Annual report 2022

Hydro's Annual Report 2022

The enclosed Annual Report and Financial statements, together with the accompanying notes, fulfill Hydro's Norwegian statutory requirements for annual reporting.

The Annual Report 2022 is available in Norwegian on our website Hydro.com. Paper copies of the report can also be ordered on our website.

Throughout the report, Hydro refers to Norsk Hydro ASA and its consolidated subsidiaries if not otherwise stated.

Hydro

Purpose

Creating a more viable society by developing natural resources into products and solutions in innovative and efficient ways

Ambitions

Lifting profitability and driving sustainability – creating value for all stakeholders

Strategic direction

Strengthen position in low-carbon aluminium

Diversify and grow in renewable energy

Sustainability

The basis for future position and profitability

Ambitions
Climate: Net-zero products, net-zero company, contribute to net-zero society

Environment: Protect biodiversity and reduce our environmental footprint

Society: Improve the lives and livelihoods wherever we operate

Content

Hydro

Introduction

Hydro

About Hydro

Hydro is a leading aluminium and renewable energy company committed to a sustainable future. Our purpose is to create more viable societies by developing natural resources into products and solutions in innovative and efficient ways.

Hydro is present throughout the global aluminium value chain, from energy to bauxite mining and alumina refining, primary aluminium, aluminium extrusions and aluminium recycling. The company has 32,000 employees, at more than 140 locations in 40 countries, more than 30,000 suppliers, and serves more than 30,000 customers around the world.

- Hydro Bauxite & Alumina represents the first two links of the aluminium value chain through bauxite mining and alumina refining.
- Hydro Aluminium Metal is a leading supplier of extrusion ingots, sheet ingots, foundry alloys, wire rods and high-purity aluminium with a global production network.
- Hydro Extrusions delivers tailored aluminium components and solutions to customers around the world.
- Hydro Energy is a major renewables producer, market operator and developer of businesses for the energy transition.

During 2022, Hydro continued to deliver on its 2025 strategy, including further strengthening its low-carbon aluminium position as well as maturing business opportunities within new energy solutions. Hydro has long been recognized as a leader in sustainability within its industry, and has communicated firm ambitions on both climate, environment and social.

Revenue

208 BNOK

Up from 2021 (150 BNOK)

Total assets

199 BNOK

Up from 2021 (175 BNOK)

40

Countries worldwide

32,000

Employees worldwide

1.3

Extrusions sales volumes Million tonnes

Alumina production

6.2

Million tonnes

Primary production

2.1

Million tonnes

Hydropower production

7.7

TWh production

Hydro

Letter to stakeholders

Unique position in a new reality

Hydro entered 2022 on the back of the strongest aluminium markets in decades following the aftermath of the Covid-19 pandemic. However, the year would soon be dominated by a devastating war in Europe, an energy crisis, spiking inflation and a global economic slowdown, including a significant fall in aluminium demand. We are pleased to present Hydro's best financial result ever during what turned into a challenging year.

The past year has once again shown us how fast things can change in our business environment, how important it is to be robust and resilient, and not to lose sight of the long-term opportunities.

Our people are the foundation on which we are built
Hydro's most precious asset is our workforce of 32,000 highly skilled and engaged employees around the world. We see a direct link between the health, safety and wellbeing of our people, our performance culture, and the progress of our strategic agenda.

Coming out of the pandemic, we have seen an encouraging safety performance. The 2022 total recordable injury rate (TRI) was 2.4, which is a strong improvement from 3.3 in 2021, and the lowest level ever reported in Hydro. The high-risk incidents rate (HRI) improved to 0.8 in 2022, compared with 1.4 the previous year. We cannot rest though. Ensuring a safe work environment is a continuous job, which needs focus and attention by everyone, every day, at every shift.

A record year and a solid basis to meet uncertainty and pursue opportunities
In a turbulent year, we benefitted from our strong cost position and our improvement efforts as well as from the high prices for aluminium and energy. We delivered record results in 2022, with an adjusted EBITDA of NOK 39.7 billion and a corresponding return on capital (RoaCE) of 22.2 percent, well above our target of 10 percent over the cycle.

Much of this is attributed to our organization's solid improvement drive. In 2019, we launched an ambitious improvement program, delivering improvements of NOK 7.3 billion annually by 2023. Last year we reached our target well ahead of schedule and decided to increase our improvement ambitions to NOK 10 billion by 2025 and NOK 11 billion by 2027.

We also raised our commercial target by NOK 0.5 billion, already materializing in the form of greener products, better product mix, higher margins and market share growth, aiming to improve results with NOK 3 billion by 2027.

Our low and robust cost positions are on the thirtieth percentile within alumina and at the seventeenth percentile in aluminium, with ambitions to further improve. In an industry seeing a steeper cost curve, this can enable improved margin generation going forward.

A competitive shareholder return is important to ensure that Hydro remains attractive to investors. We are pleased to convey that the Board of Directors proposes to allot 62 percent of adjusted net income in 2022, as a combination of dividends and share buybacks.

Megatrends present new challenges and opportunities
Going forward, we see two megatrends which will have a great impact on our business environment, posing new risks, but also opportunities.

First, we see a new geopolitical reality with increased rivalry between powers, weaker global institutions, a decline in trust and increased polarization within societies. This may have a significant impact on the global economy affecting trade, economic cooperation, supply chains and global development.

The vulnerability in global supply chains was revealed by the pandemic and is further amplified by the Russian invasion of Ukraine. In our view, proven long-term security of supply, affordability and access to energy, minerals and strategic materials will become an increasingly important strategic advantage.

Secondly, amid all the uncertainty going forward, one thing seems certain, we see higher climate ambitions and greater attention to sustainability. These are being turned into stronger regulations and business commitments, and higher expectations to the industry among politicians and regulators.

This is most noteworthy though among customers, investors and financiers, and current and potential new employees.

The current energy crisis has demonstrated how crucial access to affordable renewable energy is for society and industry to succeed with the green transition. Markets are increasingly concerned about how products are made, and we expect sustainability frontrunners to be appreciated and preferred.

We are not only committed to contributing to change, but we are also committed to drive change. More importantly, we increasingly see sustainability as our path to profitability. We continue to pursue our strategy to strengthen our position in low-carbon aluminium, as well as growing in new energy solutions.

Shaping and serving the markets for greener products
The transition towards net-zero emissions is expected to be a key driver for aluminium demand towards 2030. Even in a challenging market, we expect 2.8 percent annual growth towards 2030, of which a large part is coming from the automotive segments. Demand for recycled aluminium is expected to grow at double the rate with an annual growth at 5.4 percent.

It is encouraging that demand for low-carbon primary aluminium is accelerating and set to outpace the rest of the market at a 20 percent annual growth rate from 2022 to 2030. In fact, we expect greener and recycled aluminium to make up a majority of the EU and North American market by 2030.

In order to successfully deliver on our decarbonization strategies and achieve our ambitions on shaping the market for low and near-zero carbon aluminium, we have teamed up with frontrunners in the value chain to develop creative, innovative and sustainable solutions. The strategic partnerships with Mercedes-Benz and Polestar, and window solutions provider VELUX, enable smarter solutions with a lower-carbon footprint.

In Extrusions, we grow together with our customers, particularly in the automotive market segment, and have positioned Hydro CIRCAL to be the standard bearer in building and construction. The decisions to build new extrusion presses in Szekesfehervar (Hungary), Rackwitz (Germany) and Tønder (Denmark), together with the acquisition of German building systems and extrusion business Hueck, are firm steps to strengthen our position in important European growth segments within automotive and construction.

Commitment to zero-emission aluminium
To strengthen our position, we aim to demonstrate not only ambitions and targets related to sustainability, but real deliverables which have a positive impact for the climate, the environment and the society at large.

We are pleased to see that the green transition is indeed on its way. The fuel switch projects, changing energy sources from fuel oil and coal to natural gas and electricity at our alumina refinery Alunorte, are progressing well. It is especially encouraging that the significant reductions of greenhouse gas emissions go hand in hand with reduced operating costs. In parallel, we are developing and maturing the technologies needed to reach net-zero greenhouse gas emissions in 2050 or earlier.

For existing primary aluminium plants, we aim to eliminate emissions through carbon capture and storage (CCS), and are currently running test projects to verify the efficiency at selected plants.

For new primary aluminium capacity, Hydro's technologists have worked for the past six years to develop a breakthrough zero-emission technology, the proprietary HalZero. We aim to construct a test facility to further mature the technology concept, with a bold aspiration to deliver our first batch of HalZero aluminium by 2026. Once CCS and HalZero are in place, it is finally realistic to speak of zero-emission primary aluminium.

In addition, recycling will play a vital role in the transition towards a low-carbon economy. For us, recycling represents an opportunity for new profitable growth. Furthermore, recycling of post-consumer scrap is reducing the carbon content in the products we bring to the market. We are excited that Hydro produced its first prime quality, near-zero aluminium based on recycling of 100 percent post-consumer scrap in 2022.

We are encouraged by higher demand for recycled aluminium, strong margins and attractive returns, and have a comprehensive project pipeline. Last year, we made the decisions to establish new recycling capacity at Cassopolis, Cressona and Henderson in the US, Rackwitz in Germany,

Adjusted RoaCE
22.2%

Free cash flow
14.0
BNOK

Zero
Fatal accidents

Adjusted EBITDA
39.7 BNOK

and Szekesfehervar in Hungary, together with our bid to acquire the Polish recycling company Alumetal. These are important steps for implementing our profitable growth ambitions.

In addition to addressing own emissions, Hydro has launched a new target to reduce upstream Scope 3 emissions per tonne aluminium delivered to the market by 30 percent by 2030. These are emissions produced by our suppliers, and the target will be reached mainly through greener sourcing of raw materials and metals.

Growing in new energy
Availability of renewable power is more critical than ever to meet global climate targets. For Hydro, the contribution of Hydro Rein to bring forward more power production is crucial. Hydro Rein has made significant progress during the last year and is now executing four projects with contracted revenues amounting to USD 2.7 billion. We continue our active process for raising external capital for Hydro Rein.

Hydro Rein and Hydro Havrand are working together with the respective business areas to contribute to strengthening their position in low-carbon aluminium through renewable sourcing and decarbonization. Through Hydro Havrand, we aim to produce green hydrogen that may replace the use of natural gas in our own production and help external customers decarbonize their hard to abate emissions.

We continue to pursue our ambition to take an active part in batteries and energy storage solutions. Through our 30 percent stake in the graphite producer Vianode, we are taking a role in the production of more sustainable raw materials for electric vehicle batteries. The synthetic graphite materials from Vianode will be produced with up to 90 percent lower CO_2 emissions than today's standard materials.

Europe's largest electric vehicle battery recycling plant, HydroVolt, a 50/50 joint venture between Hydro and Swedish EV battery producer NorthVolt, has now been in commercial operation for almost a year.

Driving sustainability: Future-proofing our company
It is fundamental for every business to know its impact on nature and people, and to protect and uphold human rights in local operations as well as in global supply chains. This contributes to the health and livelihoods of people and communities in times of transition.

Responsible businesses will less likely waste time and resources on crisis and conflict, and more likely get access to new projects, new markets, the most attractive partners and win the battle for the best employees.

Hydro has a 117 year history of partnerships in the communities we are a part of and base our company on our values of Care, Courage and Collaboration. We are committed to invest in education, support just transition by contributing to economic and social development in societies where we operate, and ensure transparency and responsible business practices in our supply chains.

In 2022, we were especially proud to open the new technical school in Barcarena, also benefiting Hydro by expanding and qualifying the local workforce. We also continue to support the long-term collaborative platform Sustainable Barcarena Initiative. Programs for local entrepreneurship, education, health and environmental initiatives.

We have also seen that by educating our suppliers in Pará, we are not only ensuring that our own supply is sourced responsibly, we also enable our suppliers to grow and become preferred suppliers to other businesses in Brazil. This is truly a win-win situation for both Hydro and society.

Working to improve industry standards for human rights, transparency and responsible production, we are engaging with a range of international organizations. We are also a signatory member of the UN Global Compact and a committed member of the Aluminium Stewardship Initiative (ASI).

On the environmental side, we are committed to reducing the footprint of our mining operations, rehabilitate forests and protect biodiversity, and to eliminate landfilling of recoverable waste by 2040.

Well positioned for future value creation
Facing a more unpredictable global economy and an urgent need to drive the green transition, Hydro is well positioned to navigate through turbulence in the short-term without losing sight of our strategic positioning for the long-term opportunities.

We have a highly skilled and motivated workforce, low and robust cost positions with ambitions to improve, a pathway to net-zero aluminium products through targeted technology development, strong market positions and a portfolio of profitable growth projects. We also have ambitious and concrete sustainability targets integrated in our business strategy and operations.

This is all supported by a solid financial framework, ensuring financial strength and flexibility, while also enabling competitive shareholder distribution.

On this basis, we believe Hydro has a unique position to create value in a new reality, developing industries that matter.

Dag Mejdell
Chair

Hilde Merete Aasheim
President and CEO

Key events in 2022

February

Hydro invests in carbon capture company Verdox to eliminate emissions from aluminium production
Read more

March

Hydro will not enter into new contracts with Russian counterparts
Read more

Alunorte alumina plant fires up first electric boiler
Read more

April

New aluminium recycling plant in Cassopolis, U.S. will bring local jobs and lighter vehicles
Read more

Hydro announces tender offer for 100 percent of the shares of the Polish recycler, Alumetal S.A.
Read more

May

Hydro produces first near-zero aluminium in Clervaux
Read more

Hydro to invest NOK 320 million in Karmøy aluminium smelter
Read more

Europe's largest electric vehicle battery recycling plant begins operations
Read more

July

Hydro Rein and partners sign PPA, and start construction activities at the Mendubim solar project in Brazil
Read more

Hydro publishes green and sustainability linked financing framework
Read more

Hydro Alunorte completes construction of technical school in Barcarena, Brazil
Read more

Second quarter 2022: Record results and shareholder distribution
Read more

August

Hydro to invest NOK 500 million in recycling at Cressona, Pennsylvania facility
Read more

Slovalco will stop primary aluminium production
Read more

September

Vianode invests NOK 2 billion in battery materials plant in Norway
Read more

Hydro in Sweden accelerates transition to 100 percent renewable energy
Read more

Hydro responds to reduced aluminium demand, partially curtails production
Read more

VELUX Group partners with Hydro to cut carbon emissions in its products
Read more

October

Hydro invests BRL 590 million in Paragominas
Read more

Hydro completes construction of social center in Para State, Brazil
Read more

November

Hydro Rein and Commerz Real to develop 362 MW solar projects in Denmark
Read more

Successful placement of new sustainability linked bonds
Read more

December

Hydro acquires Hueck building systems and extrusion business in Germany
Read more

Hydro partners with Mercedes-Benz on road to CO_2 neutrality
Read more

Hydro invests in new automotive press in Hungary
Read more

Onshore wind project will develop industry in Høyanger and Sunnfjord
Read more

Strategic direction and key developments

Unique position in a new reality

Hydro is a leading industrial company committed to a sustainable future and to creating industries that matter. Hydro's ambition is to strengthen its position in terms of profitability and sustainability, thereby increasing long-term value for our stakeholders and improving lives and livelihoods where we operate. Our main priority remains providing a healthy and safe work environment for our people.

The strategic direction toward 2025 focuses on two key areas: strengthening the company's position in low-carbon aluminium and growing in new energy. The strategy leverages our competitive advantage to seize opportunities within the current megatrends and the market's growing demand for low-carbon aluminium.

The initiatives within both areas of Hydro's 2025 strategy support the achievement of our main profitability target of 10 percent RoaCE over the cycle. Hydro's track record of industrial development, close customer collaboration, combined with an integrated commercial and sustainability strategy, provide a solid foundation for the future. Hydro's ambition is to be an industry leader in low-carbon aluminium.

Increasing demand for greener aluminium
Global megatrends such as sustainability, electrification, and urbanization support the growing demand for aluminium and renewable energy. Aluminium with a lower-carbon footprint is seen as an important enabler for the green transition. Hydro's customers across industry sectors such as transportation, construction, packaging and electrical are setting ambitious decarbonization targets. Low-carbon aluminium is a key lever to reduce Scope 3 emissions for these industries.

In addition, the political and regulatory landscape supports aluminium demand. The European Green Deal has a goal of reducing CO_2 emissions by 57 percent by 2030. It is a catalyst for a restructuring of the energy market toward renewable sources.

The demand for aluminium in our main markets is expected to grow at around 3 percent annually until 2030. Low-carbon aluminium demand is expected to outpace the rest of the market, with a current estimate of 20 percent compound annual growth rate (CAGR) from 2022 to 2030. External consultants expect low-carbon and recycled aluminium will make up a majority of the EU and American markets in 2030.

Around 70 percent of Hydro's primary aluminium production capacity is based on renewable electricity, producing aluminium with a carbon intensity around 25 percent of the world average, placing our primary aluminium production among the most carbon efficient in the world. Hydro is constantly working to develop aluminium alloys with a low-carbon footprint. Currently, Hydro offers two types of low-carbon aluminium through our Hydro CIRCAL and Hydro REDUXA material brands.

Hydro CIRCAL is a range of products made with a minimum of 75 percent recycled, post-consumer scrap aluminium. Using recycled aluminium, Hydro drastically reduces energy use and our CO_2 footprint in the production phase, while still offering high quality aluminium.

Hydro REDUXA is our low-carbon aluminium. Using renewable energy sources like hydro and wind power during production, Hydro has reduced the carbon footprint per kg of aluminium to just 4.0 kg (less than a quarter of the global average).

Hydro's strong extrusions market positions and close customer relationships, support our margins and growth ambitions in key segments. Hydro's innovative solutions are also increasing the substitution potential of aluminium and creating new markets.

Hydro's decarbonization path and climate initiatives
Hydro has the ambition of achieving net-zero greenhouse gas emissions (Scope 1 and 2) by 2050 or earlier.

Hydro is pursuing three decarbonization pathways to further reduce the carbon footprint of aluminium. To secure the value of existing smelters, Hydro is developing carbon capture and storage (CCS) solutions that can be retrofitted into existing aluminium plants. Hydro is collaborating with the technology provider Verdox. The first technology test was successfully completed in 2022, and a second test is planned to start in early 2023.

Our strategic direction

Strengthen our position in low-carbon aluminium and metal recycling

Diversify and grow in new energy

We are taking the lead

Global megatrends requires low-carbon solutions

Sustainability	• Decarbonization • Circular economy
Electrification	• Energy transition • E-mobility
Urbanization	• Smart housing • Infrastructure

Hydro

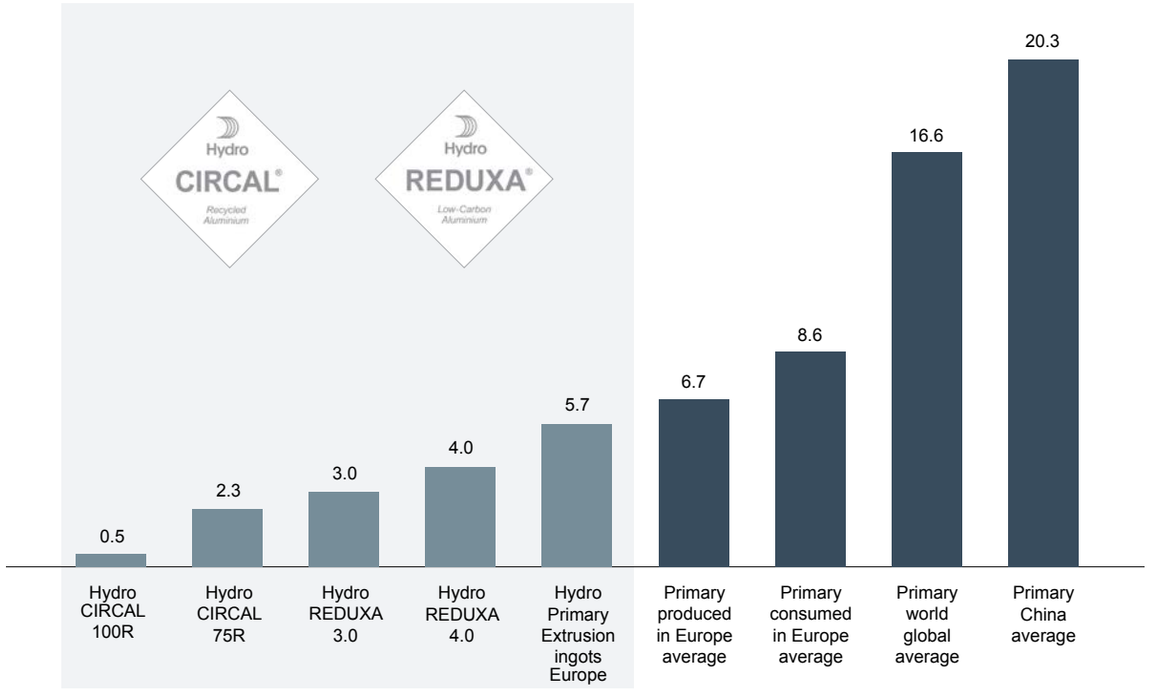
Another pathway more suited for greenfield smelters is Hydro's proprietary HalZero technology. This is technology based on converting alumina to aluminium chloride prior to electrolysis in a process where chlorine and carbon are kept in closed loops, resulting in a fully decarbonized process. Hydro aims to deliver the first zero-carbon primary aluminium from the HalZero industrial pilot plant by 2026.

Recycling post-consumer aluminium, is a third and faster pathway to zero-carbon aluminium. Using 100 percent post-consumer scrap, Hydro will be able to produce near-zero carbon products at a competitive abatement cost. In 2022, Hydro produced its first near-zero aluminium based on 100 percent recycled post-consumer scrap.

The main short-term contributor is the the Alunorte fuel switch project, which will replace heavy fuel oil with natural gas at the Hydro Alunorte alumina refinery in Brazil. The fuel switch will reduce the refinery's annual CO_2 emissions by 700,000 tonnes when completed. The project started in the first quarter of 2022, and is expected to be in operation during the second half of 2023. In addition, Hydro is installing three electrical boilers at Alunorte powered by renewable energy to replace the current coal fired boilers. The first boiler is already operational, and the second and third boilers are expected to be operational in 2024. These initiatives will result in a reduction of around 1.1 million tonnes CO_2 emissions from the Alunorte alumina refinery.

We provide products produced with low emissions

Kilos of CO2e emmissions per kilo aluminium



Hydro continues to strengthen its climate ambitions in 2022, launching targets to reduce upstream Scope 3 emissions per tonne aluminium delivered to the market by 30 percent compared to our 2018 baseline emissions. The Scope 3 target will mainly be achieved by purchasing metal with a low-carbon footprint, and reflects our growth ambitions in recycling and extrusions.

Key steps to strengthen low-carbon aluminium position
Over the past year, Hydro has seen an increased demand for our low-carbon brand products Hydro CIRCAL and Hydro REDUXA. Sales of our two low-carbon brands have grown by 65 percent since 2021. Hydro has the capacity to triple Hydro CIRCAL sales volumes and double volumes of Hydro REDUXA in the mid-term.

Hydro continues to work in strategic customer partnerships to shape the market for low and near-zero carbon aluminium. The objective is to contribute to reducing the climate impact of our customers by utilizing the full potential of aluminium as a low-carbon solution. In 2022, Hydro formed a new strategic partnership with Mercedes-Benz, and will deliver REDUXA 3.0 (defined as below 3.0 kg CO_2 / kg Al from mine to metal) to a range of Mercedes-Benz models in 2023, ultimately reducing the carbon footprint of the vehicle.

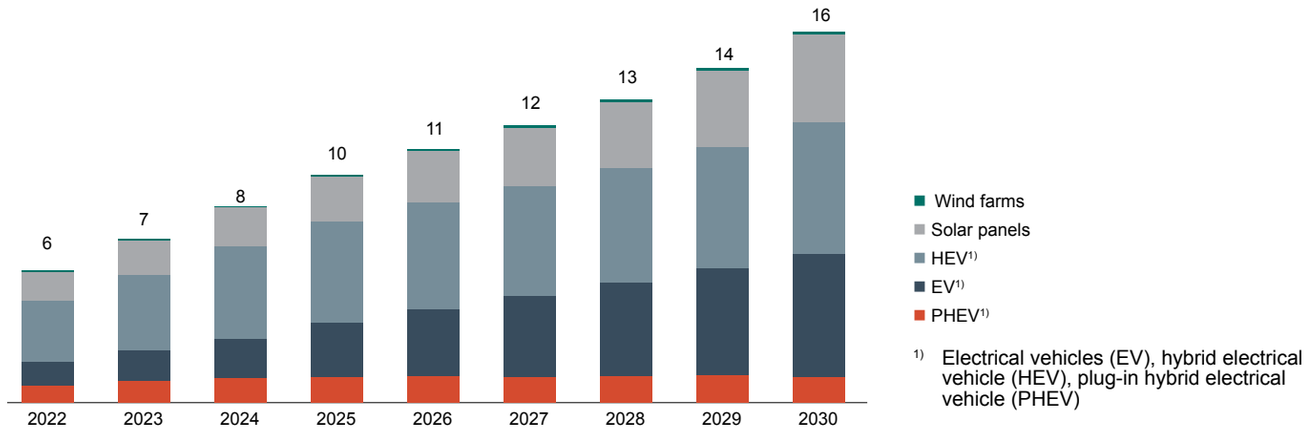
Increasing demand for greener products, improved product mix, higher margins and market share growth, have supported Hydro's 2025 commercial ambition of NOK 2.5 billion in EBITDA improvements. Towards 2027, Hydro aims to further increase the commercial ambition by NOK 0.5 billion to NOK 3 billion.

Extrusions, defined as a strategic growth area in Hydro, has successfully improved their business over the last years and is on track to realize their 2025 target EBITDA of NOK 8 billion, despite current market volatility. Extrusions continues to position itself for future growth through key investments. In 2022, Extrusions invested in around 55,000 tonnes of new press capacity through investments across the portfolio, in addition to the EUR 63 million acquisition of Hueck building systems and extrusion business. The acquisition will strengthen Hydro's presence in Germany and other European markets, and create a solid platform for further growth of the combined businesses.

Recycling is an important enabler to strengthen Hydro's position in low-carbon aluminium. Key investments into

Global aluminium demand from green transition

In million tonnes



1) Electrical vehicles (EV), hybrid electrical vehicle (HEV), plug-in hybrid electrical vehicle (PHEV)

additional recycling capacity have been announced in 2022, increasing capacity by 335,000 tonnes, including the proposed acquisition of Polish recycler, Alumetal S.A. Hydro is well on track to deliver on the ambition to double the 2020 post-consumer scrap usage by 2025. The recycling EBITDA growth target towards 2025 has been raised by NOK 0.5 to NOK 2.6-3.0 billion. The ambition has also been extended to 2027 with an additional NOK 0.5 billion, resulting in a total ambition of NOK 3.1-3.5 billion.

The improvement program is important to maintain Hydro's competitive cost curve positions. In 2022, Hydro increased the improvement target for 2025 from the original target of NOK 8.5 billion to NOK 10 billion by 2025, and NOK 11 billion by 2027.

Further strengthening sustainability strategy
Hydro's environment strategy is to minimize impact across our operations. Hydro has an ambition to achieve no net loss of priority biodiversity in all new projects and has set a target to eliminate landfilling of recoverable waste by 2040 across our operations.

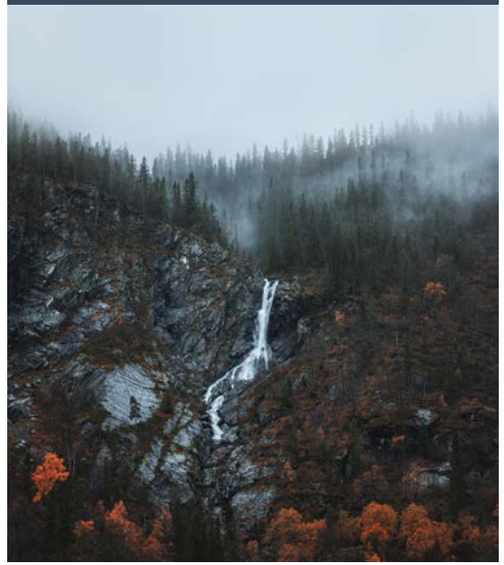
Hydro's mining operations have a target of 1:1 rehabilitation of areas mined and released for rehabilitation, which is on track. In 2023, Hydro will rehabilitate an additional 100 hectares in its legal reserve, which comprises degraded land not impacted by Hydro operations. For bauxite residue, Hydro has a target to eliminate the need to build new permanent storage facilities by 2050 and a target to utilize 10 percent of bauxite residue generation from 2030. This is supported by a project with the technology company Wave Aluminium, to potentially build a pilot plant at Hydro Alunorte to process 50kt of bauxite residue per year, extracting metals from bauxite residue.

Hydro's social ambition is to improve the lives and livelihoods wherever the company has operations. To date, Hydro has provided education to around 157,000 people and has an ambition to provide quality education to 500,000 people by 2030. In addition, Hydro has invested in building social centers in Pará and a technical school in Barcarena.

Hydro has an ambition of zero fatal accidents and life changing injuries, and to provide safe and healthy workplaces. In 2022, there were zero fatalities and one life changing incident, while our overall recordable injury rate was at the lowest level ever reported in Hydro.

Value creation across the energy space going forward

1. Expanded footprint in the Nordics in terms of power and market operations, projects, and sourcing
2. Sourcing and management of power and fuels for Hydro operating assets across geographies
3. Hydro Rein successfully established as separate company with external capital and partners
4. Hydro Havrand developing portfolio, with external capital and partners delivering speed in green fuel switch in industries and transport
5. Preferred partner for industrializing sustainable battery material businesses in Europe



Grow in new energy
Building on 117 years of hydropower production, Hydro is in a strong position to seize growth opportunities within renewable energy to support the decarbonization of Hydro and other energy intensive industries. These areas include hydropower, solar and wind power, green hydrogen, batteries and energy solutions.

Hydro Rein
Hydro Rein was established as a company in 2021, building on Hydro's strong position in the energy markets and renewable energy operations, including a strong track record in structuring power purchase agreements tailored for industrial offtake. Hydro Rein supports Hydro and other industrial companies to decarbonize, offering certified renewable power and industrial scale solutions to improve energy efficiency, reduce emissions and cut costs, such as onsite generation, energy efficiency, energy storage and flexibility management. The company is a full scale developer in the wind and solar space, focusing on minority positions in projects in the Nordics and Brazil.

Hydro Rein has made significant progress during 2022. The company is currently executing four projects with a total installed capacity of 1.7 GW, in Mendubim, Feijão and Boa Sorte in Brazil, and Stor-Skälsjön in Sweden. The projects in Brazil are some of the largest renewable energy sites under construction in Brazil, and are important enablers to decarbonize Alunorte and reach Hydro's target of a 30 percent CO_2 reduction by 2030. Contracted revenues for the four projects (PPAs) amount to approximately USD 2.7 billion total nominal value.

In the near term, Hydro Rein will strengthen its focus on early phase projects for industry purposes in the Nordics. The company is maturing solar power projects in Denmark, onshore wind projects in Sweden and onshore and offshore wind projects in Norway. These projects are being developed in strategic partnerships with other industrial players. Hydro Rein also has a large portfolio of complementary projects at Hydro sites around the world.

Hydro Havrand
Hydro Havrand was established as a company in 2021. Leveraging Hydro's 3 GW potential offtake, industrial competence and energy expertise, Hydro Havrand will offer competitive green hydrogen to third party industries and evolving hydrogen markets such as heavy duty trucking and maritime.

Green hydrogen will be vital in order to decarbonize Hydro's industrial activities. Previously communicated projects include a 5 MW green hydrogen pilot project at Hydro's Høyanger smelter in Norway. Hydro Havrand and Aluminium Metal are maturing the project, which is pending funding support from Enova. If the pilot is successful, it will enable aluminium production with close to zero CO_2 emission. Hydro Havrand is currently maturing projects in Norway and internationally.

Batteries
Over the past year, Hydro has developed a more focused battery strategy concentrating on growing within sustainable battery materials mainly in Europe.

The Hydrovolt battery recycling operations in Norway has started production and received large interest from both the EU and OEMs in Europe. The company is exploring an expansion of recycling capacity within Europe, with a long-term ambition to recycle 50,000 tonnes of battery packs by 2025 and 200,000 tonnes of battery packs by 2030, equivalent to approximately 150,000 EV batteries in 2025, and 400,000 in 2030.

In addition, Hydro Batteries has acquired a 30 percent share in Vianode, a company jointly owned with Elkem and Altor, offering sustainably produced, battery grade synthetic graphite with more than 90 percent lower embedded CO_2 emissions compared to conventional production. Commercial production is expected to start in 2024.

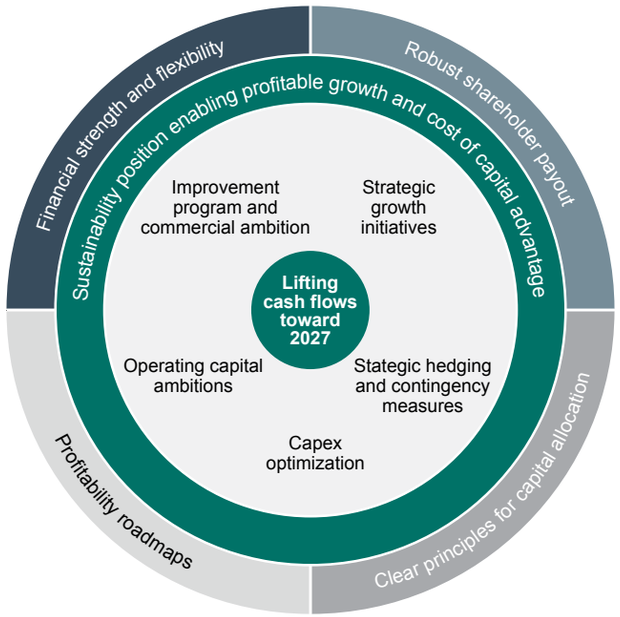
Financial ambitions

Lifting cash flow, delivering higher returns

Hydro's financial ambition is to lift cash flows and generate capital and shareholder returns through a combination of longer-term financial priorities supported by near-term financial targets. At the same time, Hydro aims to differentiate through its strong sustainability position and to develop businesses where megatrends match Hydro's capabilities.

Supported by increasing interest from regulators, customers and financial markets, Hydro firmly believes that leading in sustainability is a strong foundation for our long-term license to operate and a key driver for long-term profitability. By emphasizing climate, environment, integrity and social responsibility, as well as by developing greener business and product offerings, Hydro will reduce risks and create new profitable opportunities.

Hydro has developed a framework that establishes clear priorities to lift cash flow and returns.



Profitability roadmaps
Hydro has a target to achieve an adjusted return on average capital employed (RoaCE) of 10 percent over the course of a business cycle due to industry cyclicality. Short-term RoaCE targets includes an additional stretch on top of the 10 percent RoaCE target in strong markets.

Cost of capital and RoaCE targets are differentiated for each business area as risk and volatility of earnings, and cash flows in the underlying business activities differ.

Hydro's main efforts to realize targeted capital returns are summarized in the full value creation framework. The framework includes three levers all underpinned by Hydro's sustainability agenda: the improvement program, commercial ambitions and strategic growth initiatives.

Improvement program
In 2022, Hydro further increased its improvement program target by NOK 1.5 billion to NOK 10.0 billion by 2025, which includes a positive rebasing effect of NOK 0.7 billion. Hydro also extended its improvement program to 2027 with additional improvements of NOK 1.0 billion.

Improvement programs across the business areas are focused on operational excellence, procurement savings and fixed cost reductions. Operational excellence is key when it comes to maximizing value creation from current assets, and relies on the culture of continuous improvement and good control over the influenceable parameters. Fixed cost reductions are targeted through efficiency improvements from robotization and automation as well as energy efficiency improvements. The ambitions within procurement savings have been further stretched following systematic efforts over time. Improvements in all business areas include savings related to increased efficiency within staff and support functions, with Global Business Services (GBS) contributing the most.

Commercial ambitions
The commercial ambitions focus on market and customer-driven growth opportunities within the current portfolio. Hydro has a commercial ambition to deliver NOK 2.5 billion by 2025, and in 2022, Hydro extended its commercial ambition to 2027, with an additional ambition of NOK 0.5 billion. Execution and success rely on market support and customer demand, and are therefore less certain. The commercial initiatives include new product development in Aluminium Metal, market share gain and gross margin improvement in Extrusions through optimized product mix, increased sales of green products and higher production capacity, as well as commercial activities in Bauxite &

Full value creation potential

Improvement program

Maximizing value creation from current assets/operations

+

Commercial initiatives

Pursuing market and customer-driven growth opportunities

+

Growth and strategic initiatives

Major changes in business portfolio and/or stategic direction

Alumina to achieve higher premiums on alumina and hydrate.

Growth and strategic initiatives
Growth initiatives represent larger changes in the business portfolio. Hydro's strategy is to diversify and grow within the areas of recycling, and the new energy areas. These areas are supported by the current megatrends as well as by Hydro's core industrial expertise.

Financial strength and flexibility
Hydro's main strategy for mitigating risk related to volatility in cash flow is to maintain a strong balance sheet, investment grade credit rating and strong liquidity. At the same time reducing the average cost position of production assets and allocating capital in line with our strategic ambitions remain a key priority. Hydro considers this crucial to navigate the industry cycles, to be able to invest during cyclical downturns, and to be able to access the capital markets at attractive terms. In certain circumstances, derivatives may be used to mitigate financial risk in the business area or group levels.

Currently, Hydro has a BBB rating with S&P Global and a Baa3 rating with Moody's, both with a stable outlook.

Hydro uses the ratio Adjusted net (cash) debt to adjusted EBITDA as the key indicator of balance sheet strength and the ability to absorb volatility in the markets. The target is to stay below two times during the cycle, which supports our target to maintain an investment grade credit rating. In 2022, Hydro introduced a supplementary guidance on targeted Adjusted net debt of around NOK 25 billion over-the-cycle. Given historical industry cyclicality, this means that the Adjusted net debt will be below the target in the stronger parts of the cycle, to be able to absorb the impact from industry cycle downturns and maintain financial flexibility in periods of adverse market conditions.

A strong liquidity position is considered critical to support operations and investments through the industry cycle. In addition to a robust cash position, our liquidity is supported by revolving credit facilities, overdraft facilities and short-term liquidity lines.

Hydro's strategic hedge program is aimed at further strengthening the company's financial flexibility and robustness. Using financial derivatives, the program seeks to lock in strong upstream margins and secure cash flows. For further details, see note 7.1 Capital management.

Clear principles for capital allocation
Hydro has clear priorities and guidelines for capital allocation. Investments are evaluated using different scenarios for macro and market development to support robustness in investment decisions. Hydro also uses differentiated return requirements to reflect the underlying risk and exposures in each project.

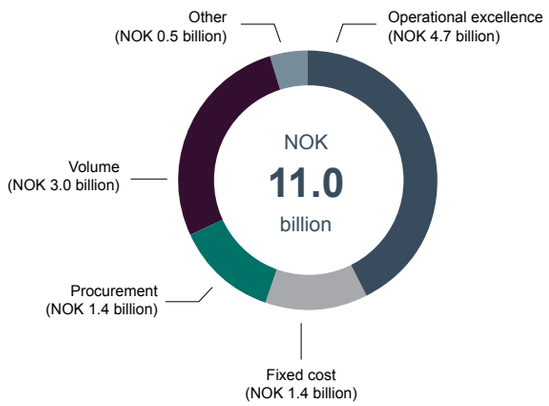
Hydro divides capital expenditures into three categories: sustaining, return-seeking, and growth. The strategy is to allocate more growth and return-seeking capital to the areas with higher value generation potential, both from a profitability and sustainability perspective. In addition, all the business areas have been grouped into different strategic modes, which impacts the capital allocation.

Investments are generally funded by Hydro cash generation or debt, with each subsidiary being capitalized to serve its own activity. The plan is to finance the Hydro Rein and Hydro Havrand initiatives partly with external equity, either through public listing or through private placement, reducing the capital contribution from Hydro.

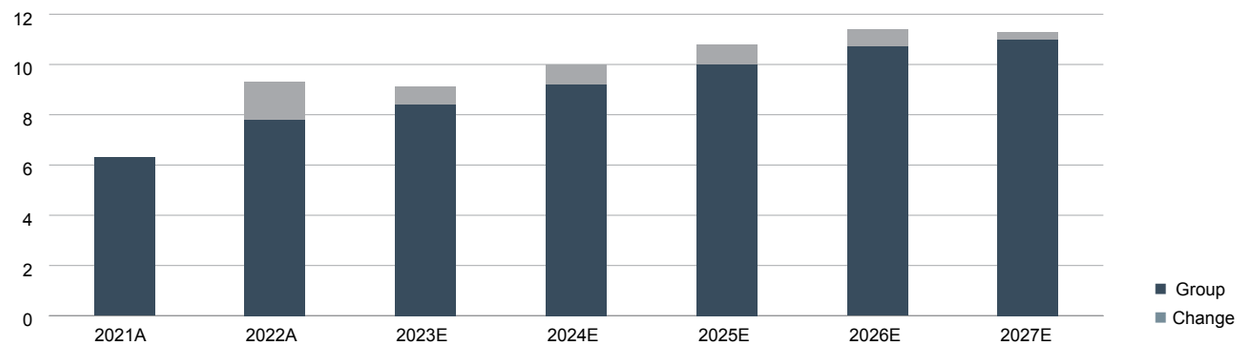
Hydro continues to optimize net operating capital levels both in absolute terms and in days of revenue, with due consideration given to the balance between capital release and supply chain robustness. The company targets a net operating capital release of NOK ~4 billion by the end of 2023.

Robust shareholder distribution
Hydro aims to provide its shareholders with a predictable dividend and a competitive return compared with alternative investments in similar companies. Hydro's ambition is to distribute a minimum of 50 percent of adjusted net income attributable to Hydro shareholders as ordinary dividend over

2027 accumulated improvement



2027 accumulated improvement potential by year



the cycle, with a dividend floor of NOK 1.25 per share. Share buybacks or extraordinary dividends will supplement dividends during periods of strong financials, where Adjusted net debt is below the NOK 25 billion target, with due consideration being given to the commodity cycle and capital requirements for future growth.

Sustainability position
Hydro's sustainability position is becoming a strong differentiator, also from a cost of capital advantage. To benefit from the lower cost of capital enabled by sustainability performance, Hydro published its green and sustainability-linked financing framework in 2022. The framework is directly linked to our medium to long-term sustainability strategy and will provide an advantage in access to and cost of capital.

The EU taxonomy is a welcomed approach to providing comparable financial data on green activities in the sector. Hydro's activities are partly covered by this, such as the manufacturing of primary aluminium, secondary aluminium, recycling, and renewable power generation. More information is available in the Appendices.

Return requirements differentiated based on risk profiles

Strategic modes for business areas reflect global megatrends and high-return opportunities

Bauxite & Alumina	Aluminium Metal	Metal Markets (recyclers)	Extrusions	Energy*
Sustain and improve	**Sustain and improve**	**Selective growth**	**Selective growth**	**Selective growth**
10–11%	10–11%	7–8%	7–8%	6–7%
Reflecting higher capital intensity and expected volatility	Reflecting higher capital intensity and expected volatility	Recycling business with lower required capital, more stable margins	Lower required capital, more stable margins	Stable cash flows from hydropower assets in Norway

* Energy Classic: Hydro power and commercial activities in Energy, excluding new growth areas

Our business

Hydro

Hydro’s presence

Since 1905, Norway based Hydro has turned natural resources into valuable products for people and businesses, and today employs more than 32,000 people in more than 140 locations in 40 countries. Hydro owns and operates businesses and has investments with a base in sustainable industries in a broad range of market segments for aluminium and metal recycling, and energy, renewables and batteries.

More than 30,000 customers worldwide

40
Countries worldwide

32
Thousand employees

6.2
Million tonnes alumina production

2.1
Million tonnes primary production

1.3
Million tonnes recycled production

Hydro

Hydro's main inputs and outcomes

MAIN INPUTS

Robust balance sheet • Workforce, technology and R&D • Relations to local authorities and communities • Environmental, social and economic impact in supply chain

Bauxite	Alumina	Energy	Primary	Casting	Extrusions	Products
• Bauxite resources • Water • Land clearance • Bauxite pipeline	• Bauxite • Caustic soda • Lime • Water • Coal • Oil	• Land use • Water reservoirs	• Alumina • Aluminium fluoride • Electricity • Coke • Pitch • Water	• Primary aluminium • Process scrap • Post-consumer scrap • Natural gas • NGL		• Extrusion ingot • Electricity

Recycling

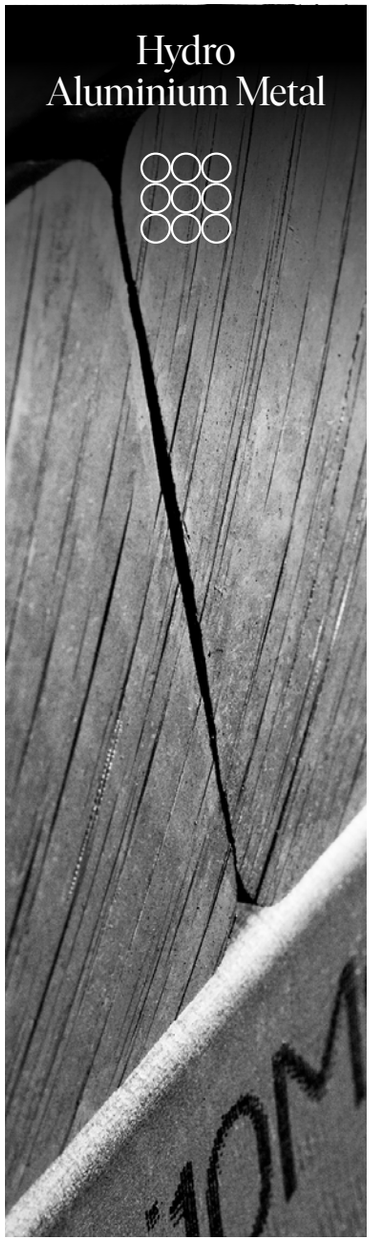
MAIN OUTCOMES

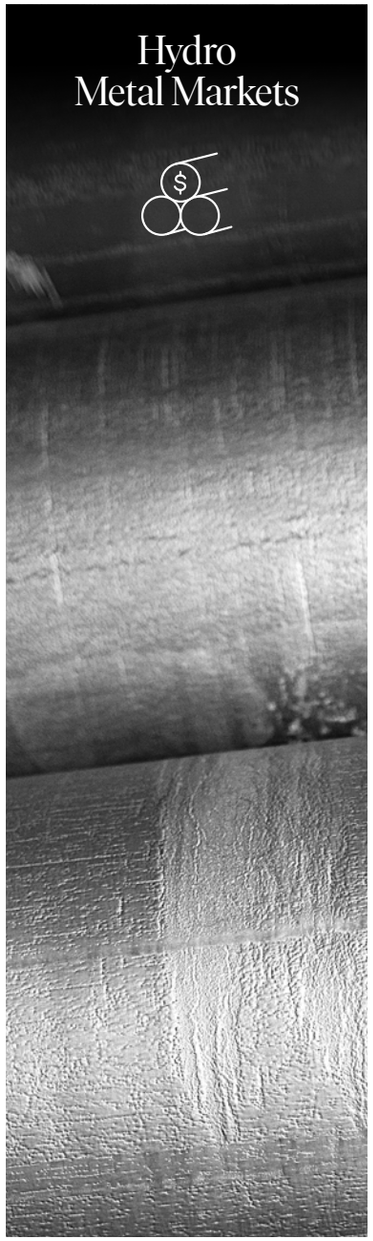
Bauxite	Alumina	Energy	Primary	Casting	Extrusions	Products
• Bauxite • Rehabilitated land • *Tailings* • *Biodiversity impact*	• Alumina • *Bauxite residue* • *GHG emissions* • *SO_2 emissions* • *NOx emissions*	• Hydropower • Flood control • *Regulated watersheds* • *Biodiversity impact*	• Primary aluminium • *GHG emissions* • *SO_2 emissions* • *Spent potlining*	• Standard, sheet and extrusion ingots, primary foundry alloys and wire rod • *NOx emissions* • *Dross*		• Extruded solutions for building and automotive industries, consumer goods etc. • *Environmental impact*

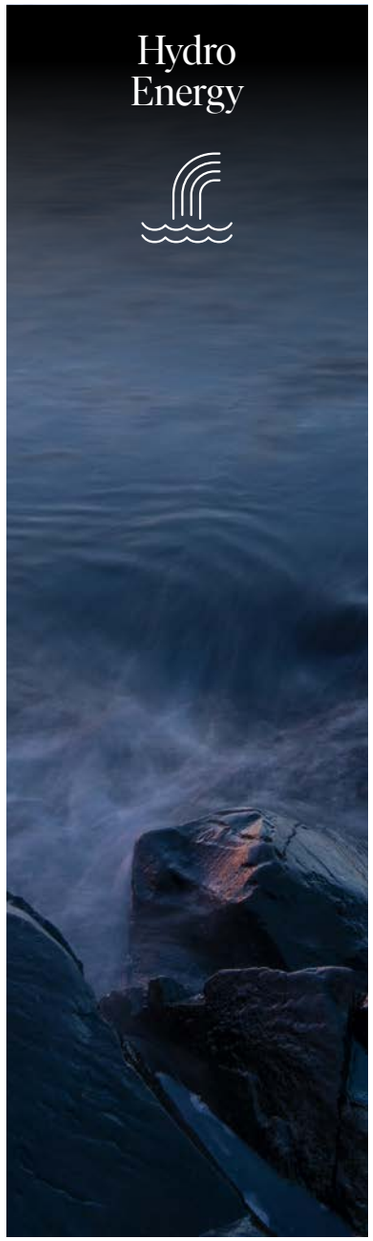
Income and shareholder value • Salaries, taxes and suppliers' income • Health & safety, job satisfaction and skills • Community impact and stakeholder value • Reputation

Text in *italics* reflects mainly negative impacts.

Business areas







Hydro Bauxite & Alumina

Operations

Hydro Bauxite & Alumina comprises our bauxite mining activities in Paragominas and our 5 percent interest in Mineracao Rio de Norte (MRN), both located in Brazil, as well as our 94 percent interest in the Brazilian alumina refinery, Alunorte. Hydro mines bauxite from Paragominas using stripmining technology. It is sorted and crushed for transportation as a slurry through a 244 kilometer long pipeline, then refined into alumina at Alunorte. Bauxite from MRN is transported to Alunorte by ship. In addition to our equity interests in the MRN bauxite mine, Hydro has volume offtake agreements for Vale's 40 percent interest in MRN, which amounted to 5.0 million mt in 2022. When operating at full production capacity, Hydro has a long position in bauxite of 3 million tonnes (assuming MRN produces 12.5 mt per annum) and 2-3 million tonnes of alumina.

Cost and revenue drivers

The main cost drivers for bauxite are labor, maintenance and consumables, electricity and fuel for mining equipment. These account for around 75 percent of the cash cost of mining activities. Labor, the largest cost factor, accounting for about 30 percent, is influenced by Brazilian wage levels and productivity developments. Maintenance and consumables are influenced by inflation and operational efficiency.

The main cost drivers for alumina refining are bauxite, energy and caustic soda. These represent around 85 percent of cash costs. Energy costs are a mix of fuel, coal and electricity, and account for about 40 percent of the total costs. Caustic soda represents around 15 percent of cash costs. Bauxite purchases from Paragominas, and those made under offtake agreements from MRN, are based on prices partly linked to the London Metal Exchange's (LME) prices and to alumina market prices.

Strengthen low-carbon aluminium position

Hydro Bauxite & Alumina is working to improve its position on the alumina industry cost and carbon curves, with Alunorte targeting to move from the first quartile of alumina refineries in terms of carbon intensity, to the first decile by 2025. To reach the targets for greenhouse gas emissions reductions, Hydro aims to replace fuel oil with liquid natural gas at the Alunorte alumina refinery in 2023, and install two more electrical boilers that use renewable electricity in 2024. This will enable the growth in sales of low-carbon alumina and aluminum, at an expected growing premium. See the section on Climate Change for more detail.

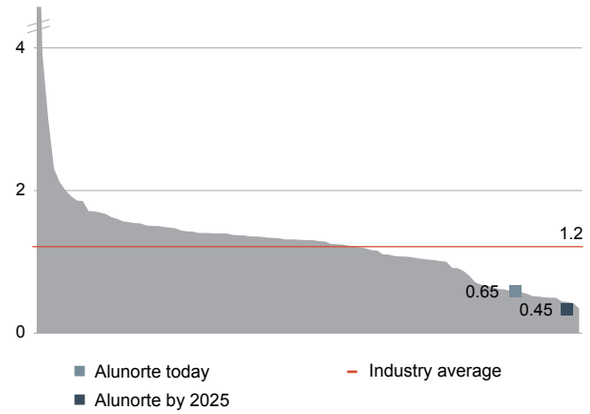
Hydro Bauxite & Alumina aims to further strengthen their position on the alumina cost curve, through delivering NOK 1.1 billion in operational and commercial improvements in the period 2023-2027.

To reduce the environmental impact of our operations, Hydro's has developed the Tailings Dry Backfill methodology at the Paragominas mine, which eliminates the need for new permanent tailings storage facilities and permits rehabilitating areas affected by mining operations faster.

Hydro also supports social and economic development in the communities where its operates. Read more about the skills development, community investments and efforts to support just transition in the sections on Local community value creation and Human rights.

CO2e per tonnes of alumina (Scope 1 and 2)

Total global aluminia production 2022



Hydro Aluminium Metal

Operations

Hydro Aluminium Metal is one of the world's largest producers and suppliers of primary aluminium and value added casthouse products. The business area consists of wholly owned aluminium metal plants in Norway, and partly owned plants in Slovakia, Qatar, Australia, Canada and Brazil. The plants produce standard ingot and value added products, such as extrusion ingot, primary foundry alloys, sheet ingot and wire rod.

Cost and revenue drivers

The main cost drivers for the production of primary aluminium include alumina, power and carbon, which together comprised about 80-85 percent of the cash costs of electrolysis metal in 2022. Hydro use approximately two tonnes of alumina to produce one tonne of aluminium, representing 35-40 percent of the cash cost of primary aluminium. Energy represents on average 25-30 percent of cash costs, and carbon anodes consumed in the smelting process account for 20-25 percent. Realized aluminium prices and casthouse product premiums are the most important revenue drivers. Aluminium Metal has a history of continuous improvements, covering all relevant earnings drivers.

Internal supply contracts between our hydropower production operations and our aluminium metal business covered about half of the energy consumption of our wholly owned Norwegian metal plants in 2022. The remainder is mainly covered by external supply contracts. The external supply contracts comprise a mixture of hydropower and wind power.

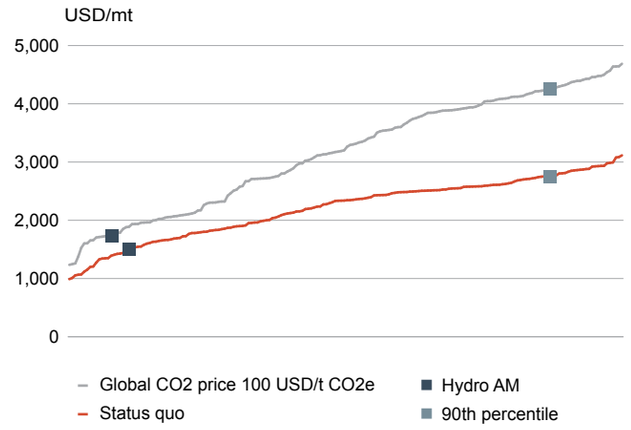
Electricity for the Qatalum aluminium plant in Qatar is provided by an integrated natural gas fired plant supplied with gas by Hydro's joint venture partner, Qatar Energy. The rest of the global joint ventures are covered by medium to long-term contracts, expiring between the end of 2024 and the end of 2030.

Strengthen low-carbon aluminium position

Hydro Aluminium metal benefits from access to renewable energy at low costs. More than 70 percent of the electricity used for Hydro's primary aluminium capacity is based on renewable power, a large share of which is sourced from captive hydropower production in Hydro Energy. This is the foundation of delivering low-carbon aluminium at competitive cost in the long term, and enables Hydro's seventeenth percentile placement on the global primary aluminium cost curve in 2022. Hydro Aluminium Metal aims to strengthen their position further, through delivering NOK 1.8 billion in operational and commercial improvements in the period 2023-2027.

Hydro aims to become carbon-neutral by 2050, and our climate efforts are concentrated along three main pathways to net-zero emissions. Read more about our pathways to net-zero in the section on Innovation and technology transition.

Smelter Business Operating Cost curve[1)]



[1)] Assumptions: LME 3m 2,458 USD/t, Alumina 293 USD/t, SHFE cash 2,909 USD/t, NOK/USD 8.79

Hydro Metal Markets

Hydro Metal Markets, a part of Hydro Aluminium Metal, consists of the Recycling business unit as well as all commercial activities, including sales, marketing and distribution of the products from our primary metal and recycling plants.

Recycling

The Recycling business unit has seven recyclers that convert scrap metal and standard ingot into extrusion ingot. These plants have a total annual capacity of around 600,000 tonnes. It also operates the scrap shredding and sorting plant in Dormagen, Germany, with sorting capacity of 36,000 tonnes of post-consumer aluminium scrap per year. In addition, Recycling has several greenfield and brownfield projects under construction. The recyclers provide customers with flexible, energy efficient and tailor made metal supply with a low-carbon footprint.

Commercial

Metal Markets supplies value added products globally and offers a wide range of products and services, including low-carbon aluminium products. Our portfolio of production plants allows for a flexible, multi-sourcing system that enables significant, rapid and cost-effective volume adjustments for customers. Hydro has leading research and development competence in value added casthouse products, supporting customers in their improvement work and in developing new products. The commercial activities of Metal Markets include metal sourcing and trading activities, which source standard ingot from third parties for remelting in Hydro's recyclers and primary casthouses, and which provide operational risk management through LME hedging activities.

Cost and revenue drivers

The results in Metal Markets consist of the operating results of the recyclers, margins on sales of third party products, and results from ingot and LME trading activities. Revenues for our recyclers are influenced by volumes, the LME price and product premiums. Costs are driven by the cost of scrap and standard ingot premiums, freight costs to customers and operational costs, including energy consumption and prices. Our results can be heavily influenced by currency effects and ingot inventory valuation effects.

Strengthen low-carbon aluminium position

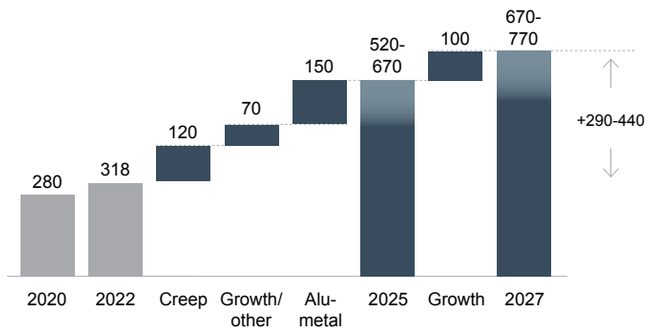
Aluminium recycling requires 95 percent less energy than primary aluminium production and can be recycled infinitely without degradation in quality. Metal Markets supplies the Hydro REDUXA and Hydro CIRCAL brands of low-carbon and recycled aluminium.

Going forward, Hydro Metal Markets will grow the portfolio of lower-carbon aluminium products, demanding higher premium pricing. This is supported by Hydro's recycling ambitions to increase the use of post-consumer scrap by 290-440kt per annum in 2027, compared to a 2020 baseline, resulting in a total EBITDA potential of NOK 3.1-3.5 billion.

In 2022, Hydro's recycling plant in Clervaux, Luxembourg produced 130 tonnes of near-zero carbon aluminium with 100 percent post-consumer aluminium scrap and a carbon footprint of less than 0.5 kg CO_2e/kg of aluminium. The technology is being rolled out to Hydro's remelting and recycling plants. In addition, Hydro is embarking on a pilot for decarbonizing post-consumer scrap at the Høyanger casthouse in Norway through switching fuel source from LNG to green hydrogen. Read more about Hydro's recycling strategy in the section on Climate change.

Hydro PCS usage and ambition

Thousand tonnes



Hydro Extrusions

Operations

Hydro Extrusions is the world leader in extrusion based aluminium solutions. The business area combines local expertise, a global network, and advanced research and development capabilities to offer everything from standard profiles to advanced solutions for most industries.

Hydro Extrusions has 70 manufacturing sites in 22 countries, with annual extrusion production of 1.3 million tonnes. It had a market share of 17 percent in Europe and 20 percent in North America in 2022, and maintains solid positions in South America and Asia. The business area is organized in four business units: Extrusion Europe, Extrusion North America, Precision Tubing and Building Systems. These units are responsible for their respective value chains, from recycling, aluminium extrusion and value adding operations to commercial activities such as product development and sales.

An integrated and vital part of the extrusion value chain is remelting and recycling, and Hydro Extrusions operates 20 recycling facilities in total in Europe, North America and South America. The combined annual capacity of these facilities is approximately 1.2 million tonnes. About 200,000 tonnes of post-consumer scrap is used in the recycling operations, and Extrusions intends to increase this amount in the years to come, supporting Hydro's overall ambition of growing Recycling EBITDA by NOK 1.4 – 1.8 billion compared to a 2020 baseline.

Cost and revenue drivers

The extrusion industry is a margin business where the LME Aluminium cost element is passed on to the customer. Contracts are typically short to medium term. Hydro Extrusions will continue to shift its portfolio toward delivering products and solutions that create more value for the customer.

Through growth in attractive regions and segments, a strong sustainability platform, customer partnerships and commercial focus as well as portfolio optimization and cost reductions, Extrusions is targeting an EBITDA result of NOK 8 billion in 2025, compared to NOK 7 billion in 2022.

Strengthen low-carbon aluminium position

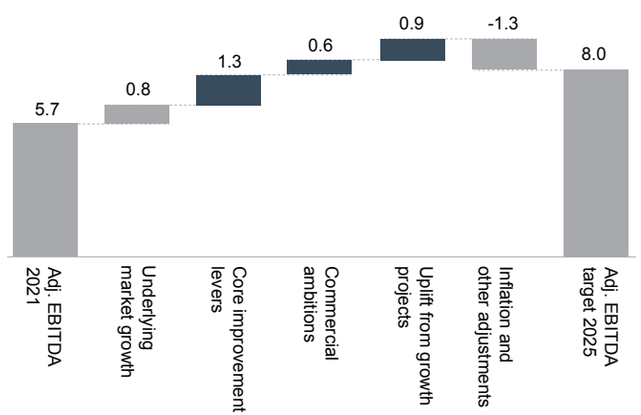
Sustainability is an integrated part of the business and Hydro Extrusions is working closely with customers across most industries to deliver products and solutions that help our customers reduce their carbon footprint, and improve sustainability and transparency in their supply chain. This includes the Hydro EcoDesign process that helps our customers create products with increased functionality and a lower-carbon footprint.

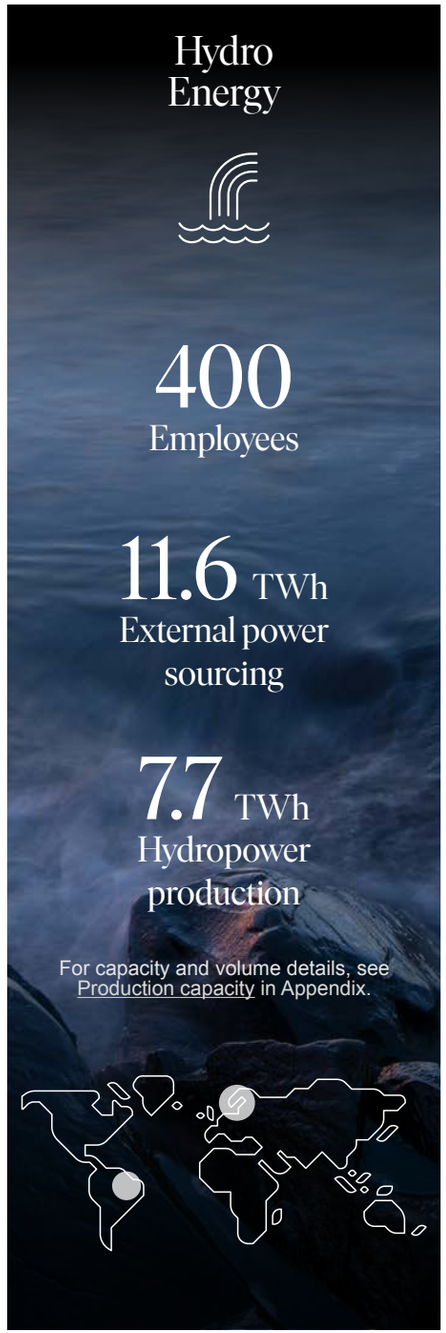
Extrusions applies additional levers to improve its carbon footprint, including sourcing aluminium with a carbon footprint that is lower than the average, increasing the use of recycled post-consumer scrap and reducing the emissions from our operations. See the section on Climate change for more details on how the recycling sourcing strategy can reduce upstream greenhouse gas emissions and the carbon footprint of products.

In addition, Hydro Havrand is exploring the possibility of replacing fossil fuels with green hydrogen at several of Extrusions' recycling operations. Several of Extrusions' plants have installed or are considering installation of on-site renewable power generation, while others have signed power purchase agreements with renewable power producers.

Extrusions EBITDA forecast 2025

NOK billions





Hydro Energy

Operations

Hydro Energy has more than 100 years of experience in production of renewable energy. Today, the business area is one of the three largest operators of hydropower production in Norway, and a large power market player in the Nordic region and Brazil. Hydro Energy is responsible for developing new business opportunities for Hydro within renewable energy, green hydrogen and batteries, and provides support to the rest of Hydro's business areas with contracts, security of supply and energy framework conditions.

In Norway, Energy operates 36 hydropower plants, with combined installed capacity of 2.8 GW at the end of 2022. In a normal year, our captive production is 9.4 TWh and Energy is an operator of 13.7 TWh renewable power production. This includes Tonstad Windfarm (208 MW/0.7 TWh) in Norway, from which Energy purchases all volumes. In addition, Energy purchases more than 9 TWh of renewable power annually in the Nordic market, mainly under long-term contracts, resulting in our total market portfolio for power to be around 18 TWh per year in the Nordics in a normal year.

Within the new energy growth areas, Hydro Rein currently has 1.7 GW gross installed capacity in construction or operation and targets another 1.3 GW by 2026. Hydro Havrand is currently embarking on a pilot project using green hydrogen to decarbonize the Høyanger recycling plant. The project is pending funding support from Enova.

Hydro Batteries is growing within sustainable battery materials, through their investment in the synthetic graphite company, Vianode, and the EV battery recycling company, Hydrovolt. In addition, Hydro Batteries has portfolio holdings in the marine battery systems segment leader, Corvus, and the European emerging cell manufacturing leader, Northvolt.

Cost and revenue drivers

Production volumes are strongly influenced by hydrological conditions. Seasonal factors affect both supply and demand. Energy's cost base is relatively stable, although volatile spot volumes and prices may cause significant variations in quarterly revenues. Energy optimizes its power portfolio in the market every day.

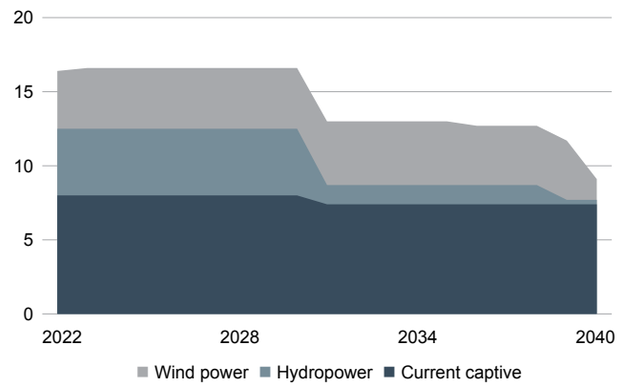
Electricity prices are influenced by fuel costs (including emission allowance costs), meteorological parameters and exchange transmission possibilities with adjoining markets, as well as by fluctuations in demand. Rising intermittent generation from solar and wind power is increasing price variation across power markets. The energy supply crisis in Europe in 2022, led to extraordinarily high and volatile prices for electricity, with large differences in Norwegian power price areas, supporting Hydro Energy's profitability significantly in 2022.

Diversify and grow in renewable energy

Hydro Energy's captive renewable energy production, competitive sourcing of renewable power and energy system solutions enable Hydro and other industrial companies to succeed in the transition to a net-zero society. The carbon footprint of aluminium is highly dependent on the source of energy, and Hydro Energy enables the production of low-carbon aluminium.

Hydro Energy is focused on growing its portfolio of new energy solutions, while also addressing and managing the social and environmental impacts that comes with land use. Read more about Hydro's energy production and how our new energy solutions contribute to a net-zero society in the section on Climate Change.

Power sourcing for Hydro smelters in Norway



Regulations

Hydro is subject to a broad range of laws and regulations in the jurisdictions in which it operates. These laws and regulations impose stringent standards and requirements, and potential liabilities relating to the construction and operation of our plants and facilities, air and water pollutant emissions, the storage, treatment and discharge of waste waters, the use and handling of hazardous or toxic materials, waste disposal practices, and the remediation of environmental contamination, among other things. Some of the laws and regulations deemed most material to Hydro's type of operations are elaborated below. Tax regulations are covered in the Country by Country report.[1]

Bauxite & Alumina regulations
Environmental Regulation
Hydro's operations in Brazil are subject to strict license and environmental regulations requirements.

Under Brazilian law, an environmental license is required for any activity that has the potential to pollute, which is often made subject to conditions to ensure regulatory compliance or to mitigate effects on the environment or local communities. Hydro's Brazilian operations hold several environmental licenses.

Particular regulations apply to our operations in the Mineracão Paragominas S.A. (Paragominas) mine, due to its location in the Amazônia region. The Brazilian Forest Code requires that 80 percent of a rural property with native forest in the Amazônia region must be preserved as an Environmental Legal Reserve, implying that a mine cannot be developed without a sustainable forest management plan. However, within states that have an Economic-Ecological Zoning, for the purpose of environmental restoration, the legal reserve requirement is set to 50 percent, applicable for our operations in Paragominas.

Greenhouse gas emissions
In 2020, Brazil reaffirmed the commitment to a 37 percent reduction in greenhouse gas emissions by 2025 and 43 percent by 2030 compared to 2005 levels, as first submitted as targets at the 2015 Climate Change Conference in Paris. An indicative long-term goal of climate neutrality (net-zero emissions) by 2060 has also been established.

Mining regulation
Exploration of minerals requires an exploration license from the federal mining agency. The license grants an exclusive right to explore an area, subject to various requirements including compensation to the landowner and payment of an annual exploration fee to the National Mining Agency.

If the exploration identifies viable resources, a mining concession is granted, including an obligation to pay royalties to the government and landowners.

Aluminium regulations
Environment
Hydro's aluminium operations are subject to a broad range of environmental laws and regulations, both inside and outside the EU. These laws and regulations impose stringent environmental protection standards related to air emissions, water management, hazardous materials and waste management.

Greenhouse gas emissions
The aluminium industry is included in the EU Emissions Trading System (ETS). The aluminium industry is affected by the scheme directly and indirectly by the pass through of CO_2 allowance costs by power producers into the power prices ("indirect effects").

Aluminium production is qualified as an industrial sector exposed to a significant risk of "carbon leakage" (i.e. risk of European operations losing market share to less carbon-efficient installations outside the EU). Aluminium producers therefore receive a higher percentage of free emission allowances compared to sectors not exposed to carbon leakage. Aluminium producers are also eligible to apply for indirect carbon cost compensation for the indirect effects of ETS in the power prices under the state aid guidelines adopted according to the ETS Directive.

In December 2022, the EU Commission, the European Council and the European Parliament finalized negotiations on a revision of the ETS Directive, accompanied by a new carbon leakage mechanism called the Carbon Border Adjustment Mechanism (CBAM) Regulation. Ambitions were raised to a total emission cut of 55 percent by 2030 compared to 1990 levels, up from 40 percent under present regulation. For the sectors covered by CBAM, the ETS Directive stipulates a phase out of free allowances from 2026 to 2034. The final text of both instruments is expected in first quarter 2023. Reporting obligation under CBAM will start in October 2023.

Trade and Tariffs
The international trade framework has a significant impact on Hydro's business through political developments (EU-US-China relations), the strategic agenda of key trading blocs (regional and bilateral free trade agreements, developments at the WTO, etc.), and technical instruments such as tariffs, anti-dumping duties and other trade measures.

The EU tariff rates on imports of alumina, primary and semi-finished aluminium products vary from 3 to 7.5 percent, excluding aluminium metal produced in the EEA and other countries the EU has a free trade agreement with. Since 2020, the EU has in place anti-dumping duties on aluminium extrusions from China, currently in the range of 21.2-32.1 percent. The EU also has specific anti-dumping duties on certain aluminium products such as foil, wheels and radiators imported from China. In December 2022, the UK decided anti-dumping duties to be applied on imports of certain aluminium extrusion from China to UK in the range between 0 percent and 35 percent.

The US currently has a tariff of 10 percent on aluminium imports, excluding imports from Australia, Argentina, Canada and Mexico. In October 2021, the EU and the US reached a temporary agreement regarding US Section 232 tariffs on aluminium by replacing duties with a tariff-rate quota from January 1, 2022. This agreement covers imports from the EU to the US while exports from Norway and Qatar will still be exposed to the tariffs.

Energy regulations
Hydro's main production assets are hydropower based and situated in Norway. The ownership and utilization of large Norwegian waterfalls for hydropower production is subject to various laws and regulatory requirements, including a requirement for concession from the Ministry of Petroleum

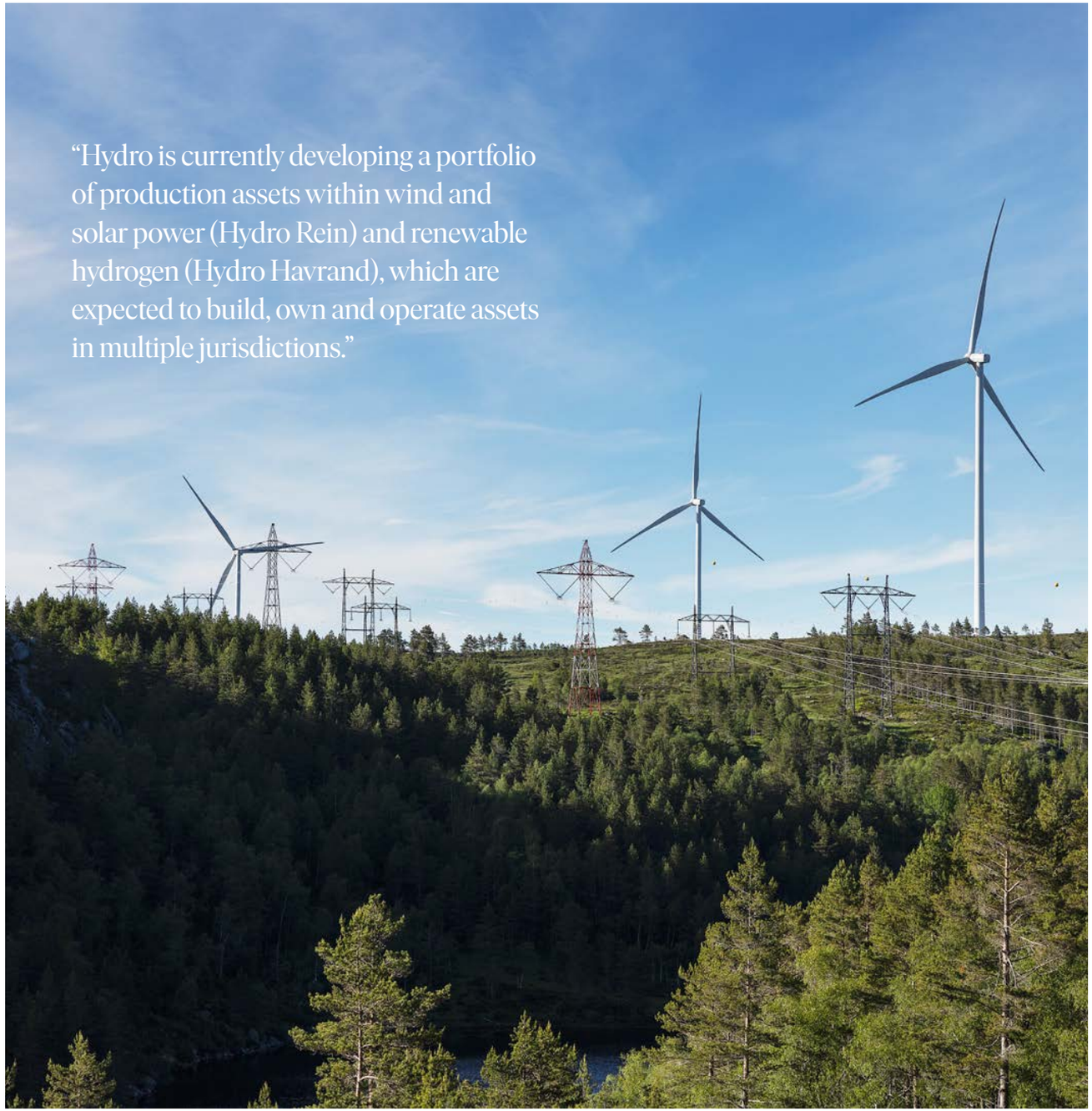
[1] More information about tax see the Country by Country report in the Appendices.

and Energy. EU regulations of power markets as well as the EU Water Framework Directive are by and large implemented in Norwegian law.

Approximately one-third (3 TWh) of Hydro's normal annual production is subject to concession terms requiring Hydro to transfer ("revert") the production assets to the Norwegian state when the concession expires. The majority of concessions will expire around 2050. Reversion can be avoided if the power plants, or two-thirds or more of the shares of the entity that owns the power plants, are sold to a public entity prior to reversion.

Hydro is currently developing a portfolio of production assets within wind and solar power (Hydro Rein) and renewable hydrogen (Hydro Havrand), which are expected to build, own and operate assets in multiple jurisdictions.

Wind, solar and hydrogen projects are all subject to various regulatory matters, such as license requirements, grid access requirements, land and zoning regulations, and HSE. The offshore wind and hydrogen industries are fairly new, and regulations are currently under development in several jurisdictions.



Market developments and outlook

The war in Ukraine, energy crisis in Europe and high inflation have presented significant challenges to the global economy during 2022. Key markets have experienced their highest inflation levels for the past 20 years, and in response many central banks increased interest rates during the year, weakening demand. Continued global supply chain disruptions and China's zero-Covid policy further reduced growth.

Bauxite & Alumina
The World excluding China alumina market was oversupplied in 2022, with China absorbing the excess production as imports to balance the global market. The World excluding China production decreased 3 percent from 2021, driven by refinery curtailments in Europe exceeding alumina production increases in Indonesia and India. In Ukraine, the Mykolaiv refinery was fully shut down in the second quarter following the onset of the war in Ukraine.

Chinese alumina production increased 6 percent from 2021, driven by the ramp-up of several new greenfield refineries, mostly using imported bauxite.

The Platts alumina price index started the year at USD 345 per mt, ranging from USD 310 to 533 per mt during 2022. The price increased strongly at the beginning of the year following the onset of the war in Ukraine reflecting heightened supply risk, reaching an annual high of USD 533 per mt in the middle of March. Prices trended down during the second quarter stabilizing around USD 330 per mt of the remainder of the year, reflecting price levels of domestic alumina in China.

The Platts alumina price index averaged USD 362 per mt for the year, a 10 percent increase compared to 2021. Prices as a percentage of LME varied, averaging 13.4 percent for the year compared with 13.2 percent in 2021. The price index at the end of 2022 represented 13.8 percent of the three month aluminium price quoted on LME.

China imported 1.9 million mt (1.0 million mt net of exports) of alumina in 2022, compared to net imports of 3.1 million mt in 2021. Australia accounted for 56 percent of imports followed by Indonesia and Vietnam with 23 percent and 10 percent, respectively. China exported 0.8 million mt of alumina to Russia in 2022.

China imported 126.3 million mt of bauxite in 2022, 18 percent higher than the previous year. Imports from Guinea increased 28 percent from 2021 to 70.2 million mt, with smaller increases of 11 percent and 1 percent of imports from Indonesia, to 19.7 million mt, and Australia to 34.2 million mt, respectively. These three countries accounted for 98 percent of China's bauxite imports in 2022, compared to 99 percent in 2021.

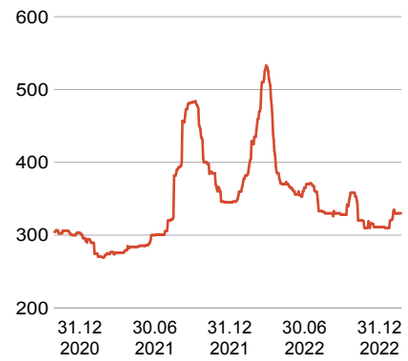
The price of bauxite imported into China in 2022 increased to an annual average of USD 58 per mt CIF China compared to USD 48 per mt CIF China in 2021, mainly driven by higher oil prices and ocean freight rates.

Primary Aluminium
Three month LME prices started the year at USD 2,808 per mt and ended the year at USD 2,378 per mt. Prices increased in the first quarter reaching an all time high in March of USD 3,849 per mt as the war in Ukraine increased the fear of sanctions on Russian producers and significant disruptions to metal flows. Prices decreased significantly in the second quarter before trading around USD 2,200 - 2,400 per mt for the remainder of the year driven by a weaker macroeconomic environment.

The US and European standard ingot premiums started the year at USD 665 per mt and at USD 425 per mt respectively. European standard ingot premiums increased in the first half of the year peaking in May at a new all time high of USD 615 per mt, prices then decreased steadily before stabilizing around USD 250 per mt at the end of the year as a weaker macroeconomic environment effected demand. The US Midwest standard ingot premium peaked at an all time high of USD 882 per mt in April, then declined steadily to around USD 490 per mt at the end of the year as a weaker macroeconomic environment effected demand.

Global primary aluminium consumption increased by 0.4 percent to 69.2 million mt in 2022. Global supply increased by 2.3 percent to 68.9 million mt resulting in global deficit of around 0.3 million mt. For 2023, global primary aluminium demand is expected to increase by around 1 percent and aluminium production is expected to increase by around 2 percent, resulting in a global surplus in 2023.

Platts PAX development
USD/mt



LME price (3 month aluminium)
USD/mt

Demand for primary aluminium outside China increased by around 0.4 percent in 2022, while corresponding production was stable. Overall, the demand and supply for primary aluminium was balanced outside China in 2022. Demand for primary aluminium outside China is expected to increase by around 1 percent in 2023. Corresponding production is expected to be up about 1-2 percent. Demand and supply for the world outside China is expected to be balanced in 2023.

Demand for primary metal in China increased around 0.3 percent to 40.2 million mt in 2022. Chinese production increased by 4.0 percent in 2022. The Chinese market was mainly balanced in 2022. Energy supply issues encountered in 2021 were resolved in 2022, facilitating significant restarts of previously curtailed capacity supporting production growth. Chinese primary production is expected to increase by 2-3 percent in 2023. Primary metal demand is estimated to increase by around 1-2 percent, resulting in a slight surplus in 2023.

LME stocks decreased significantly in 2022, from 0.93 million mt at the end of 2021, to 0.45 million mt at the end of 2022. Stocks dropped to a 20 year low of 0.27 million tons in August 2022, followed by a slight increase. Total global inventories, including unreported inventories, are estimated to have decreased by 0.4 million mt in 2022. The total stock level is estimated to be around 9.0 million mt at the end of 2022.

The European demand for sheet ingot, primary foundry alloys and wire rod increased in 2022. The consumption of extrusion ingot was negatively affected by weakness in the building and construction sector leading to a reduced demand in 2022 compared to 2021.

In Asia, the demand for extrusion ingot weakened in the second half of 2022 and high inventory levels were reported in the market at the end of the year. Primary foundry alloys demand remained stable due to pent up demand caused by semiconductor and logistics supply disruption in 2021.

The US demand for extrusion ingot in the US grew throughout the first half of 2022, but moderated toward the end of the year as higher interest rates slowed industrial activity. Meanwhile, primary foundry alloy demand steadily picked up throughout the year as automobile and light truck production rebounded with improvements in deliveries of semiconductors.

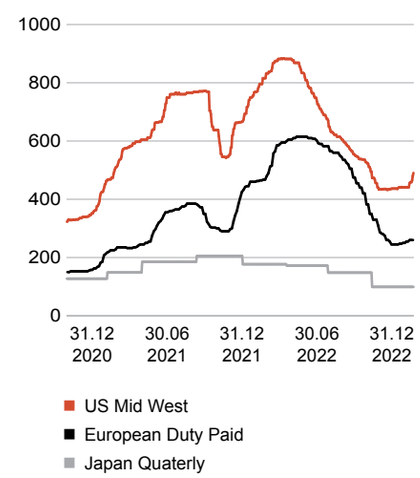
Extruded Products
Extrusion demand growth moderated throughout 2022 after rebounding strongly in both Europe and North America in 2021, following the severe slowdown in 2020. Demand remained fairly strong in the first half of the year, but started to weaken in the second half as the macro environment weakened, particularly in Europe due to the war in Ukraine and high inflation. European extrusion demand increased 2 percent in the first half of 2022, compared to the same period in 2021, while demand fell 10 percent in the second half compared to second half 2021. North American demand also moderated in the second half of 2022, with growth slowing from around 6 percent in the first half of 2022 to flat growth in the second half compared to same periods last year.

Building and construction, and industrial segments experienced the weakest development in 2022 after strongly rebounding in 2021. Higher interest rates and reduced consumer spending negatively impacted the underlying demand for these segments, with further weakness expected in the first half of 2023. The automotive segment is improving as automotive producers are increasing production amid easing of supply chain issues.

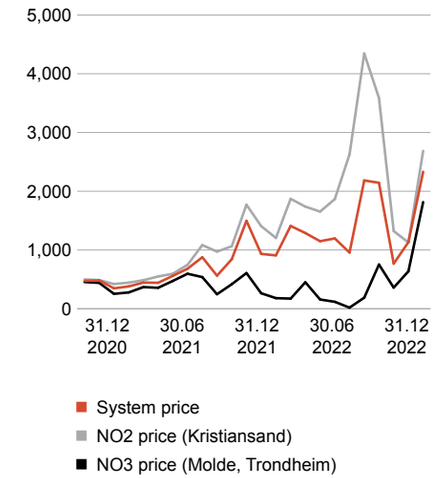
Overall, European demand is estimated to have decreased by 4 percent in 2022, compared to 2021. CRU estimates that European extrusion demand will further decrease by 7 percent in 2023, compared to 2022, with growth picking up in the second half of the year. North American demand is estimated to have increased 3 percent in 2022, compared to 2021. CRU estimates that North American extrusion demand will decrease by 1 percent in 2023, compared to 2022.

Energy market developments
Both Nordic and continental power prices reached record levels in 2022. The war in Ukraine has generated a sharp increase in energy prices and significant volatility in energy markets. Fuel prices were already at a high level early in the year, but both price level and volatility increased to unprecedented levels as Russian coal and gas supply gradually eroded. In addition to the gas shortage, weak hydrology in the Nordic area, drought at the continent and sustained problems with French nuclear power capacity contributed to the high price levels. The significant price area differences in the Nordic region have remained during the year due to limitations in transmission capacity between the Northern and Southern part of the NordPool area.

Premiums
USD/mt



Energy spot price
NOK/MWh



Performance review

Hydro

Performance

Adjusted RoaCE

22.2%

Up from 2021 (18.6%)

Recordable incidents

2.4

Down from 2021 (3.3)

Zero

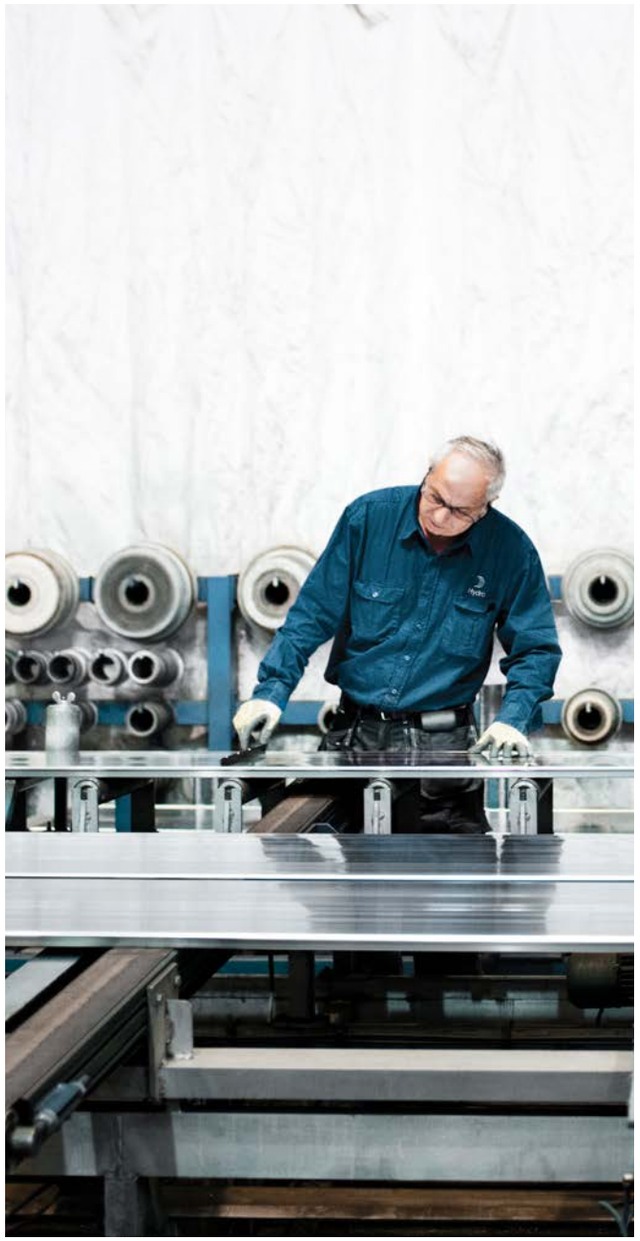
Fatal accidents

11.03

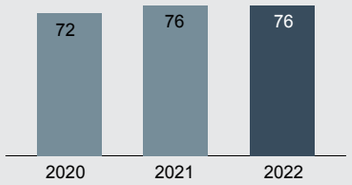
MT CO2e Scope 1 and 2 GHG emissions (ownership equity)

6.85 NOK

Shareholder payout

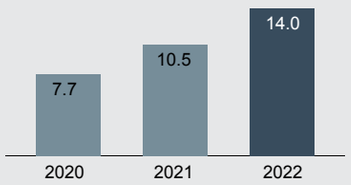


Engagement index



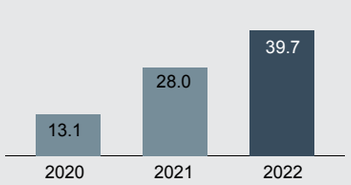
Free cash flow

NOK billion



Adjusted EDITDA

NOK billion



Key performance measures

Key financial performance

NOK million	**2022**	2021	2020
Revenue	207,929	149,654	114,291
Earnings before financial items, tax, depreciation and amortization (EBITDA)[1]	39,536	26,050	18,390
Adjustments to EBITDA[1]	128	1,959	(5,284)
Adjusted EBITDA[1]	**39,664**	**28,010**	**13,106**
Hydro Bauxite & Alumina	3,122	5,336	3,817
Hydro Aluminium Metal	22,963	13,500	3,593
Hydro Metal Markets	1,673	867	875
Hydro Extrusions	7,020	5,695	4,348
Hydro Energy	4,926	3,790	1,245
Other and eliminations	(39)	(1,178)	(771)
Adjusted EBITDA[1]	**39,664**	**28,010**	**13,106**
Earnings before financial items and tax (EBIT)[2]	30,715	17,887	9,356
Adjusted EBIT[1]	31,179	20,786	6,040
Net income (loss) from continuing operations	24,381	13,930	3,886
Adjusted net income (loss) from continuing operations[1]	23,145	14,905	2,848
Net income (loss) from discontinued operations	36	12	(2,226)
Earnings per share from continuing operations	11.76	5.92	1.99
Adjusted earnings per share from continuing operations[1]	**10.70**	**6.77**	**1.32**
Financial data			
Investments[1] [2]	13,391	8,589	13,324
Net cash (debt)[1]	1,310	3,213	(7,795)
Adjusted net cash (debt)[1]	(5,989)	(7,019)	(23,297)
Adjusted Return on average Capital Employed (RoaCE)[1]	22.2%	18.6%	3.7%
Key operational information			
Bauxite production (kmt)[3]	11,012	10,926	8,640
Alumina production (kmt)	6,193	6,305	5,457
Realized alumina price (USD/mt)[4]	382	313	268
Primary aluminium production (kmt)	2,137	2,244	2,091
Realized aluminium price LME (USD/mt)	2,599	2,317	1,685
Realized USD/NOK exchange rate	9.52	8.55	9.42
Extrusions sales volumes to external market (kmt)	1,251	1,296	1,099
Power production (GWh)	7,664	9,055	11,522

1) Alternative performance measures (APM) are described in the appendices to the Board of Directors' report.
2) EBITDA and investments per segment are specified in note 1.4 Operating and geographic segment information in the financial statements.
3) Paragominas production, on wet basis.
4) Weighted average of own production and third-party contracts. The majority of the alumina is sold linked to either the LME prices or alumina index with one-month delay.

Financial performance

Financial performance

Adjusted EBITDA
Adjusted EBITDA for the full year of 2022, increased compared to the same period last year. Higher realized all-in metal and alumina prices, record high annual results in both Extrusions and Energy, and positive currency effects were offset by higher fixed and raw material costs upstream.

Net income
Net income from continuing operations amounted to NOK 24,381 million in 2022, compared to NOK 13,930 million in 2021. In addition to the factors described above, net income from continuing operations included a net foreign exchange gain of NOK 2,192 million, a NOK 3,352 million unrealized loss on power and raw material contracts, and a NOK 3,003 million unrealized gain on LME related contracts.

Return on average capital employed (RoaCE)
In 2022, Hydro achieved an adjusted return on average capital employed of 22.2 percent, higher than the 18.6 percent achieved in 2021, and above the ambition to deliver 10 percent over the cycle. The main driver behind the strong returns was record high results in Aluminium Metal following high all-in metal prices and positive currency effects. Aluminium Metal achieved the highest RoaCE of the business areas with 35.4 percent. Energy and Extrusions also achieved returns significantly above the target level during 2022. Bauxite & Alumina RoaCE was lower in 2022 compared to 2021, mainly driven by higher raw material and energy prices.

Cash effective change in net operating capital[1)]
Cash effective change in net operating capital from continuing operations amounted to NOK (8.8) billion during 2022, compared to NOK (8.6) billion during 2021. While seasonality and a weakening market towards year end contributed to a net release of trade receivables, the market slowdown also contributed to an inventory increase driven by excess production, price increases, and security of supply measures. The settlement of the Slovalco power hedge position also contributed to increase in net operating capital.

Capex[1)]
Total capex in 2022 ended up at NOK 11.5 billion, up from NOK 6.9 billion in 2021. Projects prioritized in 2022, include critical maintenance activities needed to safeguard Hydro's production assets in every business area. Examples also include smelter relining in Aluminium Metal, bauxite pipeline section replacement in Paragominas, power plant rehabilitation and upgrades in Energy, various upgrades of presses in Extrusions, and recyclers in Metal Markets. Growth and return-seeking capex was mainly related to the expansion of remelt capacity in Extrusions and Aluminium Metal, new extrusion presses and customer-driven investments in Extrusions, and investments in Hydro Rein and Batteries in Energy.

1) For further details, see the Alternative performance measures (APM).

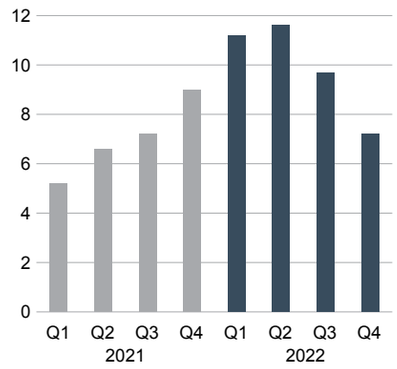
Adjusted Return on average Capital Employed (RoaCE)

	2022	2021	2020
Hydro	**22.2%**	**18.6%**	**3.7%**
Bauxite & Alumina	1.8%	12.0%	5.9%
Aluminium Metal	35.4%	28.3%	2.9%
Metal Markets	31.0%	23.9%	21.6%
Extrusions	11.4%	10.3%	6.2%
Energy	29.5%	25.4%	8.7%

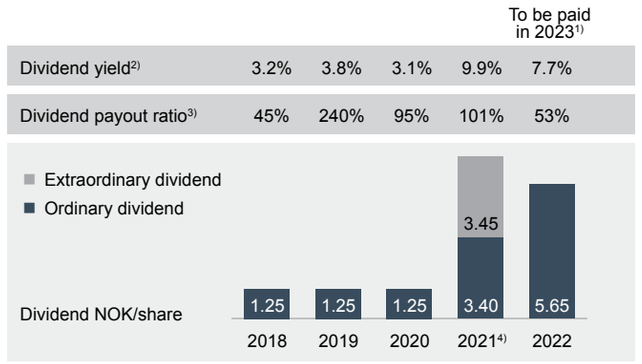
Free cash flow[1)]
Free cash flow from continuing operations ended at NOK 14.0 billion in 2022, up from NOK 10.5 billion in 2021. Cash generation was supported by strong EBITDA results, partly offset by increased capex and build in net operating capital.

Dividend
Hydro's ambition is to pay attractive dividends to shareholders. In light of the strong financial performance in 2022, and reflecting our robust balance sheet, the Board of Directors has proposed to distribute NOK 13.5 billion, which represents 61.6 percent of 2022 adjusted net income, as a combination of NOK 5.65 per share of cash dividends and NOK 2 billion of share buybacks. The final shareholder distribution for 2022 is subject to approval by the Annual General Meeting on May 10, 2023.

Adjusted EBITDA



5-year dividend development



1) Pending approval from the AGM on May 10, 2023.
2) Based on share price at year end.
3) Average dividend per share divided by average adjusted earnings per share from continuing operations.
4) 2021 extraordinary dividend of NOK 2 per share May 11 2022 and NOK 1.45 per share September 21 2022.

Net cash (debt)[1)]
Hydro's net cash was NOK 1.3 billion at the end of 2022, compared to net cash of NOK 3.2 billion at the end of 2021. The net cash reduction was driven by a positive free cash flow, which was offset by shareholder distributions as well as currency and lease effects.

Adjusted net cash (debt)[1)]
Hydro's adjusted net cash (debt) was NOK (6.0) billion at the end of 2022, compared to NOK (7.0) billion at the end of 2021. The adjusted net debt reduction was mainly driven by a reduction in cash collateral and pension obligations, partly offset by a reduction in net cash.

Adjusted net (cash) debt to adjusted EBITDA ratio[2)]
Hydro's adjusted net (cash) debt to adjusted EBITDA was 0.2, well below the targeted maximum ratio of 2.0 over the cycle.

Liquidity
Hydro held NOK 29.8 billion in cash and cash equivalents and NOK 0.8 billion in time deposits at the end of the year. Short-term bank deposits are normally available at short notice. Norsk Hydro ASA has a USD 1.6 billion revolving multi-currency credit facility with a syndicate of international banks, maturing in December 2026. The facility was undrawn per year-end 2022. Overdraft facilities and liquidity lines also provide access to additional short-term liquidity.

Improvement program
By the end of 2022, Hydro realized NOK 7.8 billion in improvements, exceeding the original target of NOK 7.0 billion for the year. During the year, Hydro increased the improvement program target by NOK 1.5 billion to NOK 10.0 billion by 2025, including a positive rebasing effect of approximately NOK 0.7 billion. Hydro also extended the program to 2027, with additional targeted improvements of NOK 1.0 billion. Extrusions is the main driver of the strong 2022 performance through procurement savings and the Extrusions Business System (EBS) initiative. Key improvements in Bauxite & Alumina and Aluminium Metal included improvements to operational parameters and raw material consumption. Hydro's target for 2023 is to achieve NOK 8.4 billion in accumulated improvements.

Commercial ambition
Hydro realized NOK 1.8 billion in commercial initiatives by the end of 2022, out of the total NOK 2.5 billion ambition by 2025. Hydro has also extended the program to 2027, with additional improvements of NOK 0.5 billion. The 2022 commercial impact in Extrusions is mainly driven by margin improvements. Bauxite & Alumina achieved higher premiums on their alumina sales compared to their performance benchmark. Finally, Aluminium Metal increased greener product sales as well increased impact from new products, such as HyForge. In total, 470 kt of CIRCAL and REDUXA were sold in 2022, which is around 185 kt more than in 2021.

Moody's
Baa3

S&P
BBB

Exceeding target

Hydro realized

7.8
NOK billion

In improvements, exceeding its NOK 7.0 billion target for 2022

Average adjusted net cash (debt)/ adjusted EBITDA

0.2

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1) For further details, see note 7.1 Capital management.
2) For further details, see the Alternative Performance Measures (APM).

Adjustments to EBIT

Reported EBIT and net income
In addition to the factors discussed above, reported earnings before financial items and tax (EBIT) and net income include effects that are disclosed in the table below. Adjusting items to EBIT and adjusted net income (loss) are defined and described as part of the Alternative performance measures in the Appendices to the Annual report.

Items excluded from adjusted EBIT and net income[1)]

NOK million	**2022**	2021	2020
Unrealized derivative effects on LME related contracts	(3,003)	5,088	(336)
Unrealized derivative effects on power and raw material contracts	3,352	(3,083)	171
Significant rationalization charges and closure costs[2)]	152	377	187
Community contributions Brazil[3)]	32	217	129
Transaction related effects[4)]	(119)	(304)	(5,407)
Net foreign exchange (gain)/loss[5)]	(318)	(79)	-
Other effects[6)]	32	(257)	(30)
Adjusting items to EBITDA	**128**	**1,959**	**(5,284)**
Impairment charges[7)]	335	426	1,968
Depreciation[8)]	-	513	-
Adjusting items to EBIT	**464**	**2,899**	**(3,316)**
Net foreign exchange (gain)/loss	(2,192)	(1,404)	3,800
Other finance (income) expense	-	-	(128)
Calculated income tax effect	492	(520)	(1,393)
Adjusting items to net income	(1,236)	**976**	**(1,038)**
Income (loss) tax rate	25%	24%	19%
Adjusted income (loss) tax rate	24%	25%	45%

1) Negative figures indicate reversal of a gain and positive figures indicate reversal of a loss.
2) Significant rationalization and closure costs include a provision for costs related to reduction of overcapacity, closures and environmental clean-up activities in Hydro Aluminium Metal and Hydro Extrusions.
3) Community agreements includes provisions for the TAC and TC agreements with the Government of Parà and Ministèrio Pùblico made in September 2018, including later adjustments for changes in cost estimates, and similar agreement.
4) Transaction related effect inculdes gains(losses) of divestments as described in the Alternative Performance Measures section in the appendices.
5) Realized currency gains and losses from risk management contracts and embedded currency derivatives in physical power and raw material prices.
6) Other effects include adjustments as described in the Alternative Performance Measures section in the appendices.
7) Impairment charges for 2022, 2021 and 2020 include Slovalco smelter and various sites and assets in Hydro Extrusions.
8) Excess depreciation related to the anode producer Aluchemie which closed in 2021.

Hydro's key financial exposures

Hydro's operating results are primarily affected by price developments of our main products, raw materials, margin developments and fluctuations in the most significant currencies for Hydro, which are USD, NOK, EUR and BRL.

Hydro enters into derivative forward sale contracts both on the LME and with banks to secure prices on parts of the planned aluminium production as part of securing a margin level for periods up to about three years when considered beneficial. To mitigate the impact of exchange rate fluctuations, long-term debt is mainly maintained in currencies reflecting underlying exposures and cash generation.

The table shows sensitivities regarding aluminium prices and foreign currency fluctuations for 2023. The table illustrates the sensitivity of adjusted earnings, before tax, interest and depreciation to changes in these factors and is provided to supplement the sensitivity analysis required by IFRS, included in note 8.2 Financial instruments to the financial statements. These sensitivities are on an adjusted basis, and do not consider revaluation effects of derivative instruments, which may influence earnings. The sensitivities include the impact from financial risk management contracts per December 31, 2022.

Legal proceedings
The Group is engaged in a large number of legal proceedings and disputes around the world. As of the date of this Annual Report, based on the Company's current assessment, neither the Company nor any other company in the Group are, nor have during the course of the last 12 months, been involved in any governmental, legal or arbitration proceedings, which may have, or have had in the recent past significant effects on the Company and/or the Group's financial position or profitability.

Sensitivities with 100% production

Commodity price sensitivity +10%

NOK million	
Aluminium (Adj. EBITDA)	3,110

Currency sensitivities +10%

NOK million	USD	BRL	EUR
Sustainable effect (Adj. EBITDA)	3,740	(840)	10
One-off reevaluation effect - Financial items (Adj. EBITDA)	(990)	1,040	(4,050)

Annual sensitivities based on normal annual production volumes and reflecting strategic hedge positions. LME USD 2,250 per mt, USD/NOK 10.16, BRL/NOK 1.94, EUR/NOK 10.39.

Key performance measures – sustainability

Environmental performance	**Ambitions and targets**	**2022**	2021	2020
Total greenhouse gas emissions by ownership equity (million tonnes CO2e)[1)]	10% reduction by 2025 against 2018 baseline and net-zero by 2050	11.03	11.46	10.64
Indirect Scope 3 GHG emissions by ownership equity (Million tonnes CO2e)[2)]	30% reduction per tonne aluminium by 2030 against 2018 baseline[3)]	14.41	15.39	20.21
Recycled post-consumer scrap (thousand tonnes)[4)]	620-770 thousand tonnes per year by 2027	321	335	104
Accumulated area disturbed by mining operations at Paragominas (hectares)	1:1 rehabilitation target of mined areas within two hydrological cycles	7,512	7,017	6,607
Accumulated area under rehabilitation (hectares)	1:1 rehabilitation target of mined areas within two hydrological cycles	2,905	2,646	2,486
Recycled waste (share of total waste generated)[5)]	Eliminate all recoverable waste by 2040	71%	74%	71%
Social performance				
Total recordable injuries (per million working hours)[6)]	Zero life-changing injuries	2.4	3.3	2.7
Number of fatal accidents	Zero fatal accidents	0	0	0
Persons empowered with skills and education[7)]	Provide quality education and capacity building to 500 thousand people by 2030	157	129	108
Share of women employees[8)]	25% share of women by 2025[8)]	22%	20%	19%
Share of women leaders[8)]	25% share of women leaders by 2025[8)]	19%	18%	-
Employee inclusion index	78% inclusion index score in 2023	76%	76%	-
Governance and compliance indicators				
Substantiated claims of corruption	Zero substantiated claims of corruption	0	0	1

1) Scope 1 and 2 GHG emissions. See note E1 for more information.
2) Comprises material upstream Scope 3 categories. See note E1.3 for more information.
3) 2018 baseline. See note E1.3 for more information.
4) Includes recycling in Hydro Extrusions from 2021.
5) Comprises waste diverted from disposal. See note E6 for more information.
6) Includes both employees and contractors. See note S5 for more information.
7) Presented as cummulative numbers in number of thousands.
8) In permanent and temporary positions.

Sustainability performance

Sustainability is an integrated part of Hydro's strategy to lift long-term profitability and positioning in the market. By reducing our footprint, improving relations with stakeholders and neighbors, managing impacts, increasing resource efficiency and developing new markets, Hydro will reduce risk and create new opportunities. Hydro has quantified ambitions towards 2030 and 2050 that will improve our performance on climate, environment, and social responsibility.

Climate performance

Hydro's ambition is to be a net-zero company by 2050 or earlier, delivering net-zero products and enabling a net-zero society. In 2022, Hydro's total greenhouse gas (GHG) emissions were 6.5 percent lower than the 2018 climate strategy baseline, and is still on track in to deliver on our target of total emission reductions of 10 percent by 2025. Hdyro recycled 321,000 tonnes of post-consumer aluminium scrap, enabling the production of 100 tonnes of Hydro CIRCAL with 100 percent post-consumer scrap, and 50,000 tonnes of Hydro CIRCAL with a minimum of 75 percent recycled post-consumer scrap. In 2022, Hydro has also set reduction targets for Scope 3 emissions towards 2030 – a 15 percent reduction in total emissions and a 30 percent reduction in Scope 3 emissions per ton aluminium delivered to market, both from a 2018 baseline.

Environmental performance

The goal of Hydro's environment strategy is to minimize impact across our operations by addressing environmental challenges. Hydro is progressing according to plan towards 2030. In 2022, our rehabilitation target was met for our mining site in Paragominas, Brazil and a Global Procedure on biodiversity and ecosystem services management was established. Hydro has a target to eliminate all recoverable waste generated by our operations, by 2040. In 2022, the company recycled 71 percent of our waste and has started to develop specific roadmaps to eliminate the landfilling of the remaining recoverable waste. For bauxite tailings and residue, specifically, the Tailings Dry Backfill (TDB) methodology, implemented in 2021, has eliminated the need to build new tailings storage facilities in Paragominas, Hydro continues our R&D activities into bauxite residue reuse. In 2022, 66 percent of the tailings generated at our mine were diverted to temporary storage for drying under the TDB method.

Social performance

Hydro is working towards a transition to a low-carbon economy that also provides a just transition, where job creation and decent work is ensured, and aims to contribute to the development of local communities where it operate. In 2022, Hydro developed a framework for supporting a just transition and established a forum for Human Rights in the company. Solutions for increased traceability and transparency of sustainability data in the value chain have been piloted with some key customers during 2022. A roadmap for implementation across all business areas by 2025 is developed. Hydro educated almost 25,000 people as part of our ambition to provide quality education and capacity building to 500,000 people by 2030, achieving 31 percent of the target on aggregate. Moreover, Hydro contributed NOK 69 million in community investments, charitable donations and sponsorships around the world.

The total recordable injury rate was 2.4 per million hours worked in 2022, an improvement from 3.3 in 2021. This is our best result to date. The majority of injuries were classified as minor, with one life changing injury and zero fatalities recorded during the year.

The diversity, inclusion and belonging strategy was further developed in 2022, and implementation is continuing in all business areas. Our gender balance improved by 2 percentage points, with 22 percent of the Hydro workforce comprising women by the end of 2022.

Sustainability reporting

The Sustainability chapter presents Hydro's management of and performance on material climate, environmental and social issues. The Sustainability statements includes detailed performance indicators and our principles for sustainability reporting. Our materiality assessment is presented in the section on Sustainability reporting the Hydro way, in the Governance chapter. Hydro reports on its sustainability performance in accordance with the GRI standards. Please see our GRI index at Hydro.com/gri.

Governance

Hydro

Risk review

Enterprise Risk Management in Hydro

Risk management is an integral part of all our business activities and decisions.

The Board of Directors (BoD) sets expectations, oversees Hydro's system of risk management and reviews key risks through biannual updates which serve as an important foundation for the strategy and business planning processes. In addition, specific topics will be subject to more frequent updates. Progress on risk mitigation is reflected in the remuneration schemes of the Chief Executive Officer (CEO) and Corporate Management Board (CMB). The Board Audit Committee supports the BoD's supervisory role. The CMB is responsible for Hydro's risk management framework at group level and assists the CEO in its execution. The framework is inspired by international standards, and Hydro more specifically apply the Committee of Sponsoring Organizations of the Treadway Commission's 'COSO Internal Control - Integrated Framework' (2013) with respect to Financial Reporting.

> Risk management is an integral part of all our business activities and decisions.

The further attribution of risk management roles in Hydro is supported by the development of a three lines of defense (3LoD) governance model.

The first line of defense resides with managers at all levels in business areas and corporate functions. They have the responsibility for and ownership of incident and HSE risks. Business areas and corporate functions ensure that risks within their respective areas of accountability are identified, assessed, adequately mitigated, documented, reported and updated. The frequency of updates is dependent on the nature of each risk as well as the pace of internal or external change.

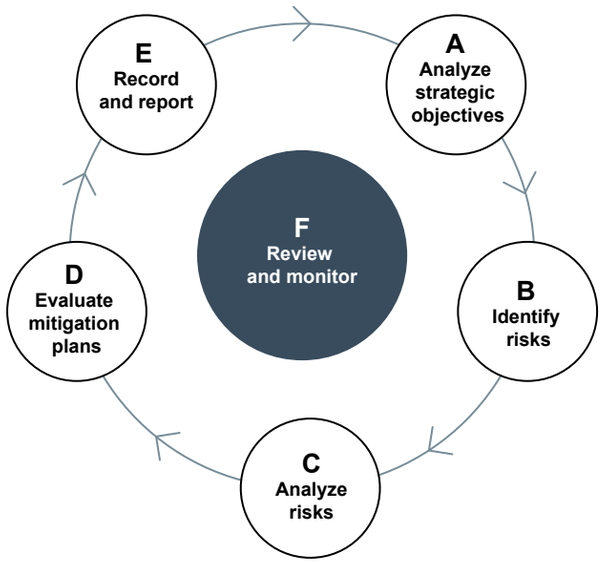
The second line comprises governance owners and subject matter experts in different risk areas. They develop policies and procedures for managing risk and coordinate an annual risk assessment with a biannual status update. More broadly, they support, challenge and monitor the first line of defense.

The third line comprises Group Internal Audit & Investigation. This department independently evaluates whether Hydro's risk management, control and governance processes, as designed and implemented by management, are adequate and contribute to the achievement of the organization's objective.

Through the 3LoD model, major risks are managed according to Hydro's risk appetite and consolidated at group level through the annual strategy process, with a status update provided in the business planning process, while mitigating plans progress on an ongoing basis.

An overview of Hydro's key risks, including developments during the last 12 months and related mitigating actions, is included below. Overall, Hydro has seen an evolution of the company's risk profile rather than a material change, with emphasis on the challenges of protectionism, regionalization and the company's new strategic direction. Despite Hydro's best efforts, our risk-mitigating initiatives may fail or prove to be inadequate to mitigate all risks. As our risks increase, decrease and change, and as new risks emerge over time, the information contained in this section should be carefully considered by investors.

Risk process



A. Strategic and business level objectives are clearly communicated to and well understood by managers at all levels
B. Upside and downside risks within each business or functional area, as well as interconnected risks are identified and assigned to risk owners
C. Significant risks are further analyzed using a variety of risk assessment techniques to articulate key attributes and establish their materiality
D. Mitigating strategies are selected and evaluated based on their cost-benefit
E. Risk outcomes are recorded and reported within business areas and corporate functions, as well as further aggregated at group level
F. Risk information is reviewed and monitored on an ongoing basis, considering the pace of internal and external change

	Influenceability	Likelihood	Trend*
Strategic risks			
1. Sustainability trends	◕	●	➤
2. Value chain concentration	◕	●	➤
3. Macro-economic developments, geopolitical tensions, protectionism and trade disruptions	◑	●	➤
4. Regulatory & policy framework uncertainty	◔	●	➤
5. Technological breakthroughs	◑	●	➤
6. Climate change	◔	●	➤
Incident risks			
7. Insufficient asset integrity	◕	●	➤
8. Material legal or compliance incident	◕	●	➤
9. Major cyber-attack	◑	●	➤
10. Failure to meet social performance expectations	◑	●	➤
11. Material tax change	◔	●	➤
HSE risks			
12. Fatal or life-changing accident	◑	●	➤
13. Security incident	◔	●	➤
14. Impact on the environment	◑	●	➤
15. Structural collapse or other major accident	◑	●	➤

* Indicates whether the likelihood of the risk and/or the severity of its consequences have increased, decreased or remained stable since 2021.

Although Hydro maintains insurance to protect against certain risks in such amounts as it considers reasonable and in accordance with market practice, its insurance may not cover all the potential risks associated with its operations, and therefore any material disruptions (especially if not covered by Hydro's insurance) could have a material adverse impact on its business and financial condition.

◔ Low	● Low	➤ Decreasing
◑ Medium	● Medium	➤ Stable
◕ High	● High	➤ Increasing

Hydro's risk categories

Strategic risks

Strategic risks are emerging challenges to the achievement of Hydro's strategic objectives. They could have a significant upside and are characterized by their large scale and potential long-term impact on sustainability and profitability. They are generally influenced by structural shifts in the external business environment.

Incident risks

Incident risks are mainly operational or influenced by operational processes. They will often, but not always, materialize suddenly and with immediate impact. Short-term mitigation is typically within Hydro's control. Hydro's main incident risks could impact several parts of the value chain with a broad range of consequences.

HSE risks

HSE risks relate to health, safety, security and/or environmental events. They are often operational or influenced by operational processes. Hydro's main HSE risks could influence multiple parts of the business. In addition to their HSE-related consequences, these risks may also result in major legal, social, reputational and financial impacts.

Hydro

Strategic risks

1. Sustainability trends

Description
Stakeholders' expectations on Hydro's sustainability performance continue to evolve. While our CO_2 footprint is among the lowest of aluminium producers, the production process remains energy and carbon intensive. In addition, key stakeholders are increasingly looking beyond carbon and focusing on the overall sustainability footprint, including environmental and social factors.

Consequences
A failure to deliver on expectations could negatively impact our license to operate, damage our reputation and increase the risk of substitution away from aluminium.

Developments
Global awareness and attention toward sustainability continues to trend upwards. To a large degree, this is positive for Hydro compared to peers mainly due to Hydro's renewable power and recycling portfolio. In addition to current climate change targets, the attention towards biodiversity and social aspects is expected to increase as decarbonization roadmaps become more mature. Customers' expectations increasingly reflect this across all aspects of sustainability and along the entire value chain.

Regulations are tightening, especially in Europe. Investments in research and development toward greener solutions are growing, which increases the drive to deliver sustainable materials. In general, all geographies, industries and companies are expected to come under increased scrutiny.

Mitigation
In 2020, Hydro established a new strategic direction to strengthen our position in low-carbon aluminum and grow within renewable energy. Hydro is committed to reduce its GHG emissions by 30 percent by 2030. This includes projects to reduce CO_2 emissions in the value chain such as a fuel switch to LNG and the electrification of boilers at Alunorte, while research on the use of hydrogen or other zero emissions processes in the cast-houses is being developed.

Within primary aluminium production, Hydro is working on various methods to reduce direct emissions, while also targeting an increased use of post-consumer scrap, thereby reducing total energy usage and metal waste. These contribute towards our longer-term technology roadmap to decarbonize main processes such as primary smelting and recycling, supporting our overall ambition to become carbon neutral by 2050.

In 2022, Hydro made good progress on our ambitions through installing the first electrical boiler at our alumina refinery, producing the first batch of aluminium products based on 100 percent post-consumer scrap, and progressing on the development our carbon free aluminium production technology in line with our targets. This enables our growing portfolio of low-carbon aluminum products, sold at a premium pricing.

Alongside decarbonization, progress is made on other environmental areas such as biodiversity, waste and water as well as stronger community relationships, particularly in Brazil. Initiatives to improve our social and environmental impact are monitored, communicated, and reported on a regular basis. This is in line with our Just Transition framework, focusing on three key societal outcomes: protecting human rights and providing access to equal opportunities, contributing to resilient local communities, and supporting people to gain the necessary skills and jobs for the future low-carbon economy.

2. Value chain concentration

Description
Hydro receives almost all our alumina from Hydro-owned operations in Brazil, whereby the bauxite mine at Paragominas supplies the majority of raw materials to the Alunorte alumina refinery through a 244 kilometers long pipeline.

On several occasions during the past few years, Hydro experienced challenges with respect to its operations in Brazil due to a combination of factors involving physical climate incidents, asset integrity (ability to run assets effectively and reliably) and a complex political and social environment. In response, Hydro has made significant efforts to enhance the robustness of our operations in the region.

Consequences
Hydro's integrated aluminium production chain poses risks related to value chain concentration, where disruptions in the bauxite and alumina production located in one region in Brazil could negatively impact metal production in other parts of the company.

Developments
The Bauxite & Alumina assets operated at expected capacity throughout 2022, despite continued complexities relating to the Covid-19 pandemic. The political and regulatory environment in Brazil has been relatively stable over the course of the year, although the polarized election campaign may indicate some uncertainty going forward.

Mitigation
In Brazil, actions have been taken to improve asset integrity, strengthen community relationships and reduce our long-term environmental impact. Systematic social responsibility efforts are ongoing, including the Sustainable Barcarena initiative and commitments stemming from the agreement with the Government of Pará and Ministério Público. Hydro is engaged in a systematic dialogue with political, governmental, non-governmental and local communities regarding the social and regulatory challenges facing our operations and the communities in which Hydro operates.

The physical adaption of assets and supply chain robustness are important mitigating factors against the risk posed by climate change related incidents, such as flooding, landslides, droughts, and the implications these may have on the local environment, as well as our ability to continue safe operations and access to raw materials and markets.

Commercial activities within alumina and other raw materials provide access to key markets and other sources as a tool in managing supply disruption risk.

3. Macro-economic developments, geopolitical tensions, protectionism and trade disruptions

Description

The aluminium industry is pro-cyclical with demand for products closely linked to overall economic conditions. Protectionism is the process by which countries impose barriers to free trade with the intention of protecting national interests. Geopolitical tensions are often the underlying cause of such actions. Trade and supply chain disruptions can impact the access to and cost of raw materials.

Consequences

Protectionism may directly affect Hydro's ability to access certain markets and trade competitively. It also leads to lower economic growth, which could indirectly affect the demand for our products.

Higher import duties and trade barriers increase costs, impacting the quantity, quality and price of internationally traded goods which Hydro requires to run our operations.

Periods of macroeconomic uncertainty or recession can increase the price volatility for aluminium products, affecting Hydro's ability to deliver stable returns. Macro-economic developments also drive changes in currency rates, which may have a significant adverse effect on Hydro's cost and competitive position. At the industry level, changing dynamics in major aluminium producing countries, such as China, may see large volumes of aluminium enter the market, reducing global price levels.

In the long-term, renewable energy scarcity and high supply costs in countries where Hydro operates could affect our competitiveness.

Developments

High inflation, increasing interest rates, higher energy costs and additional factors such as those stemming from the conflict between Russia and Ukraine have impacted economic growth, affecting demand for Hydro's products. Hydro operates in several countries which could face energy scarcity resulting in the rationing of energy, either caused by sudden events such as the curtailment of gas supply from Russia or gradually increasing supply challenges, particularly during winter months. Energy rationing could materially disrupt Hydro's operations in those countries.

Supply chain disruptions, both logistical and geopolitical, are adversely impacting the supply and cost of certain raw materials to our operations as well as our customers' ability to receive goods on which they depend to run their operations. This has been further exacerbated by continued shipping constraints.

In March 2021, the European Union (EU) imposed anti-dumping duties on certain aluminium extrusions from China for a period of five years. This was followed in the UK by a similar decision in December 2022. A temporary agreement between the US and EU regarding US Section 232 tariffs on aluminium replaces duties with quotas while exports from Norway and Qatar are still exposed to 10 percent tariffs.

Mitigation

Robust and stable operations, a strong balance sheet, high focus on operational and commercial improvements, competitive power contracts and strategic hedging support Hydro's robust positioning during potential downturns. Due to the Energy crisis, severe market volatility has adversely affected liquidity in the industry. Hydro proactively monitors and manages credit risk in our contract portfolio, and maintains constructive dialogues with relevant contract parties. However, actions may still be needed in response to market conditions, for example due to a significant reduction in market demand for aluminium billets in Europe and high energy prices, Hydro decided to close its majority owned primary aluminum Hydro Slovalco plant in Slovakia and partially reduce production at two plants in Norway until market conditions improve.

In general, Hydro is well positioned to handle challenges arising from protectionism and regionalization. The majority of our network of aluminium metal plants is located within large well-established markets, and our downstream operations have strong local presence in both Europe and North America. Hydro also actively participates in organizations aiming to promote and foster fair trade, such as European Aluminium and the U.S. Aluminum Association.

The supply chain risk is managed through a combination of physical inventory build-ups for key raw materials, selective hedging, long-term agreements with approved suppliers and commercial activities in the marketplace.

For further information on our mitigating financial measures, please refer to the Performance review section Hydro's key financial exposures and note 8.1 Financial and commercial risk management.

4. Regulatory & policy framework uncertainty

Description
The aluminium industry is subject to multiple local and global regulatory frameworks, including mining regulations, tariffs, labor laws and power industry regulations. Additionally, climate related regulations in the European Union (EU) such as the implementation of national and regional CO_2 taxes and increased attention on similar regulations in the United States of America (US) are at the forefront of the current uncertainty. The growing pressure to meet climate goals is driving the pace of new regulations and their increased scope regarding all aspects of sustainability.

Consequences
The sustainability driven developments in regulatory frameworks largely represent an opportunity for Hydro. There might however be unintended consequences arising from complexity, the uneven impact of and increased emphasis on legislation, potentially impacting aluminum's competitiveness versus other materials, the economic viability of our operations and/or ability to conduct business in certain markets.

A failure to comply with such laws across multiple local and global regulatory frameworks could expose Hydro to investigations, criminal and civil sanctions such as fines, penalties or loss of licenses, materially impacting the financial results. In addition, there could be adverse consequences such as reputational damage.

Developments
The growing pressure to meet climate goals is driving the pace of new regulations and their increased scope regarding all aspects of sustainability. This is increasingly aligned with a push towards strengthening regional sustainable supply chains, reducing dependence on global markets for key raw materials and energy sources.

In Europe, the EU has reacted to the energy security challenges arising from the Russian invasion of Ukraine by increasing its drive towards renewable power, launching its sweeping 'REPowerEU' legislative package in May, aiming to reduce consumption, increase renewable production and diversify energy supplies. The US passed "The Inflation Reduction Act", a landmark federal law which includes investments in clean energy production, reducing emissions and improving energy security.

The "Fit for 55" climate legislative package proposed in 2021, includes among other things, a review of the emissions trading system (ETS). The EU reached an agreement on the revision of the ETS and introduction of a Carbon Border Adjustment Mechanism (CBAM) in December 2022. The new ETS and CBAM means that free allocation of emission allowances for aluminium production will be phased out from 2026 to 2034. By 2025, the Commission will also consider whether to replace the indirect CO_2 cost compensation scheme with a CBAM on Scope 2 emissions. The US has been considering similar mechanisms, but so far focused on investment support through the Inflation Reduction Act (IRA).

The Commission has proposed amendments to the EU's electricity market design in addition to various national and EU initiatives already introduced to soften the impact of the energy crisis. In addition, there is uncertainty around potential structural reform to the EU's electricity market design in addition to various national and EU initiatives already introduced to soften the impact of the energy crisis.

Mitigation
Hydro continues to actively engage with regulators and industry associations, where appropriate, to ensure that aluminium's position is taken into consideration. Hydro has been involved in the development of international frameworks on climate change and greenhouse gas emissions, supporting the establishment of a level playing field for the industry.

For power industry regulations, Hydro engages in various activities to support and promote sustainable energy policies in the regions in which it operates, in addition to securing competitive energy supplies for our own operations.

5. Technological breakthroughs

Description
Hydro is exposed to disruptive technological developments by our direct competitors or by other competing materials and industries. Materials produced with technologies giving lower sustainability footprints could have a significant advantage and could challenge aluminium in key application areas.

Consequences
The successful industrialization of competing metals with lower sustainability footprints could increase the risk of substitution and potentially lower demand for aluminium.

The successful commercialization of breakthrough technological developments such as inert anodes would impact Hydro's comparative advantage as an aluminium producer with one of the lowest CO_2 footprints.

Our new business ventures into growth markets such as hydrogen, batteries, and solar energy also expose Hydro to the increased risks associated with immature technologies.

Developments
The increasing focus on sustainability is part of a long-term trend and expected to continue going forward. Hydro sees research and development activities across relevant industries concerning CO2-free production methods and competing material, such as production of steel using hydrogen. Within the aluminium industry, several research initiatives are looking into inert anode technology to reduce direct process emissions.

Mitigation
Hydro views technology as a key enabler in delivering on the dual profitability and sustainability strategy. Hydro conducts research and development in house and participates in joint partnerships and projects with other leading industrial companies, universities and research institutions. We also follow external developments closely.

Hydro has identified and are executing a number of technology based roadmaps to producing aluminium with near-zero to zero footprint, including recycling of post-consumer scrap, carbon capture, and CO2-free primary production through a chloride based process called HalZero.

Within renewable energy, risks related to immature technologies are mitigated through entering selective partnerships with established leaders and by taking limited positions to gain experience while restraining the potential downside.

6. Climate change

Description
Climate change related risks comprises climate related physical events that may impact the integrity of our assets (physical risks), as well as strategic challenges arising from climate related policies, regulations and customers' demand for zero or low-emission solutions (transition risks).

Physical risks could result from climate related acute and/or chronic changes in rainfall patterns, flooding, shortages of water or other natural resources, variations in sea levels, storm patterns and intensities as well as temperatures.

Transition risks could result from an increased demand for low-carbon products and solutions, higher costs for greenhouse gas emissions and production inputs, as well changes to market prices for aluminium based products.

Consequences
The consequences of physical risks on Hydro's facilities and operations are highly uncertain and could include the flooding of containment basins, interruptions to production processes, infrastructure failures and the potential for major accidents.

Transition risks could positively affect the demand for and valuation of Hydro's low-carbon products and portfolio while also requiring the implementation of additional low-emission solutions throughout the value chain. Current technologies may not be able to meet the abatement and emissions requirements, necessitating the development of new solutions to reduce our carbon footprint.

Developments
Physical climate risks are on the rise, evidenced by the increased occurrence of climate events such as floods, drought, and forest fires. Hydro is exposed to such physical climate risks through its global footprint, although there was no significant impact to our operations over the course of 2022.

Transition risks are reflected in the increased demand for low-carbon aluminium in our markets. The sales of Hydro Reduxa and Hydro Circal have increased accordingly. Hydro's climate strategy puts Hydro in a leading position to supply low-carbon aluminium to the market. Hydro also sees a growing interest among our customers and end users regarding our decarbonization roadmap and ability to deliver near-zero products well before 2030.

Mitigation
Hydro has conducted comprehensive climate risk assessments to better understand and mitigate the potential consequences of climate related physical events on our operations. Hydro modelled future weather patterns and their potential impact on our sites based on climate models and scenarios from the Intergovernmental Panel on Climate Change (IPCC). For 2023, our ambition is to update the physical climate risk assessments and further integrate the findings and management of such risks at an operational level, where the physical adaptation of assets and supply chain robustness are the subject of ongoing attention.

In order to manage transition risks, Hydro's climate strategy, advocacy work on future climate related legislation, technology and market strategies aim to be consistent with a 1.5 degree scenario. Our long-term positioning, operational and financial planning reflect our assessment of related transition risks. Hydro's capabilities and positioning within renewable energy, batteries, low-carbon alumina and aluminium products, sorting and recycling, ambitious decarbonization roadmap and new energy ventures positions the company well to benefit from the transition to a low-carbon economy.

Incident risks

7. Insufficient asset integrity

Description
Hydro is exposed to a range of risks and hazards including critical equipment breakdowns, power failures and natural catastrophes that could result in disruptions to operations across our business areas

Consequences
Operational disruptions might reduce or interrupt production at key plants for significant periods of time, materially affecting our financial results and cash flows.

In Brazil, Hydro operates an integrated mine, pipeline and refining system meaning that a disruption at Paragominas could adversely affect Alunorte and other downstream operations.

Some operations are located close to sizable communities where operational events could also result in significant and potentially lasting impacts on the health and safety of employees, contractors, nearby communities as well as the environment. In addition, Hydro might be subject to claims, fines and further damage to our profitability or reputation.

Developments
The risk of a major operational disruption in Bauxite & Alumina (B&A) remains a subject of ongoing attention. There was no significant disruption in B&A and energy and extrusion sites over the course of 2022, and the long-term risk is expected to decline with the planned investments to sustain and replace equipment across sites. One of the four production lines at the part-owned aluminium plant Albras shut down from February 19 to July 29, 2022, due to an internal power distribution failure. This reduced the plant's overall production capacity by 25 percent during the period.

Mitigation
In Brazil, Paragominas joined Alunorte and the port in being certified according to the ISO 55001 Asset Management standard. Extensive repairs and maintenance on the Paragominas bauxite pipeline continue to progress according to plan with 36 kilometers completed in 2022. The back up power line between Paragominas and Tomé-Açu is expected to be completed in 2023. A third Mobile Harbor Crane was added at Vila Do Conde port to further support bauxite offloading activities, complemented by updated firefighting measures to protect the conveyor belts.

Hydro Aluminium Metal made good progress on projects to replace or update critical equipment such as rectifiers, pot control systems and baking furnaces. In response to the recent disruption at Albras, a comprehensive review of busbars has been conducted and Hydro is testing a new busbar by-pass solution.

Hydro performs regular inspections and maintenance activities, conducts comprehensive emergency preparedness training with key personnel and maintains a range of business continuity plans across sites to best prevent and mitigate operational disruptions. Our resilience against power outages is enhanced, where appropriate, by automated substations, power generating facilities and back up facilities.

8. Material legal or compliance incident

Description
While Hydro has a strong commitment to act in compliance with applicable laws and regulations, the company could still be negatively affected by criminal or civil proceedings or investigations related, but not limited to, alleged anti-competitive or corrupt practices, product quality, environment, health and safety, data privacy, market regulation or trade sanctions.

Consequences
Hydro's controls and initiatives may, however, be insufficient to mitigate the risk of non-compliance with applicable laws and regulations and if such risk materializes there could be material adverse effects on our business. Potential consequences range from fines or penalties, litigation and reputational risk, withdrawal of licenses and suspension or operational shutdowns thereby causing material adverse impacts on Hydro's operating results, cash flow and financial condition.

Developments
Hydro's exposure to legal and compliance risks are considered relatively stable. All business units are frequently mapping and evaluating such risks and implementing corresponding mitigating measures. Risks arising from regulatory developments within the various compliance areas are mitigated by continuous improvements of Hydro's compliance structures and processes. For instance, the risk of potentially breaching trade sanction laws has been given special attention since the invasion of Ukraine.

One compliance incident involving a US subsidiary is still in progress. Hydro Extrusion USA, LLC executed a plea agreement under which it admitted to a federal misdemeanor violation of the Clean Air Act at its cast house in The Dalles, Oregon. An initial sentencing hearing is set for January 2023, with a second hearing to be scheduled in the second quarter of 2023. The company is continuing to proactively work with the U.S. Environmental Protection Agency Suspension and Debarment Division. Hydro Extrusion USA, LLC is also engaged in discussions with the EPA's Suspension and Debarment Division with respect to this matter.

Mitigation
Hydro's Code of Conduct requires adherence to laws and regulations as well as global directives and procedures. It is systematically implemented and maintained through our compliance system, which is based on a clear governance structure defining roles and responsibilities to manage the relevant compliance risks. Business Areas have a clear responsibility to act in a compliant manner, while being supported by Group Compliance and competent staff in other functions to help safeguarding compliance. While the system includes controls and activities to prevent, detect, report and respond to compliance failures, the core focus is on the prevention of non-compliance incidents. In addition to policies, guidelines and procedures, Hydro maintains an extensive training program adapted to the company's risks and profile to continuously build and maintain a strong culture of compliance and integrity.

9. Major cyber-attack

Description
Hydro's Information and Technology (I&T) infrastructure is critical to all our operations, ranging from process control systems at production sites to central personnel databases and systems for external reporting.

Cybercrime is increasing globally, exposing Hydro to a range of threats to the integrity, availability and confidentiality of our systems. Threats may include attempts to access information, ransomware attacks, destructive installation of viruses, denial of service and other digital security breaches.

Consequences
A cyber breach could result in a broad range of impacts including HSE events, operational disruptions and the leakage of private or confidential data.

Developments
The underlying cyber security risk to industrial control systems stabilized after a spike early in the year, triggered by uncertainty with regards to the invasion of Ukraine's potential to escalate into cyberwarfare. This was addressed by Hydro through internal control improvements including but not limited to business continuity, incident and crisis management, network security as well as training & awareness.

The external threats relating to cyber attacks are developing as malicious actors continue to innovate and change their techniques to increase their success rate, requiring organizations to adapt quickly.

Mitigation
Hydro remains vigilant to the unstable geopolitical situation in Europe and other continents where the company operates with possible spillover effects on governmental organizations and companies around the world.

This risk continues to receive attention through the continuous improvement and close monitoring of compliance to and effectiveness of existing security capabilities. Security controls will be further refined over 2023 and 2024, with a focus on protecting Hydro against the most relevant threat actors and their specific tactics and techniques. Hydro has adopted a risk based approach where new security measures will be prioritized based on continuous evaluation of the dynamic threat landscape.

10. Failure to meet social performance expectations

Description
Hydro is committed to behaving in an ethical and socially responsible manner. However, the company could still be exposed to allegations or perceived failures to act in an ethical or socially responsible manner, particularly related to human rights and legacy issues which could influence our social license to operate.

Consequences
A deterioration of our social license to operate may impact our ability to maintain optimal productivity at certain sites, would Hydro no longer be perceived as a responsible company. Loss of public trust could affect our reputation both in the short and long term, impacting our ability to attract capital and ultimately result in a loss of market share.

Unrest in local communities may impact safety and security as well as cause logistical and transportation challenges.
Other potential consequences range from fines or penalties, contractual, litigation, the withdrawal of licenses and suspension or operational shutdowns thereby causing a material adverse impact to Hydro's operating results, cash flow and financial condition.

Developments
Social performance related risks continue to be jointly influenced by increased customer and civil society expectations, scrutiny as well as legislative development in Norway, Germany and the coming EU Due Diligence Directive.

Hydro believes that transparent communication with regards to sustainability claims including social performance is critical to gain trust. Hydro is increasingly engaged by customers and civil societies to verify our ethical sourcing and social footprint across the value chain from bauxite mining and scrap supply to finished products.

In a context of increasing geopolitical uncertainty and polarization, Hydro is likely to see more instances where social conditions are less than optimal in some areas where Hydro operates and parts of the supply chain.

Mitigation
As part of Hydro's social responsibility strategy, the company has defined priorities and overall goals, and implemented these through specific directives, policies, procedures and social development programs to manage social risks and opportunities throughout the company.

Hydro continues to implement human rights due diligence in our business processes including own operations, procurement activities and projects, as well as building our internal competence on human rights management.

Hydro collaborates in industry initiatives and invests in partnerships for supporting human rights and positive social development, such as through our ICMM membership as well as partnership with Amnesty International in Norway.

The Aluminium Stewardship Initiative (ASI) certification of our sites across the value chain provides our stakeholders with a third party verification that Hydro conducts our business according to globally accepted good practices, and joint-venture Qatalum smelter received ASI Performance and Chain of Custody certifications in April 2022.

See the chapter on Human rights, Responsible supply chain and Local community value creation for further information.

11. Material tax change

Description
Hydro is committed to pay equitable taxes where the economic value is created. Our global reach involves complexity and potential volatility linked to regulatory changes on direct and indirect taxes as well as to OECD/EU initiatives such as the Global Tax Reform. In addition, multiple changes often occur in local tax regulations, constantly shifting the global tax landscape, which is challenging to predict and navigate.

Consequences
Changes to tax regulations can occur suddenly and materially impact Hydro's financial results as well as influence decisions with regards to future investment.

Developments
In Brazil, the tax system remains complex and volatile, with a broad range of direct and indirect taxes levied at federal, state and municipal levels, including the Imposto Sobre Circulação de Mercadorias e Serviços (ICMS) which is an indirect tax charged on circulation of goods and services. Brazil has a general ICMS exemption on exports. Under a 15 years framework agreed in 2015 with the state of Para, Hydro's local operations are under certain conditions entitled to a deferral of the payment of ICMS. A potential discontinuation of the ICMS deferral would materially adversely affect Hydro's operating results from its Brazilian operations.

Over the last year, local authorities showed increased attention to ICMS, requesting that Hydro demonstrates compliance with commitments under the agreement. A 5 percent reduction on the deferral was resolved for Albras, offset by a new Complementary Law which lowers energy tax levies to the general rate.

Hydro is involved in a large number of disputes with tax authorities pertaining to the Group's business in Brazil. In Norway, a proposal was introduced in September to increase the effective resource rent tax rate for hydropower from 37 percent to 45 percent, in addition to the introduction of high-price contributions.

Mitigation
Hydro is engaged in a systematic dialogue with local, state and federal politicians as well as industry associations regarding the fiscal regulatory challenges which could impact Hydro's operations. The main topic of this dialogue concerns our contribution to a sustainable aluminum value chain and underlines the need for competitive and predictable framework conditions for its operations.

Hydro continuously monitors and responds to global regulatory changes, including the development and implementation of Mandatory Disclosure Regime (MD) guidelines as a response to the directive issued by the EU.

HSE risks

12. Fatal or life changing accident

Description
Hydro's operations range from mining in Brazil, primary aluminum production in Norway and Brazil, extrusions in Europe, the US, South America and China, as well as the recycling of used metal in Europe and production of renewable power. Each activity poses serious safety risks that, if not controlled, could cause serious injuries or fatalities.

Despite Hydro's best efforts, high-risk incidents do occur. All such incidents are treated seriously and investigated to their root causes to prevent recurrence.

Consequences
Workplace related loss of life has a traumatic and long lasting psychological effect on relatives, close friends and colleagues.

Life changing injuries affect the quality of life of the injured person and often require significant adjustments at home and work. This could be associated with long lasting psychological impacts on the injured person and family, together with the need for ongoing financial support. Police or health and safety agencies might impose sanctions which include imprisonment and fines. In addition, Hydro might need to shut down its operations and be subjected to legal disputes, sanctions and reputational damage. Civil action could result in compensation claims.

Developments
High-risk incidents with the potential for a fatality or life threatening injury continue to decrease in both number and rate. There were no life threatening injuries to employees or contractors in 2022, however one life changing injury to a contractor occurred during the year. Initiatives rolled out during the year include robust self-assessment systems across BAs as well as traffic and asset management improvements.

Mitigation
Hydro's approach to HSE and Security includes leaders who are committed to safety and highly visible on the factory floor with well developed and robust HSE management systems, together with employees and contractors who are actively involved in day to day HSE activities reducing risks such as work permitting, risk assessments and root cause analysis.

Control measures aimed at reducing the likelihood of fatal and life changing incidents occurring have been developed and implemented in all business areas. Hydro's fatality prevention procedures are well established and continuously improved.

High-risk actions and completion rates are critically reviewed to ensure robust processes and learning across all sites. Frequent health, safety, security and environment network meetings connect specialists from all business areas, who discuss preventative control measures following high-risk incidents and who share best practices and innovative solutions. Machinery safety and asset integrity incidents are receiving particular attention to further prevent failures and constitute an area for further improvement.

13. Security incident

Description
Hydro is exposed to security risks such as public violence, robbery or theft. This risk is particularly relevant in the Barcarena region in Brazil, but also present in other areas such as Mexico (Reynosa and Monterrey).

Consequences
The outcome of security incidents could be psychological impact, a serious injury, single or multiple fatalities. The risk of kidnapping and subsequent ransom demands is also present.

Security incidents could potentially be associated with environmental incidents through attacks on the Paragominas bauxite pipeline and result in business interruptions.

Developments
A number of firearm related incidents and robberies occurred in 2022 in relation to Hydro's operations in Paragominas, Alunorte and Extrusion North America, however the overall incident levels have decrease significantly compared to 2021.

Violence in Barcarena and surrounding areas remains comparable to previous years, at a concerning level. There have also been several armed hijacks of trucks used to transport Hydro Extrusions materials in Sao Paulo. The security situation in Reynosa and Monterrey, while not impacting business operations, remains a concern and is monitored closely.

The war in Ukraine and associated increase in international political tensions elevates the potential risk of sabotage.

Mitigation
Hydro's Bauxite & Alumina security team closely monitors security risks and maintains close contact with security authorities in operational areas. Security training for security teams based in Brazil is ongoing, and weekly security calls incorporate all Hydro locations in the country. Improvements to perimeter fencing and monitoring at Alunorte have improved deterrent and response with improvement in access controls and CCTV implemented.

Hydro monitors closely the performance of our security providers, one of which has achieved international accreditation and recognition.

Group Security closely monitors the security risks in Brazil and maintains close contact with both plants in Mexico ensuring security mitigation measures are aligned with the developments and threat.

The review of security and emergency preparedness procedures and contingency plans is ongoing to counteract threats to Hydro businesses related to the Russian war on Ukraine.

14. Impact on the environment

Description
Hydro's mining and industrial operations are exposed to potential risks that could have a negative impact on the environment. Such risks are usually long-term and may relate to the effects of known and unknown, historical and current emissions to the air, water and soil around Hydro's operations.

Many operational sites have some form of environmental legacy that will need to be remediated prior to site closure. Examples include areas with contaminated ground and landfills that could potentially impact the environment if there is a route of exposure, such as a spread to the food chain via groundwater.

Consequences
Related events could have a significant and potentially lasting negative impact on the aquatic life, flora, fauna and may pose health and safety risks to nearby communities if, for example, ground water becomes contaminated. They could also potentially lead to operational shutdowns, fines or legal disputes, negative reputational impacts as well as a material impact on financial results and cash flow.

Developments
Chemical usage and waste production are present at all sites, with an inherent risk of spills and leakages. Aluminum Metal and Bauxite & Alumina are the business areas most exposed to significant negative impacts on the environment due to the volumes of hazardous materials used in operations and locations of large sites. There has been a small reduction in severe incidents reported in 2022, compared to previous year.

Mitigation
All Hydro sites are required to have action plans in place for known legacies. These are agreed with relevant regulatory bodies. Legacy remediation plans are suitable for known risks, but potential investigations may uncover unknown risks, while there is also an increased scrutiny of operations in Brazil.

In order to reduce the risks for our operations, Hydro performs extensive risk assessments. These include the modelling of future weather patterns and their impact on Hydro's facilities based on existing climate models from the Intergovernmental Panel on Climate Change (IPCC) and scenarios for policy and legal risk, technology, market and reputational risk. Environmental studies are being conducted in Barcarena. These were originally due for completion in 2022, but have been postponed until next year. A rehabilitation plan is in place for Paragominas.

All sites are required to follow Group standards on chemical and waste management to mitigate the inherent risk of storing, handling and disposing hazardous materials. Chemical management and controls set to prevent spills are included in business area internal audit programs. Hydro has conducted analysis on fluoride emissions from our smelters in Norway and established plans to mitigate their effect on the local deer population.

15. Structural collapse or other major accident

Description
Hydro is exposed to the risk of major accidents such as the collapse of a hydropower dam, an incident at its tailings storage at Paragominas or bauxite residue storage facilities at Alunorte and Schwandorf, the collapse of the entire port structure at the Alunorte alumina refinery or a rupture of its bauxite slurry pipeline between Paragominas and Alunorte.

Consequences
Any occurrence of such incidents could have a significant and potentially lasting adverse impact on the environment as well as the health and safety of employees, contractors and nearby communities. In addition, Hydro might need to shut down its operations and may be subjected to fines, legal disputes and reputational damage thereby causing a material adverse impact on operating results, cash flow and financial condition.

Developments
Extensive repairs and maintenance to the pipeline took place in 2021, 2022 and are still ongoing. There have not been any incidents involving crane failures or other significant defects in other structures during the year.

The stability of the Schwandorf bauxite residue deposits in Germany has progressed with a drilling and testing program according to Geotechnical Design Standard. Following this assessment, it was concluded that the bauxite residue facilities exhibit geotechnical stability, and no risk elements require immediate measures.

Mitigation
Hydro is continuously seeking to reduce the likelihood of major incidents with risk mitigating activities through the commitment to comply with the Global Industry Standard on Tailings Management within the applicable deadlines. Other initiatives include Tailings Dry Backfill technology that will eliminate the long-term risk of failure at Paragominas.

Hydropower dams are highly regulated. At closed tailings facilities, the risk of failure under varying conditions, including extreme weather and seismic events (defined as events with a statistical return period of 1:10000), is under investigation.
The Paragominas bauxite pipeline's extensive repairs and maintenance program is ongoing, while security concerns associated with the pipeline's length and remote location are addressed through a robust and well embedded fatal risk management approach.
The old ship unloaders at the Vila do Conde port in Brazil were replaced by new Mobile Harbor Cranes. Frequent contact with the port administration continues with improvements in maintenance and inspections regimes.

The Hydro share

Introduction

Hydro's share price closed at NOK 73.32 at the end of 2022. The return ex. dividend for 2022 was NOK 5.1, or 7.4 percent. Hydro paid its 2021 dividend of 5.40 NOK/share in May 2022, and 1.45 NOK/share in September 2022. In addition, a NOK 2 billion share buyback program was approved by the Extraordinary General Meeting in September 2022. As of December 31, 2022, 34 percent of the share buyback program had been completed.

Hydro's Board of Directors proposes to pay a dividend of NOK 5.65 per share for 2022, and a share buyback program of NOK 2 billion for approval by the Annual General Meeting on May 10, 2023, reflecting Hydro's strong financial position. The proposed payment demonstrates the company's commitment to provide a predictable and competitive dividend.

The average five-year payout ratio is 74 percent. There were 2,068,998,276 shares issued at the end of 2022. A total of 1,272,589,837 Hydro shares were traded on the Oslo Stock Exchange (OSE) during 2022 at a value of NOK 88.9 billion, making Hydro the third most traded company on the OSE. The average daily trading volume for Hydro shares on the OSE during 2022 was 5,029,999 shares. Hydro's shares are listed on the Oslo Stock Exchange, while our American Depositary Shares (ADSs) trade on OTCQX International in the US, the premium over-the-counter market tier.

Dividend policy

Long-term return to shareholders should reflect the financial value created by Hydro over time. Total shareholder return consists of dividends and share price development. Hydro's dividend policy is in the long term to pay out minimum 50 percent of adjusted net income as ordinary dividend over the cycle to our shareholders. The dividend policy has a floor of NOK 1.25 per share.

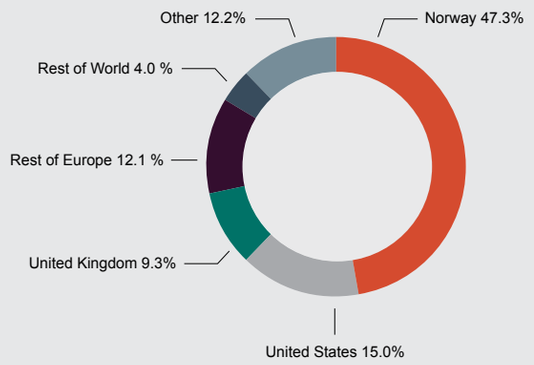
When determining the dividend for a specific year, Hydro will take into consideration expected earnings, future investment opportunities, the outlook for world commodity markets and our financial position. Hydro targets an adjusted net debt of around NOK 25 billion over the cycle.

Top 15 shareholders

The Ministry of Trade, Industry and Fisheries	34.7%
Folketrygdfondet	6.0%
The Vanguard Group, Inc.	2.4%
BlackRock Investment Management (UK) Ltd.	2.2%
BlackRock Institutional Trust Company, N.A.	2.1%
Schroder Investment Management Ltd. (SIM)	1.5%
Storebrand Kapitalforvaltning AS	1.4%
DNB Asset Management AS	1.4%
Nordea Funds Oy	1.2%
KLP Fondsforvaltning AS	1.2%
State Street Global Advisors (US)	1.0%
PointState Capital LP	0.9%
T. Rowe Price Associates, Inc.	0.9%
Alfred Berg Kapitalforvaltning AS	0.8%
Allianz Global Investors GmbH	0.8%

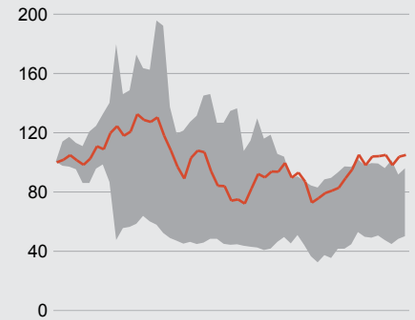
See main shareholder list on Hydro website.

Geographical ownership of shares

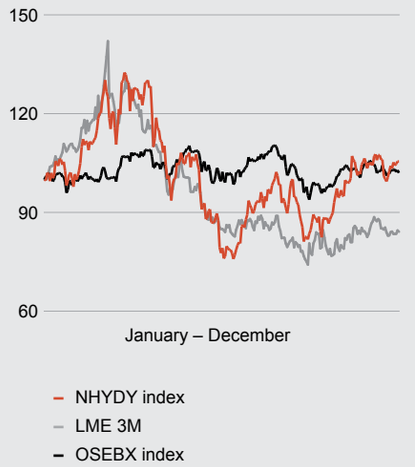


NHY share price development

NOK



Share price development vs OBX



Share buybacks or extraordinary dividends may supplement ordinary dividends during periods of strong financial results, due consideration being given to the commodity cycle and capital requirements for future growth. The total payout should reflect Hydro's aim to provide its shareholders with competitive returns benchmarked against alternative investments in comparable companies. Hydro's Board of Directors normally proposes a dividend per share in connection with the publication of our fourth quarter results. The Annual General Meeting then considers this proposal in May each year, and the approved dividend is subsequently paid to shareholders in May or June. Hydro pays ordinary dividends once each year. For non-Norwegian shareholders, Norwegian tax will be deducted at source in accordance with the current regulations.

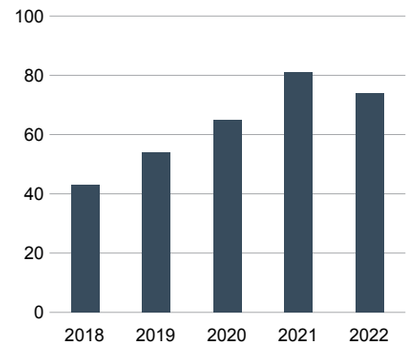
Commom share data

	2022	2021	2020	2019	2018
Share price high, Oslo (NOK)[1)]	89.95	71.46	40.74	41.55	62.70
Share price low, Oslo (NOK)[1)]	51.49	36.99	19.14	26.49	38.69
Share price average, Oslo (NOK)	69.34	55.94	28.09	33.43	48.61
Share price year-end, Oslo (NOK)	73.32	69.52	39.86	32.64	39.21
Earnings per share from continuing operations	11.76	5.92	1.99	0.52	2.75
Adjusted earnings per share from continuing operations[2)]	10.70	6.77	1.32	0.52[3)]	2.75[3)]
Dividend per share (NOK)	5.65[4)]	6.85[7)]	1.25	1.25	1.25
Pay-out ratio[5)]	53%	101%	95%	240%	45%
Dividend growth	(18%)	448%	-	-	(29%)
Pay-out ratio five year average[6)]	74%	81%	65%	54%	43%
Adjusted net cash (debt) / Adjusted EBITDA[8)]	0.20	0.36	1.95[9)]	2.27[10)]	1.2[10)]
Credit rating, Standard & Poor's	BBB	BBB	BBB	BBB	B BB
Credit rating, Moody's	Baa3	Baa3	Baa3	Baa2	Baa2
Non-Norwegian ownership, year-end	53%	52%	52%	40%	41%
Outstanding shares, average	2,050,779,399	2,050,818,686	2,048,766,546	2,047,057,976	2,045,796,971
Outstanding shares, year-end	2,068,998,276	2,051,475,662	2,049,124,718	2,047,648,790	2,046,302,797

1) Share price high and low based on closing price.
2) Alternative performance measures (APM) are described in the appendices.
3) Amounts are as disclosed for the individual years reflecting the accounting policies applied for those years and Hydro's definition of APMs applied for the relevant years.
4) 2022 dividend per share proposed by Board of Directors, dependent on approval from the Annual General Meeting May 10, 2023.
5) Dividend per share divided by adjusted earnings per share from continuing operations.
6) Average dividend per share divided by average adjusted earnings per share from continuing operations for last five years.
7) Includes NOK 1.45 per share extra dividend distributed.
8) This ratio replaces the formerly used ratios Adjusted net cash (debt) to Equity and Funds from operations to average Adjusted net cash (debt). See note 7.1 Capital management in the consolidated financial statements.
9) Restated.
10) Adjusted net cash (debt) / Adjusted EBITDA.

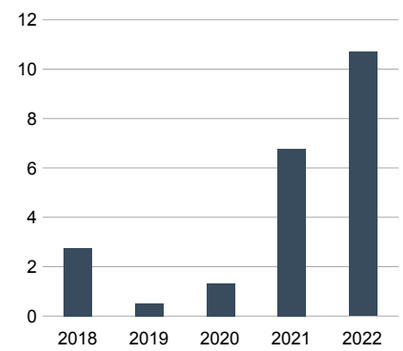
Pay-out ratio five-year average[6)]

Percent



Adjusted earnings per share from continuing operations[2)]

NOK



Buyback of shares

In periods when earnings are high, Hydro may consider buying back shares in addition to ordinary or extraordinary dividend payments. This consideration will be made in the light of alternative investment opportunities and our financial situation. In circumstances when share buybacks are relevant, our Board of Directors proposes buyback authorizations to be considered and approved by the Annual General Meeting. Authorizations are granted for a specific time period and for a specific share price interval during which share buybacks can be made, in accordance with applicable regulation.

Funding and credit quality

Maintaining a strong financial position and an investment grade credit rating are viewed as important risk mitigating factors, supporting Hydro's possibilities for strategic development. Access to external financial resources is required in order to maximize value creation over time, within an acceptable risk exposure.

To secure access to debt capital on attractive terms, Hydro aims at maintaining an investment grade credit rating from the leading rating agencies. Contributing towards this ambition, Hydro's targets, over the business cycle, a ratio of average Adjusted net cash (debt) to adjusted EBITDA below 2x, and an adjusted net debt of around NOK 25 billion. For further information, see note 7.1 Capital management in the Financial Statements section of this report.

American Depository Shares

JPMorgan Chase Bank NA, as depositary of the ADSs through its nominee company, Morgan Guaranty Trust Company, held interests in 19,067,034 ordinary shares, or 0.92 percent of the outstanding ordinary shares as of December 31, 2022. The interests are on behalf of 249 registered holders of ADSs.

Major shareholders and voting rights

As of December 31, 2022, Hydro had 56,441 registered shareholders as per the Norwegian Central Securities Depository (VPS). The Ministry of Trade, Industry and Fisheries of Norway was the largest of these with a shareholding of 34.26 percent of the total number of ordinary shares authorized and issued, and 34.70 percent of the total shares outstanding. As of the same date, the Government Pension Fund - Norway (Folketrygdfondet) owned 5.92 percent of the total number of ordinary shares issued and 6.0 percent of the total shares outstanding. There are no different voting rights associated with the ordinary shares held by the state.

The Norwegian Ministry of Trade, Industry and Fisheries represents the Norwegian government in exercising the state's voting rights. The state has never taken an active role in the day to day management of Hydro and has for several decades not disposed of any of the ordinary shares owned by it, except when participating in the share buyback programs. All shares carry one vote. It is a requirement of Norwegian legislation that a shareholder can only vote and have preferential subscription rights for shares registered in their name.

Shares registered with a nominee account must be re-registered in the Norwegian Central Securities Depositary, Verdipapirsentralen (VPS), before the Annual General Meeting in order to obtain voting rights. This requirement also applies to our US-traded ADSs. Hydro cannot guarantee that beneficial shareholders will receive the notice for a general meeting in time to instruct their nominees to affect a re-registration of their shares. Hydro is organized under the laws of the Kingdom of Norway. It may be difficult for investors to effect service of process outside Norway upon Hydro or its directors and executive officers, or to enforce against Hydro or its directors and executive officers judgments obtained in other jurisdictions. Norwegian courts are unlikely to apply other than Norwegian law when deciding on civil liability claims under securities laws.

Information from Hydro

Communicating with the stock market is given high priority, and Hydro aims to maintain an open dialogue with market participants. Our objective is to provide sufficient information on a timely basis to all market participants to ensure a fair valuation of our shares. Information that is considered price sensitive is communicated by news releases and stock exchange announcements. Hydro hosts regular meetings for investors in Europe and the US. The major brokers in Oslo and London publish equity research reports on Hydro. Previous annual and quarterly reports and Hydro's Investor relations' policy are available on Hydro.com.

Annual General Meeting

The Annual General Meeting of the company will be held May 10, 2023, at 10:00 CET. Notice to the Annual General Meeting, including information on participation and relevant appendices will be distributed to the company's shareholders at least three weeks prior to the Annual General Meeting.

Change of address

Shareholders registered in the Norwegian Central Securities Depository should send information on changes of address to their registrar and not directly to Hydro.

Financial calendar 2023[1)]

April 28	First quarter results
May 10	Annual General Meeting
July 21	Second quarter results
October 24	Third quarter results

[1)] Hydro reserves the right to revise these dates.

See updated calendar on Hydro.com.

Sustainability reporting the Hydro Way

The Hydro Way is our approach to business. It is an approach that has existed within Hydro since 1905 and guided our development over the years. The Hydro Way originates from our company's identity, our unique set of characteristics and constitutes a way of doing things that differentiates us from other companies.

The Hydro Way helps set our priorities and serves as a reference point when questions arise. The Hydro Way explains how our business is run through:

- Our purpose
- Our values
- Our operating model

Our purpose is supported by our values and defines how Hydro conducts our business:

Hydro's purpose is to create a more viable society by developing natural resources into products and solutions in innovative and efficient ways.

All elements of Hydro's environmental and social performance are integrated in Hydro's overall group strategy. This includes specific support strategies on climate change, environment and people as described in the Sustainability section of this annual report.

Hydro's constituting documents and global directives describe the requirements for our operations. Policy commitments for responsible business conduct are embedded in business processes through Hydro's directives, mandates and procedures. See the section on Corporate governance for more information.

Our reporting approach
Hydro has based our sustainability reporting on The Hydro Way since 2004. The sustainability reporting is reviewed by Hydro's Corporate Management Board and approved by the Board of Directors. Hydro complies with the Norwegian legal requirements on country by country reporting.

The sustainability reporting is based on reporting frameworks from the UN Global Compact, the International Council on Mining and Metals' (ICMM) 10 principles and Position Statements, and the Aluminium Stewardship Initiative's (ASI) 11 principles and underlying criteria.

Hydro reports in accordance with the GRI Standards. Hydro's GRI Content Index 2022 can be found at Hydro.com/gri, and shows Hydro's adherence to UN Global Compact, ICMM, ASI, UN Sustainable Development Goals and UN Guiding Principles on Business and Human Rights.

Our sustainability reporting is subject to independent assurance by our external auditors. For more information about our reporting principles and reporting scope, please refer to About the reporting in the appendices containing the notes to our Sustainability section.

Materiality assessment
In 2022, Hydro updated our materiality assessment according to the guidance provided in the GRI 3 (2021) Universal Standard. The process to update the materiality assessment was facilitated by the sustainability reporting team, using workshops to involve expert functions in Hydro that have insight into our sustainability commitments and external stakeholders' expectations. See the stakeholder dialogue section of the report for more information.

The material topics present our best judgment of the most significant impacts that Hydro has on the economy, environment, and people through our activities and business relationships. The materiality assessment is approved by Hydro's Corporate Management Board.

Our 2022 report is organized around nine material topics. Each of the nine topics has corresponding subchapters in the annual report, which sets out why the topic is material and presents our management of and performance related to the material topic and the corresponding subtopics.

Ratings

SUSTAINALYTICS	**19.7 (Low risk)** #3 in sector (3/180)
MSCI	**AA rating** "Leading initiatives to achieve carbon-free aluminum"
Member of Dow Jones Sustainability Indices Powered by the S&P Global CSA	**67%** Europae Index inclusion DJSI inclusion since 1999
ecovadis	**73/100** 96th percentile
Moody's ESG Solutions	**71/100** #1 rank in sector (1/43) #23 rank in universe (23/4,826)
ISS ESG	**B rating** Corporate Rating Prime Status Sustainability leader within industry

Hydro

Hydro's materiality analysis 2022

Ethics and compliance
- Integrity and anti-corruption
- Partnerships
- Product quality and liabilities
- Public affairs and lobbying
- Transparency

Climate change
- Climate related risk
- Materials and greener sourcing
- Net zero products and operations
- Renewable energy solutions

Environment
- Biodiversity
- Emissions to air
- Tailings and bauxite residue
- Water
- Waste and efficient resource use

Legacy impact
- Environmental impact
- Public safety and health
- Tailings management

Innovation and technology transition
- Net zero products and operations
- Renewable energy transition
- Research and development

Human rights
- Human and workers' rights
- Indigenous peoples and traditional communities
- Just transition
- Living wage

Responsible supply chain
- Conflict minerals
- Human and workers' rights
- Just transition
- Local workforce and wage
- Raw materials

Local community value creation
- Community investments and social programs
- Education and skills development
- Just transition

Our people and work environment
- Diversity, inclusion and belonging
- Living wage
- Workers' health and safety
- Security and emergency preparedness
- Talent and leadership development

Material changes from 2021

- Several material topics in the 2021 annual report have been reorganized as subtopics under the nine material topics.
- Legacy impact, previosly reported on in the Environmental chapter, is introduced as a separate material topic. Legacy impact as a topic with a separate section in the report reflects that closure planning and managing our legacy assets comprises managing social and financial risks, as well as environmental risks.
- Innovation and technology transition is introduced as a material topic. In our 2021 annual report, the topic was included in Innovation and Renewable energy transition.
- Our people and work environment is introduced as a material topic. The topic covers what our 2021 annual report included under the topics: Diversity and inclusion, Emergency preparedness, Health, safety and security, and Organizational capabilities and culture.
- Pandemics is removed from material topics. Our reporting on the subtopic Security and emergency preparedness under the material topic Our people and work environment reflects how Hydro works to prepare for and responds to pandemics and other acute events.
- Living wage introduced as a subtopic to Human rights and Our people and work environment. This reflects our obligations, as per the Norwegian Transparency Act, to map and manage risks related to human rights and working conditions, which specifies that living wages is a key aspect of decent working conditions.
- Some subtopics appear under several material topics:
  - Materials is a subtopic to both Climate change and Responsible supply chain. The subtopic relates to both the carbon footprint of our sourced raw materials and ability to achieve our net-zero ambitions, and to the due diligence Hydro performs on suppliers to manage risks related to our commitments to responsible business conduct.
  - Human rights is both elevated as a material topic with a corresponding subchapter that describes our overall governance and processes to safeguard human rights in our operations and value chain in line with the reporting requirements in the Norwegian Transparency Act, and also included as a subtopic to Supply chain.

Corporate governance

Why it matters

Hydro is a public limited liability company organized with a governance structure based on Norwegian corporate law. Our corporate governance provides a foundation for value creation and good control mechanisms in the form of corporate directives that describe mandatory requirements for all parts of our organization.

Our approach

Our governing documents and global directives help ensure that all our employees carry out their activities in an ethical manner and in accordance with current legislation and Hydro standards. Our Code of Conduct addresses compliance with laws and other matters such as handling of conflicts of interest, and a commitment to equal opportunities for all employees. Our defined programs contribute to compliance with anti-corruption and basic human rights, and other relevant governance areas.

Hydro follows the most recent Norwegian code of practice for corporate governance dated October 14, 2021. Information regarding our shareholder policy can be found in the Hydro Share section. Hydro's strategic direction is described in the section on Strategic direction.

Global directives and Code of Conduct
The Hydro Way represents our framework for leadership, organization and culture and is the foundation of our governance system. See Sustainability reporting – The Hydro Way for further information.

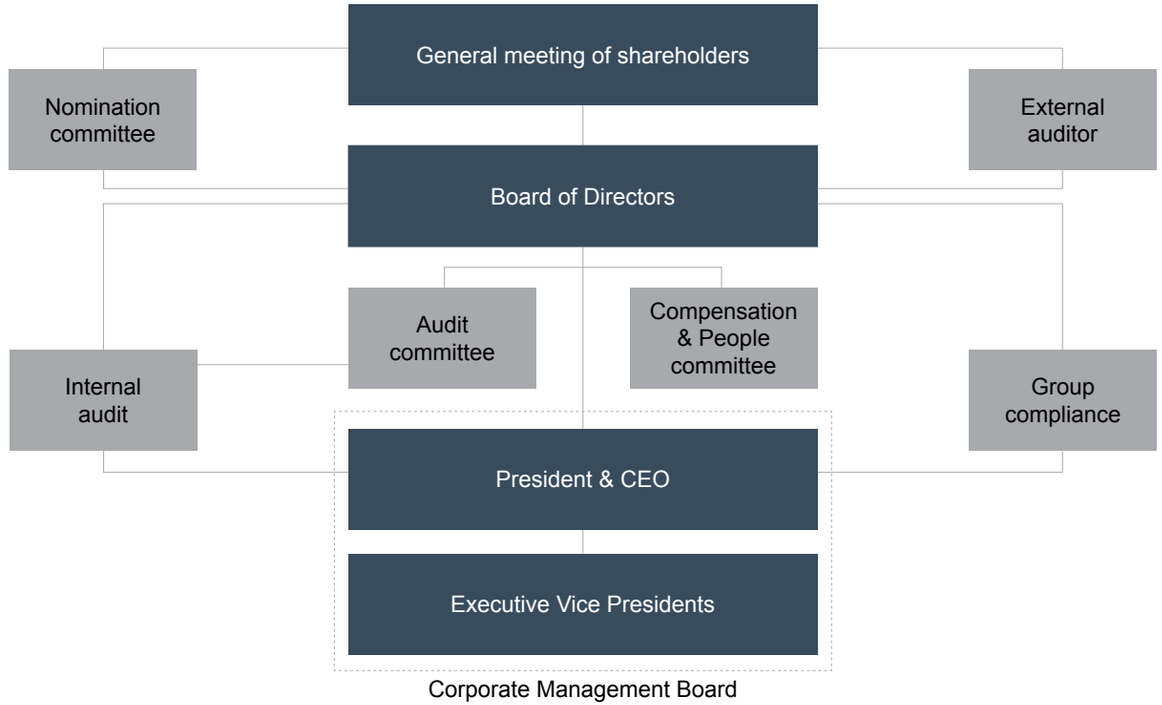
Our governance structure is based on applicable laws and regulations, and Hydro's corporate directives, with delegation of responsibility to our business areas and to corporate functions whose duties include finance, tax and accounting, social responsibility, environment and governance, including legal and compliance. In order to maintain uniformly high standards, Hydro sets common requirements in the form of constituting documents and global directives. Constituting documents are approved by Hydro's Board of Directors, or the general meeting of shareholders, while global directives are approved by the President and CEO. This information is made available to all employees.

Hydro's Code of Conduct is a constituting document and applies to all Hydro employees throughout the world, as well as to board members of Hydro and its subsidiaries. See Ethics and compliance for more information about Hydro's Code of Conduct.

More comprehensive information about our governance practices, policies, Code of Conduct, and requirements can be found at Hydro.com/governance. For information about Hydro's Code of Conduct, other constituting documents and global directives, whistleblowing procedure and integrity program, see Hydro.com/principles.

Management compensation
Information concerning remuneration and remuneration policies, share ownership, loans outstanding and loan policy relating to Hydro's Board of Directors and Corporate Management Board (CMB) is disclosed in a separate Remuneration report to be published together with the annual report.

Governance bodies in Hydro



Governance bodies

General meeting of shareholders
Company shareholders exercise ultimate authority through the general meeting. Shareholders registered in VPS, the Norwegian Central Securities Depository, five working days in advance of the general meeting of shareholders can vote in person or by proxy. Invitations are sent to shareholders or to the shareholder's security deposit bank. Following the discontinuation of the Corporate Assembly on the company's annual general meeting May 10, 2022, the articles of association of the company was amended to reflect this amendment to the company's governance model.

The general meeting of shareholders elects the shareholders representatives of the Board and determines the remuneration of the Board. Further it elects the external auditor and approves the auditor's remuneration. It also approves the statutory report according to Norwegian requirements and financial statements, including the dividend proposed by the Board. Moreover, it elects the nomination committee and determines their remuneration, and, finally, deals with any other matters listed in the notice convening the meeting. Shareholders may, at least four weeks before an ordinary general meeting, request in writing that proposals for resolutions are submitted to the general meeting, or that items are added to the agenda.

Developments and events during the reporting year
The Annual General meeting was held May 10, 2022. An Extraordinary General meeting was held September 20, 2022.

References: The minutes of meeting from the general meetings can be found at Hydro.com/governance.

Corporate assembly
The corporate assembly was discontinued by the company's Annual General Meeting May 10, 2022.

Developments and events during the reporting year (One meeting. 89 percent meeting attendance)
Members: Terje Venold (chairperson), Abid Shahzad, Lars Kjetil Skeie, Andreas Bakken, Anne Kverneland Bogsnes, Odd Arild Grefstad, Berit Ledel Henriksen, Kjetil Houg, Nils Morten Huseby, Bjørn Petter Moxnes, Ørjan Normann, Birger Solberg, Unni Steinsmo, Svein Kåre Sund, Jorunn Johanne Sætre, Susanne Munch Thore (deputy chairperson), Elisabeth Tørstad, Einar Øren.
Deputy members: Hilde Christiane Bjørnland, Gisle L. Johansen, Hans Henrik Kloumann, Nils Bastiansen

All members and deputy members stepped down as of the discontinuation of the Corporate Assembly, May 10, 2022.

References: Articles of association § 7-8 at Hydro.com/governance.

Nomination Committee
The Nomination Committee consists of minimum three and maximum four members who shall be shareholders or shareholder's representatives. The members of the Nomination Committee, including its chairperson, are elected by the general meeting of shareholders for periods of up to two years at a time. The Nomination Committee makes its recommendation to the general meeting of shareholders regarding the election of shareholder elected members on the board of directors and regarding remuneration to the board members. The nomination committee further makes its recommendation to the general meeting of shareholders regarding the election of the members and chairperson of the Nomination Committee and regarding remuneration to the members of the Nomination Committee. The guidelines for the Nomination Committee are adopted by the general meeting of shareholders. The guidelines include Hydro's requirements for independence, shareholder interests, competence, capacity and diversity.

Developments and events during the reporting year (14 meetings. 95.7 percent meeting attendance.)
Members: Berit Ledel Henriksen (chairperson, elected chair as of May 10, 2022), Morten Strømgren, Nils Bastiansen, Terje Venold (stepped down as of May 10, 2022), Susanne Munch Thore (elected member as of May 10, 2022)

References: Articles of association § 5A, the guidelines for the Nomination Committee and biographical information can be found at Hydro.com/governance.

Board of Directors
The Board of Directors currently holds 11 members. Seven are elected by the general meeting of shareholders, four are elected by and among the company's employees in Norway, for a period of up to two years. The employee representatives on the Board each have a personal deputy. In accordance with Norwegian law, the Board assumes the overall governance of the company, ensures that appropriate management and control systems are in place and supervises the day to day management as carried out by the President and CEO.

All shareholder elected members are external. No members elected by employees are part of the company's executive management. Employee directors have no other service contractual agreements with the company outside of their employee contracts, though they are subject to their duties as board members.

The Board normally conducts an annual self-assessment of its work, competence, and cooperation with management and an assessment of the chairperson. Further, the Board Audit Committee performs an annual self-assessment.

All shareholder elected members were in 2022, deemed to be independent according to the Norwegian standards. None of the company's non-employee board members had any other service contractual agreements with the company. Thomas Schulz was, as of December 31, 2022, the CEO of the listed company Bilfinger SE. Sales and purchases between Bilfinger SE and fully owned Hydro subsidiaries was in total NOK 380.363.323 in 2022. Schulz was not directly involved in these transactions. Schulz stepped down as Board member of the Company as of May 10, 2022.

Developments and events during the reporting year (20 meetings. 96.7 percent meeting attendance)
The Board of Directors has an annual plan for its work. It includes recurring topics such as strategy review, business planning, risk and compliance oversight, financial reporting, people strategy, succession planning as well as health and safety and sustainability including social responsibility, climate and environment. The Board is closely following the market and macroeconomic developments relevant for the aluminium industry. High on the Board's agenda in 2022 was health and safety, including social responsibility and the environment, the Covid-19 situation, and the continued work and implementation of the Hydro 2025 strategy "Lifting profitability, driving sustainability." The board conducted deep dives throughout the year, including deep dives on Hydro's human rights management, cyber security, hydrogen and operational deep dives on the business areas B&A and Aluminium Metal. A two day strategy meeting to follow up on the work and implementation of the Hydro 2025 strategy was held in June. Extraordinary meetings have been held when needed.

References: Articles of association and biographical information can be found at Hydro.com/governance. See Management remuneration report.

Board People and Compensation Committee
Consists of four members of the Board of Directors. The committee shall assist the Board in exercising its oversight responsibility, in particular in relation to compensation matters pertaining to the President & CEO and other members of the Corporate Management Board (CMB), other compensation issues of principal importance, and strategic people processes in the company, in particular related to succession, leadership and talent, and diversity and inclusion.

The committee shall regularly consider the appropriateness and competitiveness of the remuneration arrangements for the CEO and other members of the CMB.

Developments and events during the reporting year (10 meetings. 100 percent meeting attendance.)
Members: Dag Mejdell (chairperson), Kristin Fejerskov Kragseth, Rune Bjerke and Arve Baade[1].

In addition, Irene Rummelhoff stepped down as of May 10, 2022, and Sten Roar Martinsen[1] stepped down as of May 10, 2022.

References: The mandate for the Board People and Compensation Committee can be found at Hydro.com/governance.

Board Audit Committee
The audit committee consists of four of the Board members and meets the Norwegian requirements for independence and competence. The audit committee assists the board in exercising its oversight responsibility with respect to the integrity of the company's financial statements and sustainability reporting, the financial and sustainability reporting processes, internal controls, systems of risk management, and the compliance system. In addition, the committee oversees qualifications, independence and performance of the external auditor and Hydro's internal audit function. To ensure the independence of the internal audit function, the head of Internal Audit reports to the board through the audit committee. The head of Group Compliance has a dotted reporting line to, and meets regularly with, the audit committee. The audit committee maintains a pre-approval policy governing the engagement of the company's external auditors to ensure independence.

Developments and events during the reporting year (10 meetings. 95 percent meeting attendance.)
Members: Marianne Wiinholt (chairperson), Petra Einarsson, Peter Kukielski & Bjørn Petter Moxnes[2].

References: The mandate for the Board Audit Committee can be found at Hydro.com/governance.

President & CEO and Corporate Management Board
According to Norwegian corporate law, the President & CEO constitutes a formal governing body responsible for the daily management of the company. The President & CEO leads Hydro with the assistance of the Corporate Management Board. The division of functions and responsibilities between the President & CEO and the Board is defined in greater detail in the rules of procedures established by the board. The CMB, including the President & CEO, has a shared responsibility for promoting Hydro's objectives and securing the company's property, organization and reputation. Members of the CMB are also Executive Vice Presidents (EVPs) with responsibility for the respective business areas and corporate staffs.

Developments and events during the reporting year (27 meetings in 2022)
Helena Nonka stepped down as EVP Corporate Development October 1, 2022. Trond Olaf Christophersen was appointed EVP Corporate Development November 1, 2022.

References: Biographical information on the CMB members in the section on the Corporate Management Board. See Management remuneration report.

[1] Martinsen and Baade are employed in Hydro. Baade represents the employees through the Norwegian Confederation of Trade Unions (LO). We believe that such reliance does not adversely affect, in any material way, the ability of the compensation committee to act independently or to satisfy the other requirements.

[2] Moxnes is employed in Hydro and represents the employees through the Central Cooperative Council. We believe that such reliance does not adversely affect, in any material way, the ability of the audit committee to act independently or to satisfy the other requirements. For self-assessment, see information on the Board, above.

Board of Directors

Dag Mejdell
Chair

Position
Full time external board professional

Education
MSc in Economics and Business. Administration (siviløkonom), Norwegian School of Economics (NHH)

Current directorships
Chair of Sparebank 1 SR Bank ASA, Chair of Mestergruppen AS, Chair of Torghatten Group AS

Rune Bjerke
Deputy chair

Position
Adjunct Executive in Residence, Norwegian School of Economics

Education
BSc in Economics, University of Oslo; Master of Public Administration (MPA), Harvard University

Current directorships
Chair of Reitan Retail AS, Chair of Wallenius Wilhelmsen ASA, Deputy Chair of Schibsted ASA, Chair of Merkantilbygg Holding AS

Arve Baade
Director

Position
Full-time employee representative representing Industri Energi

Education
Certificate of apprenticeship in process studies

Current directorships
Chair of Sunndal Chemical Union, Board member of Sunndal Næringsselkap AS

Petra Einarsson
Director

Position
Full time external board professional

Education
BSc in Business Administration and Economics Specialization in Managerial Economics, Uppsala University

Current directorships
Board member and Chair of the Audit Committe of Scandinavian Biogas, Board member and Chair of the Audit Committe of Svenska Aerogel AB, Board member of Alimak Group AB, Board member, Chair of the Audit Committe and member of the Remuneration Committe of SSAB

Kristin Fejerskov Kragseth
Director

Position
CEO of Petoro

Education
M. Eng, Ocean Engineering, Texas A&M University, Engineer Marine, Høgskulen på Vestlandet

Current directorships
Chair of Stavanger Sandnes Skøyteklubb, Deputy board member of ONS (Offshore Nothern Seas)

Peter Kukielski
Director

Position
CEO of Hudbay Minerals Inc.

Education
MSc Civil Engineering, Stanford University USA

Current directorships
Board member Hudbay Minerals Inc.

Philip Graham New
Director

Position
Full time external board professional

Education
MA PPE, University of Oxford

Current directorships
Chair of UK Ministerial Electric Vehicle Energy Task Force, Board Advisor to Fotowatio Renewable Ventures BV, Director of AlmarWater Solutions BV, Fellow of Institute of Energy

Marianne Wiinholt
Director

Position
Chief Financial Officer, WS Audiology

Education
State-Authorized Public Accountant, Copenhangen Business School (CBS), Cand. Merc. Aud, Copenhagen Business School, Bachelor communication, Copenhagen Business School

Current directorships
Board member and Chair of the Audit Committee of Coloplast A/S

Bjørn Petter Moxnes
Employee representative

Position
Technical lead and employee representative

Education
M.Sc. in Chemical Engineering, NTH, MTM Technology Management, NTNU/MIT

Current directorships
Group leader (konserngruppeleder) Tekna-P Norsk Hydro, SSR leader Norsk Hydro (Tekna, Nito, Negotia, Lederne)

Torleif Sand
Employee representative

Position
Operator action responsible and employee representative

Education
Upper secondary school with vocational subjects

Current directorships
Deputy Årdal Chemical Union, Board member of AMS, Member of Country board Industri Energi

Margunn Sundve
Employee representative

Position
Full time employee representative representing Industri Energi

Education
Certificate of apprenticeship in process studies, vocational school in HSE

Current directorships
Chair of Alnor Chemical Union, Chair of AKF Hydroklubben, Member of Country board Industri Energi

Name	Place of residence	Year of birth	Position	Board committee	Meetings attended	Number of Hydro shares[1)]	Director since	Term expires
Dag Mejdell[2)]	Oslo, Norway	1957	Chairperson	Chairperson Compensation and people committee	20	45,000	2012	2024
Rune Bjerke[4)]	Oslo, Norway	1960	Deputy Chair	Compensation and people committe	19	21,500	2020	2024
Irene Rummelhoff[3)]	Hafrsfjord, Norway	1967	Deputy Chair		8	5,000	2014	2022
Arve Baade	Sunndalsøra, Norway	1967	Director	Compensation and people committee	19	6,118	2018	2024
Petra Einarsson[5)]	Torsåker, Sweden	1967	Director	Audit committee	12	0	2022	2024
Liselott Kilaas[3)]	Oslo, Norway	1959	Director		7	0	2018	2022
Kristin Fejerskov Kragseth[5)]	Stavanger, Norway	1967	Director	Compensation and people committee	12	700	2022	2024
Peter Kukielski[6)]	Vancouver, Canada	1956	Director	Audit committee	20	11,000	2019	2024
Philip Graham New[5)]	Oxford, United Kingdom	1962	Director		12	799	2022	2024
Thomas Schulz[3)]	Rungsted Kyst, Denmark	1965	Director		6	0	2016	2022
Marianne Wiinholt	Klampenborg, Denmark	1965	Director	Chairperson Audit committee	19	0	2016	2024
Sten Roar Martinsen[3)]	Kopervik, Norway	1961	Employee representative		8	7,857	2005	2022
Bjørn Petter Moxnes[5)]	Sunndalsøra, Norway	1960	Employee representative	Audit committee	12	340	2022	2024
Ellen Merete Olstad[3)]	Oslo, Norway	1963	Employee representative		8	5,891	2020	2022
Torleif Sand[5)]	Øvre Årdal, Norway	1967	Employee representative		12	1	2022	2024
Margunn Sundve[5)]	Haugesund, Norway	1971	Employee representative		12	609	2022	2024

Total number of board meetings were 20.

1) As per December 31, 2022.
2) Including shares owned by Nobel Partners, a private equity investment firm.
3) Stepped down as Board member as of May 10, 2022.
4) Deputy Chair as from May 10, 2022.
5) Became board member as of May 10, 2022.
6) American Depositary Shares purchased via OTCQX. Includes ADRs purchased via Cynthia Kukielski Spousal Trust.

Corporate Management Board

Hilde Merete Aasheim
President and Chief Executive Officer

Key experience

Ten years of experience as Executive Vice President Hydro Primary Metal from 2008-2019, previously Head of Staff Functions and Corporate Services in StatoilHydro. Head of the integration between Statoil and Hydro's oil and gas activities in 2007. Head of Leadership and Culture in Hydro in 2005. Senior positions in Elkem from 1986-2005. In 2002 she was Head of the Silicon Division in Elkem and member of the Corporate Management Board. Aasheim also has work experience from Arthur Andersen & Co.

Education

MSc in Economics and Business Administration (siviløkonom), the Norwegian School of Economics (NHH); State-authorized public accountant, certified from NHH

External directorships

Member of the International Council on Mining and Metals (ICMM)

Eivind Kallevik
EVP Hydro Aluminium Metal

Key experience

Chief Financial Officer, Head of Finance Bauxite & Alumina. He has been Head of Corporate Financial Reporting, Performance and Tax, Head of Finance Aluminium Products, Head of Business Controlling Hydro Aluminium. Prior to Hydro, Kallevik worked six years on oil and gas financing for Christiania Bank og Kreditkasse in New York and Oslo.

Education

Master of Business Administration from University of San Francisco

External directorships

Member of Eurometaux, Management Committee

Pål Kildemo
EVP and Chief Financial Officer

Key experience

Executive Vice President and Chief Financial Officer (CFO) of Norsk Hydro ASA and member of the Corporate Management Board since May 2019. Kildemo has held several key positions in the company, including Head of Investor Relations and Head of Finance in Primary Metal. Kildemo also served as acting Executive Vice President of Primary Metal just prior to becoming Chief Financial Officer.

Education

Master's degree in Economics and Finance from Heriot-Watt University

External directorships

Board position in Future Leaders Global

Anne-Lene Midseim
EVP Compliance, IP & General Counsel

Key experience

Executive Vice President Compliance, IP & General Counsel, as well as EVP CSR, Legal and Compliance, since 2015. Midseim has worked in Hydro since 1998, with senior positions as Company Secretary, and as Head of Staffs in Bauxite & Aluminium. Resident Legal Advisor in East-Timor, Oil for development program (2006-2007), Lawyer for Norwegian law firm Vogt & co (1996-1998), Executive Officer in the Ministry of Oil and Energy (1994-1996).

Education

Candidate in Jurisprudence (cand. jur.), University of Oslo

External directorships

Board member Gassco AS, Chair of the Board of Industriforsikring AS

Trond Olaf Christophersen
EVP Corporate Development

Key experience

Extensive and broad experience in Hydro since joining in 1997. Head of Business Unit Recycling, Head of Commercial, and Plant Manager at the Karmøy smelter (Aluminium Metal, 2013-2022), Head of Energy Markets (Energy, 2007-2013), several management positions in the former Oil & Energy Business Area and the Aluminium Business Area, including asset management and business development (1997-2007).

Education

Master of Management, BI Norwegian Business School (2006), MSc Mechanical Engineering, University of Bath, UK (1997)/ MSc Mechanical Engineering, NTNU, Trondheim, Norway (1997)

External directorships

Board member in Industriforsikring since 2019

Therese Rød Holm
EVP Communication & Public Affairs

Key experience

Holm has extensive and broad experience, including several senior positions in Hydro and other large companies across all main disciplines of communication and public affairs. She joined Hydro in 2014 and has held several leadership roles, both in Hydro Group and in Hydro Extrusions. Prior to Hydro, Holm was communication manager in Marine Harvest, now Mowi, from 2003-2011. Later she worked for Posten Norge, as responsible for internal communication in the Mail division.

Education

Economist graduated from the Norwegian School of Economics (NHH) (Bergen, Norway, 2000)

External directorships

None

Arvid Moss
EVP Energy

Key experience

Executive Vice President Hydro Energy since 2010 and acting Head of Corporate Strategy and Business Development since 2019. Moss joined Hydro in 1991 and has held several senior management positions including project leader for the oil and gas merger agreement with Statoil, Head of Metal Products (2004-2006) and Head of Automotive Structures (1996- 2001). Previously State Secretary and Chief of Staff in the Norwegian Prime Minister's office.

Education

MSc in Economics and Business Administration (siviløkonom), Norwegian School of Economics (NHH)

External directorships

Chair of the Board in National Export Strategy Council as of July 1, 2021

Hilde Vestheim Nordh
EVP People & HSE

Key experience

Executive Vice President People and HSE since 2019. Nordh joined Hydro in 1995 and has held roles of Head of HSE & HR in Energy, HSE manager Karmøy, and casthouse manager at Karmøy.

Education

MSc in Materials Technology, Rheinisch Westfälische Technische Hochschule (RWTH)

External directorships

None

John Thuestad
EVP Hydro Bauxite & Alumina

Key experience

Executive Vice President, Hydro Bauxite & Alumina. Thuestad previously served as Head of Extrusion Europe in Hydro. Previous roles include EVP Group President Primary Metals in Alcoa and CEO of Elkem AS.

Education

MSc in Metallurgy (sivilingeniør), Norwegian University of Science and Technology (NTNU); MBA Carnegie Mellon University

External directorships

Member of the Executive Committee of International Aluminum Association (IAI) on behalf of Hydro. Board member Yara International ASA

Paul Warton
EVP Hydro Extrusions

Key experience

Executive Vice President for Hydro Extrusions. Warton previously served 10 years as global president Automotive Structures & Industry for Constellium. Prior to that, he worked for 17 years in the global aluminium extrusion industry with leadership positions in Sapa, Alcoa and Luxfer Group. He also worked for 10 years in manufacturing and commercial leadership positions in Tier 1 automotive companies at Federal Mogul and GKN.

Education

BSc in Production Engineering, University of Birmingham; MBA in Finance, London Business School

External directorships

Member of the Executive Committee of European Aluminum on behalf of Hydro

Name	Place of residence	Year of birth	Employed in Hydro since	Current position since	Position	Number of Hydro shares[1)]
Hilde Merete Aasheim	Oslo, Norway	1958	2008	2019	President and Chief Executive Officer	125,803
Eivind Kallevik	Oslo, Norway	1967	1998	2019	EVP Hydro Aluminium Metal	76,511
Pål Kildemo	Bærum, Norway	1984	2008	2019	EVP and Chief Financial Officer	16,443
Anne-Lene Midseim	Oslo, Norway	1968	1998	2015	EVP Compliance, IP & General Counsel	36,280
Arvid Moss	Oslo, Norway	1958	1991	2010	EVP Energy	176,402
Hilde Vestheim Nordh	Asker, Norway	1969	1995	2019	EVP People & HSE	28,921
John Thuestad[2)]	Asker, Norway	1960	2017	2018	EVP Hydro Bauxite & Alumina	63,109
Paul Warton	Tibshelf, United Kingdom	1961	2021	2021	EVP Hydro Extrusions	3,838
Therese Rød Holm[3)]	Bærum, Norway	1975	2014	2022	EVP Communication & Public Affairs	-
Trond Olaf Christophersen[4)]	Oslo, Norway	1972	1997	2022	EVP Corporate Development	4,328

EVP: Executive Vice President. All EVPs are members of the company's Corporate Management Board (CMB).

1) As per December 31, 2022.
2) Including shares owned through Jothur AS, a private equity investment firm.
3) Rød Holm was appointed as EVP October 1, 2022.
4) Christophersen was appointed as EVP November 1, 2022.

Board of Directors' report in relation to the Norwegian Code of Practice for Corporate Governance

This chapter provides a detailed overview of how Norsk Hydro ASA ("Hydro" or the "company") follows the Norwegian code of practice for corporate governance ("Norsk Anbefaling for Eierstyring og Selskapsledelse") (the "Code of Practice") dated October 14, 2021. Information that Hydro must provide in accordance with the Norwegian Accounting Act, Section 3-3b is also included. This overview should be seen in context with the general corporate governance report provided in Hydro's annual report for 2022.

The Board of Directors of Norsk Hydro ASA (the "Board") actively supports sound management principles of corporate governance. The Code of Practice covers 15 topics, and this board report covers each of these topics and describes Hydro's adherence to the Code of Practice. More detailed information can be found on the company's website.

Deviations from the Code of Practice
Adherence to the Code of Practice is based on a *comply or explain* principle, meaning that any deviation from the Code of Practice shall be justified and explained. This includes to explain what alternative solution the company has selected. To the Boards best assessment, the company has in total four deviations from the Code of Practice. This includes two deviations from Section 6, one from section 8 and one from Section 14. Each deviation is explained below and under the relevant section of this board report.

Section 6, General Meeting of Shareholders:
Hydro has two deviations from this section:
(1) *"Ensure that the members of the Board of Directors ... are present at the General Meeting:"*
The entire Board has normally not participated in the general meeting. Matters under consideration at the general meeting of shareholders have not previously required this. Chair of the Board is always on hand to present the annual report and answer any questions from shareholders. As of the Annual General Meeting in 2023, all board members will be encouraged to attend the Annual General Meetings of the company, either physically or electronically.

(2) *"Making arrangements to ensure an independent chair for the general meeting"*
Hydro's Articles of Association section 9 previously stated that the general meeting was to be chaired by the chair of the corporate assembly, or in his or her absence, by the deputy chair.

Following the resolution by the Annual General Meeting to discontinue the company's corporate assembly May 10, 2022, and appurtenant amendments to the Articles of Association, the general meetings of the company will be chaired by an independent chair, in accordance with applicable regulation.

Section 8 – Board of directors: composition and independence
Hydro has one deviation from this section: *The general meeting should elect the chairman of the board of directors.* However, it is stated in the Public Limited Liability Companies Act (No: "Allmennaksjeloven") section 6-1(2) that the board of directors shall always elect its chair if it has been agreed that the company shall not have a corporate assembly. The Board of Hydro elects its chair for periods of until two years at a time.

Section 14, Takeovers:
Hydro has one deviation from this section:
"The Board of Directors should establish guiding principles for how it will act in the event of a takeover bid:"
The Board has chosen not to prepare explicitly formulated general principles for handling takeover bids. The reason for this is that the Norwegian state, represented by the Ministry of Trade, Industry and Fisheries, owns 34.26 percent of the Hydro shares (as of 31.12.2022) and the Ministry of Trade, Industry and Fisheries has by virtue of the Active Ownership Report (Report to the Storting no. 6 (2022-2023)) expressed a long-term ownership perspective in the company for the purpose of retaining a leading technology and industrial company with head office functions in Norway, c.f. the Active Ownership Report (Report to the Storting no. 6 (2022-2023)) p. 44.

1. Implementation and reporting on corporate governance
Hydro follows the most recent edition of the Norwegian code of practice for corporate governance dated October 14, 2021. Hydro seeks to comply with international best practice standards when preparing its constituting documents and global directives, and the Board monitors the subject of corporate governance actively and continuously. The Board believes that there is a clear link between high-quality governance and the creation of long-term shareholder value.

The Board has the overriding responsibility for the stewardship of the company and shall conduct supervision of the company's day to day management and the company's activities in general. The Board believes that sound corporate governance is vital to ensure the greatest possible sustainable value creation over time in the best interests of Hydro's employees, shareholders and other key stakeholders, and is committed to maintaining a high standard of corporate governance across the group.

The Board approved this statement in a Board meeting held on February 13, 2023, through the signing of the Annual Report.

2. Hydro's business
Hydro is a global aluminium and energy company with production, sales and trading activities throughout the value chain, from bauxite, alumina and energy generation to the production of primary aluminum and extruded products as well as recycling. Based in Norway, the company has approximately 32,000 employees involved in activities in 40 countries on all continents. Rooted in more than a century of experience in renewable energy production, technology development and partnerships, Hydro is committed to strengthening the viability of the customers and communities the company serve and managing the impacts of the company's activities on people, society and the environment, in line with corporate policies for health, safety, security, sustainability and climate, including human rights and ethics.

The company's objective, as stated in Section 2 of its Articles of Association, is to engage in industry, commerce and

transport, to utilize energy resources and raw materials, and to engage in other activities connected with this purpose. Hydro is committed to creating value by taking a lead role in the green transition. Through this, the company work to strengthen local community relations, communities and business partners through education and empowerment. Hydro's target is to ensure the safety of our employees and have an injury-free work environment. The company's business activities may also be conducted through participation in or in cooperation with other companies.

Hydro's purpose is to create a more viable society by developing natural resources into products and solutions in innovative and efficient ways. To support the company's objective and purpose, the company has established the below corporate values:

- Care – we act with respect for people and the environment and place safety at the heart of our operations
- Courage – we break new ground and take measured risks with agility, accountability and foresight
- Collaboration – we work as partners internally and externally to unite competencies and create win-win opportunities

The Hydro Way (see Sustainability reporting the Hydro Way for further information) represents our framework for leadership, organization and culture and is the foundation for our governance system, including Hydro's Code of Conduct which is approved by the Board. The Board also oversees that Hydro has appropriate global directives for, among other things, risk management, HSE, people management and social responsibility and human rights. Sustainability, including environment and climate change, social responsibility, diversity, health, safety and work environment and compliance is integrated into the group's risk management and strategy processes and are at the centre of the Board's considerations and decision-making throughout the year. The approach is discussed in more detail in the group's annual report as applicable.

The Board has an annual plan for its work. It includes recurring topics such as strategy review, business planning, risk and compliance oversight, financial reporting, people strategy, succession planning as well as health and safety, social responsibility, climate change and environment. The Board is closely following the market and macroeconomic developments relevant for the aluminium and energy industries, hereunder the geopolitical situation.

High on the Board's agenda in 2022 was health and safety, including social responsibility and the environment, and the continued work and implementation of the Hydro 2025 strategy "Lifting profitability, driving sustainability." The board conducted deep dives throughout the year, including deep dives on Hydro's human rights management, cyber security, hydrogen and operational deep dives on the business areas B&A and Aluminium Metal. A two day strategy meeting to follow up on the work and implementation of the Hydro 2025 strategy was held in June. Extraordinary meetings have been held when needed.

The Board conducts an annual self-assessment of its work, competence and cooperation with management, including an assessment of the chair. Further, the Board Audit Committee performs an annual self-assessment. The main conclusions of the Board self-assessment is normally submitted to the nomination committee, which in turn assesses the Board`s composition and competence. The self-assessment is faciliated by the corporate advisory firm Egon Zehnder.

Norsk Hydro ASA has purchased and maintains a Directors and Officers Liability Insurance on behalf of the members of the Board and the CEO. The insurance also covers any employee acting in a managerial capacity and includes controlled subsidiaries. The insurance policy is issued by a reputable insurer with an appropriate rating.

References: Hydro's articles of association are available at Hydro.com/governance. Learn more about The Hydro Way and Hydro's corporate directives at Hydro.com/principles.

3. Equity and dividend

In the opinion of the Board, Hydro's equity capital is appropriate to the company's objectives, strategy and risk profile.

Hydro's dividend policy was revised in 2021, reflecting Hydro's ambitions to lift performance and cash returns to shareholders over the cycle. The revised dividend policy is to pay out a minimum of 50 percent of adjusted net income over the cycle with a NOK 1.25 per share dividend floor. In the Board's opinion the dividend policy is clear and predictable.

The dividend per share is proposed by the Board, based on Hydro's dividend policy, and approved by the general meeting of shareholders. In 2022, the Board proposed a cash dividend of NOK 5.40 per share at the Annual General Meeting May 10, 2022, which was approved by the Annual General Meeting. Capital structure policy and targets were updated in the second quarter 2022, introducing an adjusted net debt target over the cycle around NOK 25 billion, leading the Board to propose an additional dividend of NOK 1.45 per share, which was approved at the Extraordinary General Meeting September 20, 2022.

In line with applicable regulation, the Board may obtain authorization from the general meeting of shareholders to buy back Hydro shares in the market or to increase the share capital. Mandates granted to the Board to increase the company's share capital or to purchase own shares will normally be intended for a defined purpose, in line with statutory regulation, and limited in time to no later than the date of the next Annual General Meeting.

Authorization to the Board to acquire the company's own shares was granted to the Board of Directors at the Extraordinary General Meeting of the Company on September 20, 2022. The authorization was granted in accordance with applicable laws and regulations and the authorization is registered at the Norwegian Register of Business Enterprises.

The authorization granted by the Extraordinary General Meeting allows the Board to acquire shares in Norsk Hydro ASA with a nominal value of up to NOK 109,800,000 in the market and from the Ministry of Trade, Industry and Fisheries, divided into up to 100,000,000 shares. The shares will be subject to subsequent cancellation. It is a perquisite for all buybacks and subsequent deletion of shares that these transactions do not result in a change to the ownership interest of 34.26 percent of the Ministry of Trade, Industry and Fisheries. The acquisition of shares is subject to terms and conditions set by the Board at all times, and the minimum and maximum amounts that can be paid per share is NOK 20 and NOK 150, respectively.

The authorization granted by the Extraordinary General Meeting is valid from September 20, 2022, until September 20, 2023. An authorization to acquire own shares will normally not be requested to last longer than until the date of the next Annual General Meeting. The Board however found it appropriate that the authorization granted at the Extraordinary General Meeting September 20, 2022, was requested for up until one year. It is the Board's understanding that the purpose of the Code of Practice's recommendation in

section 3 is to ensure that any authorization to the Board is not granted for more than one year, to allow the company's shareholders to review any authorizations granted on an annual basis. The granted authorization caters to this purpose.

At the company's Annual General Meeting in May 2023, the company's shareholders will be presented the content of the current authorization and be given a status on the buyback program. Transactions conducted as part of the current share buy-back program are executed on Oslo stock exchange, with on-going disclosure via stock exchange releases and the company's web page. See also item 4.

The notice, appendices and minutes of meeting from both the Annual General Meeting and the Extraordinary General Meeting are available at Hydro.com/generalmeeting.

References: Learn more about Hydro's equity and dividend policy in Shareholder information.

4. Equal treatment of shareholders
Hydro has one share class. All the shares have the same rights.

Transactions involving own shares are normally executed on the stock exchange. Buybacks of own shares are executed at the current market rate.

Transactions conducted as part of the current share buy-back program, with authorization granted to the Board on the Extraordinary General Meeting September 20, 2022, are executed on Oslo stock exchange, with on-going disclosure via stock exchange releases and the company's web page. Share redemptions from the Norwegian State are carried out at the same price terms as for the buybacks carried out via the stock exchange. Hydro is executing the buybacks via an external bank mandate and in accordance with the EU Market Abuse Regulation (EU 596/2014 (MAR)) art. 5.

Shareholders who are registered in the Norwegian Central Securities Depository (VPS) may vote in person or by proxy at the general meeting of shareholders. Invitations are sent to the shareholders or to the bank/broker where the shareholder's securities account is held.

Sales of shares to employees in Norway are conducted at a discount to market value. See also Item 6.

Contact between the Board and the investors is normally conducted via company management. Under special circumstances the Board, represented by the chair, may conduct dialogue directly with investors.

Regulation of share issues and pre-emptive rights are described in the company's Articles of Association.

For the company's related party transactions, the mandatory regulations in the Norwegian Public Limited Companies Act §§3-9 and 3-10 following are supplemented by IFRS (International Financial Reporting Standards) standards. See also section 9.

State ownership
As of December 31, 2022, the Norwegian state, represented by the Ministry of Trade, Industry and Fisheries, owned 34.26 percent of Hydro's total issued shares. Hydro holds regular meetings with the Ministry, where topics discussed include Hydro's economic and strategic development, sustainability, and the Norwegian state's expectations regarding results and returns on investments. These meetings are comparable to what is customary between a private company and its principal shareholders. The meetings comply with the provisions specified in Norwegian company and securities legislation, not least with respect to equal treatment of shareholders. As a shareholder the Norwegian state does not usually have access to more information than what is available to other shareholders. If state participation is imperative and the government must seek approval from the Norwegian parliament (No: Stortinget), it may be necessary to provide the Ministry with "inside information", c.f. the EU Market Abuse Regulation (EU 596/2014). In such event the state is subject to the rules and regulations regarding the handling of such information.

References: Learn more about major shareholders in the Shareholder information and sale of the Hydro share to employees in note 9.2 Employee remuneration to the consolidated financial statements. Hydro's Code of Conduct can be found on Hydro.com/principles. Hydro's articles of association can be found on Hydro.com/governance. See also note 9.1 Related party information to the consolidated financial statements.

5. Freely negotiable shares
The Hydro share is freely negotiable, and there are no voting restrictions linked to the shares. It is among the most traded shares on the Oslo Stock Exchange and is subject to efficient pricing. As of December 31, 2022, the Norwegian state, represented by the Ministry of Trade, Industry and Fisheries, owned 34.26 percent of Hydro's shares, while the Government Pension Fund Norway owned 6.91 percent. Shareholding is based on information from the Norwegian Central Securities Depositary (VPS) as of December 31, 2022. Due to lending of shares, an investor's holdings registered in its VPS account may vary.

References: Learn more about Hydro's equity and dividend policy under Shareholder information.

6. General meeting of shareholders
The general meeting of shareholders, to which all shareholders are invited, is the company's highest governing body. The company's Articles of Association are adopted by the general meeting.

The Annual General Meeting was held on May 10, 2022, as a physical meeting in the company's head offices at Vækerø (Oslo, Norway) with electronic voting and with the shareholders having the possibility to attending digitally. In total, 54.80 percent of the total share capital was represented.

An Extraordinary General Meeting was held September 20, 2022. The Extraordinary General Meeting was held as a digital meeting, where shareholders attended and voted electronically. At the Extraordinary General Meeting 57.55 percent of the total share capital was represented.

Notice to a general meeting with supporting information is normally published on Hydro.com more than three weeks in advance and distributed to the shareholders at least three weeks prior to the meeting.

Notice to a general meeting provides information on the procedures which shareholders must follow to participate in and vote at the meeting. Such notice also details:

- the procedure for representation by proxy, including the use of a form of proxy
- the right of shareholders to propose resolutions for consideration by the general meeting of shareholders
- the website where the notice of the meeting and other supporting documents will be made available

The following information is available at Hydro's website:
- information on the right of shareholders to propose matters for consideration by the general meeting of shareholders
- how to make proposals for resolutions for consideration by the general meeting or how to comment on matters for which no resolution is proposed
- form of proxy

The Board's aim is that resolutions and supporting information distributed are sufficiently detailed, comprehensive and specific to enable shareholders to reach decisions on the matters to be considered at the meeting.

The notification deadline for shareholders wishing to attend the general meeting is no more than five days prior to the meeting.

Shares registered in a nominee account must be re-registered in the Norwegian Central Securities Depository (VPS) and be registered in the VPS on the fifth working day before the general meeting to obtain voting rights

Shareholders who are unable to attend in person may vote by proxy. The Board will nominate a person who will be available to vote on behalf of shareholders as their proxy, normally this is chair of the Board.

The general meeting votes for each candidate nominated for election to the company's Board and nomination committee. To the extent possible, the form of proxy will facilitate separate voting instructions for each matter to be considered, and for each of the candidates nominated for election. It is possible to vote electronically in advance.

Following the resolution by the Annual General Meeting to discontinue the company's corporate assembly May 10, 2022, the general meetings of the company will be chaired by an independent chair, in accordance with applicable regulation. On the company's Extraordinary General Meeting September 20, 2022, the meeting was chaired by attorney-at-law Hedvig Bugge Reiersen from the law firm Wikborg Rein. Hedvig Bugge-Reiersen is by the Board deemed independent of the company.

Chair of the Board, the chair of the nomination committee, the President and CEO, the CFO and the company's auditor attend all general meetings. As of the Annual General Meeting May 2023, all board members will be encouraged to attend the Annual General Meeting, either physically or digitally.

The minutes of meeting from general meeting of shareholders are published via stock exchange notice and on Hydro.com/generalmeeting as soon as possible after the meeting.

References: Learn more about the general meeting of shareholders at Hydro.com/investor.

Deviations: See the first page of this section.

7. Nomination committee

The company has a nomination committee. The members, including its chair, are elected by the general meeting of shareholders for periods of up to two years at a time, c.f. the company's Articles of Association section 5A. The chair of the nomination committee has the overall responsibility for the work of the committee.

The main task of the nomination committee is to provide a recommendation to the company's general meeting of shareholders on the election of members to the Board and the nomination committee, to ensure that the best possible preparations are made for the general meeting's decisions. In addition, the nomination committee recommends the remuneration to the members and deputies of the Board and the nomination committee.

The nomination committee consists of minimum three members, maximum four, who are either shareholders or shareholder representatives. If the chair resigns as member of the nomination committee during the electoral period, the nomination committee shall elect among its members a new chair for the remainder of the new chair electoral period, c.f. the company's Articles of Association section 5A.

The guidelines for the nomination committee have been approved by the general meeting of shareholders, and set out how elections to the nomination committee are to be prepared, the criteria for eligibility, the number of members, the term of office for which members are elected etc. The guidelines for the nomination committee are available at the company's website.

Shareholders may propose candidates for the nomination committee at any time. In order to be considered at the next ordinary election, proposals must be submitted by the end of November in the year before the election year.

The recommendations of the nomination committee include details on the candidates' background and independence and justifies separately why it is proposing each candidate. The recommendations of the nomination committee are normally made available together with the notice to the annual general meetings of the company.

The nomination committee ensures that due attention is paid to the interests of the shareholder community and the company's requirements for competence, capacity and diversity. The nomination committee also takes account of relevant statutory requirements regarding the composition of the company's governing bodies.

According to its mandate, the nomination committee shall be receptive to external views and shall ensure that any deadlines for proposals regarding members of the nomination committee and the Board are published well in advance on the company's website. In carrying out its duties the nomination committee actively maintains contact with the shareholder community and strives to ensure that its recommendations are anchored with major shareholders. Shareholders may contact the nomination committee via an electronic form available at the company's website. The nomination committee regularly has discussions with members of the Board.

All members of the nomination committee are independent of Hydro's Board of Directors, CEO and other executive management staff. As the largest shareholder the Norwegian state is represented on the nomination committee by Morten Strømgren from the Ministry of Trade, Industry and Fisheries. The Government Pension Fund Norway (Folketrygdfondet) is represented by Nils Bastiansen. Further information on the composition of the company's nomination committee is available at the company's website.

References: Information on Hydro's articles of association, the nomination committee and its members can be found on Hydro.com/governance. This is also where nominations to the committee can be submitted electronically.

8. Board of Directors - composition and independence
Detailed information about each board member can be found in the Corporate governance chapter.

All board members are to the Board's best assessment independent of the company's executive management and material business relationships.

Thomas Schulz was, as of December 31, 2022, the CEO of the listed company Bilfinger SE. Sales and purchases between Bilfinger SE and fully owned Hydro subsidiaries was in total NOK 380.363.323 in 2022. Schulz was not directly involved in these transactions. Schulz stepped down as Board member of the Company as of May 10, 2022.

In compliance with Section 5 of Hydro's articles of association, the Board consists of between nine and twelve members. The shareholder-elected board directors are elected by the general meeting of shareholders for periods of up to two years at a time, c.f. said provision. The employee-elected board directors are elected by and among the company's employees in Norway. The general meeting of shareholders resolves on the remuneration to the board members.

The nomination committee aims to achieve a board composition that protects the interests of the shareholder community and the company's need for expertise capacity and diversity. Emphasis is placed on the members complementing each other professionally and the Board's ability to function as a collegiate body.

As of December 31, 2022, the 11 members of the Board of Directors owned a total of 86,067 shares in Norsk Hydro ASA. Hydro does not have a share purchase program for board members, with the exception of the employee representatives, who are entitled to buy shares through the Norwegian employee share purchase scheme. All share purchase transactions are conducted in compliance with the Norwegian Securities Trading Act and appurtenant regulations.

At the Annual General Meeting of the company, May 10, 2022, the Annual General Meeting resolved to discontinue the corporate assembly. More information on the discontinuation of the corporate assembly may be found at hydro.com. It is stated in the Public Limited Liability Companies Act (No: "Allmennaksjeloven") section 6-1(2) that the board of directors shall always elect its chair if it has been agreed that the company shall not have a corporate assembly. The Board of Hydro adheres to this statutory requirement. The Board of Hydro elects its chair (and as applicable, its deputy chair) for periods of until two years at a time.

All board members are encouraged to own shares in the company.

References: An overview of the members of the corporate assembly, the current composition of the Board of Directors and information about their independence is disclosed in the Corporate governance chapter, and in Hydro's articles of association which are available on Hydro.com.

Deviations: See the first page of this section.

9. The work of the Board of Directors
The Board of Directors of Norsk Hydro ASA (the "Board") is responsible for the company's value creation, and sets and monitors the company's objectives, strategy and risk profile. The Board is focused on ensuring that considerations of sustainability are closely linked to the company's activities and value creation.

The Board has established procedures for its own work. These are set out in the Rules of Procedures for the Board of Directors of Norsk Hydro ASA. The Rules of Procedures has a particular emphasis on clear internal allocation of responsibilities and duties vis-à-vis the Board and the President and CEO.

It is stated in the Rules of Procedures that the Board represents and are accountable to all shareholders of the company. Pursuant to the Public Limited Liability Companies Act section 6-12 and 6-13, the Board has the overriding responsibility for the stewardship of the company, and shall conduct supervision of the company's day to day management and the company's activities in general.

The Board has an annual work plan with particular emphasis on objectives, strategy and implementation. It includes recurring topics such as strategy review, business planning, risk and compliance oversight, financial reporting, people strategy, succession planning as well as health and safety, and sustainability, including social responsibility, climate and environment. The Board is closely following the market and macroeconomic developments relevant for the aluminum industry. Since 2001, Hydro has had a board audit committee and a board people and compensation committee. Each committee consist of four board members. The shareholder-elected members are all independent of the company. In the opinion of the Board, the audit committee meets the Norwegian requirements regarding independence and competence.

More information on the Board Committees' composition, work, development and events during the year are set out in the Corporate governance report, in the section on Governance bodies.

Matters to be considered by the Board are prepared by the President and CEO in collaboration with the chair of the Board. The chair of the Board carries a particular responsibility for ensuring that the work of the Board is conducted with high quality, is well organized and that it functions efficiently. Emphasis is placed on creating a board environment of open and constructive dialogue and discussion.

Conflicts of interests and disqualification
Hydro's Code of Conduct contains guidelines for, among other things, how conflicts of interests that may arise should be handled with. The code applies to all of Hydro's board members and employees. It is the opinion of the Board that there were no transactions that were material between the group and its shareholders, board directors, Corporate Management Board or related parties in 2022, except those described under Item 8.

If the chair of the Board is or has been actively involved in a given case, for example in negotiations on mergers or acquisitions, another board member will normally lead discussions concerning that particular case.

The Rules of Procedures also contain provisions that any board member holding a key position in a company with competing activities may not participate in the discussion of or decision on matters where competition-sensitive issues are addressed. Further, the Rules of Procedures state that each board member has a duty to continually assess whether there are any circumstances which could undermine the general confidence in his or her independence, and how the Board shall handle transactions with closely related parties.

Board self-assessment
The Board normally conducts an annual self-assessment of its work, competence and cooperation with management and a separate assessment of the board's chairperson. In addition, the audit committee performs a self-assessment. The results are submitted to the nomination committee, which in turn evaluates the Board's composition and competence. This assessment is normally conducted by an external facilitator. The 2022 self-assessment was facilitated by the corporate advisory firm Egon Zhender.

References: Information about the Board of Directors and its committees, and the board members' competence can be found in the chapter Corporate Governance in Hydro's Annual Report 2021. The Board of Directors' mandate can be found at hydro.com.

10. Internal Control over Financial Reporting and Risk Management
The Board of Directors is responsible for sound internal controls and appropriate risk management systems. This is exercised by follow-up and deep dives according to the Board Audit Committee (BAC) annual wheel, and consist of agenda points and reviews of the key risk areas throughout the company's internal controls and risk management systems. The head of internal audit reports directly to the Board of Directors but is for administrative purposes placed under the purview of the chief financial officer (CFO).

10.1 Internal Control over Financial Reporting
Hydro's ICFR is based on the COSO 2013 Internal Controls Integrated Framework, which consists of five interrelated components and 17 relevant principles that must be present and functioning. The five elements are: Control Environment, Risk Assessment, Control activities, Information and Communication, and Monitoring activities.

Group Accounting and Reporting (GAR) has on behalf of the CFO, the governing responsibility for processes across Hydro related to periodic financial reporting, and internal control over financial reporting (ICFR), and is primarily designed to provide reasonable assurance to our management and the Board of Directors regarding the preparation and fair presentation of our financial statements.

Our overall control environment for financial reporting is governed by our ICFR Global Directives, and reflects the tone set by the common attitudes, ethics, and values, and competence of top management and management, and all the rest of our employees.

The ICFR framework is implemented through a risk-based and top-down approach, to provide appropriate organization of the financial reporting, ensuring that Hydro's activities, accounts and management are subject to adequate control.

Hydro's disclosure committee assists the CEO and the CFO in ensuring fairness, accuracy, completeness, and timeliness of Hydro's public reports and disclosures. The disclosure committee is also an integral component of Hydro's disclosure controls and procedures and assesses Hydro's effectiveness and compliance initiatives pertaining to ICFR. The disclosure committee reports quarterly a summary of its activities to the board audit committee. Through reporting from the disclosure committee, the audit committee takes an active role in ensuring the functioning of the ICFR framework. The Board of Directors meets regularly with the external auditor without members of the corporate management present.

The audit committee has established a pre-approval policy governing the engagement of Hydro's primary external auditors for audit and non-audit services to Hydro or any entity within the group. Under this pre-approval policy, the audit committee has defined and pre-approved subcategories of audit and non-audit services. The audit committee's preapproval policy includes annual monetary frames for each of the following categories of services:

- Audit
- Audit-related
- Tax
- Other - not related to financial audit and tax

Within the scope of the pre-approval policy, all services shall be pre-approved. The reported amounts for audit, audit-related, tax and other non-audit-related services are within the monetary frames established by the audit committee.

Hydro's internal control system includes all parts of Hydro's corporate directives, including our code of conduct and HSE and corporate social responsibility requirements. A more detailed description of the company's internal controls and risk management systems can be found at Hydro.com/governance.

10.2 Enterprise Risk Management
Our ERM process is described in the Risk review section.

References: A review of Hydro's major risks can be found in the section Enterprise risk management in Hydro. More information about Hydro's corporate directives can be found at Hydro.com/governance.

11. Remuneration of the Board of Directors
The shareholder elected board members perform no duties for the company other than their board duties.

Remuneration to the Board is determined by general meeting of shareholders, based on the recommendation of the nomination committee. The nomination committee recommends compensation with the intention that it should reflect the board's responsibility competence and time commitment as well as the company's complexity and global activities compared with the general level of directors' fees in Norway. Remuneration of the Board is based neither on performance nor on shares or share options.

References: All aspects of remuneration of the Board of Directors are described in the Management remuneration report. See also Hydro's articles of association.

12. Remuneration of the executive management
The Board of Directors has established a remuneration policy for remuneration of members of the executive management. The remuneration policy states that Hydro shall pay members of the executive management a compensation package that is competitive, but not market leading, and in line with good industry standards locally.

Where appropriate, compensation packages should also include a performance based component. The performance-based incentive schemes shall support Hydro's business strategy and long-term interests and shall also contribute to ensuring that the company is run in a sustainable manner. Performance based compensation has been capped in accordance with the Norwegian government's guidelines on executive remuneration.

The company's long-term incentive program is share based with a lock-in period of three years. Hydro has no share option scheme.

The remuneration policy was first approved by the shareholders at the Annual General Meeting in 2021.

A revised policy was approved by the Annual General Meeting on May 10, 2022. The policy is available on Hydro's website. A management remuneration report for 2022 will be presented to the Annual General Meeting in 2023 for an advisory vote.

References: Hydro's remuneration policy is available on Hydro's website. All aspects of remuneration of management are described in the Management remuneration report. The employee share purchase plan is described in Note 9.2 Employee remuneration.

13. Information and communication

Hydro's corporate culture embodies the principles of transparency and respect for others. Our ability to operate efficiently in the Norwegian market and internationally requires consistent and professional communication. Hydro therefore adhere to the principles of transparency, honesty and accountability when interacting with our stakeholders.

Hydro has established a global directive for accounting and financial reporting. Our principles for sustainability reporting are presented in the Appendices, Notes to the sustainability statements. Our approach to reporting is based on transparency and consideration of the requirement for equal treatment of all players in the securities market. This also pertains to contact with shareholders outside of the general meetings of shareholders.

Shareholder information is available on Hydro.com. The financial statements and Annual Report are sent free of charge to shareholders on request. Notice of general meeting of shareholders is sent directly to shareholders with known addresses unless they have consented to receive these documents electronically. All information sent to the shareholders is made available on Hydro.com when distributed. Presentation of the quarterly reports as well as the annual general meeting are simultaneously broadcasted through webcasts. All relevant information is sent to the Oslo Stock Exchange electronically for public storage.

Hydro has emergency plans in place at the relevant levels in the organization. These plans are exercised regularly. Rules for who can speak on behalf of the company are regulated through Hydro's Code of Conduct.

References: A financial calendar is available in Hydro's annual reports and at Hydro.com/investor where also more information about webcasts and the Hydro share can be found, including key legal information for shareholders in Norsk Hydro ASA. Hydro's code of conduct is available on Hydro.com/principles.

14. Takeovers

The Board of Directors will handle takeover bids in accordance with Norwegian law and the Norwegian code of practice for corporate governance. There are no defence mechanisms against acquisition offers in the company's articles of association or in any underlying steering document. We have not implemented any measures to limit the opportunity to acquire shares in the company. See also Item 5.

Deviations: See the first page of this section.

15. Auditor

The external auditor annually presents the main features of the audit plan to the audit committee.

The external auditor participates in all meetings of the audit committee. The minutes from these meetings are distributed to all board directors. This practice is in line with the EU audit directive. Each year the auditor presents the main elements of the audit, including uncorrected audit misstatements and internal control weaknesses.

The external auditor meets with the Board of Directors when the company's annual financial statements are approved. In the meeting, the auditor provides an overview over the main elements of the audit, identified weaknesses in and suggestions for improvements to Hydro's internal controls. The Board of Directors holds meetings with the external auditor without members of the corporate management present.

Hydro places importance on independence and has clear guidelines regarding the use of services from external auditors in accordance with the EU Audit reform and IESBA independence rules. All services from the external auditor, including non-audit services, are subject to pre-approval as defined by the audit committee. The pre-approval process for non-audit services ensure that no services prohibited by law is delivered to Hydro or any controlled subsidiaries. The external auditor provides the audit committee with an annual written confirmation of independence, and a summary of all non-audit services provided to Hydro during the year.

Remuneration of the auditor is stated in the Annual Report. It is also included as a separate agenda item to be approved by the Annual General Meeting. In 2020, the annual general meeting chose to retain KPMG as external auditor for the group, in accordance with a tender process. KPMG has been the auditor for Hydro since 2010. Lead Audit Partner has been part of the audit team since 2017. The lead Audit partner rotates every 7 years.

References: See note 10.4 Auditor's remuneration to the consolidated financial statements.

Sustainability

Hydro

Sustainability performance

Sustainability is an integrated part of Hydro's strategy and the basis for our long-term positioning and profitability. By reducing our footprint, improving relations with neighbors and other stakeholders, managing impacts, increasing resource efficiency and developing new markets, Hydro will reduce risk and create new opportunities. Hydro has quantified a set of ambitions towards 2030 and 2050 that will improve our performance on climate, environment, and social responsibility.

This chapter is part of Hydro's reporting in accordance with the GRI standards and presents Hydro's management of and performance on material environmental and social issues. Our materiality assessment and summary of the topics are presented in the section on Sustainability reporting the Hydro way, in the Governance chapter. This chapter should be read together with the appendix to the annual report that contains Hydro's Principles for sustainability reporting and the notes to our sustainability performance. Hydro's GRI index is available at Hydro.com/gri. See also the notes to our sustainability performance for more information.

Hydro and the UN Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) embrace a universal approach and define the global agenda for sustainable development. The goals explicitly call on businesses to use creativity and innovation to address development challenges, and recognize the need for governments to encourage sustainability reporting. Hydro uses the SDGs to understand the context of our impact on sustainable development. Please refer to the Appendices for an overview of Hydro's impact on the 17 development goals.

Materiality analysis

Our 2022 material topics reported on in this chapter can be found in our Materiality analysis.

Environmental information

The table below shows Hydro's main quantitative indicators related to its climate and environmental performance. More detailed information is, when indicated, available in the notes to the performance indicators.

	Notes	% change 2021–22	**2022**	2021	2020	2019	2018	GRI Standards reference
Climate performance								
Direct GHG emissions from consolidated operations (million tonnes CO2e)	E1.1	(6%)	7.17	7.62	6.93	6.51	6.05	305-1
Indirect GHG emissions from consolidated operations (million tonnes CO2e)	E1.1	(8%)	1.57	1.71	1.28	1.44	1.47	305-2
Direct GHG emissions from Hydro's ownership equity (million tonnes CO2e)	E1.2	(5%)	7.36	7.75	7.13	6.76	6.36	305-1
Indirect GHG emissions from Hydro's ownership equity (million tonnes CO2e)[1)]	E1.2	(1%)	3.67	3.71	3.51	3.81	3.85	305-2
Indirect (Scope 3) GHG emissions from consolidated operations (million tonnes CO2e)	E1.3	(3%)	27.92	28.84	-	-	31.47	305-3
GHG intensity – alumina refining (tonnes CO2e per tonne alumina)	E1.5	0%	0.62	0.63	0.65	0.71	0.79	305-4
GHG intensity – electrolysis, based on ownership equity (tonnes CO2e per tonne aluminium)	E1.5	(4%)	1.57	1.64	1.59	1.60	1.60	305-4
Environmental performance								
Total sulphur dioxide emissions (tonnes SO2)	E2.1	(23%)	21 216	27 519	22 332	22 871	16 275	305-7
Total nitrogen oxide emissions (tonnes Nox)	E2.1	(6%)	7 993	8 524	7 884	7 549	7 130	305-7
Accumulated area disturbed by mining activities (hectares)	E6.2	7%	7 512	7 017	6 607	6 153	5 819	
Accumulated area under rehabilitation by mining activities (hectares)	E6.2	10%	2 905	2 646	2 486	2 339	2 203	
Bauxite tailings generated (thousand tonnes)	E5.1	5%	4 455	4 239	3 345	2 871	2 116	G4-MM3
Bauxite residue generated (thousand tonnes)	E5.1	(2%)	5 270	5 384	4 827	3 871	3 191	G4-MM3
Total waste generated, excl. tailings and bauxite residue (thousand tonnes)	E5.2	(9%)	664	731	604	-	-	306-3
Total waste diverted from disposal (percentage of total waste generated)	E5.3	(3 pp)	71 %	74 %	71 %	-	-	306-4
Total freshwater withdrawals (million m3)	E4.2	(1%)	124.6	129.5	114.2	120.5	120.2	303-3
Total freshwater withdrawals in water stressed areas (million m3)	E4.2	(1%)	1.0	1.1	0.9	1.1	1.1	303-3
Recycled post-consumer scrap (thousand tonnes)	E4.3	(4%)	321	335	104	98	104	
Total recycled metal (thousand tonnes)	E4.3	(5%)	1 285	1 353	421	438	474	

[1)] Emissions from the gas fired power plant at Qatalum are reported as scope 2.

Social and governance information

The table below shows Hydro's main indicators related to safety and social performance. More information is, when indicated, available in the notes to the performance indicators.

	Notes	% change 2021-22	2022	2021	2020	2019	2018	GRI Standards reference
Employees								
Number of permanent employees	S1.1	2%	32,014	31,264	34,240	36,310	36,236	102-7 (2016)
Share of women	S1.1	1 pp	21%	20%	18%	18%	18%	
Number of temporary employees	S1.2	7%	1,917	1,799	1,929	1,647	1,680	102-8 (2016)
Women in management, levels 0-2	S4.1	2 pp	37%	35%	31%	32%	33%	405-1 (2016)
Non-Norwegians in management, levels 0-2	S4.1	(5 pp)	29%	34%	43%	37%	39%	405-1 (2016)
Full-time equivalents for contractor employees	S1	22%	16,900	13,900	11,800	10,500	9,000	102-8 (2016)
New employees	S1.3	13%	4,213	3,738	3,071	4,466	5,141[1)]	401-1 (2016)
Turnover	S1.3	2 pp	17%	15%	14%	13%	12%	401-1 (2016)
Hydro Monitor Employee Engagement Index	S3		76%		72%		84%[1)]	
Payroll (NOK million)	S1.1	15%	17,605	15,312	17,509	19,005	17,318	201-1 (2016)
Health and safety								
Sick leave	S5.1	0.3 pp	4.1%	3.8%	4.2%	3.7%	3.6%	403-2 (2018)
Total recordable injuries (TRI) rate (injuries per million working hours)	S5.1	(27%)	2.4	3.3	2.7	3.0	3.4	403-2 (2018)
TRI rate, permanent employees		(23%)	3.0	3.9	3.0	3.3	3.5	
TRI rate, contractors		(28%)	1.3	1.8	1.7	2.2	3.0	
Number of fatal accidents	S5.1	0	0	0	0	0	1	403-2 (2018)
Number of fatal accidents, permanent employees		0	0	0	0	0	1	
Number of fatal accidents, contractors		0	0	0	0	0[3)]	0	
High risk incidents	S5.2	(39%)	75	122	140	190	202	403-2 (2018)
Occupational illness rate	S5.3	0%	0.3	0.3	0.3	0.2	0.5	403-3 (2018)
Current income tax (NOK million)	S7	51%	6,891	4,565	2,105	1,512	2,724	
Research and Development								
R&D expenses (NOK million)	S8.1	27%	655	512	633	625	594	
R&D funds received (NOK million)	S8.1	(21%)	22	28	34	36	35	
Community investments and social programs								
Community investments, charitable donations and sponsorships	S9.1	25%	69	55	56	59	89	
Persons empowered with skills and education (thousands, per year)	S9.2	23%	25	21	60	28	24	
Compliance								
Cases reported through AlertLine	S10.1	59%	433	273	224	347	342	102-3 (2016)
Confirmed cases of corruption	S10.1	0%	0	0	1	2	1	205-3 (2016)
Significant human rights breaches	S10.3	0%	0	0	0	0	0	406-1/407-/408-1/409-1 (2016)
Relocation of people	S10.3	0%	0	0	0	0	0	G4-MM9
Training in business ethics Hydro[3)]	S10.4	120%	56,516	25,709	34,330	24,481	3,490	412-2/205-2 (2016)
Supplier audits	S10.5	308%	200	49	49	98	83	HDD-01
Potential and existing counter parties screened using RDC	S10.5	(7%)	6,500	7,000	8,000	18,172	13,000	414-1 (2016)

[1)] Excluding Extrusions.
[2)] Contractor fatality in 50/50 JV managed by Qatalum.
[3)] Times training modules was completed in class room and e-learning training on anti-corruption, code of conduct, data privacy, and sanctions and trade compliance, Diversity inlcusion belonging, Human rights management, Anti-Harassment, Non-Discrimination training.

Ethics and compliance

Material topics covered in this chapter:

- Integrity and anti-corruption
- Partnerships
- Product quality and liabilities
- Public affairs and lobbying
- Transparency

Why is it important?

Hydro is a global aluminium company, present in every step of the value chain, from mining to metal products and solutions. Hydro is committed to applying ethical business practices and compliance throughout our organization and supply chain. Hydro's board sanctioned Code of Conduct creates the foundation that supports our efforts to do the right things and to always act with integrity throughout our global organization wherever we operate and conduct business on behalf of Hydro.

Our approach

In Hydro, compliance is defined as adherence to applicable laws and regulations as well as Hydro's governance documents. Specific policies and procedures as well as guidelines have been established to assist line management to adhere to Hydro's compliance requirements. Special emphasis is made on reducing the risk of non-compliance within financial reporting, anti-corruption, competition, data privacy, economic sanctions, human rights, security, health, safety and environment.

Our compliance system is based on a clear governance structure defining roles and responsibilities regarding compliance and all compliance-related activities undertaken throughout the company. For legal entities where Hydro holds less than 100 percent of the voting rights, we are working through their boards of directors to promote the principles in Hydro's Code of Conduct and our governance documents. In 2022, Hydro continued to strengthen the compliance program through various updates and improvements.

The management of compliance risks are integrated in our business planning, enterprise risk management and follow-up process, including relevant risk-mitigating actions and relevant key performance indicators. The progress of actions as well as any non-compliance matters are addressed in the quarterly internal board meetings that each business area has with the CEO, and an annual compliance report is submitted to the board of directors. The head of group compliance reports to the board of directors through the board audit committee at his own discretion. In addition, he participates in all board audit committee meetings and provides quarterly compliance updates to the audit committee. He also meets with the board of directors periodically. Read more about

Ambition

Commitment

to building a culture of integrity and trust

Performance

433

Cases reported through AlertLine

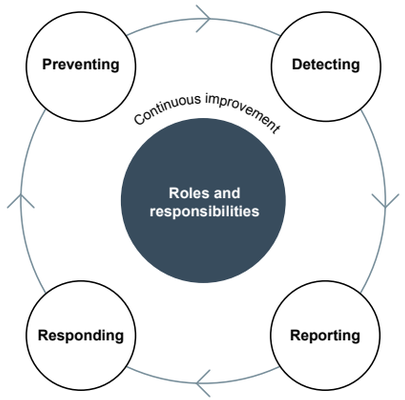
56,516

Compliance awareness and training modules completed

78

Integrity culture index

Integrity and compliance



Hydro's human rights management in the Human Rights section.

Combating corruption and respecting human rights are integral to our supplier requirements, see Responsible supply chain for more information. Procedures are in place to assess the integrity risk of business partners. Regular transaction-based screening of customers and suppliers is also carried out, see note S10.5 Screening of business partners and supplier audits to the social statements.

An integrity culture index was introduced in Hydro's employee engagement survey in 2020, benchmarking the employee perception of our integrity culture. The overall score of the index was within the first quartile of the defined external benchmark, which was one of the KPIs of the CEO scorecard. The results provided us with a good basis for specific and tailored compliance activities which were undertaken in 2021 and 2022. In 2022 the integrity culture index was measured again and the scores shows a positive trend since 2020.

Hydro's global data protection constitutes the company's binding corporate rules for data protection (BCR) and ensures compliance with the EU General Data Protection Regulation (GDPR). Designated data privacy coordinators for all business areas and staff functions form part of the data privacy network chaired by the head of data privacy. We are continuously working on the robustness of the data privacy network, which is seen as a key point for a well-functioning data privacy program. With a program established in 2018, Hydro has also worked on several data privacy program improvements in procedures and supporting processes to ensure continuous fit to the business.

We are committed to building a culture of trust where employees are comfortable to ask questions, seek guidance, raise concerns, and report suspected violations to our Code of Conduct, applicable laws or regulations or Hydro's obligations. Normally, internal concerns and complaints should be raised with local management, but employees may also raise the issue directly with Human Resources, HSE (health, safety and environment), a union representative, Compliance, Legal or Internal Audit. Employees, on-site contractors, and others may also use Hydro's confidential reporting channel, the AlertLine, where concerns can be reported anonymously to Internal Audit. The AlertLine is available in applicable languages and reports can be made online or via toll-free phone numbers listed at Hydro's intranet or on Hydro.com. For further information about the use of our global grievance mechanism and the AlertLine, please see the Human Rights chapter and note S10.1 Reported and confirmed cases of non-compliance.

The Head of Internal Audit reports to Hydro's Board of Directors through the Board Audit Committee. The Committee and Corporate Management are informed on matters reported through the AlertLine on a quarterly basis. Hydro's Internal Audit has resources in Norway, Brazil and North America. The head of internal audit participates in all board audit committee meetings and provides quarterly updates to the audit committee.

Hydro is committed to delivering high quality products and managing product related liabilities. Product quality comprises quality specifications in the use phase of our products as well as criteria for carbon footprint and environmental impact of our products. To meet customer expectations for product quality and responsible value chain, we are working to certify our production sites according to the Aluminium Stewardship Initiative (ASI). This year we increased the share to 66%, see note S13 Certificates, and note S10 Compliance for more information. Please refer to the Climate change and Environment chapters of the annual report for more information about our work.

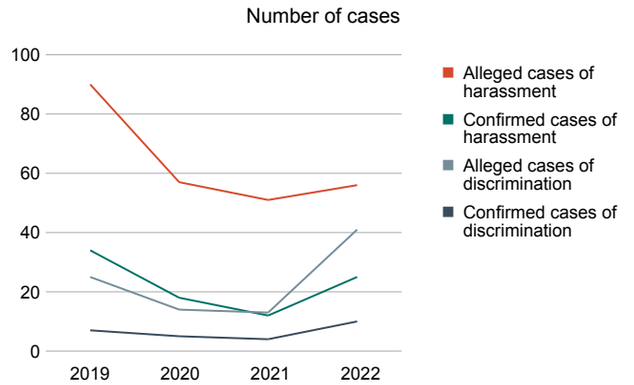
For more information about Hydro's performance on compliance, see note S10 Compliance to the social statements in this report.

Transparency
Transparency is key to creating a global level playing field as well as to safeguard the company's reputation. Hydro reports in accordance with the GRI Standards and supports the Extractive Industries Transparency Initiative (EITI). Since 2005, we have reported payments to host governments related to exploration and extraction activities for bauxite. We also comply with the Norwegian legal requirements on country-by-country reporting. In accordance with the Norwegian Transparency Act (valid from 2022), UK Modern Slavery Act and Australia Modern Slavery Act, we publish a transparency statement and an account of due diligence assessments, see the Human Rights section. In addition, we follow the Euronext guidelines to issuers for Environmental, Social and Governance (ESG) reporting.

Partnerships
Hydro works through industry and aluminium associations to improve the ESG standards within our industry and to establish a level playing field for global aluminium production. Hydro is a member of the International Council on Mining and Metals (ICMM), which gives us the opportunity to participate in the development of industry practices on the environment and to share best practices. We are also a founding member of the Aluminium Stewardship Initiative (ASI).

The ongoing loss of biodiversity and degradation of ecosystems represent long-term risks for the industry and

Alleged and confirmed cases of discrimination and harassment



society at large. To increase our knowledge and secure a science-based approach to rehabilitation, the Biodiversity Research Consortium Brazil-Norway (BRC) was established in 2013. BRC consists of the University of Oslo and its Brazilian partners Museu Paraense Emílio Goeldi, Federal University of Pará and Federal Rural University of the Amazon, in addition to Hydro. The scope of the consortium is to create an environmental research program connected to our mining operations. The aim is to strengthen Hydro's ability to preserve natural biodiversity and to better rehabilitate the areas where we mine bauxite. Twenty-six research projects are progressing, and more projects are in the pipeline.

Joining forces in collective action is critical in the fight against corruption. Hydro has had a partnership with Transparency International for many years. Hydro is also a member of the Maritime Anti-Corruption Network (MACN), which provides valuable insight into the maritime industry – an important part of our supply chain. Through Alunorte, Albras, Mineração Paragominas and Norsk Hydro Brasil, Hydro has been a signatory of the Business Pact for Integrity and Against Corruption since 2018. The Pact is developed by the Ethos Institute in partnership with global organizations such as the United Nations and the World Economic Forum, seeking to unite companies with the objective of promoting a more ethical market and to eradicate bribery and corruption in Brazil. Hydro companies in Brazil had improvements in their integrity results reported in the Integrity Ethos Indicators.

Hydro has had a long-standing partnership with Amnesty International Norway since 2002. The partnership is based on human rights education and dialogue meetings on relevant human rights dilemmas. Hydro is also an active member of the Nordic Business Network for Human Rights coordinated by the Danish Institute for Human Rights. To contribute to the development and strengthening of the human rights management and procedures, Hydro participates in other relevant forums, such as ICMM, ASI and UN Forum on Business and Human Rights.

Hydro is a Signature Partner of UNICEF Norway to contribute to quality education for children and adolescents. For information about our community investments and social programs, see the Community investments and social programs section.

In addition, we cooperate with global and local industry organizations, NGOs and other organizations. See Hydro.com for an overview of important partnerships. For information about how we collaborate with other institutions within research and development, please see the section on Innovation.

Public affairs and lobbying

Hydro recognizes the value of engaging with public authorities and other stakeholders in relation to the development of various policy initiatives that impact our industry. We interact primarily with decision makers in countries where we have significant operations, such as Norway, Brazil and the US, as well as with regional structures like the European Union institutions. These interactions are mainly related to securing competitive, stable and predictable industry framework conditions, taxes and legislation that affect our activities.

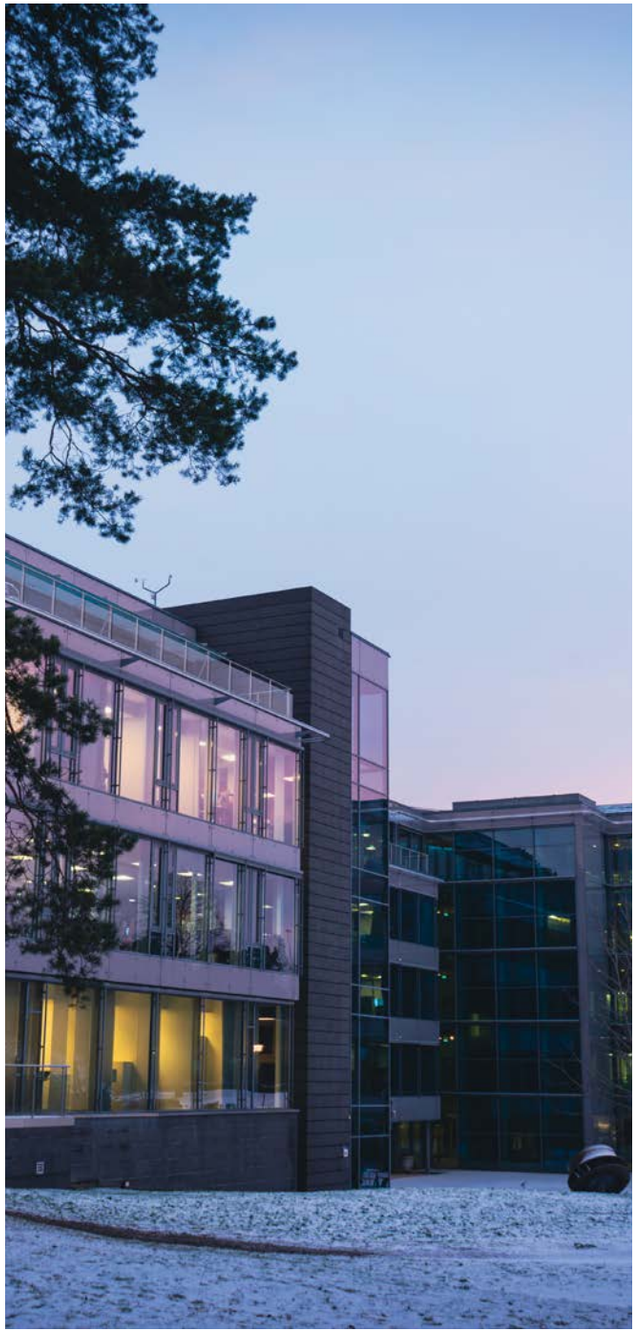
We promote our views on issues of importance either through direct interaction with public authorities and other stakeholders, or through various industry associations. See GRI Standards 2-29 at Hydro.com/gri.

In addition, we participate in think tanks, especially in Brussels, and engage regularly in discussions with various NGOs.

Most resources are dedicated to advocacy activities within the EU, Brazil, the US and Norway, through business associations, and to direct dialogue with authorities and decision makers. When relevant, we are in dialogue with applicable tax authorities in Norway, the EU and Brazil. We may also discuss fundamental tax developments and issues with other enterprises.

We support the principles of free and fair trade, and efforts to create a global level playing field. In our advocacy, we also support the climate targets set in the Paris Agreement.

Hydro supports market-based solutions for pricing of carbon emissions, like the EU Emissions Trading System (ETS). A decisive part of the EU regulation is the ability to compensate for the extra cost occurring within the EU, in order to maintain competitiveness for global industries like aluminium. Pricing of emissions from imported products through a Carbon Border Adjustment Mechanism (CBAM) is scheduled to replace existing carbon leakage measures with a phase-in starting in 2026. For the aluminium industry it's important that CBAM is reviewed and tested before implemented, and that indirect cost compensation remains as an important carbon leakage instrument.



The European Green Deal was announced by the EU Commission in 2019, increased European climate protection targets 2030 were decided in December 2020, and the EU presented in July 2021 their Fit-for-55 proposal to enable greenhouse gas reductions in the next decade. It is a roadmap on policies to achieve carbon neutrality in the EU by 2050 and includes policies to develop markets for low-carbon and circular products, in combination with stricter targets for emission reduction. We see interesting opportunities in both this roadmap, and in the Commission's initiatives on Circular Economy and Critical Raw Materials, as long as it is combined with competitive framework conditions.

The EU agenda on energy markets has been particularly full in 2022. Hydro's main view is that interventions in these markets should be temporary and targeted at alleviating costs for vulnerable consumers. In the long term, markets should be allowed to function to provide the right pricing signals for investments in renewable energy production.

In 2023 the EU and the US will be conducting negotiations on a Global Arrangement on Sustainable Steel and Aluminium (GASSA). Hydro will follow this process closely with a view to securing proper definitions of what should be considered sustainable.

For information on spending on public affairs and lobbying, see note S12 Public affairs and lobbying to the Environment and social statements in this report.

According to our Code of Conduct, Hydro may not make financial contributions to political parties.

Stakeholder dialogue

Engaging with our stakeholders helps us understand what is expected of us, what is important to them, how we impact them and how we can solve common challenges. As a global company, Hydro participates in a wide range of activities, from local community meetings to national and international multi-stakeholder and industry association discussions. We are committed to interacting with all our stakeholders in an ethical and transparent manner. We strive to demonstrate integrity in everything we do.

Our dialogue and engagement covers a large number of stakeholders and individuals, such as unions, works councils, academia, customers, suppliers, business partners, authorities, industry associations, non-governmental organizations and local communities, including vulnerable groups. This is shown in the figure on Stakeholder dialogue.

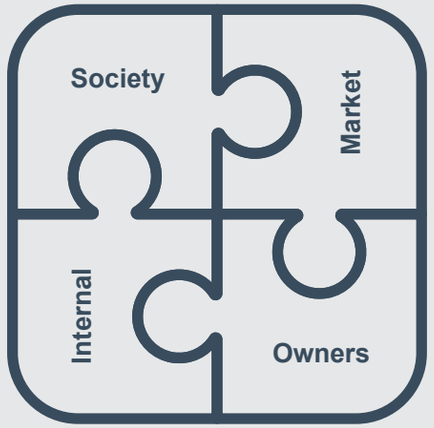
We consult with interested and affected parties in the identification, assessment and management of all significant social, health, safety, environmental and economic impacts associated with our activities. For more information regarding stakeholder dialogue and human rights, see our section on Rightsholder and stakeholder engagement in the Human rights chapter.

Dialogue with affected groups gives input to plans, detailing our environmental and social responsibilities. We strive to act in an open and credible manner, and gather views from interested parties, aiming for a common understanding of the decisions that are made.

When planning new projects, we map the environmental and social impact when relevant. Before major developments or large expansions are undertaken, it is a requirement to conduct an impact assessment, in line with internationally accepted standards. In both cases, we follow standards such as the International Finance Corporation Performance Standards, Equator principles and UN Guiding Principles on Business and Human Rights. This includes the principle of free, prior and informed consent when indigenous and traditional peoples are involved. The assessments follow the requirements regarding information, consultation and investigation of the project's environmental and social impact, including human rights, and include an action plan with proposed initiatives.

All business areas have a forum for dialogue between management and union or employee representatives. Hydro's Global Framework Agreement is extended and still valid.

Stakeholder dialogue in Hydro



Society
- Academia
- Authorities
- Industry associations
- Lobby groups
- Local communities
- Media
- National and international unions
- NGOs
- Politicians
- Public offices
- R&D funding bodies

Market
- Commodity and stock exchanges
- Competitors
- Customers
- End users
- Insurers and banks
- Partners/joint ventures
- Suppliers
- Other business relations

Internal
- Board of Directors
- Corporate Assembly
- Employee representatives
- Employees

Owners
- Owners/shareholders
- The Norwegian government
- Financial markets
- Analysts
- Traders
- Brokers
- Ratings agencies

Climate change

Material topics covered in this chapter:

- Climate related risk
- Materials and greener sourcing
- Net zero products and operations
- Renewable energy solutions

Why it matters

Managing our impact on climate change is key to meeting opportunities and challenges arising from sustainability trends and climate-related policies and regulations, and an important component in Hydro's new strategic direction. In parallel, climate related risks can impact the integrity of our assets.

Our approach

Hydro has set a net-zero ambition by 2050 or earlier and believes low-carbon aluminium products can play an important role in reducing global greenhouse gas (GHG) emissions. Hydro's ambition is to reduce the climate impact from our value chain and become a net-zero company in 2050 or earlier, deliver net-zero products and use our industrial and energy competence to enable the transition to a net-zero society. Our net-zero ambitions are based on a successful transition to a 1.5 degree economy, in line with climate science and the Paris agreement.

Hydro's climate strategy is an integral part of our overall business strategy, aiming at driving improvements and development within the company. Impact on the climate strategy is also a criterion for all significant investment decisions. The strategy includes reducing the climate impact of our operations as well as taking advantage of business opportunities by enabling our customers and society to do the same.

Alumina refining and electrolysis of primary aluminium are energy-intensive processes and constitute the majority of Hydro's GHG emissions. The energy source is the main driver for total as well as specific emissions, i.e. emissions per tonne of product produced. On the other hand, aluminium can save significant amounts of energy and GHG emissions in the use phase due to its lightweight properties. In addition, Hydro aims to enable other sectors to decarbonize and transition to a low-carbon economy by utilizing our industrial and energy competence to develop batteries, green hydrogen and more renewable energy.

Net-Zero Hydro
The majority of Hydro's direct GHG emissions are associated with alumina production, mainly fossil fuel combustion for the heat-intensive calcination process and steam generation,

Ambitions

Net zero
Scope 1 and 2 GHG emissions by 2050 or earlier

30%
Reduction in scope 1 and 2 GHG emissions by 2030

10%
Reduction in scope 1 and 2 GHG emissions by 2025

30%
Reduction in upstream scope 3 GHG emissions per tonne aluminium by 2030

Performance

11.03
Million tonnes scope 1 and 2 GHG emissions by ownership equity

0.62
Tonne scope 1 and 2 GHG emissions per tonne alumina refinined

1.57
Tonne scope 1 GHG emissions per tonne aluminium from the electrolysis process

14.41
Million tonnes upstream scope 3 GHG emissions by ownershp equity

Hydro

and the electrolysis process for primary aluminium, which is harder to abate.

Hydro's ambition is to reach net-zero GHG emissions in 2050 or earlier, and we have established a roadmap to reduce our absolute direct and indirect GHG emissions by 10 percent by 2025 and 30 percent by 2030, based on a 2018 baseline.[1] The climate strategy is integrated in the Corporate Management Board's remuneration and followed up as a KPI on the CEO's balanced scorecard.

Changes in our production portfolio might influence these targets, but our aim is still to reduce our specific emissions, i.e. emissions per metric tonnes of aluminium produced. The baseline emissions equal 11.3 million tonnes CO_2 equivalents (CO2e), including direct emissions and indirect emissions from electricity generation (scope 1 and 2 emissions).

Innovation and technology development are key enablers for reaching net-zero GHG emissions from Hydro's operations in 2050. We have initiated a significant R&D program to assess options for zero-carbon processes throughout the aluminium value chain.

We are exploring three pathways to deliver zero-carbon aluminium products:

- Carbon capture and storage and direct air capture to decarbonize our existing primary aluminium facilities
- Our own proprietary HalZero technology for carbon-free processes for primary aluminium production
- Utilizing more post-consumer aluminium scrap. We have successfully produced the first commercially available near-zero carbon aluminium in 2022 at the Clervaux recycling plant, using 100% post-consumer scrap.

Read more about Hydro's technology roadmap in the Innovation and technology transition chapter.

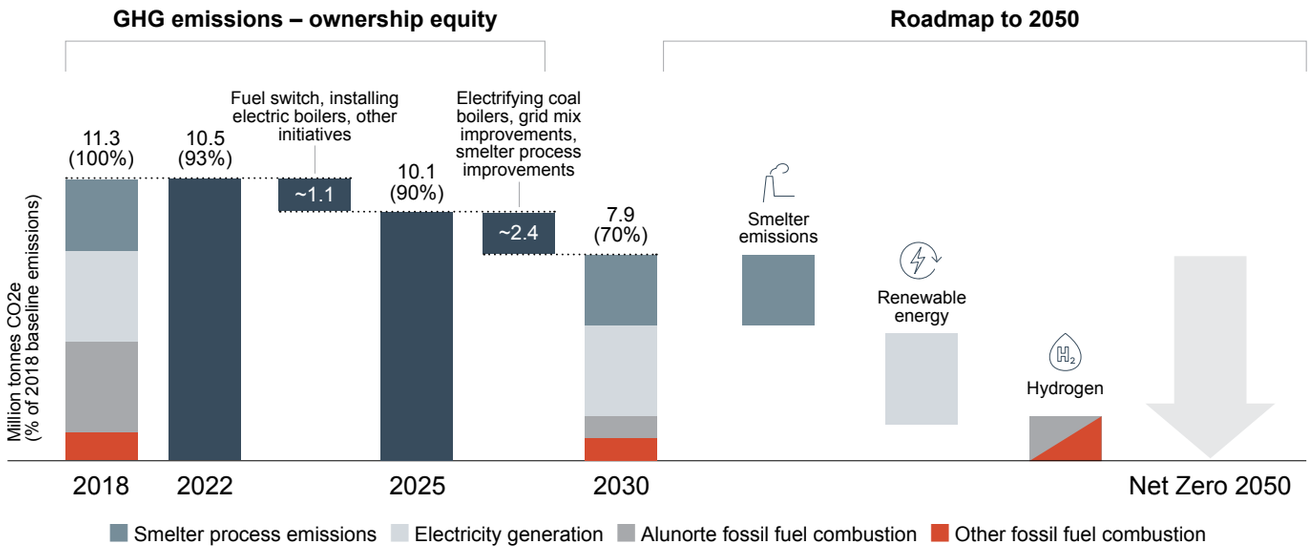
In addition, Hydro's new energy ventures, Hydro Rein, Hydro Havrand and Hydro Energy's Batteries unit can play an important role in enabling a net-zero society.

Hydro recognizes the need to limit global warming to 1.5 degrees above pre-industrial levels, as set out in the Paris agreement from 2015. To understand the impact of climate change and the implications of the Paris Agreement for the aluminium industry, Hydro has taken part in the International Aluminium Institute's work to develop greenhouse gas pathways toward 2050 consistent with the Paris Agreement. These are in-line with the International Energy Agency's 1.5 degree scenario, combined with IAI's analysis of demand in the aluminuim market and material flows. These pathways are integrated in Hydro's strategy, hence Hydro's climate strategy is aligned with climate science. Hydro is considering to verify our climate strategy against the Science Based Target Initiative when they have developed a sectoral decarbonization approach (SDA) for the aluminium sector.

The overall carbon footprint of primary aluminium is highly dependent on the source of energy used to produce the metal. Consequently, in recent years, the electricity grid mix has been a key factor in deciding the location of Hydro's investments. More than 70 percent of the electricity used in Hydro's production of primary aluminium is based on renewable power. This is based on the physical grid mix in the countries where we operate.

[1] 2017 for Paragominas, Alunorte and Albras due to the production embargo at Alunorte and curtailment at Albras and Paragominas in 2018

Technology roadmap towards net-zero emissions in 2050



Hydro's climate strategy baseline
The indirect (scope 2) emissions in the baseline for the RCF and Hydro's climate strategy is based on supplier-specific emission factors from power purchasing agreements, as we believe this incentivizes our plants to implement greener energy sourcing. This creates a deviation of 500 thousand tons between the baseline and our location-based GHG emissions reported in note E1 to our sustainability statements.

Energy efficiency is an important part of Hydro's ongoing efforts to reduce costs and air emissions. Our alumina refinery Alunorte in Brazil is among the most energy-efficient refineries in the world. Switching part of our fuel oil consumption used for calcination at Alunorte to natural gas with lower GHG emissions is an important enabler to reach our emission reduction targets. The project is on track to reduce emissions by 700,000 tonnes of CO_2 by 2025. In addition, we have installed one electrical boiler for steam generation, replacing fossil fuel combustion, and plan to install two more with a total potential to reduce emissions by an additional 400,000 tonnes of CO_2 by 2025. By 2030, the aim is to fully decarbonize all processes at Alunorte, except the calcination process. This will be done mainly by electrification of remaining boilers and will lead to total emission reduction of 70 percent at Alunorte by 2030. For more information on Hydro's emission data see note E1 to our Sustainability statements.

In order to ensure continued supply of renewable power to Hydro's operations in Norway, we operate 39 hydropower plants with a combined installed capacity of 2.7 GW. Adjusted for ownership shares, our captive hydropower production is 9.4 TWh in a normal year. In addition, we operate a wind farm and purchase more than 9 TWh of renewable power annually in the Nordic market under long-term contracts.

Average electricity consumption at our consolidated production sites was 13.9 kWh per kilogram primary aluminium produced in 2022. The global average was 14.1 kWh in 2021.[1] We are now in the process of transferring Hydro's next generation of smelter technology, the Karmøy Technology Pilot, to our other primary aluminium metal plants, see the Innovation chapter for more information.

In Hydro Extrusions, our sites are working on different initiatives to lower their GHG emissions associated with energy and electricity consumption. As an alternative to purchasing the standard electricity mix from the grid, some plants have entered into power purchasing agreements (PPAs) with renewable power producers. Many plants are also working with partners and governments to evaluate the possibilities of installing their own on-site renewable power generation. The sites are also working to improve energy efficiency through benchmarking, process improvements and when investing in new equipment.

[1] Based on figures from the International Aluminium Institute

Increasing recycling of aluminium

The inherent properties of aluminium make recycling attractive. It can be recycled infinitely without degradation in quality, and recycling requires 95 percent less energy than primary aluminium production.

Hydro is a large remelter and recycler of aluminium. We remelt process scrap from our own production and from other companies, as well as post-consumer scrap from the market. The carbon footprint of recycled pre-consumer scrap or process scrap is dependent on its metal origin. Thus, process scrap from aluminium produced by coal power comes with a much higher footprint than process scrap from hydropower-based aluminium. Post-consumer scrap, however, comes with no historical carbon footprint, as this metal is entering its next lifecycle.

Recycling post-consumer scrap comes with challenges. The metal has to be collected and properly sorted, before being recycled back to high quality products. The main challenge with post-consumer scrap is to make sure that the quality of the metal is preserved in the recycling process, and to identify the alloys and properties of the used metal we purchase. Hydro produces extrusion ingot with a high share of post-consumer scrap (e.g. our Circal products) We work together with customers to develop new markets and specifications for products with a high recycled content, whilst developing even more advanced sorting technology.

Hydro has an ambition to recycle 620-770 thousand tons of post-consumer scrap by 2027. To reach our ambitions, we are improving our processes to combine process scrap with post-consumer scrap recycling. The technology is being rolled out to Hydro's remelting and recycling plants. These investments

Sustainable financing in Hydro

Hydro's sustainability position enables profitable growth and a cost of capital advantage. To access favorable financing, Hydro published a green and sustainability-linked financing framework in 2022. This Framework was established to support the issuance of Green Financing Instruments, as well as Sustainability-Linked Financial products. The financial products use, respectively, the EU Taxonomy and Hydro's climate strategy as basis for the financial products, with KPIs linked to GHG emissions and recycling of post-consumer scrap. CICERO Shades of Green has provided a Second Party Opinion on the Framework and rated it Excellent on Governance and "medium green" overall.

Hydro established a Euro Medium Term Note (EMTN) programme on 7 November 2022, approved by Euronext Dublin and the Central Bank of Ireland. The EMTN programme provides a framework for issuance of euro medium term notes up to an aggregate amount of EUR 5 billion. Hydro's first NOK 3 billion sustainability-linked bonds under the new framework and EMNT programme were issued on 30 November 2022, with a potential redemption premium (a financial penalty) applicable if targets for reduced GHG emissions and increased recycling of post-consumer scrap are not met. This makes Hydro the first investment grade Norwegian company to issue sustainability-linked bonds. The transaction is split between two tranches, a 6 year NOK 1,500 million with a floating rate of 3m Nibor + 2.000% p.a., and a 6 year NOK 1,500 million with a fixed rate of 5.257% p.a.

Hydro Alunorte signed a USD 200m sustainability-linked loan in 2022. The seven-year loan facility is structured as a sustainability linked loan, swapped to fixed rate. The sustainability link was incorporated in the facility and interest rate swap, linking pricing to performance on the GHG emission reduction target to be achieved through the Alunorte fuel switch project.

In 2019, Hydro signed a USD 1.6 billion revolving multi-currency credit facility with the margin linked to Hydro's GHG emissions target. The margin under the facility will be adjusted based on Hydro's progress to meet its annual targets to reduce GHG emissions by 10 percent by the end of 2025.

In 2022, Hydro's GHG emissions were 6.5% lower than the 2018 climate strategy baseline. Hydro is on track to reach the target of 10 percent emissions reductions by 2025.

will increase our post-consumer scrap capacity by up to 20 percent at each plant.

Hydro's patented technology in scrap shredding and sorting is under further development, making it possible to produce high-quality products from post-consumer building and automotive scrap. Our Hydro CIRCAL product line offering aluminium with 75 percent post-consumer scrap has among the lowest carbon footprints in the aluminium industry.

To enable the sorting process of aluminium scrap by the different alloys to preserve the quality of the aluminium, we have developed a laser sorting technology, Laser Induced Breakdown Spectroscopy (LIBS). We have installed an industrial pilot line at Hydro's scrap sorting facility, St. Peter in Germany. We have improved the pilot sorter with regards to throughput and quality. Also, we have developed and commissioned the HySortTM LIBS sorter that is flexible on the input of post-consumer scrap with a much higher throughput and more consistent quality of the sorted product. The ambition of the technology is to sort post-consumer scrap back into its original alloys for remelting in Hydro's casthouses. The machine has been handed over to production mid-year 2022 and is currently used to sort shredded post-consumer scrap in the St. Peter plant back into alloys.

One of the challenges when recycling post-consumer scrap is metal loss when the pieces are too small or thin, leading to dross. To address this issue, we have developed a "screw extruder" to handle thin-gauge scrap such as chips, swarf or shredded material. The screw will compact the scrap and the larger metal pieces will reduce dross generation in the recycler.

Net-Zero Products
Aluminium has significant carbon footprint benefits in its use phase, especially due to its lightweight properties.
We work closely with customers to develop products that save energy and reduce emissions, and enable them to reach their sustainability targets.

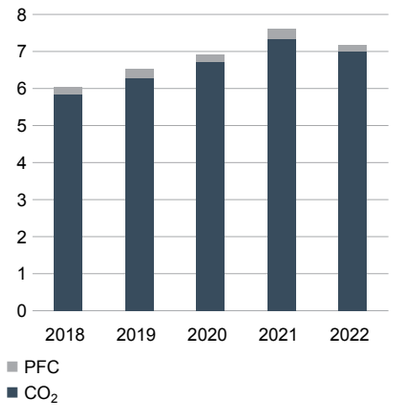
Examples include lighter transportation. Replacing 1 kg of steel with aluminium in a car using fossil fuel or electricity from fossil sources reduces GHG emissions by about 20 kg of CO2e due to aluminium's lightweight properties. Aluminium in packaging reduces cooling needs and food spoilage, and building facades in aluminium lead to lower operating costs and enable buildings to generate as much energy as they use during operation.

Demand for low-carbon aluminium products is increasing and it is expected to continue growing. With 70 percent of Hydro's primary aluminium production using renewable electricity, and the low-carbon aluminium brands Hydro REDUXA and Hydro CIRCAL, we differentiate our product portfolio from our peers, while supporting both margin and volume growth. Hydro earns additional premiums or volume commitments on its low-carbon products, and many customers choose Hydro's aluminium due to its low carbon footprint.

Reaching our 2030 climate ambition will result in an even lower carbon footprint from our products. The production capacity for near-zero carbon aluminium will be developed in line with market demand. This is reflected in the ambition to deliver Hydro REDUXA 2.0 with a carbon footprint of less than 2 tonnes of CO_2 per mt of aluminium by 2030.

Direct greenhouse gas emissions from Hydro's consolidated activities

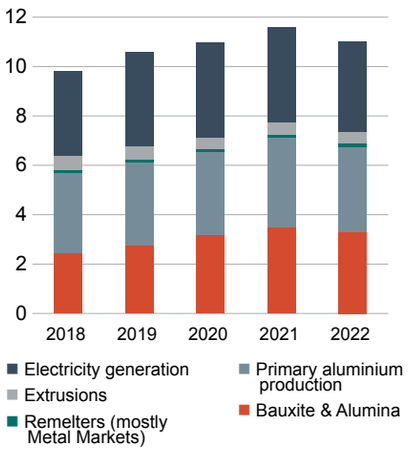
Million tonnes CO2e



Hydro's direct greenhouse gas emissions decreased in 2022 due to curtailment at our Slovalco plant, and the implementation of electric boilers for steam generation at Alunorte.

Greenhouse gas emissions from Hydro's ownership equity

Million tonnes CO2e



Direct and indirect greenhouse gas emissions decreased in 2022 due to production stop at our Slovalco plant, the implementation of electric boilers at Alunorte.

In 2022, we produced 100 tonnes of CIRCAL100 from 100% post-consumer scrap with a carbon footprint below 0.5 tonne CO_2 per tonne aluminium. This is a significant improvement, compared with the current 2.3 kg CO_2/kg aluminium in Hydro CIRCAL extrusion ingot based on 75 percent post-consumer aluminium scrap, and the world average of 16.6 kg CO_2/kg aluminium. Hydro will make key capacity investments over the medium term to ensure our recycling portfolio can facilitate the increasing demand for Hydro CIRCAL.

Read more about our pathways to delivering near-zero aluminium in the Innovation chapter.

Greener sourcing and scope 3 emissions
Hydro is a large purchaser of raw materials and energy. Hydro aims to source less carbon-intensive energy and aluminium metal with a lower carbon footprint. We also aim to increase the use of post-consumer scrap in our metal production.

Scope 3 emissions refer to indirect emissions from purchased raw materials and services. It is divided between upstream scope 3 emissions and downstream scope 3 emissions. Whilst upstream scope 3 emissions are under the influence of the company, downstream scope 3 emissions are generally outside of a company's influence. The GHG Protocol has defined a total of 15 categories for scope 3 reporting. However, a materiality assessment by the International Aluminium Institute (IAI) has shown that only 5 categories are material for scope 3 reporting in the aluminium industry: purchased goods and services, fuel and energy related activities, upstream transportation and distribution, downstream transportation and distribution and processing of sold products.

While scope 3 emissions constitute a minor part of total emissions from Hydro's primary metal production, we purchase a lot of metal and aluminium scrap from external providers. As Hydro regards the carbon footprint of process scrap as equal to its metal origin, Hydro's upstream scope 3 emissions are significant when including externally sourced metal. Hydro is also producing more alumina than what is being processed internally. A lot of alumina is thus being processed outside of Hydro's smelters, resulting in high downstream emissions from processing of sold products. Hydro's total scope 3 emissions in 2022 was 27.9 million tonnes of CO_2, split between upstream emissions of 14.4 millions tonnes CO_2 and downstream emissions of 13.5 millon tonnes CO_2. Upstream emisions are dominated by metal purchase and downstream emissions are dominated by external processing of alumina.

In 2022, Hydro set emissions reduction targets for upstream scope 3 emissions. The targets are to reduce total upstream scope 3 emissions by 15 percent by 2030, and to reduce upstream scope 3 emissions per ton aluminium delivered to the market by 30 percent by 2030. Both targets refer to a 2018 baseline.[1] Downstream scope 3 emissions were not included in the targets as these emissions are outside of Hydro's influence and control.

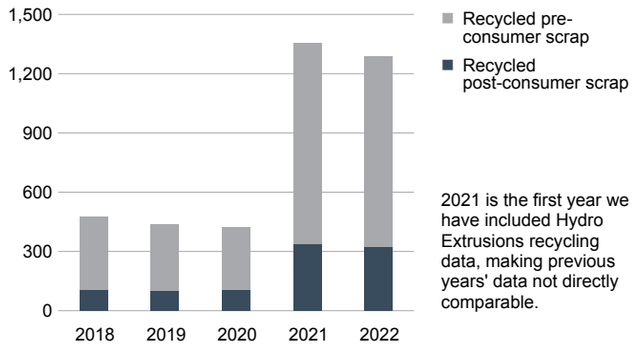
The 2022 results shows that Hydro has reduced its total upstream scope 3 emissions by 29 percent in 2022, compared to the baseline. Per tonne aluminium delivered to market, Hydro has already reduced its emissions by 26 percent. The reductions are mainly due to more conscious sourcing of aluminium metal, but also due to less sourcing of metal in general. Going forward, upstream scope 3 emissions may increase, both in total and per tonne, due to higher activity and thus more external metal input.

Net-zero Society
Hydro's competence and capabilities also makes us an enabler for net-zero society. To move to a net-zero society the world needs more renewable electricity generation, and mechanisms to store that energy. In addition, not all processes can be directly electrified, and need other alternatives to fossil fuel. To address these challenges and help both Hydro and the broader society and economy at large, Hydro has during the last years set up a battery unit, established Hydro Rein as a company that is responsible

[1] Except for Alunorte due to the 2018 production embargo. For Alunorte, 2017 is used as the baseline.

Recycling

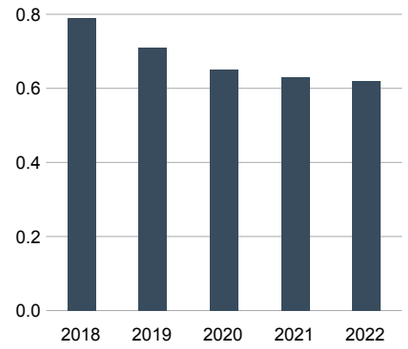
Thousand tonnes



2021 is the first year we have included Hydro Extrusions recycling data, making previous years' data not directly comparable.

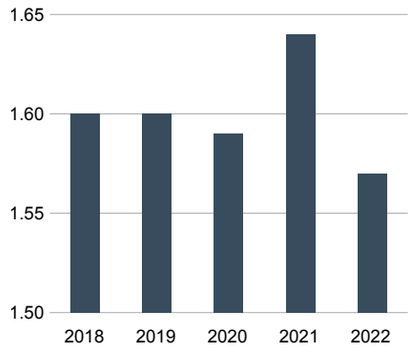
GHG emission intensity – alumina refining

Tonnes CO2e per mt alumina



GHG emission intensity – electrolysis

Tonnes CO2e per mt aluminium



Greenhouse gas emissions from the electrolysis from Hydro smelters based on ownership equity. Slovalco is excluded from 2022 due to production curtailment. Albras was excluded from the 2019 average due to extraordinary emissions during the start-up of curtailed capacity.

for new renewable growth projects, as well as the green hydrogen company, Hydro Havrand.

Hydro Rein is a leading provider of renewable energy solutions to industrials, fully owned by Hydro. Hydro Rein has a diversified portfolio of 16 projects under development in core markets in the Nordics and Brazil. The company has an ambition of 3GW in construction or operation (gross) by 2026. In addition to certified renewable power, Hydro Rein supports customers with onsite generation, energy efficiency, energy storage and flexibility management.

The Batteries business unit aims to develop leading sustainable battery businesses in Europe by active investments in the battery value chain. Batteries targets growth within sustainable battery materials by leveraging Hydro's capabilities. Core growth pillars are Circular Solutions and Anode Materials. Currently Batteries have invested in the synthetic graphite producer Vianode, the EV battery recycler Hydrovolt, as well as in Corvus and Northvolt.

Hydro Havrand, our green hydrogen company, will use Hydro's green hydrogen offtake, potentially as much as 4 GW and more than 80 locations, as a springboard to global opportunities. Increased renewable energy production, energy efficiency and electrification can address the majority of global emissions. Green hydrogen produced with renewable power can contribute towards the remaining emissions from 'hard to abate' sectors such as heavy industries and the maritime sector.

Strategic partnerships and the circular economy
Aluminium's inherent properties of durability, light-weight and recyclability makes the metal well positioned for the circular economy. Hydro's industrial experience can also be a benefit to other sectors trying to decarbonize their products and value chains, and make them more circular. The Circular Economy concept and associated business models represent opportunities for Hydro. To capitalize on these, we have to enter into strategic partnerships and move away from traditional supplier/customer relationships to design sustainable products.

One example is the Swedish electric car maker Polestar which has an ambition to create a climate-neutral car by 2030. Hydro joins Polestar as a materials partner to explore how aluminium can contribute to realizing the project. The Polestar 0 project will require zero-carbon footprint aluminium. Hydro's experts collaborate with Polestar on defining joint R&D programs and explore specific aluminium alloys needed for the vehicle.

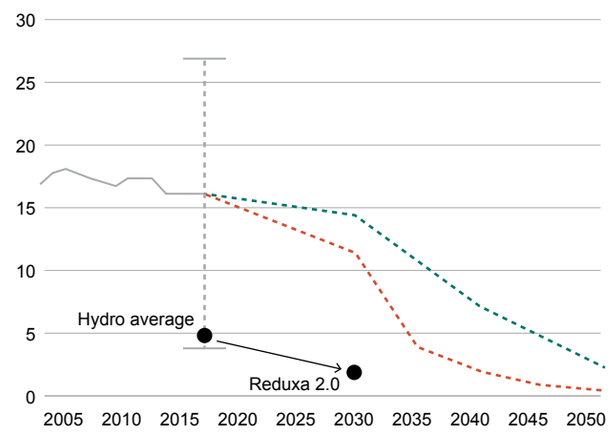
Addressing climate related risks and opportunities
Our operations and facilities are subject to risks arising from physical climate change that may impact our operations. Effects of climate change could include changes in rainfall patterns, flooding, shortages of water or other natural resources, changing sea levels, changing storm patterns and intensities, and changing temperature levels. The changes may be acute and/or chronic. These changes can lead to operational and environmental incidents within our operations, for example by flooding of containment basins, interruption of production processes or causing failures or maintenance needs to our infrastructure. Changing temperatures can also lead to increased emissions from our industrial processes.

In order to understand and mitigate the risks for our operations and potential consequences related to climate change, we have performed comprehensive climate risk assessments, evaluating both physical and transition risks. In 2018, Hydro modelled future weather patterns and their impact on our facilities based on climate models and scenarios from the Intergovernmental Panel on Climate Change (IPCC). In 2023, our ambition is to update the physical climate risk assessment and integrate the findings and management of such risk into our system of risk management.

Climate change adaptation and the transition to a 1.5 degree economy poses both opportunities and risks to Hydro. We have assessed scenarios for policy and legal risks, technology, market and reputation risks consistent with a 1.5 degree scenario. The outcome of this is integrated into Hydro's climate strategy, our advocacy work on future climate-related legislation, and our technology and market strategies. As a result, Hydro's long term positioning, operational and financial planning reflect our assessment of transition risks in a 1.5 degree scenario.

Hydro's ambitions are based on a successful transition to a 1.5 degree economy. The transition may lead to stricter regulations and more ambitious climate targets that may drive costs within parts of our asset base. The overall portfolio will likely benefit from such trends, as it will affect demand for and valuation of Hydro's low-carbon products and portfolio. Hydro is a signatory to TCFD.

IAI emission projection pathways toward 2050
Tonnes CO2e/t primary aluminium



Source: International Aluminium Institute (IAI), Hydro analysis

Environment

Material topics covered in this chapter:

- Biodiversity
- Emissions to air
- Tailings and bauxite residue
- Waste and efficient resource use

Why it matters

All industrial activity has the potential to impact the environment at local, regional and global scales. If not correctly managed, land-use change, resource utilization, emissions of pollutants, and disposal of hazardous waste all have the potential to cause long-term, irreversible impacts to nature and human health. To minimize such detrimental effects, Hydro must ensure management practices are used to identify and address the environmental risks associated with its operations.

Our approach

The goal of Hydro's environment strategy is to minimize our impact across our operations by addressing industry's key environmental challenges. We aim to do so by driving rehabilitation at our bauxite mine, developing and implementing viable management solutions for tailings and bauxite residue streams, while reducing waste to landfill from our downstream operations and significantly reducing our non-GHG emissions to air. We have set longer-term ambitions to eliminate the need for permanent bauxite residue storage from 2050 and eliminating landfilling of all other recoverable waste by 2040. Targets for land rehabilitation and reduced waste to landfill will be included in the CEO's KPI scorecard for 2023. We also have the ambition to achieve no net loss of priority biodiversity in all new projects.

All of Hydro's operations shall follow our own internal policies and procedures, related to environmental management, supported by comprehensive health, safety and environment (HSE) management systems, audit programs, training and awareness initiatives. In addition, the large majority of our sites are ISO 14001 certified and many have received certification to ASI's Performance and Chain of Custody standards.

Ambitions

No net loss
Of biodiversity in new projects

1:1
Rehabilitation of available mined areas within two hydrological cycles

Waste
Eliminate landfilling of all recoverable waste by 2040

Performance

259
Hectares rehabilitated

2,905
Total accumulated area in hectares undergoing rehabilitation

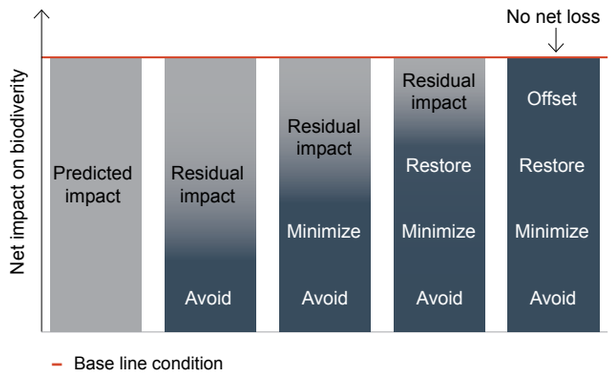
71%
Total waste recycled

Biodiversity
Biodiversity, and the ecosystem services that it supports, is vital for human existence and the sustainable growth of industry and society. Biodiversity is under immediate threat from the direct and indirect effects of human activity, with an unprecedented number of species at risk of extinction. Industry can be the cause of, and is affected by, the loss of biodiversity and ecosystem services. Hydro, as an industrial company with presence in the extractive and energy sectors, has a responsibility to manage the impact of its activities on biodiversity and ecosystem services.

In 2022, Hydro published a Global Procedure for the management of risks and impacts related to biodiversity and ecosystem services. This procedure applies to all wholly owned and operated activities within Hydro and defines a risk management approach anchored in the Biodiversity Mitigation Hierarchy. We have also set an ambition to achieve no net loss of priority biodiversity in all new projects. Risk mapping of biodiversity and related Biodiversity Action Plans are consistently in place where applicable, and confirmed through ASI certification.

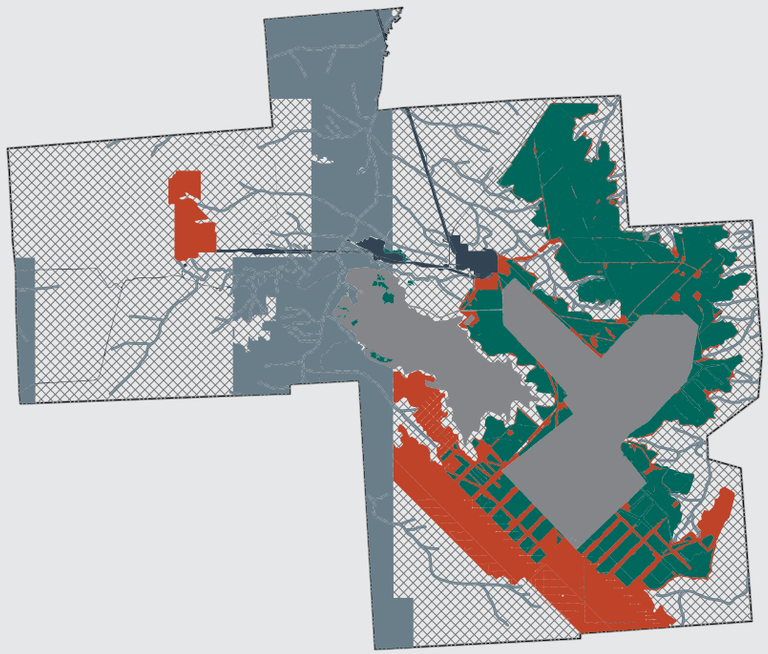
Mining
Hydro's only operated mine, Mineração Paragominas S.A. (MPSA, referred to as Paragominas) is located within the municipality of Paragominas, in the state of Pará, northern Brazil. To access the bauxite deposits, which are located 8 to 12 metres underground, the overlying vegetation, topsoil and overburden must first be removed (see note E6.1). The municipality of Paragominas is located in an area defined as the deforestation belt around the central Amazon region. Within the municipality, there has been a reduction in forest area of more than 30 percent over a period of almost

Biodiversity mitigation hierarchy



Hydro's No Net Loss Ambition for new projects
In 2021, Hydro established a No Net Loss ambition for new projects. This mean that new projects, including major changes to the environmental footprint of existing assets, that pose a threat to priority biodiversity (i.e. natural habitat and critical habitat) must design a Biodiversity Action Plan that can credibly achieve a No Net Loss outcome for those biodiversity features impacted by the project. These actions must follow the Biodiversity Mitigation Hierarchy, where actions are taken to first avoid and minimise the impact of the project, and then seek to rehabilitate impacts that do occur. Finally, the project will consider implementing biodiversity offsets to compensate for any residual impacts to the priority biodiversity features that remain after taking avoidance, minimisation and rehabilitation measures. This ambition applies to any project that is fully owned by Hydro.

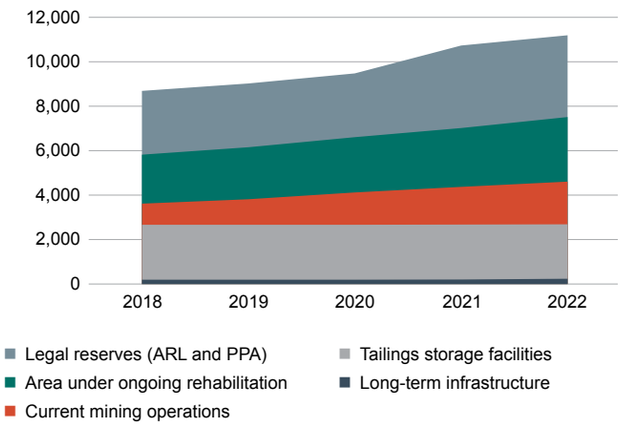
Paragominas site use[1)]



- Total MPSA property
- Legal reserves (PPA and ARL)
- Area under rehabilitation process
- Current mining operations
- Tailing storage facilities
- Long-term infrastucture
- Remainder of property

1) Area reserved for new tailings ponds is expected to be reduced as a consequence of the new Tailings Dry Backfill technology.

Paragominas land use and rehabilitation



Two-year rolling land rehabilitation progress

Year	Area	Percentage of land rehabilitated[1)]
2018	113	100%
2019	91	100%
2020	150	100%
2021	150	89%
2022	182	0%

[1)] Percentage of land cleared that has been rehabilitated within two years hydrological cycles for a given year. The two last years in the table have still not reached the end of their two-years cycles.

20 years, primarily driven by expanding agriculture. The Paragominas property, itself, is characterised by areas of primary rainforest and land previously used for agriculture

Due to the nature of strip mining, it is possible to progressively rehabilitate areas impacted by the bauxite mining activity. Hydro has a specific rehabilitation target for Paragominas which promotes this progressive rehabilitation approach. The target requires that mined areas undergo rehabilitation within two hydrological seasons after release from the mining operations. This is what we refer to as our 1:1 rehabilitation target. This rolling target was again met in 2022, when we rehabilitated 100 percent of the mined areas released in 2020. See note E6.2 for quantitative information on land use and rehabilitation. As required by Extractive Industries Transparency Initiative (EITI), Hydro discloses its mining concessions and exploration permits at hydro.com.

We use three different methods for the rehabilitation of mined areas, based on different needs:

- Traditional rehabilitation (planting of local species)
- Natural regeneration of vegetation (utilising the seed bank within the topsoil)
- Nucleation (uneven distribution of topsoil and addition of branches to promote water retention and create more complex habitat)

To increase our knowledge and secure a science-based approach to rehabilitation, the Biodiversity Research Consortium Brazil-Norway (BRC) was established in 2013. For more information, see our section on partnerships.

Hydropower operations
All of Hydro's hydropower reservoirs are located within or in close proximity to national parks and other protected areas in mountainous regions in southern Norway, including Hardangervidda and Jotunheimen. In addition to potential impacts on biodiversity, including changes in aquatic and terrestrial habitats along the waterways, our hydropower activities may also have impacts on recreation and tourism.

To mitigate the effects of hydropower-related impacts on fish populations, we release fish spawn in almost 40 lakes and rivers according to concession requirements. In relation to renewal of concessions, rehabilitation projects are carried out in rivers and lakes to improve fish habitats and aesthetic qualities. We also monitor the impact of our operations on aquatic life in rivers connected to catchment areas.
During 2022 we initiated biodiversity risk screening of our current hydropower operations. This work has been started for the Fortun power station, and the risk screening will be carried out for the other power station locations over the next couple of years. The study will identify potential risks to biodiversity due to operation, which will further lead to Biodiversity Action Plans. We intend to address high risks and seeks mitigating activities where necessary.

Water
Hydro's primary interactions with water relate to freshwater withdrawals (including significant rainfall) and discharges in our bauxite mining and alumina refining operations in northern Brazil, seawater and surface water withdrawals in our Norwegian primary aluminium smelters and the water catchment influence of our hydropower operations in Norway. Of all the water withdrawals across Hydro's operations, very little is consumed. The primary consumption type is evaporative losses in processes related to alumina refining and aluminium recycling and extrusion. The majority Hydro's withdrawn water is discharged to seawater and rivers. Freshwater discharged to surface water bodies, e.g. rivers and lakes, is considered of high quality according to the ICMM definition.

Water-related risks are very specific to the type of operation and its geographic location. We have a Global Procedure for Water Stewardship that requires operations to evaluate water related risks and opportunities at a catchment scale and to develop management plans and context relevant targets to address material risks identified. For the majority of Hydro's operations, priority is given to managing the quality of discharges to the external environment and ensuring that we operate within the relevant permit limits and regulatory

Rehabilitation method

Traditional rehabilitation of vegetation
Seedling plantings comprised tree species that are native to the region

Natural regeneration of vegetation
Utilizing the natural seed bank of the topsoil

Nucleation regeneration of vegetation
Uneven distribution of topsoil and addition of branches to promote water retention and create more complex habitat

frameworks. Due to seasonal heavy rainfall in Northern Brazil, managing flood risk is important for both the mining operation and the alumina refinery. Other initiatives include reducing dependency on surface water withdrawals at our mining operation in Brazil, by increasing rainwater capture and storage and reuse of process water, and water-use efficiency programmes in our Extrusion business to reduce overall water withdrawal intensity.

Hydro uses the WRI Aqueduct water tool to perform an annual review of freshwater withdrawal from water-stressed areas, defined as locations with high or extremely high baseline water stress. The mapping of Hydro's sites in 2022 showed that less than 1 percent of our overall freshwater input came from water-stress areas.

Hydro has ongoing concession process for the hydropower system in Fortun. As part of the concession process, we are assessing the environmental impacts on the regulated water resources, taking into consideration inputs from local stakeholders, relevant authorities and municipalities. A similar process has been initiated in Røldal-Suldal by the authorities, where Hydro is minority owner and operator, but LyseKraft DA, as majority owner, is in lead of the process. We are also carrying out environmental impact assessments and studies of mitigating actions for our hydropower operations in Årdal, based on a decision of the Norwegian Environment Agency (Miljødirektoratet) for the period 2019-2024.

Our Norwegian hydropower operations are also covered by and categorized in the regional Water Management Plans (WMP). The water regulation in Norway is based on the EU Water Framework Directive, which aims for “good ecological status or potential” for all water resources within 2027. New WMPs (2022-2027) were approved by the Norwegian Government in October 2022. The WMPs will be an important basis for authorities’ follow-up of the concessionaires in the future. The WMPs are based on proposals and input from different stakeholders.

See note E4.2 for quantitative information on water withdrawal.

Waste and efficient resource use

Our goal is to first minimize the amount of waste produced in our operations, and then reuse or recycle it. When this is not possible, we shall deposit it in a secure way to minimize adverse effects to people and the environment.

Tailings and bauxite residue
Tailings from bauxite extraction consist of mineral rejects from the extraction process mixed with water and flocculants. The tailings at Paragominas are stored in dedicated tailings storage facilities (TSFs), where the particles settle and excess water is captured in separate clarification ponds for reuse or discharge to the external environment. These clarification ponds also prevent overflow to the river during heavy precipitation.

The bauxite tailings facilities and bauxite residue deposits are regularly inspected by Hydro and the Brazilian authorities. In addition, independent third-party audits are performed twice a year, to comply with Brazilian regulations and maintain the stability certifications for each TSF. For more details on Tailings and bauxite residue, see note E5.1 and our full tailings disclosure forms available at our website.

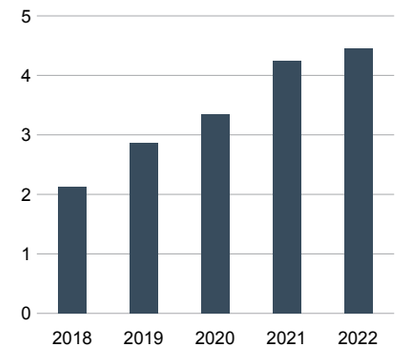
Hydro’s Tailings Dry Backfill technology at the Paragominas mine allows tailings to dry in shallow areas before being excavated and returned to the mined strip from where they originated. The mined strip is then reshaped and rehabilitated with the ambition of returning it to original conditions. By continuously backfilling the dry tailings, the methodology eliminates the need for new permanent TSFs, including the need to raise existing facilities further. The operating license for this technology was received in December 2020, and it has now been fully adopted into operations at the mine.

Bauxite residue is a waste product of the alumina refining process. Its disposal is challenging due to large volumes and its alkaline nature. The residue is washed with water to lower the alkalinity and to recover caustic soda for reuse. Hydro uses an enhanced dry stacking technology for disposing of bauxite residue which allows for storage at steeper slopes, thus reducing the relative environmental footprint. The residue moisture content has been reduced to 22 percent.

In order to address the long-term legacy of bauxite residue generation and storage, Hydro has set a 2050 ambition to eliminate the need for new bauxite residue storage areas and a target to utilize 10 percent of bauxite residue generation from 2030. For more information, please refer to the section on Tailings management in the Closure planning and legacy impact chapter. Hydro participates in international collaboration projects investigating possibilities to use

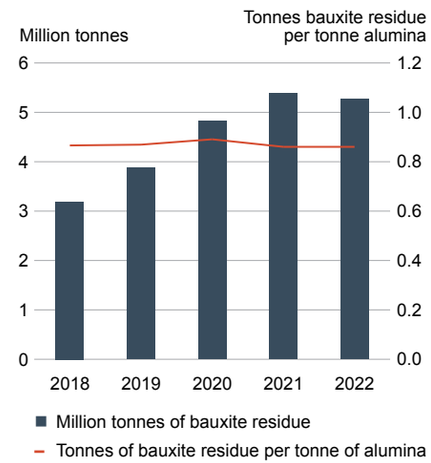
Tailings from bauxite production

Million tonnes



Tailings production decreased significantly in 2018 due to the Paragominas curtailment, with a partial reversal in 2019 and 2020 due to the lifting of the embargo. 2021 production was back at 2017 levels.

Bauxite residue from alumina production



Bauxite residue production decreased significantly in 2018 due to the Alunorte embargo. This was partly reversed in 2019 and 2020 due to the lifting of the embargo and ramp-up of production. Production in 2021 returned to normal levels

bauxite residue as a resource, described in the section on collaboration with other parties in the Innovation chapter.

Other waste and by-products
Hydro has set a target to eliminate landfilling of all recoverable waste by 2040, and to landfill less than 35 percent of generated spent pot lining (SPL) by 2030. SPL, or cathode waste, is generated from the electrolysis cells used in primary aluminium production. Qatalum has a temporary solution for handling SPL in cooperation with local cement plants and they are working to find a permanent solution. The Albras aluminium plant in Brazil have had a significant stock of SPL. This is being continually reduced according to an annual plan and target, and is delivered to the cement industry in Brazil. Hydro has also initiated a research project in collaboration with Alcoa with the aim to recycle first-cut SPL.

A large portion of the anode waste from our smelting activities in Norway is being used by Norcem cement plant in Brevik, Norway. The carbon material from Hydro is being used as an alternative fuel in the production process, which ensures safe treatment of any hazardous components. Hydro also has an agreement with a refractory supplier to recycle part of the bricks coming from relining the anode baking furnace.

Dross is a mixture of metallic aluminium, alloy components and metal oxides that is formed on the surface of liquid aluminium. Hydro's casthouses have treatment facilities to recover as much aluminium as possible from hot dross and residual dross can also be sent to third parties for further treatment. 100 percent of dross produced in Hydro is recycled, either through onsite or offsite recovery treatment processes.

Hydro is also involved in a Norwegian research project, that is evaluating the recovery of valuable surplus bath components from aluminium electrolysis.

See note E5 Waste for quantitative information on waste treatment.

Non-GHG Emissions to air

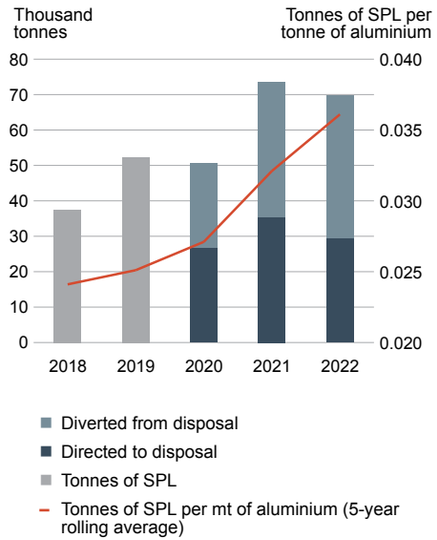
Emissions to air are inherent in the aluminium production process and are generated at all stages of the value chain. Key air emissions from our operations include sulfur dioxide, nitrogen oxides, fluorides, polycyclic aromatic hydrocarbons, and particulates, see note E2.1 Other emissions for details. Where needed, emissions to the external environment are reduced through treatment of the flue gases prior to their release into the environment.

In addition to reducing our greenhouse gas (GHG) emissions, Hydro's ambition is to halve non-GHG emissions from fossil fuels (i.e. sulfur dioxide, nitrogen oxides and particulates) by 2030.

Following a mass balance of mercury at Alunorte in Brazil, Hydro has initiated a project to install four mercury condensers on the digestor lines. The first condenser was installed in 2018, as a pilot, and its technical performance is being monitored prior to the installation of the remaining units. The initial timeline to install the remaining units has been rescheduled to allow for further performance optimization of the technology. Installation of the remaining three condensers is planned to start in 2023.

Spent potlining (SPL) from aluminium production

Thousand tonnes



The volumes of spent potlining (SPL) varies with the relining of smelter cells which is normally done every 4-7 years for established smelters. Furthermore, opening new production lines and closing down production lines will give fluctuations in the aluminium production, production, and due to the cyclical nature of SPL, a 4.7-year time lag in the SPL volumes. Hence SPL is normalilzed with aluminium production with a 5-year rolling average as the best estimate of a trend line. Increased production of SPL in recent years relates to higher relining frequency and restart of line B at the Husnes aluminium plant.

Legacy impact

Material topics covered in this chapter:

- Environmental impact
- Public safety and health
- Tailings management

Why it matters

Managing legacies to protect the environment and human health as well as mitigating future financial risks to Hydro and to the society is an important responsibility for us. Our 117 years of industrial activity has resulted in environmental and social legacies, which require management many years after the industrial activity that created them ceased.

In the early days of our company's history, rivers and fjords near our industrial sites became contaminated due to the release of waste products into the near waters. Some of these fjords remain impacted and require our attention today. Even though environmental practices have been significantly improved throughout the years, today's operations, while conducted in compliance with regulatory requirements and in line with best industry practices and available technologies, have the potential to create additional legacies that power social, environmental, and financial risks to Hydro and our external stakeholders.

Our approach

Through our closure and legacy management program, we aim to avoid and/or minimize the creation of additional legacies as well as to minimize impacts of legacies from the past. Our approach is to manage risks and opportunities throughout all phases of an asset's life cycle, including investment (design/construction or acquisition), operation, and closure.

In 2022, we continued to implement our legacy management project for operational sites to improve the way we work with proactive closure planning and legacy risk management.

Legacy sites management

The Kurri Kurri aluminium metal plant in Australia was formally closed in 2014 and during the subsequent years, buildings and infrastructure were demolished. The proposal to remediate the site was approved in 2020 after a rigorous assessment by the New South Wales' Department of Planning, Industry and Environment (DPIE). The project is primarily for construction of an onsite, engineered containment cell, to deposit the contents of an existing approved stockpile of mixed waste generated during the 1970s and 1980s, the first decades that the plants was in use. Several pockets of contaminated soil, along with other waste that cannot be reused or recycled, will also be placed in the cell. Although unfavourable weather conditions have delayed the containment cell construction by approximately 6 months, the expected completion is estimated to be early 2024. The reuse of historic spent potlining (SPL) as feedstock for cement production is also progressing according to the plan. Hydro has agreed to sell the site to a joint venture of local property and residential land developers Stevens Group and McCloy Group. Under the sale agreement with McCloy/ Stevens Groups, the land sales will be divided into precincts and progressively be realized over several years. The first group of these sales have been completed during 2022. Further information is disclosed at Regrowth Kurri Kurri's webpage

The Norwegian Environment Agency (NEA) has required Hydro to remediate historical contamination in the Gunneklev fjord through capping of the contaminated sediments with clean geologic materials. In January 11 2023, NEA accepted our application to extend the deadline from December 2023 to December 2024. The reason for the postponement is the need for alignment between the remediation project and with the E18 road and tunnel construction project in the local area. Surplus geological materials from the road project may be used in the remediation project.

Hydro continues to execute a structured remediation and reclamation plan in collaboration with authorities at the former fluorspar mines dated back to the 1920s in Germany. The goals are to physically secure underground mining structures for all generations to come and enable desired land uses including reforestation.

At the Ashtabula legacy site in the US, several activities were carried out throughout 2022, including demolition and closure of settlement ponds. Site-wide environmental investigation has been completed and the results assessed. The need for environmental remediation activities is being assessed and alternatives evaluated.

The Aluchemie anode producer, which is a joint venture company owned by Hydro (47 percent) and Rio Tinto (53 percent), located near Rotterdam in the Netherlands, closed its operation at the end of 2021. In 2022, the demolition of buildings and infrastructure was initiated and is on-going on schedule. Site remediation strategy is being defined and discussed with the relevant authorities. The property is owned by the Rotterdam Port Authority and Aluchemie is required to return the site to the same condition existing in 1962,

before the plant was constructed, and operation started. Remediation activities, according to the current schedule, will be completed in 2025.

The activities at the legacy tailings facilities in Schwandorf and Stulln, Germany are outlined in the Tailings Management section.

Tailings management
Our definition of *tailings facility*, as applicable to Hydro's assets, is an asset that is designed and managed to contain the tailings produced by the mining process or the bauxite residue produced by the alumina refining process.

Tailings facilities refer to facilities that contain tailings or bauxite residue in open pit mines or on the surface. Tailings facilities are higher than 2.5 m measured from the elevation of the crest to the elevation of the toe of the structure or have a combined water and solids volume more than 30,000 m3. Hydro's methodology for tailings dry-back fill in Paragominas is not defined as tailings facilities.

A tailings facility can have status as "in active use", "inactive" or "closed". Hydro has tailings facilities in the first and the latter category.

Our objective for tailings management is zero failures that may lead to loss of life or life-changing injuries, material negative socioeconomic impact or material environmental damage throughout the tailings facility lifecycle, from design to post closure.

We manage four tailings facilities at Paragominas and Alunorte in the state of Pará in Brazil and six smaller closed tailings facilities at legacy sites in Schwandorf and Stulln in Germany.

We commit to best practice tailings management to protect the health and safety of people, host communities and the environment. We plan, design, construct, operate, maintain, close, and relinquish our tailings facilities in accordance with regulatory compliance requirements, internal company standards, the International Council on Mining and Metal (ICMM) framework, and the Aluminium Stewardship Initiative (ASI) practices. Furthermore, Hydro is committed to implement the Global Industry Standard on Tailings Management (GISTM), requiring that tailings facilities operated by Hydro with Extreme or Very high potential consequences will conform to the standard by August 5, 2023, while other tailings facilities operated by Hydro not in a state of safe closure, will conform to the standard by August 5, 2025[1].

In 2022, we made significant progress on the implementation of GISTM in Hydro. This includes:
- Established a governance structure and appointed roles in accordance with GISTM. This work will continue in 2023.
- Established an Independent Tailings Review Board for Paragominas and Alunorte in accordance with the GISTM requirements.
- Carried out reviews for all tailings facilities in Paragominas and Alunorte, by ITRB as part of the GISTM implementation.
- Carried out reviews for all tailings facilities at the legacy sites in Germany by international tailings management experts.

The GISTM implementation and the assessment of the GISTM status is still ongoing. Our ambition is to be compliant within the applicable deadlines.

For all our tailings facilities, we disclose more detailed technical information at Hydro.com.The information is updated on a regular basis.

Hydro is a member of ICMM which is one of the three co-conveners of GISTM alongside UN Environment Program (UNEP) and PRI, an investor initiative in partnership with UNEP Finance Initiative and UN Global Compact.

Hydro is also a 5 percent shareholder in Mineração Rio do Norte (MRN). MRN is the operator of the mine and is responsible for its tailings management. Hydro works with MRN and the other stakeholders through the board of directors and relevant technical committees to require the safe operation of MRN's tailings facilities in accordance with applicable laws and standards.

The section on waste and efficient resource use in the Environment chapter describes tailings and bauxite residue in more detail, including how we are pursuing reduction, reuse, and remediation technologies and methodologies to minimize impacts from tailings.

[1] Consequence classifications are not ratings of the condition of a facility or the likelihood of failure; instead, they rate the potential consequence if they were to fail

Innovation and technology transition

Material topics covered in this chapter:

- Net zero products and operations
- Renewable energy transition
- Research and development

Why it matters

Innovation and technology transition are key to meeting our sustainability ambitions and delivering on Hydro's strategic direction. Innovation allows us to improve our aluminium products and processes, develop cutting edge technology to use less energy, cut GHG emissions, and help our customers meet their commercial and sustainability goals. Our technology roadmap is our pathway to zero emissions and a more fair and circular economy. We aim to produce better and greener aluminium, and work closely with our customers early in the product cycle, to help them meet their goals for their market and the climate.

Our approach

In the mature aluminium industry, the development cycles are long, with a need for highly skilled technology competence. This includes smelter technology, new aluminium alloys with special properties, lighter transportation, better packaging to reduce cooling needs and food spoilage, and aluminium facades that lead to lower operating costs and enable buildings to generate as much energy as they use during operation. At the same time, our downstream activities are continuously developing new solutions with customers. More and more, this collaboration reflects design thinking, bridging the gap from idea to solution.

To promote innovation, Hydro has a technology board consisting of members from Hydro's Corporate Management Board. The technology board meets twice per year to set direction and priorities in the technology area. Business areas are responsible for their own technology development and for the execution of their respective technology strategies. A corporate technology office ensures a holistic and long-term approach to Hydro's technology strategy and agenda. The Chief Technology Officer leads an internal R&D network with representatives from the business areas and supports Hydro's technology board in developing overall research and technology priorities and strategies.

Ambitions

Net zero
Emissions by 2050 or sooner

620–770
Thousand tonnes of recycled post-consumer scrap by 2027

10%
Utilization of bauxite residue generation by 2030

Performance

50
Thousand tonnes sold of Hydro CIRCAL

321
Thousand tonnes of post-consumer scrap

5,270
Thousand tonnes of bauxite residue

Research and development (R&D) efforts

Our R&D efforts are centered around the following:

- Reducing energy consumption, waste, emissions and carbon footprint in line with Hydro's sustainability agenda
- Making products and solutions that promote the use of aluminium and sustainable development
- Using R&D and technology to ensure optimal operations in existing assets, including cost and HSE
- Improving environmental impact in Hydro Bauxite & Alumina, such as biodiversity, rehabilitation and utilization of bauxite residue
- Developing recycling technology and low-carbon products based on post-consumer scrap, e.g. Hydro CIRCAL.
- Increasing the share of value added products and tailored solutions in collaboration with the customer
- Utilizing the opportunities of digitalization to improve process stability, productivity, cost and safety.
- Building competence in batteries and hydrogen

The greater part of our R&D expenses goes to our in-house research and application development organization, while the remainder supports work carried out at external institutions. Our main R&D centers are in Årdal (smelter technology) and Sunndal (alloys and casting) in Norway, Barcarena in Brazil (bauxite and alumina), and Finspång in Sweden and Troy, Michigan, in the US (both Extrusions).

Hydro is committed to achieving net-zero emissions by 2050 or earlier and the ambition is to take the lead in delivering industrial- scale zero-carbon aluminium by 2030. To deliver on our commitment and ambition, we need new technologies that enable us to deliver net-zero products and achieve net-zero operations. Our efforts are concentrated along three main pathways to zero:

1. Carbon capture and storage (CCS) – decarbonizing existing smelters
Through capturing off-gases at smelters, we aim to reduce electrolysis emissions for existing smelters. We have evaluated more than 50 CCS technologies and developed a roadmap for testing and piloting the most promising up to industrial scale. The most likely outcome will be a combination of off-gas capture and direct air capture to eliminate 100 percent of the emissions. Upstream emissions at the Alunorte alumina refinery in Brazil will be reduced via fuel switch and electrification, and we will pilot hydrogen for calcination of alumina.

2. HalZero chloride process – decarbonizing new smelter capacity
Through utilizing our proprietary HalZero chloride process, we can convert alumina to aluminium chloride prior to electrolysis in a process where chlorine and carbon are kept in closed loops, resulting in a fully decarbonized process. We have been working on lab-scale for more than five years on this technology and have developed a roadmap for translating this to industrial scale before 2030. This way we can fully decarbonize the smelting process by eliminating emissions for both electrolysis and anode baking. Hydro's HalZero technology will be relevant for new capacity post-2030.

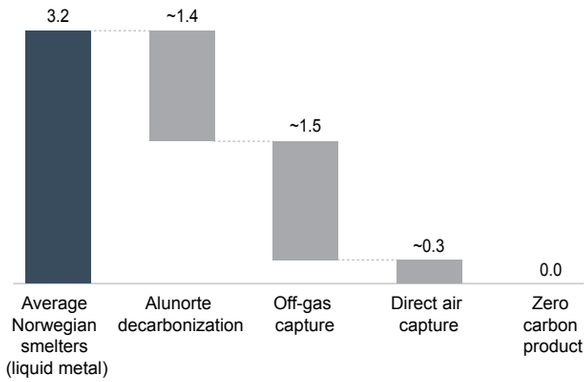
3. Zero aluminium through scaling up volumes of post-consumer scrap (PCS)
We plan to improve our recycling capacity to sort and utilize more difficult PCS aluminium. We already produce Hydro CIRCAL, a certified recycled and low-carbon product of more than 75 percent post-consumer scrap. We have demonstrated our ability to produce this also with 100 percent post-consumer scrap, but to do this in a profitable way at scale requires utilizing greater amounts of difficult, unsorted and contaminated scrap. In order to achieve this we will utilize advanced laser-based sorting (LIBS). In order to have a fully decarbonized scrap based product we also need to use direct electricity or hydrogen in our remelting furnaces at the recyclers. You can read more about our recycling in the Climate change chapter.

To contribute to decarbonizing society, we must also strengthen our ambitions regarding a just and fair transition towards carbon neutrality. Our chapter on Human rights describes our approach to a just transition.

From an innovation perspective, Hydro benefits from our

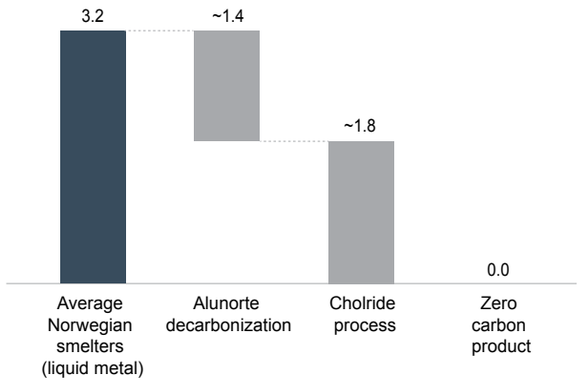
Emissions reduction pathway by Carbon Capture and Storage

Tonnes CO2e per tonne aluminium



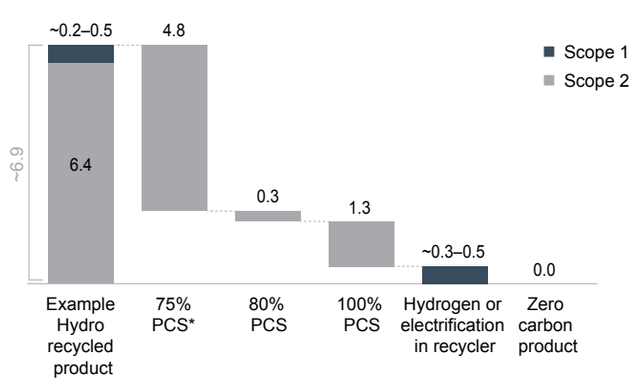
Emissions reduction pathway by HalZero Chloride process

Tonnes CO2e per tonne aluminium

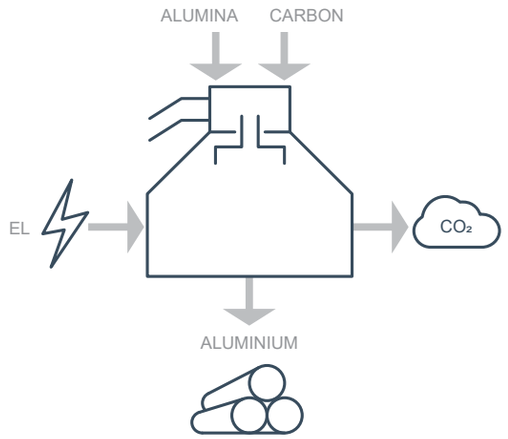


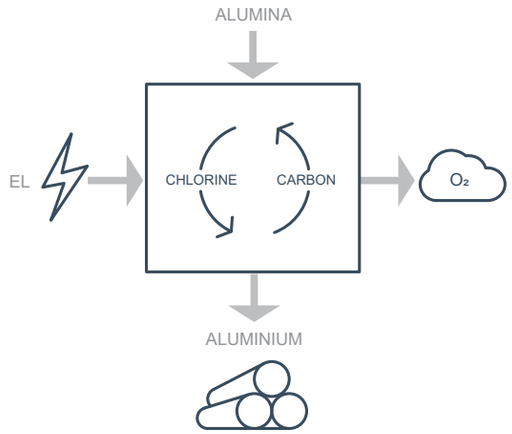
Emissions reduction pathway by Post-Consumer Scrap

Tonnes CO2e per tonne aluminium



* (Hydro CIRCAL) 2.3 kg CO2/kg aluminium





broad knowledge and oversight of the entire value chain from bauxite mining, alumina refining, electrolysis of primary aluminium and alloy technology to finished products and recycling.

Innovation and development initiatives are carried out in close collaboration between our production units, R&D organization and customers. We emphasize three main areas: the quality of our products, the efficiency of our production system and the development of new alloys. Our casthouse production process is based on our advanced proprietary casting technology, developed by the fully owned equipment producer Hycast and our R&D organization.

Quality improvements are closely linked to our customer technical service, which addresses customer needs while improving our own casthouse process. We develop new alloys with distinct properties to support the development of new or enhanced applications within industries such as automotive, building and construction, and electronics. This work begins with developing an understanding of metallurgical processes that forms the basis for sample compositions and production methodologies carried out in laboratory or test production facilities. Full-scale testing is often completed with customers and/or end-users.

Our 75,000-tonne-per-year technology pilot at Karmøy in Norway shows stable and excellent performance and produces the world's most climate- and energy-efficient primary aluminium. We are now in the process of implementing technology elements from the Karmøy Technology Pilot in our existing primary aluminium smelters, improving performance and financial robustness. This includes the Husnes line B in Norway, which started production in 2020, and as a part of the regular maintenance and relining of our electrolysis cells in all smelters, presently at Sunndal.

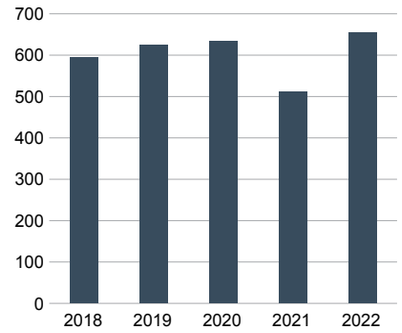
In the area of digital innovation we have developed digital twins; a digital simulation model of physical processes. In Hydro's digital twins we combine our physics based models with sensor data from production and advanced analytics algorithms. Digital twins have successfully been implemented in the control systems of our smelters, providing more stable production at a higher performance, and we pursue this approach across other Hydro business areas. Exploring and piloting data science and robotization is done in Hydro Energy and Extrusions as well.

Toward 2050, we are exploring different paths for zero carbon technology in aluminium production. We are partnering with several start ups and academic environments to explore and develop CO_2 capture technology for low carbon concentrations, like direct air capture and the emissions from our own primary production facilities. We are looking into projects to replace fossil carbon in our anodes with bio carbon, and while it appears challenging, we are part of two R&D programs supported by the Norwegian Research Council looking into this. In addition, we are on track with our HalZero technology development project where we explore a new process for production of primary aluminium with zero CO_2 emissions. A feasibility project has been supported by Gassnova and we have also submitted an application to ENOVA for the first pilot step of HalZero.

Tailings management and bauxite residue is a challenge in our industry. One example of our progress relates to the tailings dry backfill project which is described in the section on Tailings and bauxite residue in the Environment chapter. Bauxite residue is a challenge in our industry due to its alkalinity and large volumes. Alunorte uses an enhanced dry-stacking residue disposal technology, which includes an improved residue filtration step and the in-situ mechanical compaction of the disposed residue. Alunorte is now using press filtration technology before transporting the residue to the disposal area. This technology produces a filtered cake with lower moisture content, which allows for the cake's further mechanical compaction and storage on steeper slopes, thus reducing disposal area requirements and environmental footprint.

Research and development expenses

NOK million



See note S8.1 - Research & Development for more information

Aluminium in automotive

The growing use of aluminium in the automotive industry is being driven by emissions regulations, electrification and passenger safety requirements. Aluminium is well suited for automotive due to low weight, good strength and formability, corrosion resistance, recyclability and its energy absorption properties that can increase safety. Lightweighting is particularly important for electric vehicles with heavy battery packages.

This is creating new opportunities for Hydro as an established supplier to the automotive industry in Europe, North America and Asia. Product applications include extruded aluminium frames and sub-frames, body-in-white (BIW) components and battery casings.

In the Extrusion Europe and Extrusion North America business units, innovation, R&D and application development is predominantly targeted toward the growth in automotive and especially the e-mobility BIW structural markets. The commercial transportation market is another key area. For our Precision Tubing unit, innovation targets new aluminium applications, such as fuel and brake lines, with aluminium replacing copper and steel, resulting in lighter products with comparable performance. Moreover, Hydro develops aluminium-based material concepts for battery components and integrated solutions for thermal management and battery modules.

High level of expertise

An important part of Hydro's technology strategy is to utilize our researchers, operators and other experts in optimizing the operations at our plants. The competence base in Hydro's technology environments is on a high level in general and world-class in several core areas. As a result, we emphasize using this competence in operational improvements. Examples include reduced energy consumption in casting furnaces, new cathode solutions for relining of electrolysis cells, improved blending tools for utilization of recycled materials, reduced emissions, and improvement projects related to quality and productivity.

Upstream, we prioritize our R&D and innovation efforts toward decarbonization technology development and operational efficiency, while downstream, we concentrate on applications and product development. Part of our work downstream is conducted together with customers, reflecting design thinking from idea to solution. From 2021, we have prioritized more resources toward technology development that supports our ambitious sustainability targets on emissions, waste and circularity.

To promote idea generation and innovation, Hydro's business areas have specific programs in place.

Collaborating with other parties

In Norway, we receive support from several public institutions to further develop our smelter and casthouse technology as well as our downstream activities. These include The Research Council of Norway, Enova, Innovation Norway and Prosessindustriens Miljøfond. The majority of the support from The Research Council of Norway is paid directly to projects administered or partnered by Hydro at the Norwegian University of Science and Technology (NTNU), SINTEF or Institute for Energy Technology (IFE). We are a partner in four centers for research-based innovation, supported by The Research Council of Norway: SFI Metal Production, SFI Center for Advanced Structural Analysis, SFI Manufacturing and SFI Physical Metallurgy. These are cross-disciplinary R&D programs with a frame of up to eight years. We are also a partner in similar centers for environment-friendly energy (FME). For more information, see note S8 Financial assistance from governments to the Environment and Social statements about public funding.

We also participate in other national and EU-funded R&D projects on post-consumer scrap recycling technology, following market demand for products with a low carbon footprint. Our R&D program includes joint projects with external research institutes such as SINTEF, NTNU, IFE and the University of Oslo in Norway and the University of Auckland in New Zealand.

Since 2016, Hydro has been a partner in NAPIC, the NTNU Aluminium Product Innovation Center. Its purpose is to develop new aluminium applications. A consortium that comprises several downstream industries has been established and five different faculties at NTNU are participating. To support and speed up the activity, Hydro has been sponsoring an NTNU professor in this area.

Hydro participates in international collaboration projects investigating the possibilities of using bauxite residue as a resource. An important example is with NTNU, SINTEF, Norcem/Heidelberg and Veidekke to develop a new type of concrete using bauxite residue as a resource to improve quality. We are also working with other aluminium companies through the International Aluminium Institute to solve this industry challenge. In Brazil, Hydro cooperates with the national Brazilian entity SENAI (National Service of Industrial Apprenticeship) mineral research area, UFPA (Federal University of Pará) and USP (University of São Paulo) on R&D projects connected to bauxite residue management.

Product stewardship

Hydro engages in dialogue with customers and other stakeholders regarding the environmental impact of our processes and products. We perform life-cycle assessments (LCAs) for all major product groups to identify improvement potential. With other aluminium producers, we have developed a pan-European network of national initiatives to promote and recycle aluminium packaging. Many of these national activities emphasize education and have developed projects with primary and secondary schools and universities to stimulate the next generation to make their contribution to a better environment.

Hydro is an active member of the Aluminium Stewardship Initiative. As of publication of this report, 61 of our consolidated production sites have been certified, covering Hydro's value chain from bauxite to finished products.

Investments in new energy solutions

As part of Hydro's new strategic direction, Hydro is investing in growth initiatives and energy solutions that enable a net-zero society. This includes more renewable electricity generation and mechanisms to store that energy. Read more about Hydro's investments in batteries unit, renewable energy and green hydrogen in the section on Net-zero society in the Climate change chapter.

Human rights

Material topics covered in this chapter:

- Human and workers' rights
- Indigenous peoples and traditional communities
- Just transition
- Living wage

Why it matters

Hydro recognizes that businesses have a responsibility to respect, support and promote human rights. As a global aluminium and energy company with mining interests, ensuring responsible conduct is important throughout Hydro's value chain. We must consider our impact on society and on people's rights, spanning from construction to closure, in our own operations, the local communities we are part of, and in our supply chain.

Our approach

We respect the human rights of all individuals and groups that may be affected by our operations. As an employer, owner and purchaser, an important way to respect human rights is to secure decent working conditions in our organization, in minority-owned companies and with our suppliers.

We do not tolerate any form of harassment or discrimination, including but not limited to gender, race, color, religion, political views, union affiliation, ethnic background, disability, sexual orientation or marital status. Furthermore, we do not tolerate any form of forced or compulsory labor, human trafficking or child labor abuse. We support the principles of freedom of association and collective bargaining.

Hydro supports the principles underlying the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, and the International Covenant on Civil and Political Rights, the UN Global Compact and ILO's eight core conventions, and we expect our suppliers to do the same. We are a member of the International Council on Mining and Metals (ICMM) and are committed to following their principles and position statements. Hydro's approach to human rights is based on key frameworks that define human rights principles for businesses, including the UN Guiding Principles on Business and Human Rights. For a full overview, see GRI Standards general disclosure 2-28 at Hydro.com/gri.

Hydro's social ambition is to improve lives and livelihoods wherever we operate. We will do this in at least three ways:

- Invest in education: Equip people with essential skills for the future economy. By 2030, our target is to empower 500,000 people with education and skills development.
- Support a just transition: Contribute to economic and social development in communities where we operate.
- Responsible supply chain: Ensure transparency and responsible business practices in our supply chain.

Respecting, supporting and promoting human rights is the fundament of our social ambition.

Modern slavery transparency statement and Norwegian transparency act

The sections Human rights and Responsible supply chain have been developed to comply with the legal requirements as stated in the Norwegian Transparency Act 2021, the UK Modern Slavery Act 2015, and the Australia Modern Slavery Bill 2018. In addition, we have our Human Rights management approach available on Hydro.com.

The reporting requirements apply to Hydro as an enterprise resident in Norway with total assets of more than NOK 35 million combined with, on average, more than 50 full time employees, a supplier of goods with a total turnover of GBP 36 million or more in the UK, and more than AUD 100 million in Australia.

Ambition

Improve lives and livelihoods wherever we opderate

Performance

Hydro Human Rights Forum was established

11 local community stakeholder dialogue meetings and 469 total dialogues in Brazil

19,000 employees trained in Hydro's Code of Conduct

Hydro's prioritized human rights areas

We have identified and prioritized the human rights relevant to our operations and which we are most at risk of potentially impacting. These have been identified based on information from impact assessments, internal and external experts, and other relevant sources. They have been prioritized based on the highest severity and likelihood of a potential adverse impact on people.

Hydro's prioritized areas
Modern slavery, forced labor and child labor abuse
Principles of freedom of association and collective bargaining
Freedom from discrimination and harassment
Decent working conditions
Right to privacy
Right to health
Right to safety
Rights of vulnerable individuals and groups
Provide information, dialogue and participation
Rightful, respectful and lawful resettlement, relocation and repossession

* Including contracted and agency workers

The information in the sections Human rights and Responsible supply chain is valid for:

- Norsk Hydro ASA and its consolidated subsidiaries. These include, but are not limited to, the fully owned production units
- Hydro Aluminium Deeside Ltd. UK
- Hydro Building Systems UK Ltd.
- Hydro Aluminium UK Ltd.
- The fully owned holding company Hydro Aluminium Australia Pty Limited, the owner of Hydro's 12.4 percent stake in the joint venture Tomago Aluminium Smelter and the Tomago Aluminium Smelter management company Tomago Aluminium Company Pty.

The sections are prepared based on information collected from all consolidated entities in Hydro. In addition, the above-mentioned legal entities have been consulted on the sections themselves.

Entities that are not fully owned by, but are controlled by Hydro, can have different policies. We expect that their relevant policies are aligned with the ones of Hydro.

The Modern Slavery Transparency Statement is approved and signed by the Board of Directors of the parent company Norsk Hydro ASA in the responsibility statements.

For a full overview of Hydro's operations, business activities, organization structure and supply chain, see the Our business chapter.

Supporting a Just Transition

As a global company with more than 30,000 employees, 25,000 suppliers sites in more than 40 countries, Hydro is exposed to a range of Just Transition challenges. In 2022, we defined corporate targets for how to contribute. Through a risk-based approach and internal stakeholder engagement; we identified the most relevant challenges and opportunities Hydro faces. This has led us to our Just Transition priorities around three outcomes that we will contribute towards.

Our Just Transition framework centers around contributing to three societal outcomes:

- People have their human rights protected and have access to equal opportunities
- Local communities are resilient in a changing world
- People have the necessary skills and jobs for the future low carbon economy

Read more about our Just Transition work in:

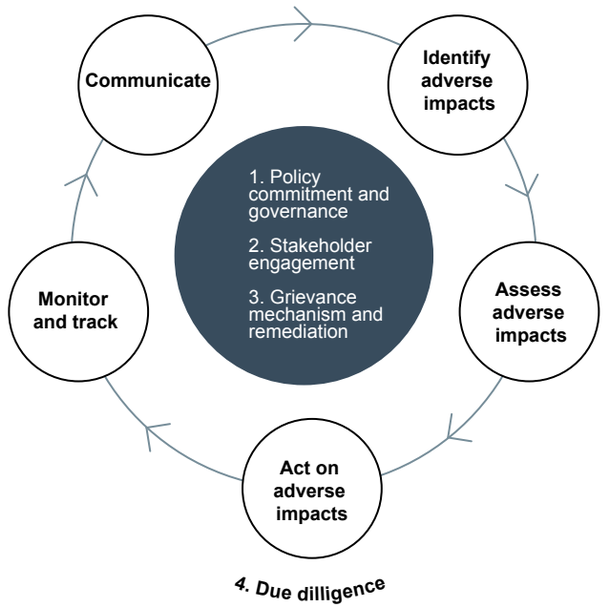
- Just Transition for our people and work environment
- Just Transition in our local community
- Just Transition in our supply chain

Supporting a Just Transition

The 2015 Paris Agreement established that global decarbonisation efforts should also provide for a Just Transition that ensures the creation of decent work and quality jobs. The definition from the European Union's Foundation for the Improvement of Living and Working Conditions explains that "a Just Transition to a climate-neutral economy provides and guarantees better and decent jobs, social protection, more training opportunities and greater job security for all workers affected by global warming and climate change policies."

Hydro's human rights management

Hydro's human rights management is based on the OECD Due Diligence Guidance for Responsible Business Conduct. The figure below summarizes how we manage human rights, and Hydro's prioritized human rights areas, through four steps.



1. Policy commitment and governance
Hydro's Human Rights Policy was last updated in 2020 and outlines the company's commitment to respect, support and promote human rights. The commitment is integrated in key procedures, including supply chain management, new projects, portfolio management, and risk management. The policy is approved by the Corporate Management Board and is available at Hydro.com. The policy and salient risks were reviewed in 2022 and updates will be published in 2023. Information pertaining to Hydro's human rights policies and compliance is regularly discussed with the Board of Directors, the Corporate Management Board, business area management teams, and relevant parties such as union representatives.

In 2022, the Hydro's Human Rights Forum (HuRF) was established to align and regularly share knowledge on human rights topics across the company. HuRF is comprised of representatives from each business area and representatives from Compliance, Legal, Sustainability, Procurement, HR, and ESG-reporting.

For more information on policy and governance across our business and with our suppliers, see Hydro's human rights policy.

2. Rightsholder and stakeholder engagement
When relevant, we consult parties that might be significantly impacted by our activities.

We engage and collaborate with stakeholders internally and externally to understand and evaluate the effectiveness of our human rights management. This includes NGOs, unions, local associations, authorities, and other relevant stakeholders. For more information, see the section on our partnerships.

We are committed to the principles of non-discrimination and to respecting the rights of vulnerable individuals and groups. In terms of impact and remediation, we aim to engage in dialogue with, and pay particular attention to, vulnerable individuals and groups.

Employee representatives are involved in dialogue at an early stage in all major processes affecting employees. We have a tradition for open and successful collaboration between management and unions. For more information, see Collaborating with unions and employee representatives in the section on Our people and work environment.

Where relevant, and in line with our risk-based approach, we have regular dialogue with communities, and more frequent and structured dialogue in communities with higher risk of facing adverse human rights impacts. We develop and plan community dialogues in collaboration with affected communities, based on their needs and expectations. Community members close to our sites in Brazil and at several other major sites are invited to visit plants on a regular basis. See our section on Managing human rights risks for more information.

Please see Ethics and compliance for more information about our approach to stakeholder dialogue.

Indigenous peoples and traditional communities

Hydro respects the rights of indigenous people and traditional communities and acts in alignment with the UN Declaration on the Rights of Indigenous Peoples as well as the Indigenous and Tribal Peoples Convention (ILO Convention 169) in engagement with indigenous people and traditional communities. We recognize their rights to self-determination, to lands which they traditionally occupy, to their customs, traditions and institutions, and to free, prior and informed consent (FPIC).

Hydro does not own any mining and/or exploration concessions in indigenous lands.

Below is an overview of indigenous peoples and traditional communities in the area of influence of our own operations and joint ventures. Please see our section on Managing human rights risks for more information about actions and initiatives related to indigenous peoples and traditional communities. Please see Responsible supply chain for cases related to our supply chain.

Brazil
In Pará state, in Brazil, several traditional Quilombola communities reside in the local communities next to our operations. There is no indigenous peoples' land in proximity of our operations.

Canada
In Canada, Hydro's part-owned primary aluminium producer Alouette is the vicinity of the Innu First Nation community.

Sweden
The wind farm project Stor-Skjälsjön is located near Sundvall in the northern part of Sweden where there is a Sami community

3. Grievance mechanisms and remediation
Grievance, or complaint, mechanisms are important tools to inform us of our impact on individuals and groups. Grievances may be of any kind, including social and environmental issues. In situations where we identify adverse human rights impact that we have caused or contributed to, we work to cooperate in, promote access to and/or provide remediation. See Managing human rights risks for more information concerning remediation cases.

To help facilitate informed and effective participation with people who are potentially affected by our operations, we establish or facilitate access to grievance mechanisms. We encourage, and will not retaliate against, individuals who in good faith ask a question, raise a concern, report a suspected violation, or participate in an internal company investigation. Hydro is committed to not interfere, retaliate, or hinder access to external or internal, judicial, or non-judicial grievance mechanisms.

We have several grievance mechanisms depending on stakeholder groups. The whistle-blower channel AlertLine can be publicly accessed through Hydro.com to report concerns involving illegal, unethical, or unwanted behavior. See Ethics and compliance for more information. Grievance mechanisms for community members have different approaches depending on local needs. At many of our sites, we collect information and complaints through community dialogue. In Brazil, we use several channels, including Canal Direto (toll-free phone number and email) and dedicated, trained field workers. Please see note S10.1 Reported and confirmed cases of non-compliance for more information.

4. Due diligence: Identifying, assessing, acting, monitoring and communicating risks and impacts
Hydro's human rights due diligence is integrated in relevant business processes including the enterprise risk management process. Mitigating action plans are developed and included in business plans in the business areas where relevant. Business plans are monitored, followed up and evaluated through the year in regular internal board meetings. Human rights and other sustainability-related issues are discussed when relevant.

In line with our risk-based approach, we aim to conduct more thorough human rights impact assessments with mitigating action plans where there is a higher risk for adverse impacts. Before new projects, major developments or large expansions are undertaken, we aim to conduct risk-based environmental and social impact assessments when relevant, which include evaluating risks for adverse human rights impacts. We are guided by The IFC Performance Standards on Environmental and Social Sustainability in doing so.

Training and capacity building
Human rights responsibilities are part of Hydro's Code of Conduct, which is translated into 19 languages.

Code of Conduct trainings are provided to employees. The Code of Conduct includes our opposition to all forms of modern slavery. In addition, more specific training on relevant human rights topics is provided to relevant functions and locations. E-learning on Hydro's Social responsibility, including human rights, is available to all employees. In 2022, over 500 employees participated in live trainings in human rights due diligence and more than 8.400 employees completed the e-learning on sustainability. For more information, see note S10.4 Compliance training, and, also, Local community value creation and Responsible supply chain regarding capacity building for external stakeholders.

Managing human rights risks

We monitor Hydro's prioritized human rights areas and recognize that there are potential risks of adverse impacts concerning our operations. According to our human rights risk-based approach looking at the size, nature, context,

Risk-based approach

In line with UN Guiding Principles on Business and Human Rights and with OECD Due Diligence Guidance for Responsible Business Conduct, we prioritize due diligence according to the following framework:

Factors for prioritization	For own operations and joint ventures this translates to	For suppliers and contractors translates to[1)]
Size of business	Number of employees and/or cornerstone employer	Expenditure
Nature of operations	Footprint on environment, including water resources, emissions, etc.	Suppliers industry. See graph on supplier due dilligence
Context of operations	Risks of human rights violations in country of operation (see Country human rights risk level)	Risks of human rights violations in country of supplier (see Country human rights risk level)
Severity and probability of impact	Hydro's prioritized human rights areas	Supplier risk levels

[1)] Read more about responsible supply chain and supplier risk levels in Responsible supply chain chapter.

Country human rights risk levels

We use country human rights risk levels in the countries where Hydro is present to help guide our human rights management. The risk levels are based on a range of independent human rights sources, such as Global Slavery Index, Heidelberg Conflict Barometer and Human Development Index. The following countries where Hydro has operations or joint ventures were in 2022 considered high risk: Brazil, China, Bahrain, India, Mexico, Qatar and Turkey. We use a more extensive list of country human rights risk levels for our suppliers and for other relevant procedures, including investment decisions. See more in our Human rights country risk score illustration.

severity and probability of impact, the main risks are:

- Adverse impact on local communities in northern Brazil
- Adverse impact to migrant workers at our joint venture in Qatar
- Adverse impact in parts of our supply chains. See Responsible supply chain for more information about Hydro's supply chain.

The most significant adverse impacts that we are aware of through our due diligence processes, including grievance mechanisms, are described below. We have also described how we are working to mitigate or remediate these potential or actual adverse impacts. Hydro did not detect severe human rights impacts in our own operations in 2022.

Brazil

In 2022, Hydro continued the human rights due diligence process in our operations in the state of Pará, Brazil. The process covers the sites Alunorte, Albras and Paragominas, including the bauxite slurry pipeline from Paragominas to Alunorte.

After a first analysis, a Human Rights Action Plan was set in motion with initiatives that included:

- Conducting human rights training for management, other employees and suppliers, including our grievance mechanism partner
- Developing policies on anti-discrimination and harassment, and on traditional communities
- Detailed mapping of traditional communities along the 244-km-long bauxite pipeline as well as advancements on the Quilombola study
- Implementation of social initiatives and strengthening social dialogue with traditional communities
- Better incorporate the Voluntary Principles for Security and Human Rights in security providers' contracts
- Strengthening effectiveness criteria for grievance mechanisms

In the beginning of 2022 Hydro engaged KPMG to conduct an independent assessment of the Human Rights Action Plan across its operation in Brazil. KPMG assessed the implementation of the priority targets, considering the level of completion and appropriateness, to ensure the targets were properly achieved. 92 percent of the initiatives in the Human Rights Action Plan have been executed as planned.

Hydro conducted a structured dialogue process engaging 178 community leaders in Barcarena to understand their perspective on key issues associated with our operations and to provide information about our actions.

In an area surrounding Hydro's operations in Barcarena and which is regulated for industrial purposes, illegal logging and irregular settlements have accelerated since 2016. Hydro is constantly engaged with competent authorities to find a solution that respects the Human Rights guidelines.

Hydro is conducting a thorough consultation with Quilombolas communities, following ILO 169 guidelines, which will increase our understanding of local cultures, provide means to identify potential impacts and ensure their right to participate in the process. Hydro is engaged with competent authorities, i.e. Fundação Cultural Palmares, State of Pará and INCRA[1]. We especially follow closely the communities impacted by the construction and operation of the 244km-long pipeline that crosses areas inhabited by traditional Quilombola groups, including the Jambuaçu Territory, in Para. As part of an integrated plan to remediate past impacts along the pipeline, in 2022 an agreement was signed with families directly impacted by the work, but not contemplated by the legal agreement with the former owner.

Hydro is also seeking to establish and contribute to a fund for social investments for the Jambuaçu Territory. The program supports local associations along the pipeline to strengthen their legal, administrative and governance structure. We also have social programs and other income generation initiatives, including traditional farming.

Regarding the lawsuit made in the Netherlands by Cainquiama and nine individuals linked to Alunorte and Albras, please see note S10.2 Legal claims to the Social performance statement.

In the municipality of Oriximiná in Pará, where the MRN[2] bauxite mine is located, there are Traditional Quilombola communities that are requesting formal title to their land. Hydro is constantly engaged with MRN through the board of directors and committees to ensure the project complies with national and international standards. MRN is currently engaged with the Quilombolas communities in a formal

[1] INCRA is the Brazilian agency in charge of land certifications, including Quilombola matters, as part of the environmental licenses

[2] Hydro has a 5 percent ownership interest and off-take agreements with Vale for a further 40 percent of the volume produced by MRN

consultation process for the implementation of new projects, following national and international standards, including ILO 169. In 2022, MRN was certified by the Aluminium Stewardship Initiative Performance Standard.

Hydro Rein made three important project investments in Brazil in 2022, Ventos dos Zacarias (formerly referred to as Feijao), a wind and solar project in the northeast of Brazil, Mendubim, a solar project in the northeast of Brazil, and Boa Sorte, a solar project in the southeast of Brazil.

In Ventos dos Zacarias, Rein has Green Investment Group as partner. A joint environmental and social team is responsible for following up identified environmental and social impacts throughout the project development and construction, including the impact on and potential resettlement of members of the two self-identified Quilombola communities in the vicinity of Ventos dos Zacarias.

In Mendubim, Rein has Scatec and Equinor as partners. Out of two households resettlements in the project, one family was moved in September and the other family was resettled in November. Scatec is responsible for executing the action plan that is in place for the second resettlement.

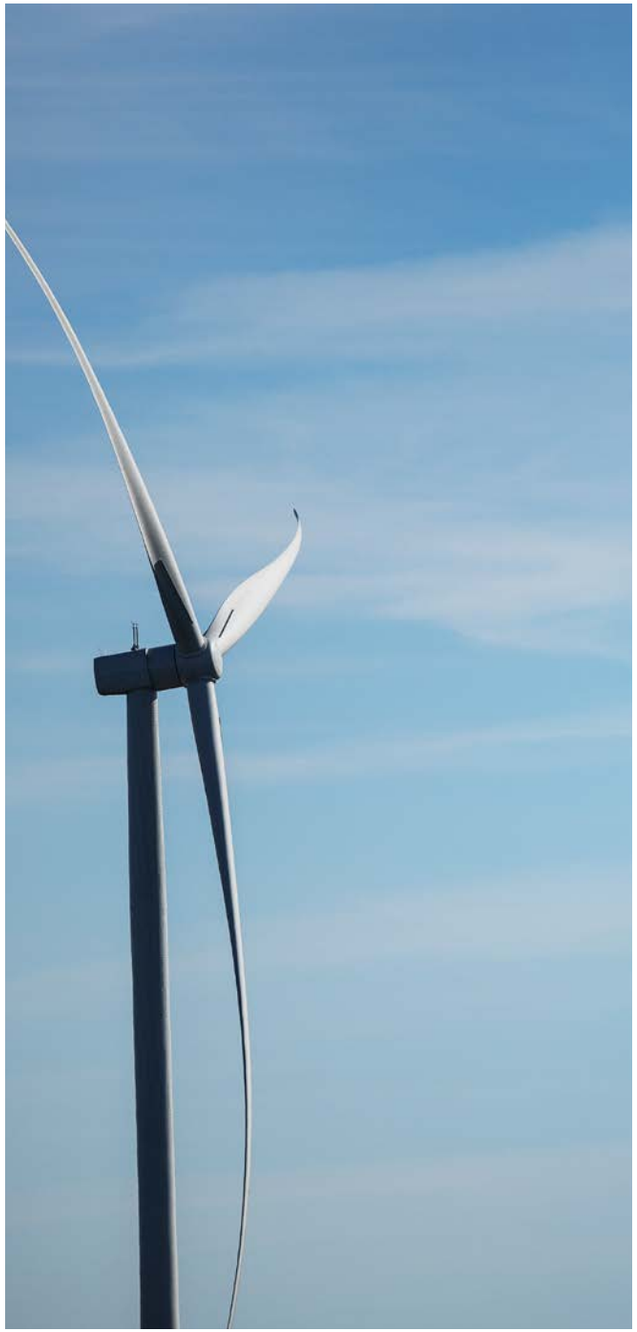
In Boa Sorte, Rein has Atlas Renewables as partner. They are responsible for the execution of environmental and social programs. Boa Sorte does not involve resettlements neither traditional communities.

We work with our business partners to ensure the implementation of IFC Performance Standards on relocation of people as well as other relevant standards that Hydro follows. These are described in our approach earlier in this chapter.

Qatar
At the primary aluminium producer Qatalum, a joint venture where Hydro holds 50 percent, close to 75 percent of the roughly 1250 workers are employed directly by Qatalum. The remaining 25 percent are temporary workers that, for the most part, have a Qatalum employed manager. Qatalum strives to secure good working conditions for all employees, and work continuously to assess, safeguard and improve the conditions of contracted workers. Qatalum became a member of the Aluminium Stewardship Initiative (ASI) in 2021 and was audited by DNV against both the Performance and Chain of Custody standards. In April 2022, Qatalum received its certificate for both standards, a recognition that it is aligned with globally accepted standards on ESG. We aim to continue to work with Qatalum in addressing relevant findings and observations in the audit. In 2022 we continued our discussions with local stakeholders and companies present in Qatar to address and discuss common challenges related to the recruitment of migrant workers, as well as sharing knowledge and good practice related to working conditions in Qatar.

Sweden
The wind farm project Stor-Skjälsjön is located near Sundsvall in the north of Sweden, of which Hydro Rein has 25 percent ownership of the project. A review of environmental and social risks has been conducted. No known non-compliances with regulatory requirements or Hydro's policies have been identified. An adjacent Sami community will be impacted by the wind farm, as the areas are in some periods used for reindeer herding. Legal agreements on cooperation between the Sami community and the wind farm during construction and operation have been signed and regular consultations held. Eolus, Rein's experienced Swedish partner, is responsible for the development and stakeholder management. The impacts of the wind farm will be minimized through mitigative actions proposed by the community.

Other countries
We also have more limited operations in other countries where there is an increased human rights risk, including China, Hungary, and Mexico. We track the human rights developments in these countries and seek ways to mitigate our impact when and where relevant.



Responsible supply chain

Material topics covered in this chapter:

- Conflict minerals
- Human and workers' rights
- Just transition
- Local workforce and wage
- Raw materials

Why it matters

With more than 25,000 suppliers, we have a significant indirect impact on society and the environment through our supply chain, and our suppliers are all important contributors to the success of our business. We engage, influence and work with our suppliers for continuous improvement and to mitigate potential negative impacts to people and the environment in our supply chain.

Our approach

A responsible supply chain is part of our sustainability ambitions. We will ensure transparency and traceability of key sustainability data for our products by 2025 or earlier. In 2022 we initiated a group wide project to identify common KPIs, building a data model to support the transfer of data along the value chain and establishing a 2025 roadmap with identified milestones. Our approach to responsible sourcing is based on the OECD Due Diligence Guidance for Responsible Business Conduct, and can be summarized in three steps:

1. Mapping of risks
All suppliers are subject to a qualification process, including mapping of risks related to business practice, human rights, working conditions and environment. If we identify any concerns related to such issues, we conduct a more comprehensive review or audit of the potential supplier to clarify if the supplier meets our requirements before any agreements are signed. The mandatory due diligence process for all suppliers is described in the company-wide procedure, Sustainability in the supply chain, and is based on three levels of inherent sustainability risk levels. See illustration on our supplier due diligence process.

2. Clear expectations
Hydro's Supplier Code of Conduct sets out the minimum sustainability requirements for all our suppliers. The code is based on internationally recognized standards such as the Universal Declaration of Human Rights, UN Global Compact and the ILO Core Conventions.

3. Support and development
We build our relationship with our suppliers on mutual trust and development. We actively discuss and promote ethical business practice, safe working conditions, human rights and environmental issues.

Hydro's social ambition for 2050 is to improve lives and livelihoods in the communities where we operate. For more information, see the Human rights chapter.

Hydro's supply chain

Most of Hydro's suppliers are located in the same countries as our production facilities.

The Hydro Supplier Code of Conduct was last updated in 2020 to be more specific on several requirements, especially on human rights, conflict minerals, working conditions, environmental and climate impact. The changes are based on international standards to which Hydro is committed, including the International Council on Mining and Metals (ICMM) and Aluminium Stewardship Initiative (ASI).

The principles set out in Hydro's Supplier Code of Conduct are made binding through contractual clauses to ensure suppliers and business partners reflect the values and principles that Hydro promotes. Standard contracts also include clauses on auditing rights and the supplier's

Ambitions

Transparency and traceability of key sustainability data for our products by 2025 or earlier

Performance

1,500 due diligence processes carried out

40% of existing counterparties screened

Hydro's supply chain

SUPPLY CHAIN INPUTS

ALUMINA
- Coal (South America, US)
- Fuel oil/diesel (Brazil)
- Caustic soda (US)
- Bauxite (Brazil)
- Lime (Brazil)
- Sulphuric acid (Brazil)

PRIMARY ALUMINIUM
- Alumina (Brazil, Australia, Europe, Jamaica)
- Anodes (Local, Europe, China)
- Fluoride (Norway, Europe, China)
- Coke (USA, China, Middle East, Europe, Norway)
- Pitch (Australia, China, Europe, India)

EXTRUSION
- Extrusion ingot (South America, North America, Europe, Middle East, Asia)

HYDRO ACTIVITIES

SUPPLY CHAIN INPUTS

BAUXITE
- Diesel
- Flocculants

ENERGY
- 10 TWh captive hydropower production in Norway
- 6 TWh gas power in Qatar (Hydro's share)
- Remaining power (local)

CASTING
- Alloying metals (China, other Asia)
- Gas (local)
- Scrap metal (traders, local, global)
- Cold metal (Russia, EU/EEC, Americas, Africa)
- Liquid metal (local)

Labor, transport/logistics, catering, maintenance & security (mainly local) / Project related services, equipment and materials (local and worldwide)

The figure shows Hydro's supply chain related to its value chain, and does not reflect the current organizational structure.

responsibility to actively promote the principles with its own suppliers/contractors and sub-suppliers/sub-contractors of any tier that have a material contribution to the supply of goods and services to Hydro under the contract. Failure to comply with the principles may result in a termination of the contract.

Through 2022, the business areas implemented our global procedure on sustainability in the supply chain to ensure a common approach across Hydro, with special emphasis on risk categorization of suppliers. The documents explaining our approach and requirements are available on Hydro.com/principles.

Suppliers, customers and other business partners registered in our main accounting systems are screened weekly against recognized international sanction lists. Furthermore, we have developed a spend cube to visualize external spend, measure procurement initiatives and manage supply chain risk.

Furthermore, supplier audits and site visits are performed by Hydro personnel and external auditors based on risk analyses. See note S10.5 Screening of business partners and supplier audits for more information.

Through regular reviews, audits and other tools, we contribute to continuous development among our suppliers. We have a risk based approach to supplier audits. In 2022, we conducted 200 supplier audits, all of which included topics related to HSE, human rights and working conditions. We are an active member of the ASI and promote ASI's certification program to our aluminium suppliers for the sustainable development of their operations. We also cooperate with other external stakeholders, such as unions and industry associations, to develop and implement supplier development programs.

We engage and collaborate with stakeholders internally and externally when relevant, to help inform and evaluate the effectiveness of our approach to responsible sourcing. See our section on Partnerships for more information.

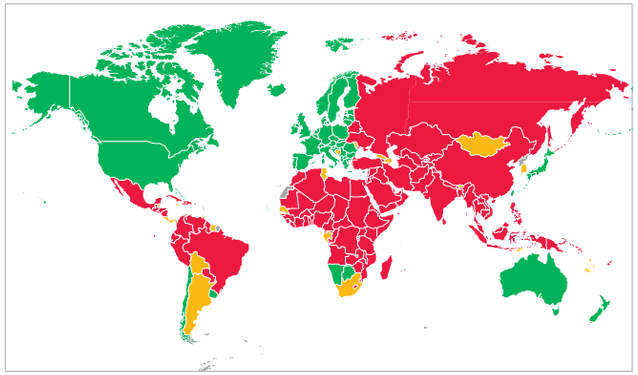
Just Transition in our Supply Chain
With more than 25,000 suppliers, Hydro is exposed to several human rights risks in its supply chain which could hinder the achievement of a Just Transition. Through our supply chain management, we can contribute towards one of the

Hydro's key sourcing countries*

Country	Percent
USA	26%
Brazil	21%
Norway	8%
Switzerland	8%
Australia	4%
Canada	4%
Singapore	4%
Germany	3%
China	3%
Others	20%

* Materials sourced from other Hydro entities are not included. Data is based on Hydro's Spend cube, covering most of our spend. Spend cube is still under develop and does not encompass 100% of our spend.

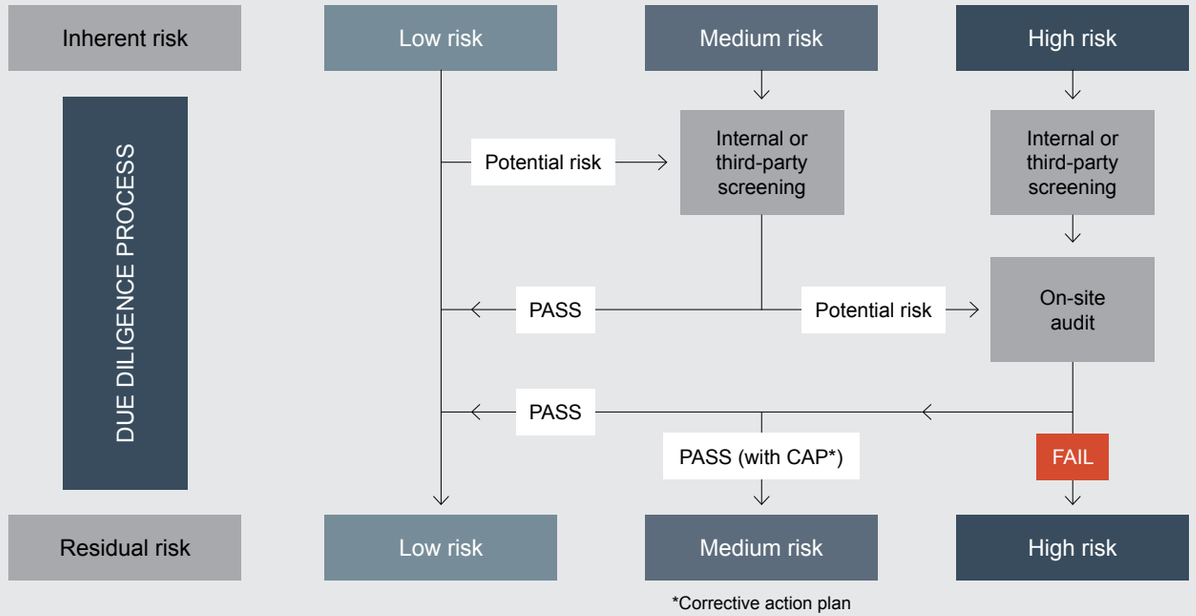
Human Rights Country Risk Score



Low risk Medium risk High risk

Supplier due diligence process

The due diligence process for the supply chain is based on new inherent sustainability risk criteria, as shown in the flowchart below. The inherent sustainability risk criteria is based on the supplier's industry, country of origin and expenditure. More details on these criteria can be found in the Hydro global procedure Sustainability in the supply chain.



*Corrective action plan

three outcomes that characterize a Just Transition: to ensure “people have human rights protected and have access to equal opportunities”.

To track progress on this in our supply chain, our target is to ensure responsible and inclusive business practices by undertaking human rights due diligence in all relevant projects and in the supply chain. In 2022, we undertook 1,500 supplier due diligences and did not uncover any adverse human rights breaches in our supply chain. We met the target of undertaking human rights due diligence in all relevant projects and in the supply chain.

Managing risks

The prioritized human rights areas monitored in the supply chain are related to safe and decent working conditions, health, discrimination, freedom of association and collective bargaining. The risk of incidents of child labor abuse, compulsory or forced labor is also monitored. There have been very few findings of these severe risks in our supply chain in recent years. We do, however, recognize a risk of forced or compulsory labor among suppliers in the Middle East, South America and Asia. This is addressed in our supplier screenings, supplier audits and regular dialogue with the suppliers.

China
In early 2021, several countries introduced sanctions on officials in China over alleged human right violations against the mostly Muslim Uighur minority group, mainly in the Xinjiang region. 2022 saw the US ban on imports from China’s Xinjiang region take effect, emphasizing the need to remain duly diligent. Hydro does not source material and alloys from the Xinjiang region, but given the complexity of internal Chinese supply chains we continue to monitor the situation.

Guinea
Hydro does not source bauxite directly from Guinea, but some of the alumina Hydro sources in Europe and a part of the primary metal sourced externally have their bauxite origin in Guinea. We followed closely the complaints process related to the expansion of the CBG mine raised to the Compliance Officer in CAO (the Compliance Advisor Ombudsman for the International Finance Corporation). We have requested more information from both parties in the complaints case, the mine operator and the NGOs representing the impacted villagers.

Norway
In Norway, Hydro has an offtake agreement with Statkraft on power from the new Fosen wind power installation. The projects on the Fosen peninsula are located within Sami reindeer grazing land. Agreements on mitigating measures and compensation for extra costs during the construction phase were previously entered into with the two affected reindeer herding groups. In August 2021, the Norwegian supreme court determined that the construction of the wind park had not sufficiently taken into account the rights of the Sami population. The consequences of the verdict are being assessed by the responsible ministry. Hydro is monitoring the situation and following up with Statkraft.

Supplier development

We work to strengthen and improve our suppliers’ sustainability performance through efforts such as dialogue, knowledge-sharing, innovation processes, incentives and supplier development programs. As a part of our work to strengthen our procurement processes, we have incorporated living wage considerations. In particular, we encourage our suppliers to pay wages to cover basic needs and provide some discretionary income.

In Brazil, suppliers can apply to participate in a comprehensive, year long supplier development program. In 2022, twenty one supplier companies were invited to participate in the third edition of the Supplier Development Program. At the end, twelve suppliers successfully completed all the requirements and were duly certified in December 2022. The total number of participants, considering all three editions is 148 companies, including ninety local companies.

Streamlining supplier risk management

As part of creating a common and consistent approach to supply chain management, we have entered into agreement with the sustainability ratings company EcoVadis (www.ecovadis.com). Hydro has a complex and diverse supply chain. By utilizing the intelligence and performance improvement tools provided by EcoVadis, we believe we will be in a good position to streamline sustainability risk management, and to help us promote and monitor positive development of our supply chain.

Local community value creation

Material topics covered in this chapter:

- Community investments and social programs
- Education and skills development
- Just transition

Why it matters

We are working towards a Just Transition and aim to contribute to the development of local communities where we operate. We can only succeed as a company if the communities around us also succeed, and investing in positive development is an important part of mitigating risk and negative impact. Through offering jobs, buying services, paying taxes and fees, and by trying to be good neighbors, we contribute to the society to which we belong. We constantly strive to make a positive difference in these communities. This is integrated into our purpose, values and business strategy.

Our approach

A key element in Hydro's approach to local community value creation and just transition is to strengthen the societies and communities where we operate. The way we do this differs from country to country and from community to community. The main contribution is generated from our operations through production and purchase of goods and services, direct and indirect job creation, and tax payments. We engage in capacity building through targeted programs, to develop the competence of groups as well as individuals, and we have partnerships aiming to further enhance the public's knowledge about Hydro and its operations. Hydro has corporate requirements on management of community investments, charitable donations and sponsorships. Read about Hydro's social ambitions for 2050 in our chapter on Human rights.

Education and skills development target
Our ambition is to equip 500,000 people with essential skills for the future economy by 2030. We have developed a methodology which defines what constitutes as education and skill development and ensures consistency in how we measure our progress across the company. The methodology can be accessed here. The insight from measuring the people reached and the impact of our initiatives make us better equipped to select and execute future initiatives with a positive impact.

In 2022, we reached more than 25,000 people, which implies that we have reached to 157,000 people in total since 2018. We are still on track to reach 500,000 by year-end 2030. Continuous improvement of current initiatives and the development of new high-impact initiatives are important going forward.

Community investments and social programs
We have a magnitude of social programs based on local needs and customs. Some of our community investments and programs are linked to mining license requirements, while others are voluntary commitments. The programs target education, economic growth, decent work, entrepreneurship, capacity building and strengthening of institutions.

To support local communities, we organize volunteer programs at many of our production sites. The volunteer activities are based on local customs and needs. Many sites also support local communities through a range of sponsorships and charitable donations.

Another important contribution is the transfer of competence that takes place through our cooperation with universities and research institutions. This includes the cooperation with three academic institutions in Pará, Brazil, and the University of

Ambition

500,000

People equipped with essential skills for the future economy through education and skills development by 2030

Performance

25,000

People educated or trained in 2022 as part of target

69 MNOK

Spent on community investments, charitable donations and sponsorships

Oslo through the Biodiversity Research Consortium Brazil-Norway. See partnerships. for more information. In addition, we provide scholarships to selected PhD candidates doing research relevant for our business areas. Hydro is also the sponsor of a professorship in Norway and has several adjunct professors among its own employees. See collaborating with other parties for more information.

Just Transition in our local communities

Hydro has a direct and indirect influence on communities with a plethora of unique challenges. In our Just Transition work, we have looked at the communities where we have the largest presence, and the ones which are uniquely exposed to Just Transition challenges to prioritise our work. Some of these at-risk communities, face challenges related to poverty and inequality, physical climate change and challenges related to decarbonisation efforts changing the nature and demand of jobs in communities.

Key towards contributing towards a Just Transition is supporting the local communities in which we operate is therefore supporting them to develop resilience in a changing world, and the necessary skills and jobs for a future low carbon economy. We will contribute toward this by empowering 500,000 people with education and skills for the future economy by 2030, as described above. We also engage in partnerships for a positive local development.

In 2022, we spent 69 million on community investments, charitable donations and sponsorships, an 25 percent increase on the prior year.

Local community programs

Brazil

The Barcarena region, where Hydro's Alunorte alumina refinery and the Albras metal plants are located, ranks low on the Human Development Index (measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living), and has one of the highest levels of violence in the world. There are high levels of unemployment and general poverty with a lack of access to basic services, with the share of people with access to sanitation at less than 30 percent.

In Pará state, Hydro has several social programs across the seven municipalities where we have operations. The programs contribute to the sustainable development of the territory, supporting a just transition and promoting capacity building, education and income generation, preserving the biodiversity of Amazon, with respect for Human Rights. To achieve this goal, we develop projects in four strategic areas: Education and skills; Value Chain; Quality of life; Biodiversity. In 2022, we developed a strategy to guide our social investments and strengthen our efforts toward a positive impact on the territories.

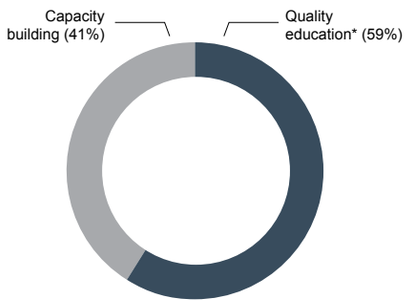
In 2022, we also continued technical training for community members along the bauxite pipeline from Paragominas to Barcarena (see managing human rights risks in Human rights chapter) to strengthen their job opportunities. We also work to establish social programs and income generation initiatives, including traditional farming and livelihoods, along the pipeline.

As the Hydro Sustainability Fund initiative, we initiated the Sustainable Barcarena Initiative (SBI) in 2018. This is an independent platform for sustainable development in Barcarena in Pará state. The overall aim is to bring local stakeholders together to discuss challenges and opportunities, strengthen capabilities and ultimately invest in the social initiatives they plan and develop together. In 2022, about 120 people participated in meetings, dialogues or programs organized by the initiative. The Hydro Sustainability Fund finances SBI and will contribute with BRL 100 million to the initiative over a 10 year period.

The fund launched its first round of financing in 2019 for projects supporting local associations to increase community businesses' knowledge and to promote cultural events. Due to Covid-19, the implementation of the projects was delayed until 2021, but the projects are now underway. A second round of financing of more than BRL 7.1 million is under development together with USAID. SBI coordinates the financing rounds.

Breakdown of 2022 results by type of support provided

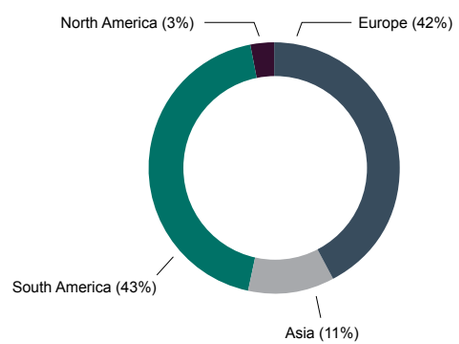
25,000 people reached



* Education refers to initiatives within the traditional educational system, and Capacity building covers training outside the educational system.

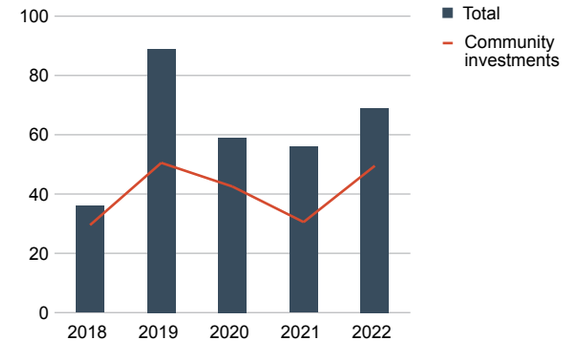
Breakdown of 2022 results by region

25,000 people reached



Community investments, charitable donations and sponsorships

NOK million



In response to Covid-19, the fund and these partners financed income generation projects for local production of face masks, as well as strengthening of existing social projects for local farmers through the pandemic. In addition, a partnership between the fund, the Mitsui Fund and Instituto Peabiru invested BRL 1.3 million to finance a project to develop and promote products from local smallholder farmers to the Barcarena market. A further BRL 1.8 million investment is planned for the next two years to upgrade and expand the initiative.

To support the preservation of the Amazon region, we run several programs that emphasize entrepreneurship and strengthening of traditional livelihoods. This includes environmental efforts and collaborations such as the Biodiversity Research Consortium Brazil-Norway. See our section on Partnerships for more information.

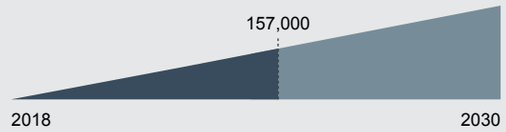
A volunteering program for employees has helped increase internal engagement and address community needs. In 2022, over 500 employees participated in the volunteer programs organized at several of our locations in Brazil. The volunteers organized over 70 different activities, including organizing food baskets, fundraising, seed planting and training for community leaders.

India
In Kuppam, India, we finance two local learning labs using tablets and physical games that give children at two schools in the community access to enhanced learning opportunities. Although our extrusion plant in India was sold in 2021, the project was still funded by Hydro in 2022.

Italy
We continued supporting UNICEF's "Upshift" program, a youth social innovation and social entrepreneurship program designed primarily for marginalized or at-risk young people. In 2022, Hydro supported "Upshift" for migrant and refugee youth in Italy.

Ukraine emergency support
UNICEF received NOK 10 million from Hydro to support families and children affected by the war in Ukraine. NOK 1 million of the donation was donated by Hydro employees around the world, as part of a two-week fundraising initiated by Hydro's unions EWC (European Works Council) and LO (Norwegian Confederation of Trade Unions). Additionally, Hydro made a holiday contribution of NOK 1 million to UNICEF which was donated to their Ukraine Winter Preparedness program. Hydro in Poland has organized transport to and from the Ukrainian border for any of the 400 Ukrainian Hydro employees who wished to bring their families to Poland. Hydro Extrusions has donated EUR 50,000 to Happy Kids, a Polish NGO providing foster homes and care for children evacuated from the war. The donations will help finance food, clothing, medicines and more.

Social responsibility



2030 target
500,000 people equipped with essential skills for the future economy through education and skills development

Hydro

Our people and work environment

Material topics covered in this chapter:

- Diversity, inclusion and belonging
- Living wage
- Workers' health and safety
- Security and emergency preparedness
- Talent and leadership development

Why it matters

We value human life above all other considerations and will not compromise the health and safety of those working for us or affected by our activities. We have a responsibility to provide a safe work environment and believe that this also promotes efficiency and lower operating costs. We believe that diverse and inclusive teams lead to higher levels of innovation, a learning culture, better customer understanding, and better financial results. Hydro is committed to the principles of non-discrimination and does not tolerate any form of harassment or bullying in the workplace.

Our approach

Occupational health and safety
Hydro shall be a leading company in our industry in the area of occupational health and safety. This will be achieved through consistent implementation of the management system with committed and visible leadership, and full engagement of all employees and others who work with us. The CEO HSE Committee is the strategic decision-making committee for all main HSE-related matters for the Hydro group. The committee is led by President & CEO Hilde Merete Aasheim and consists of the members of the Corporate Management Board and the head of HSE.

Our ambition is to provide safe and healthy workplaces, promote health and wellbeing, and prevent work-related injuries and ill-health. We drive safety improvements by systematically reducing risks, training personnel and regularly following up by line management and safety delegates. All injuries and high-risk incidents are investigated to find root causes and to share lessons learned between our sites.

We will work continuously to avoid damage to property and loss of production. Hydro has developed a comprehensive health and safety management system and our manufacturing sites are certified to internationally recognized health and safety standards. We embrace digital tools where possible and have developed an advanced incident management system, self-assessment tools, risk management processes, e-learning training modules, etc., all easily accessible to employees. In addition, we have strengthened our behavioral

Ambitions

0
Fatal accidents and life changing injuries

25%
Women in permanent and temporary positions by 2025

78%
Score on the Inclusion index by 2023

Performance

1
Life changing injury

22%
Women in permanent and temporary positions

76%
Score on the Inclusion index

tools using human performance techniques and the consistent use of peer to peer job observations.

The number of total recordable injuries and associated rates improved over 2022 levels, from 3.3 to a total recordable injury rate of 2.4 per million hours worked in 2022. The majority of injuries were relatively minor, however, there was one life-changing injury reported during the year where a contractor had two fingers amputated using a table saw.

We recorded zero fatal accidents in 2022. Sadly, we have recorded one fatality in February 2023, when a contractor employee at minority-owned MRN lost his life in an accident involving a vehicle. At the time of publishing our annual report, the accident is under investigation by police and MRN. See note S5 to the Sustainability statements for more information about our health and safety statistics.

The deployment of fatality-prevention procedures and associated life-saving rules and behaviors continued in 2022, which contributed to a continued reduction in the number and rates of high-risk incidents with the potential to be fatal or life changing. Key initiatives include monthly deep dive incident data analyses to support continuous improvement through root cause identification and defining actions to prevent incidents from recurring, and quarterly health, safety, security and environment network meetings to connect specialists from all business areas to discuss findings and actions taken from high-risk incidents, and sharing best practice and innovative solutions.

Our approach to continual improvement of physical and chemical occupational health is based on work environment risk assessments (WERA) and implementation of risk-reduction measures followed up through an associated key performance indicator. WERA provides a systematic approach for evaluating the exposure of similar exposure groups, identifying the most exposed work operations and measures can be implemented before ill-health occurs. The Group online HSE tool, IMS provides a WERA module to facilitate the work process and ensure transparency.

The focus on mental health and wellbeing has continued with numerous initiatives completed during the year to raise awareness, including mental health webinars, quarterly wellbeing topics addressing stress management, sleep hygiene, healthy eating and physical activity. In addition, two e-learning modules on stress awareness and stress management have been developed. To ensure a systematic approach to the psychosocial work environment, we have established a psychosocial risk indicator (PRI) as part of our employee engagement survey, Hydro Monitor. A process for follow-up of the PRI has been developed, including guidelines and tools.

Our people strategy

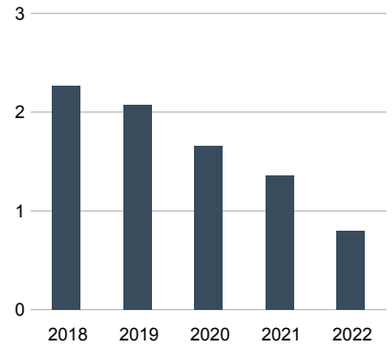
Hydro needs competence, capabilities and organizational culture to deliver on our strategy. Hydro's people strategy sets strategic priorities for talent acquisition, learning and competence development, leadership and succession, and diversity and inclusion. The priorities are supported by targets and activities based on the business areas' needs.

Hydro believes its value proposition, purpose, and growth opportunities are important to attract and retain talent in a challenging labor market. In 2023, Hydro will deploy new assessment tools for personality and ability to ensure the right candidates are employed. Hydro invests in employee skills and development opportunities in line with both business and individual needs to deliver on our business strategy and to be an attractive employer. Our goal is to have a culture of continuous learning to ensure the current and future workforce are prepared to deliver on our growth agenda and improve our business.

Learning and competence development is offered through a combination of on the job training, social initiatives like networking, mentoring and peer to peer learning, and formal learning initiatives. Our learning platform supports learning and competence development by providing content from learning providers and well known universities. All employees have a yearly dialogue with their leader where goals, development needs and activities are discussed and documented.

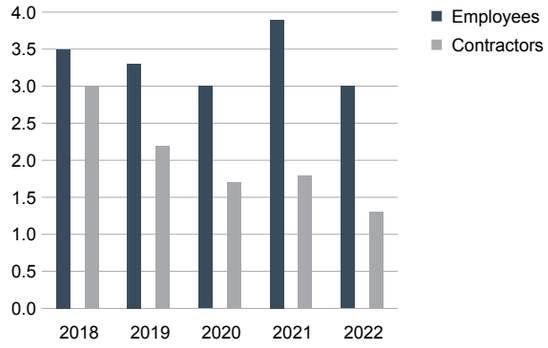
High-risk incidents

Per million hours worked
(employees and contractors combined)



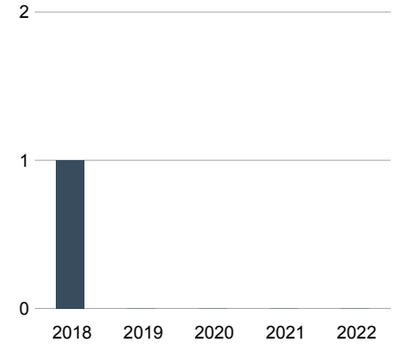
Total recordable injuries

Per million hours worked



Fatal accidents

Number



In 2019, there was one fatality in Qatar in the 50/50 JV managed by Qatalum

The green transition will create new employment opportunities and changes to existing ones. Innovations in our production methods and advancement of technologies risks the automation of jobs. Additionally, our focus on decarbonisation must not exacerbate social inequalities or discrimination. In order to facilitate a Just Transition, we develop skills and jobs relevant to the future low carbon economy, and ensure that our employees have their human rights protected and access to equal opportunities. We will contribute towards these outcomes by providing training and reskilling opportunities to Hydro employees. In 2022, we continued to develop and deliver learning and competence development for all our employees. We also work to increase inclusiveness among Hydro employees and track the perception of inclusiveness in our Hydro Inclusion Index. In 2022, 76 percent of employees have a positive perception of inclusion in Hydro.

Leadership is a prioritized organizational lever for Hydro. Our ambition has been to develop a leadership framework of competencies based on valid research, but also reflecting what is unique to Hydro and therefore what we need from our leaders to deliver our business strategy and live our values. The framework serves as a fundament for our leadership processes, development programs and tools. In 2022 the leadership expectations have been deployed. In addition, selection and succession of potential leaders will be supported by our leadership criteria.

Leadership development and succession planning for critical positions are among the strategic people priorities towards 2025. To have a solid pipeline of leaders with the required breadth of experience, we aim to rotate leaders so that they gain knowledge from different parts of the organization and provide programs that support the development needs of leaders and specialists. Through the succession and talent processes, we work with the leadership and specialist pipelines to identify and develop our future leaders.

Hydro believes Diversity, Inclusion and Belonging (DIB) is a key enabler for Hydro. Our DIB processes are centred around three pillars:

- Diversity: Seeking multiple perspectives and competencies when solving tasks and meeting customer needs. This includes increasing relevant diversity across seniority levels, including improved gender balance
- Equity: Promoting equitable opportunities for everyone to thrive, contribute and succeed, adjusting for the fact that different individuals have different starting points
- Inclusion: Fostering inclusive leadership and an inclusive culture for all employees to contribute with their full potential

We aim to increase value creation and foster a culture of belonging in a high-performing and sustainable work environment based on inclusion of our differences. Our DIB strategy promotes an inclusive culture, inclusive leadership, equity for underrepresented groups, improvements in team diversity, increased gender balance, and ensures a diverse talent pool.

Business areas and corporate staff functions have developed roadmaps to ensure targeted actions are implemented across all areas. To be more data driven, we have developed reports, dashboards and analytics for the business areas in 2022 to track progress on key DIB metrics.

Hydro Monitor is our global employee engagement survey, sent to all permanent employees every other year, including 2022. It is complimented with shorter pulse surveys on different levels in the organization on a more frequent basis. The purpose of the survey is to measure key drivers of engagement within Hydro by giving employees a method to have their voices heard and provide valuable feedback. This feedback is developed into focused action plans and roadmaps for improvement.

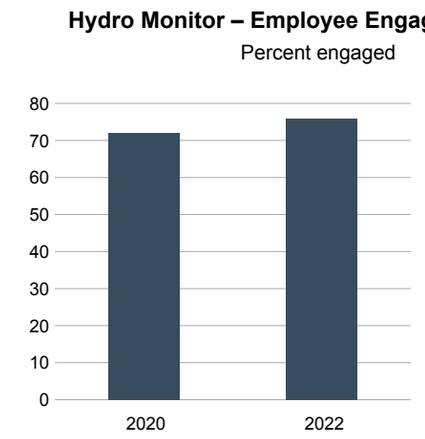
More information on Hydro's goals and approach to diversity, inclusion and equitable opportunity, can be found in the social and environmental statements.

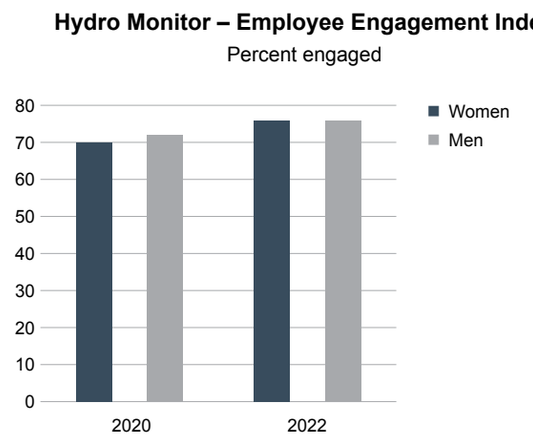
Collaborating with unions and other employee representatives
Through the Global Framework Agreement, Hydro is committed to providing equality of opportunity and treatment as required by ILO Conventions 100 and 111, respectively. This includes equal remuneration for men and women for work of equal value. The diversity and inclusion strategy was approved in 2021 and communicated through the business area communication bodies for dialogue between management and union representatives.

Living wage
In light of the Norwegian Transparency Act, we are in the process of conducting living wage gap analyses for our main operations and geographies, which we aim to finalize in 2023. In 2021, living wage was included in our responsible supply chain and procurement processes. Further information can be found in the section on Responsible supply chain.

Security and emergency preparedness
Hydro is committed to the protection of people, environment, physical assets, data and information. We anticipate and prepare for potentially adverse incidents with crisis potential in order to maintain business and operational continuity.

To prepare for and respond to intentional, unintentional and/





or naturally occurring disasters, and to protect people and critical assets, we adapt and initiate security measures depending on the evolving risk picture. Our emergency preparedness plans enable effective response to high-risk incidents and crises, ensuring an effective, cohesive, integrated and timely response to any business disruption, regardless of origin, scale or complexity.

Security in Hydro includes a proactive security risk management process, based on analysis, to enable appropriate mitigating actions and accurate and timely decision-making. Security guards are employed on a regular basis to protect our personnel and assets. No armed personnel are used in our operations.

There were several serious security incidents in 2022, and some involved firearms. No Hydro personnel were injured in these events and resulting security-mitigation measures were employed to further protect personnel and prevent against other incidents.

During 2022, Hydro continued the progression to achieve certification for ISO 18788, a management system for private security operations, requirements and guidance. It is founded upon the Voluntary Principles on Security and Human Rights, helping to demonstrate an ethical approach to the delivery of security services, and it will benchmark Hydro's security management system against the international standards. Hydro's security teams have achieved conformity to the requirements in the US and are now preparing for accreditation and certification. Hydro are also continuing to support our third-party security providers to achieve the same level of conformity in Brazil. One of the providers in Brazil achieved certification to ISO 18788 in 2021 and is now working with Hydro to help other Hydro providers through the process.

Hydro is responsible for infrastructure and functions on local and regional levels that might be critical to society's operability, and we operate large-scale production sites where a crisis could influence community interests and safety in general. Hence, we are subject to control and follow-up by relevant national authorities. We have emergency plans in place by site, business area and at group level, and we exercise and validate these plans regularly.

Ten emergency and crisis management workshops, with risk mapping at their core, were held in 2022. Based on evolving complex scenarios these workshops were conducted at plant, business area and Corporate Emergency Team (CET) levels. They help to link the process of security and emergency response, crisis management and recovery from the plant through to business area level and above.

Secure information handling is important to ensure Hydro's business continuity and reputation. Cyber-risk assessment is an integrated part of Hydro's enterprise risk management system, in order to facilitate the business areas' awareness of how cyber risks relate to their critical assets and operations. Crucial computer systems are subject to surveillance and regulations, and all personnel with access to sensitive information are bound to secrecy and required to handle information according to corporate guidelines and requirements.

Our enterprise IT platform[1] is a critical element in all parts of our operations, covering areas such as digital collaboration, enterprise resource planning, central personnel databases and systems for external reporting. Cybercrime is increasing globally, and Hydro is exposed to threats to the integrity, availability and confidentiality of our information and systems. Threats may include attempts to access information, computer viruses, denial of service and other digital security breaches.

Hydro has launched several initiatives to increase the robustness of the enterprise IT platform against malicious attacks by improving system infrastructure and by educating employees through mandatory e-learning to develop and improve secure work processes and routines, and to understand how these threats can be prevented. Additional segregation and protection is also implemented for the process control systems at Hydro's plants.

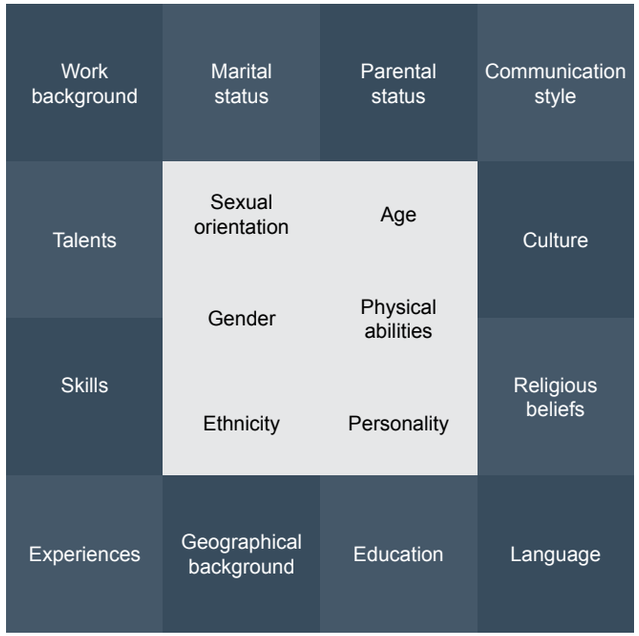
Corporate Emergency Team crisis management training has been conducted together with the Cyber Crisis Team (CCT) to train a cyber security scenario with global impact for the company.

Covid-19 continues to circulate globally, however, there are many tools available, and the risk of severe illness, hospitalization and death are reduced compared to earlier

[1] Hydro's enterprise IT platform refers to our IT infrastructure and software solutions across the Hydro group, but excludes our process control systems at operational sites.

Diversity characteristics

We have a broad definition of diversity in Hydro. We believe it encompasses both primary characteristics (what you cannot influence) such as gender assignet at birth, race, color, age, ethnicity, sexual orientation, affectional orientation, personality; and secondary factors (what you can influence) including education, work experience, skills, language, geography, communication style, and beliefs.



in the pandemic. Hydro operated throughout the challenging period 2019 – 2021 without any major disruptions through the strict adoption of rules set by relevant local authorities together with Hydro-specific measures. In addition, emphasis has been given to the mental health state of the Group's staff impacted by long-standing social distancing rules, and the Group continues to encourage vaccination according to the guidelines set by authorities in countries where it operates.

Our strategy to minimize the operational impact of Covid-19 and prepare for future pandemics continues to be based on full compliance with rules complemented by a flexible range of Hydro-specific responses and robust emergency preparedness. Where applicable, guidelines and regulations from national authorities such as those pertaining to travel restrictions, social distancing, home office or complete societal lockdowns have been reflected in our internal policies and procedures. We evaluate our key pandemic-related risks and vulnerabilities through annual security and business resilience assessments, which support the preparation and review of business continuity plans.

Additional measures that have been used and could be reinstated include stock level increases for raw materials to reduce our exposure to supply chain disruptions, as well as cash-preservation measures to reduce cost, capital expenditures and ensure adequate liquidity to face the financial impact of potential shutdowns.

Diversity, inclusion & belonging

The following sections provide information on the status of diversity and inclusion in Hydro, and the activities being undertaken to identify and analyze risk of discrimination and to take action to improve our DIB performance, in accordance with the requirements in the Norwegian Equality and Anti-Discrimination Act. This diversity and inclusion report and its references to the social statement, is approved by the Board of Directors and included in their responsibility statement.

Our diversity, inclusion and belonging program
We value diverse perspectives as essential to delivering on our long-term strategic agenda. Diversity allows us to think, approach challenges and solve problems differently.

Hydro is committed to providing equitable employment opportunities and treating all employees fairly and with respect regardless of primary or secondary diversity characteristics. Hydro's employees and business areas shall only use merit, qualifications and other professional criteria as a basis for employee-related decisions, such as recruitment, training, performance, compensation and promotion. We strive to develop programs and actions to encourage a diverse organization based on the principle of equitable opportunities. Hydro is committed to the principles of non-discrimination and does not tolerate any form of harassment or bullying in the workplace.

Identifying and mitigating DIB-related risks
We use our employee engagement surveys, Hydro Monitor and pulse surveys, to identify and monitor risks relating to diversity, inclusion and belonging in Hydro. We also use the internal grievance mechanism AlertLine to assess the risk of discrimination and harassment in the organization, and track relevant employee data from our core employee system. Hydro Monitor also allows us to assess employee engagement and psychosocial risk indicators across different demographics, including gender, age, role, minority status, and caretaking needs.

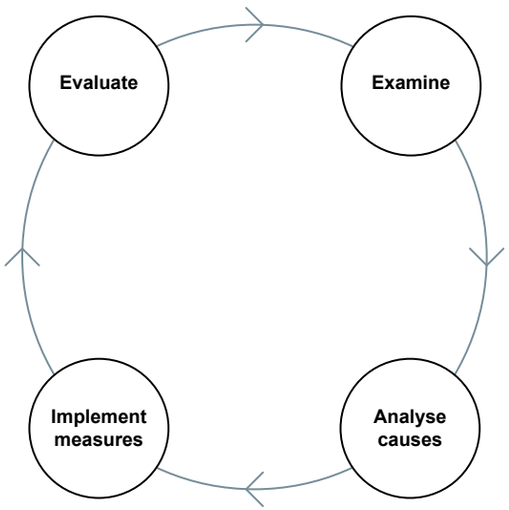
Since 2021, we have measured inclusion through our inclusion index. The index consists of eight questions related to diversity, inclusion and belonging, obtained through the Hydro monitor and pulse survey. The inclusion index score forms one of the CEO KPIs from 2023 measured on an annual basis as an improvement score and is also a KPI in our long-term Just Transition Sustainability roadmap.

We have developed tools and guidelines to assess risk of discrimination towards underrepresented groups. The business areas are expected to develop targets, act on the findings from the risk assessments, develop roadmaps, ensure responsibility is taken, and report progress to eliminate discrimination. The tools include digital and anonymous focus groups trying to understand root causes and actions, unconscious bias testing and training, and group guidelines for employee resource groups.

As a mitigating action, Hydro's DIB Policy has been further developed and implemented in 2022. It explains Hydro's commitment to diversity, inclusion and belonging and outlines the principles of DIB.

Hydro's corporate management board owns the DIB agenda and is accountable for DIB across Hydro. In 2022, they completed a workshop to develop diversity leadership

Identifying and mitigating DIB-related risks



DIB key results 2022

Diversity	**2022**	**2021**
Gender balance – women overall	22%	20%
Gender balance – female leaders	19%	18%
Inclusion		
Inclusion Index overall	76%	76%[1)]
Equity		
Inclusion Index minorities	72%	68%[1)]
Psychosocial risk indicator	76%	76%[1)]

[1)] Not based on Hydro Monitor, but a shorter pulse survey.

competence and signed a letter of commitment to DIB. A global DIB core team was set up to drive execution of the DIB agenda on behalf of the corporate management board, comprising Hydro's DIB Lead and a DIB responsible for each business area.

The corporate management board, HR leaders and DIB core team members receive DIB safeguarding dashboards each quarter for Hydro overall and for the respective business areas. The dashboards use HR reporting data and employee surveys for quarterly tracking of metrics on gender balance, diversity in the succession pool, inclusive culture, wellbeing, psychological safety and diversity leadership. The quarterly measurements are used to develop action plans and make continuous improvements and reported on in internal board meetings for each business area.

To mature our work on diversity, inclusion and belonging, we are continuously implementing actions at all levels in the organization across our strategic pillars. DIB is embedded in all people processes, including recruitment, onboarding, and succession planning, and is included in all our global employee and leadership development programs.

Five diversity days are celebrated in Hydro to raise awareness and improve inclusion of underrepresented groups: International Women's Day, International Day for the Elimination of Racial Discrimination, Pride, World Mental Health Day, and International Day of People with Disabilities. These days each have a sponsor from the top management. Employee resource groups have been set up in several areas, including the Hydro Rainbow LGBTQI+ network, and Women's networks in Operations, Finance, and the Headquarter.

Diversity, inclusion and belonging achievements 2022

- Diversity, inclusion and belonging training completed and letter of commitment signed by the Corporate Management Board (CMB)
- Inclusion Index set as KPI on CEO scorecard 2023 for improvement purpose
- Establishment of the DIB core team collaborating across Hydro with CMB sponsors
- Safeguarding process for DIB commenced with quarterly dashboards to measure improvements
- Mandatory online DIB training provided to all new employees. Including deep dive learning pathways and workshop material provided to all
- Several new employee-resource groups initiated (e.g. women in operations, women in finance, mental health, LGBTQI+)
- Integration of compensation data in our people master data system
- Global engagement for the five diversity days

Gender balance targets and performance

We have worked systematically to increase gender balance in Hydro's operations since our first action plan to promote women employees and leaders was adopted in 1997. While we have seen successes in improving gender balance at staff positions, challenges remain for operator and leadership positions.

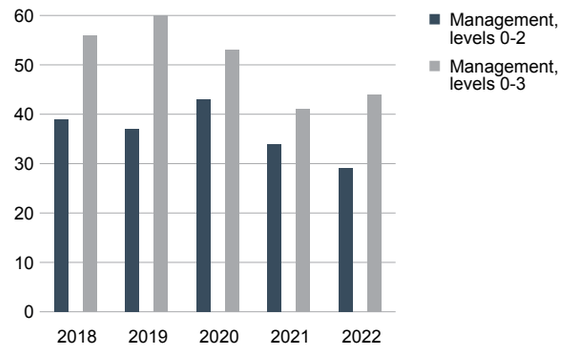
Our ambition for the share of women in Hydro is 25 percent by 2025, including permanent and temporary employees. In 2022, we achieved 22 percent. For more information about temporary employees see note S1.2. Employees by employment type and part-time employees.

The share of women in Hydro's Board of Directors was 36 percent in 2022. With three women among the seven shareholder-elected members and one woman among the three employee representatives on the Board of Directors, Hydro complies with the Norwegian legal requirements on women representation. The proportion of women on Hydro's Corporate Management Board was 40 percent in 2022. For further information about gender balance, see note S3 Diversity in management and S1 – Employees.

While gender balance is a challenge among operators at most of Hydro's operational sites, women constitute 49 percent of the workforce in Hydro's corporate staffs and 45 percent in Global Business Services. Globally, about one-

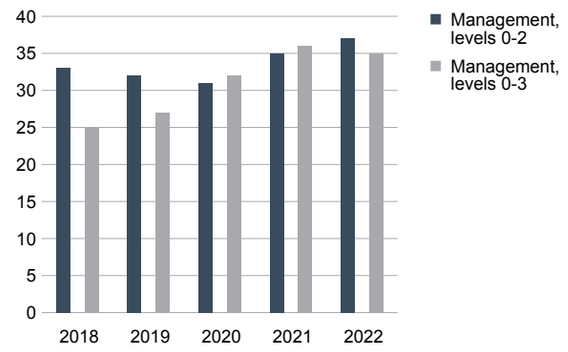
Share of non-Norwegian leaders

Percent



Share of women leaders

Percent



Gender balance ambitions and 2022 performance*

	2022	Ambition 2025
Gender balance – women overall	22%	25%
Gender balance – female leaders	19%	25%
Female non-operators	29%	35%

* In permanent and temporary positions.

third of employees among non-operators are women.

Hydro recognizes the importance of a good balance between work and other aspects of life. For example, Aluminium Metal, which is Hydro's largest business area in Norway, has implemented procedures to ensure a predictable work schedule for operators, and opportunities for flexible working hours for non-operator employees.

Opportunities for people with disabilities
Hydro seeks to generate opportunities and become an attractive employer for employees with disabilities, across our global operations. To foster an environment and culture where people of all physical, cognitive and mental health abilities can feel supported and be successful, we have developed a global guide for inclusion of people with disabilities. We are continuously adjusting working conditions so that all employees have the same opportunities in their workplace.

In Brazil, we are required to employ at least 5 percent employees with disabilities. At the end of 2022, 4.7 percent of the employees in Paragominas were disabled, at Alunorte 4.6 percent, and at Albras 4.8 percent. The absolute number for employees with disabilities increased in 2022, compared to 2021, and we are working to increase the share of disabled employees further. The Hydro Extrusions sites in southern Brazil fulfilled their legal requirements.

Pay equality and compensation
Hydro is committed to provide equal employment opportunities for all our employees. Hydro will continuously work to ensure pay equality for the same or similar jobs, regardless of gender. Our global compensation principles state that all employees shall receive total compensation that is competitive and aligned with the local industry standard. The compensation should be holistic, performance-oriented, transparent, fair and objective. Relevant qualifications, such as performance, education, experience and professional criteria, shall be considered when providing training, settling compensation and awarding promotions.

In 2020, we started the integration of compensation data in our people master data system, and a global job architecture framework was developed enabling us to map all employees in Hydro in a consistent way. Hydro's global job architecture framework is built on Mercer's International position evaluation system (IPE). Hence, Hydro's architecture consists of two main elements: a job family structure and a job level structure.

The activities and competency requirements determine which family a job belongs to, and it is the job that an individual holds that is mapped, not the individual person. The jobs are mapped in the family structure. We map employee positions in a level structure based on the complexity of each job. The job level structure consists of nine levels from operators, specialists to managers. Levels 1 to 3 typically cover operators in our plants, levels 5 and 6 jobs require higher education, e.g. bachelor or master with typically 1 to 5 years of experience. Levels 6 and 7 are jobs that require extensive experience in their area of expertise and levels 8 and 9 cover our most senior specialist and management positions.

In 2021, Hydro reported for the first time on compensation related differences between men and women based on the requirements in the Norwegian Equality and Anti-Discrimination Act. In 2022 we expanded our compensation reporting to identify pay gaps, increase transparency and improve fairness. We have prioritized countries where there are legal requirements on compensation reporting.

Further information on pay equality and compensation, including details on pay gap, temporary and part-time positions and parental leave statistics by gender for persons employed by our Norwegian subsidiaries, is included in note S1 – Employees and note S2 – Remuneration. In 2023, this will be updated with the biannual statistics on gender pay gaps and gender differences in part time work for each employee category, according to the Norwegian Equality and Anti-Discrimination Act.

Financial statements

Hydro

Consolidated financial statements

Consolidated income statements

Amounts in NOK million (except per share amounts). Years ended December 31	Notes	2022	2021
Revenue	1.4, 5.1	207,929	149,654
Share of the profit (loss) in equity accounted investments	1.4, 3.1	1,337	1,340
Other income, net	5.2	4,406	2,219
Total revenue and income		213,672	153,212
Raw material and energy expense	5.3	129,373	88,843
Employee benefit expense	9.2	22,886	20,287
Depreciation and amortization expense	2.4	8,593	7,844
Impairment of non-current assets	2.5	336	437
Other expenses		21,769	17,914
Total expenses		182,957	135,325
Earnings before financial items and tax		30,715	17,887
Interest and other finance income	7.5	619	263
Foreign currency exchange gain (loss)	7.5	2,192	1,404
Interest and other finance expense	7.5	(1,161)	(1,156)
Finance income (expense), net		1,649	510
Income (loss) before tax		32,365	18,397
Income taxes	10.1	(7,984)	(4,467)
Income (loss) from continuing operations		24,381	13,930
Income (loss) from discontinued operations	1.5	36	12
Net income (loss)		24,417	13,942
Net income (loss) attributable to non-controlling interests		263	1,782
Net income (loss) attributable to Hydro shareholders		24,154	12,160
Basic and diluted earnings per share from continuing operations	7.6	11.76	5.92
Basic and diluted earnings per share from discontinued operations	7.6	0.02	0.01
Basic and diluted earnings per share attributable to Hydro shareholders	7.6	11.78	5.93

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated statements of comprehensive income

Amounts in NOK million. Years ended December 31	Notes	2022	2021
Net income (loss)		24,417	13,942
Other comprehensive income			
Items that will not be reclassified to income statement			
Remeasurement postemployment benefits, net of tax	7.6	784	2,376
Unrealized gain (loss) on securities, net of tax	7.6, 8.2	40	(115)
Total		824	2,262
Items that will be reclassified to income statement			
Currency translation differences, net of tax	7.6	8,428	(1,377)
Currency translation differences, net of tax, subsidiaries sold	7.6	(4)	(578)
Cash flow hedges, net of tax	7.6, 8.3	624	(375)
Share of other comprehensive income that will be reclassified to income statement of equity accounted investments, net of tax	7.6	6	(137)
Total		9,054	(2,466)
Other comprehensive income		9,878	(204)
Total comprehensive income		34,295	13,738
Total comprehensive income attributable to non-controlling interests		1,252	1,564
Total comprehensive income attributable to Hydro shareholders		33,043	12,174

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated balance sheets

Amounts in NOK million, December 31	Notes	2022	2021
Assets			
Cash and cash equivalents	7.2	29,805	22,923
Short-term investments	7.3	4,173	6,763
Trade and other receivables	6.2	23,988	20,579
Inventories	6.1	30,035	21,791
Other current financial assets	8.2	1,127	3,656
Total current assets		89,128	75,713
Property, plant and equipment	2.1	62,656	54,605
Intangible assets	2.2, 2.3	9,280	8,725
Investments accounted for using the equity method	3.1	21,222	17,942
Other non-current assets	2.7, 8.2	5,596	6,045
Prepaid pension	9.3	8,573	8,894
Deferred tax assets	10.1	2,163	2,588
Total non-current assets		109,490	98,799
Total assets		**198,618**	**174,512**

Amounts in NOK million, December 31	Notes	2022	2021
Liabilities and equity			
Bank loans and other interest-bearing short-term debt	7.4	6,746	6,428
Trade and other payables	6.3	24,374	22,710
Provisions	4.1	3,005	3,128
Taxes payable		5,888	3,237
Other current financial liabilities	8.2	2,794	4,065
Total current liabilities		42,807	39,569
Long-term debt	7.4	26,029	21,989
Provisions	4.1	5,289	4,772
Pension liabilities	9.3	8,252	9,621
Other non-current financial liabilities	8.2	1,817	4,637
Other liabilities		1,831	1,879
Deferred tax liabilities	10.1	4,796	3,665
Total non-current liabilities		48,013	46,563
Total liabilities		90,820	86,132
Share capital	7.6	2,272	2,272
Additional paid-in capital	7.6	29,217	29,156
Treasury shares	7.6	(1,229)	(584)
Retained earnings		70,360	60,112
Other components of equity	7.6	1,835	(6,892)
Equity attributable to Hydro shareholders		102,455	84,064
Non-controlling interests		5,343	4,316
Total equity		107,798	88,380
Total liabilities and equity		**198,618**	**174,512**

The accompanying notes are an integral part of the consolidated financial tatements.

Consolidated statements of cash flows

Amounts in NOK million. Years ended December 31	Notes	2022	2021
Operating activities			
Net income (loss)		24,417	13,942
Adjustments to reconcile net income to net cash provided by operating activities:			
Loss (income) from discontinued operations	1.5	(36)	(12)
Depreciation, amortization and impairment	2.4, 2.5	8,929	8,281
Share of profit in equity accounted investments		(1,337)	(1,340)
Dividends received from equity accounted investments	3.1	1,237	1,559
Deferred taxes		1,093	(97)
Loss (gain) on sale of non-current assets		20	382
Net foreign exchange (gain) loss	7.5	(2,192)	(1,404)
Net purchases of trading securities		1,398	(1,441)
Changes in assets and liabilities that provided (used) cash:			
Trade and other receivables		(980)	(6,675)
Inventories		(6,269)	(7,527)
Trade and other payables		(1,532)	5,566
Derivatives		(250)	1,672
Collateral for derivatives		3,187	(4,582)
Other items		1,708	2,356
Net cash provided by continuing operating activities	10.3	**29,393**	**10,680**

Amounts in NOK million. Years ended December 31	Notes	2022	2021
Investing activities			
Purchases of property, plant and equipment		(9,604)	(6,020)
Purchases of other long-term investments		(1,971)	(911)
Purchases of short-term investments		(1,250)	(3,000)
Proceeds from sales of property, plant and equipment		187	371
Investment grants received		35	49
Proceeds from sales of other long-term investments		542	327
Proceeds from sales of short-term investments		1,500	4,500
Net cash used in continuing investing activities		**(10,561)**	**(4,684)**
Financing activities			
Loan proceeds		8,963	4,293
Loan repayments		(7,158)	(5,781)
Net decrease in other short-term debt		(241)	(107)
Repurchases of shares		(661)	-
Proceeds from shares issued		48	51
Dividends paid		(14,179)	(2,822)
Other cash transfers to non-controlling interests		(19)	-
Net cash used in continuing financing activities		**(13,247)**	**(4,366)**
Foreign currency effects on cash		1,353	5
Net cash provided by discontinued operations	1.5	**(56)**	**3,650**
Net increase in cash and cash equivalents		6,882	5,285
Cash and cash equivalents at beginning of year		22,923	17,638
Cash and cash equivalents at end of year		**29,805**	**22,923**

The accompanying notes are an integral part of the consolidated statements.

Consolidated statements of changes in equity

Amounts in NOK million	Notes	Share capital	Additional paid-in capital	Treasury shares	Retained earnings	Other components of equity	Equity attributable to Hydro share-holders	Non-controlling interests	Total equity
December 31, 2020		2,272	29,106	(662)	52,028	(8,464)	74,279	3,165	77,444
Treasury shares issued to employees	7.6		50	78			129		129
Items not reclassified to income statement in subsidiaries sold					(1,635)	1,635	-		-
Dividends	7.7				(2,564)		(2,564)	(368)	(2,932)
Acquisition of Non-controlling interest					123	(76)	47	(47)	-
Capital contribution in subsidiaries								2	2
Total comprehensive income for the year					12,160	14	12,174	1,564	13,738
December 31, 2021		2,272	29,156	(584)	60,112	(6,892)	84,064	4,316	88,380
Treasury shares issued to employees	7.6		61	36			97		97
Treasury shares acquired	7.6			(681)			(681)		(681)
Dividends	7.7				(14,060)		(14,060)	(215)	(14,275)
Acquisition of Non-controlling interest					154	(163)	(9)	9	-
Capital repayment in subsidiaries								(19)	(19)
Total comprehensive income for the year					24,154	8,889	33,043	1,252	34,295
December 31, 2022		**2,272**	**29,217**	**(1,229)**	**70,360**	**1,835**	**102,455**	**5,343**	**107,798**

The accompanying notes are an integral part of the consolidated statements.

Oslo, February 13, 2023

Dag Mejdell *Chair*	Rune Bjerke *Deputy chair*	Arve Baade *Board member*	Petra Einarsson *Board member*	Kristin F. Kragseth *Board member*	Peter Kukielski *Board member*
Bjørn Petter Moxnes *Board member*	Philip Graham New *Board member*	Torleif Sand *Board member*	Margunn Sundve *Board member*	Marianne Wiinholt *Board member*	Hilde Merete Aasheim *President and CEO*

Notes to the consolidated financial statements

Section 1 – General information

Note 1.1 Reporting entity, basis of presentation and significant accounting policies

The reporting entity reflected in these financial statements comprises Norsk Hydro ASA and consolidated subsidiaries (Hydro). Hydro is headquartered in Oslo, Norway, and the group employs around 32,000 people in about 40 countries. Hydro is a global supplier of aluminium with operations throughout the industry value chain, and engages in development and production of renewable energy. Operations include power production, bauxite extraction, alumina refining, aluminium smelting, recycling, and extruded solutions. The Board of Directors and the President and CEO authorized these financial statements for issue on February 13, 2023. Hydro is listed on the Oslo stock exchange, Oslo Børs.

Basis of presentation
The consolidated financial statements of Norsk Hydro ASA and its subsidiaries are prepared in accordance with International Financial Reporting Standards (IFRS) as endorsed by the European Union (EU) and Norwegian authorities and effective as of December 31, 2022. Hydro also provides the disclosures as specified under the Norwegian Accounting Act (Regnskapsloven).

The financial statements have been prepared on a historical cost basis except for certain assets, liabilities and financial instruments, which are measured at fair value. Preparation of financial statements including note disclosures requires management to make estimates and assumptions that affect amounts reported. Actual results may differ.

The functional currency of Norsk Hydro ASA is the Norwegian krone (NOK). The Hydro group financial statements are presented in NOK.

As a result of rounding adjustments, the figures in one or more columns included in the financial statements may not add up to the total of that column.

Interest rates used for calculating net present values are rounded to the nearest 10 basis points for post-employment benefits, to the nearest 25 basis points for other non-financial assets and liabilities.

Significant estimates and judgment
Estimation risks are associated with different phases of operation and sources of uncertainty. We have identified the following important sources of estimation risks, which impacts accounting estimates in different ways:

- Changing business environment, including changes driven by the green shift and physical climate changes already present or expected in the near future, impacting such estimates as remaining useful life for existing assets and whether assets are impaired due to shorter useful life, higher cost, or regulatory constraints of operations. These aspects of judgments are further discussed in note 2.4 Depreciation and amortization expense and note 2.5 Impairment of non-current assets.
- New business models for developing projects or businesses in cooperation with others are applied for such business activities as renewable energy projects and technology development. Contracts used in such projects may introduce complexity related to how to assess control and influence for part-owned companies, including whether Hydro has control, joint control or significant influence over such companies as further discussed in note 3.1 Investments in joint arrangements and associates.
- Renewable energy projects introduce complex accounting judgment related to contract structures including which of these contracts that represent financial instruments to be recognized at fair value and how to measure such contracts with entity specific features as further discussed in note 8.2 Financial instruments.
- Exiting and remediating sites used for historic activities represent both risks of costs and liabilities, and opportunity for value creation, and involves estimation of extent and cost of remediation effort as well as assessment of the value of land, building and other assets historically used for industrial purposes.

The following areas of accounting involve a significant degree of judgment and complexity and may result in significant variation in amounts. Judgment in these areas are partly related to the sources of uncertainty identified above and partly related to other sources of uncertainty discussed in the individual notes.

- Impairment of non-current assets, discussed in note 2.5 Impairment of non-current assets
- Uncertain assets and liabilities, discussed in section 4 Uncertain assets and liabilities
- Uncertain tax positions, discussed in note 10.1 Income taxes
- Business combinations, impacting such items as long-lived assets and uncertain assets and liabilities, discussed in note 1.5 Significant subsidiaries and changes to the consolidated group
- Financial instruments, discussed in section 8 Financial risk and financial instruments

Significant accounting policies
The following description of accounting principles relevant for presentation and consolidation applies to Hydro's 2022 financial reporting, including comparative figures. The accounting policies for items covered by specific note disclosures are described in the relevant notes in this set of financial statements.

Income statements and statements of comprehensive income
Hydro has elected to present a separate income statement and a separate statement of comprehensive income, rather than a combined statement. Further, Hydro presents an analysis of expenses based on their nature as a common analysis of expenses through Hydro's value chain. Hydro has elected to present a sub-total Earnings before financial items and tax (EBIT). This measure is also used as a segment profit measure. The share of the profit (loss) in equity accounted investments is included in this sub-total because the majority of such investments are operationally integrated with Hydro's businesses. Results from such investments are managed as part of Hydro's operating activities with significant transactions between the majority of these investments and Hydro. Return on other equity investments is not as closely related to the business activities in Hydro, and hence classification as finance income better reflects the way such investments are managed.

Gains and losses on disposal of non-current assets are presented net, as well as expenditures related to provisions that are reimbursed by a third party. However, insurance compensation and government grants are reported on a gross basis.

Statements of cash flows
Hydro uses the indirect method to present cash flows from operating activities. Interest and dividends received as well as interest paid are included in cash flows from operating activities. Dividends paid are included in cash flows from financing activities.

Basis of consolidation
The consolidated financial statements include Norsk Hydro ASA and subsidiaries, which are entities in which Hydro has the power to govern the financial and operating policies of the entity (control). Control is normally achieved through ownership, directly or indirectly, of more than 50 percent of the voting power. Currently, Hydro has more than 50 percent of the voting power in close to all subsidiaries. Subsidiaries are included from the date control commences until the date control ceases.

Intercompany transactions and balances have been eliminated. Profit and loss resulting from intercompany transactions have been eliminated.

Non-controlling interests
Non-controlling interests represent equity interests in subsidiaries held by other owners than Hydro. Non-controlling interests are reported as a separate section of the Group's equity in accordance with IFRS 10 Consolidated Financial Statements. Results attributed to non-controlling interests are based on ownership interest, or other method of allocation if required by contract.

Transactions between non-controlling shareholders and the group
Sales and purchases of equity interests and equity contributions not resulting in Hydro gaining or losing control of a subsidiary are reported as equity transactions in accordance with IFRS 10. No gain, loss or remeasurement of values of recognized assets, liabilities or goodwill are recognized as a result of such transactions.

Foreign currency transactions
Transactions in foreign currencies are initially recorded in the functional currency of the transacting entity by applying the rate of exchange as of the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the rate of exchange at the balance sheet date. Currency gains or losses are included in Finance expense.

Foreign currency translation
For consolidation purposes, the financial statements of subsidiaries with a functional currency other than Norwegian kroner (NOK) are translated into NOK. Assets and liabilities, including investment in associates, joint ventures and goodwill, are translated using the rate of exchange as of the balance sheet date. Income, expenses and cash flows are translated using the average exchange rate for the reported period. Goodwill is recognized in the predominant functional currencies in the acquired businesses. Translation adjustments are recognized in Other comprehensive income and accumulated in Currency translation differences in Other components of equity. On disposal of such subsidiary, joint venture or associate, the cumulative translation adjustment of the disposed entity is recognized in the income statement as part of the gain or loss on disposal.

Note 1.2 Measurement of fair value

Hydro measures certain assets and liabilities at fair value for the purpose of recognition or disclosure. Recurring fair value measurement is used primarily for financial instruments, see section 8 Financial risk and financial instruments. Non-recurring fair value measurement is used for transactions, such as business combinations, divestments with non-cash consideration and certain other non-routine transactions. Fair value is estimated using inputs which are to varying degree objectively observable. Certain items are valued on the basis of quoted prices in active markets for identical assets or liabilities (level 1 valuations), others are valued on the basis of inputs that are derived from observable prices (level 2 valuations), while certain positions are valued on the basis of judgmental assumptions that are to a limited degree or not at all based on observable market data (level 3 valuations).

Financial instruments
The estimated fair value of Hydro's financial instruments is based on market prices and valuation techniques. Valuations are made with the objective to include relevant factors that market participants would consider in setting a price, and to apply accepted economic and financial methodologies for the pricing of financial instruments. References for less active markets are carefully reviewed to establish relevant and comparable data. Extrapolations and other accepted valuation techniques are employed in periods with few or no transactions, such as for long-term commodity contracts in markets with few observations beyond the short or mid-term period, and for contracts with variability or contingencies which are not present in observable markets.

Hydro's estimated credit spread for similar liabilities is used when determining the fair value of financial instruments where Hydro is net liable. Hydro determines the appropriate discount factor and credit spread for financial assets based on both an individual and on a portfolio assessment.

Equity securities
Fair value for unlisted shares is based on commonly accepted valuation techniques utilizing significant unobservable data, primarily cash flow-based models. To the extent there are transactions in such shares, the transaction price is assessed and, to the extent comparable to rights embodied in the investment held by Hydro, used for reference. For investments where share holdings are associated with offtake rights and/or obligations or other specific clauses, those rights and obligations are included in the valuation of the equity securities. Fair value for listed shares or regularly traded shares is based on quoted market prices as of the balance sheet date.

Debt instruments
Fair value for unlisted debt instruments is estimated primarily through cash flow models using contractual cash flow where relevant, and discount rates reflecting the perceived credit risk and other relevant risks associated with the instrument. Fair value for listed instruments is based on quoted market prices as of the balance sheet date.

Derivatives
Fair value of financial derivatives with a currency or interest rate as underlying is estimated as the present value of future cash flows, calculated by reference to quoted swap price curves and exchange rates as of the balance sheet date. For derivatives covering a period beyond the liquid period of price curves, the curves are extrapolated using unobservable data.

Fair value of commodity derivatives is measured as the present value of future cash flows, calculated using forward curves and exchange rates as of the balance sheet date. Estimates from brokers and extrapolation techniques are applied for non-quoted products and periods to achieve the most relevant forward curve. For electricity contracts linked to specific production facilities, variability in production profile and price patterns are included in the valuation models. In addition, when deemed appropriate, correlation techniques between commodities are applied. Options are revalued using option pricing models, and credit spreads are applied where deemed to be significant. Markets are assessed to determine whether they are active for the relevant instruments. Currency and interest markets are considered liquid for the periods used for price references, and thus applied unadjusted. For aluminium contracts priced to observations at the London Metal Exchange (LME), liquidity is considered good for the first few years, with fewer transactions for longer durations. For electricity contracts priced to the electricity exchange Nasdaq OMX, liquidity is considered good for the first two years. For longer durations there are fewer transactions and higher uncertainty. Similar assessment is made for other markets used for price references. For less liquid periods, adjustments to remove outliers and extrapolation techniques are applied.

Embedded derivatives
Hydro measures embedded forward contracts that are separated from the host contract by comparing the forward curve at contract inception to the forward curve as of the balance sheet date. Changes in the present value of the cash flows related to the embedded derivative are recognized in the balance sheet with changes in the fair value recognized in the income statement. Forward curves are established as described above under Derivatives.

Note 1.3 Significant events

The following significant events have impacted Hydro in 2022, or are expected to impact Hydro in 2023:

At the beginning of 2022 the aluminium markets were one of the strongest in decades in the aftermath of the corona pandemic. However, the Russian invasion in Ukraine, the energy shortage in particular in Europe, spiking inflation and a global economic slow-down, including a significant fall in aluminium demand, resulted in significantly weaker markets in the second half of the year. There is significant uncertainty surrounding the market outlook impacting estimates.

In March, Hydro announced that no new contracts with Russian counterparts will be entered into in response to the war in Ukraine. Existing contracts were terminated where contract clauses or sanctions allowed, otherwise Hydro complied with such contracts through the minimum term.

In August 2022, the Board of Directors in the part-owned subsidiary Slovalco in Slovakia decided to stop primary aluminium production in response to high energy prices and adverse framework conditions. Primary production had been curtailed in steps during 2021 and 2022, resulting in power purchase contracts for delivery during 2022 at fixed price being recognized at fair value of about NOK 2.8 billion at the end of 2021. The fair value represented a gain on derivative purchase contracts in 2021, with market adjustments and realization in 2022. The Slovalco smelter assets were written down as impaired at the end of 2021 as a result of the high production costs not supporting profitable production. The casthouse in Slovalco continues its recycling operations.

The Hydro Rolling business was sold in June 2021. The business is reported as Discontinued operations. The transaction is further described in note 1.5 Significant subsidiaries and changes to the group.

Note 1.4 Operating and geographic segment information

Hydro identifies its reportable segments and discloses segment information under IFRS 8 Operating Segments, which requires Hydro to identify its segments according to the organization and reporting structure used by management. Operating segments are components of a business that are evaluated regularly by the chief operating decision maker for the purpose of assessing performance and allocating resources. Hydro's chief operating decision maker is the President and CEO. Generally, financial information is required to be disclosed on the same basis that is used by the CEO.

Hydro's operating segments represent separately managed business areas with products serving different markets, or distinct elements of the business separately followed up and reported to the chief operating decision maker. Hydro's reportable segments are the business areas Hydro Bauxite & Alumina, Hydro Aluminium Metal, Hydro Extrusions, and Hydro Energy, as well as the Hydro Metal Markets activities which are managed combined with Hydro Aluminium Metal.

Hydro Bauxite & Alumina activities includes bauxite mining activities, production of alumina and related commercial activities, primarily the sale of alumina. Alumina purchased and produced is both used internally for production of aluminium and sold to external customers.

Hydro Aluminium Metal includes primary aluminium production and casting activities. The main products are comprised of extrusion ingots, foundry alloys, sheet ingot and standard ingot.

Hydro Metal Markets includes all sales activities relating to products from our primary metal plants in Aluminium Metal and operational responsibility for stand-alone recyclers as well as physical and financial metal trading activities. Aluminium produced by Aluminium Metal and Metal Markets is both used internally for production of extruded products and sold to external customers.

Hydro Extrusions delivers products within extrusion profiles, building systems and precision tubing, and is operating several recycling facilities, both integrated with its extrusion plants and separate plants. Hydro Extrusions is present in about 40 countries. The products are delivered to such sectors as construction, automotive and heating, ventilation and air conditioning.

Hydro Energy includes operating and commercial responsibility for Hydro's power stations in Norway, a trading and wholesale business in Brazil, and energy sourcing for Hydro's world-wide operations. Energy is also responsible for Hydro's initiatives within other renewable energy production such as wind and solar managed by Hydro REIN, the hydrogen initiatives managed by Hydro Havrand and the battery initiatives.

Other consist of Hydro's captive insurance company Industriforsikring, internal service providers, and certain other activities. Unallocated corporate activities are reported as part of Other.

Operating segment information

Hydro uses two measures of segment results, Earnings before financial items and tax - EBIT and EBITDA. EBIT is consistent with the same measure for the group, considering the principles for measuring certain intersegment transactions and contracts described below. Hydro defines EBITDA as Income (loss) before tax, financial income and expense, depreciation, amortization and write-downs, less investment grants. Hydro's definition of EBITDA may be different from other companies. The two measures represent results with and without the charge for historic investments in production capacity and other fixed assets and are considered complementary.

Because Hydro manages long-term debt and taxes on a group basis, Income before tax and Net income is presented only for the group as a whole.

Intersegment sales and transfers reflect arm's length prices as if sold or transferred to third parties at the time of inception of the internal contract, which may cover several years. Transfers of businesses or fixed assets within or between Hydro's segments are reported without recognizing gains or losses. Results of activities not considered part of Hydro's main operations as well as unallocated revenues, expenses, liabilities and assets are reported together with Other under the caption Other and eliminations.

The accounting policies used for segment reporting reflect those used for the group. The following exceptions apply for intersegment transactions:

- Internal commodity contracts may meet the definition of a financial instrument in IFRS 9 or contain embedded derivatives that are required to be reported separately and valued at fair value under IFRS 9. However, Hydro considers these contracts as sourcing of raw materials or sale of own production, and accounts for such internal contracts as executory contracts.
- Certain other internal contracts may contain a lease arrangement. However, the segment reporting reflects the responsibility allocated by Hydro's management for those assets, and no internal lease arrangement is identified.

The following tables include information about Hydro's operating segments.

	External revenue		Internal revenue		Share of the profit (loss) in equity accounted investments	
Amounts in NOK million	**2022**	2021	**2022**	2021	**2022**	2021
Hydro Bauxite & Alumina	21,649	17,088	12,303	10,610	-	-
Hydro Aluminium Metal	13,087	5,373	52,396	37,175	1,549	1,509
Hydro Metal Markets	76,821	54,165	14,147	10,896	-	-
Hydro Extrusions	90,892	69,883	284	413	-	-
Hydro Energy	5,467	3,257	7,148	6,891	(180)	(104)
Other and eliminations	13	(113)	(86,278)	(65,986)	(32)	(65)
Total	**207,929**	**149,654**	**-**	**-**	**1,337**	**1,340**

	Depreciation, amortization and impairment[1]		Earnings before financial items and tax (EBIT)[2]		EBITDA	
Amounts in NOK million	**2022**	2021	**2022**	2021	**2022**	2021
Hydro Bauxite & Alumina	2,496	2,018	471	3,288	2,967	5,306
Hydro Aluminium Metal	2,664	3,158	20,292	8,376	22,866	11,440
Hydro Metal Markets	161	149	1,621	725	1,780	872
Hydro Extrusions	3,297	2,649	3,699	2,929	6,982	5,558
Hydro Energy	190	194	4,621	3,727	4,810	3,921
Other and eliminations	121	113	11	(1,158)	132	(1,046)
Total	**8,929**	**8,281**	**30,715**	**17,887**	**39,536**	**26,050**

	Non-current assets		Total assets[3]		Investments[4]	
Amounts in NOK million	**2022**	2021	**2022**	2021	**2022**	2021
Hydro Bauxite & Alumina	27,531	22,026	38,570	31,729	3,799	2,338
Hydro Aluminium Metal	34,439	31,606	61,851	52,327	3,387	3,479
Hydro Metal Markets	2,541	3,514	15,615	16,184	969	214
Hydro Extrusions	24,851	23,633	44,993	42,368	3,223	1,763
Hydro Energy	14,056	12,317	15,837	14,253	1,920	692
Other and eliminations	6,073	5,704	21,752	17,651	92	104
Total	**109,490**	**98,799**	**198,618**	**174,512**	**13,391**	**8,589**

1) Amounts include impairment, see note 2.5 Impairment of non-current assets.
2) Total segment Earnings before financial item and tax is the same as Hydro group's total Earnings before financial income and tax. Financial income and financial expenses are not allocated to the segments. There are no reconciling items between segment Earnings before financial items and tax to Hydro Earnings before financial items and tax. Therefore, a separate reconciling table is not presented.
3) Total assets exclude internal cash pool accounts and accounts receivable related to group relief.
4) Additions to property, plant and equipment (capital expenditures) plus long-term securities, intangible assets, long-term advances and investments in equity accounted investments, including amounts recognized in business combinations. The table includes investments in continuing operations only.

Amounts in NOK million	EBIT	Depreciation, amortization and impairment	Investment grants	EBITDA
EBIT - EBITDA 2022				
Hydro Bauxite & Alumina	471	2,496	-	2,967
Hydro Aluminium Metal	20,292	2,664	(91)	22,866
Hydro Metal Markets	1,621	161	(2)	1,780
Hydro Extrusions	3,699	3,297	(14)	6,982
Hydro Energy	4,621	190	(1)	4,810
Other and eliminations	11	121	-	132
Total	**30,715**	**8,929**	**(108)**	**39,536**

Amounts in NOK million	EBIT	Depreciation, amortization and impairment	Investment grants	EBITDA
EBIT - EBITDA 2021				
Hydro Bauxite & Alumina	3,288	2,018	-	5,306
Hydro Aluminium Metal	8,376	3,158	(95)	11,440
Hydro Metal Markets	725	149	(3)	872
Hydro Extrusions	2,929	2,649	(20)	5,558
Hydro Energy	3,727	194	-	3,921
Other and eliminations	(1,158)	113	-	(1,046)
Total	**17,887**	**8,281**	**(117)**	**26,050**

The identification of assets, non-current assets and investments is based on location of operation. Included in non-current assets are investments in equity accounted investments; property, plant and equipment (net of accumulated depreciation) and non-current financial assets.

Operating revenues are identified by customer location.

Amounts in NOK million	Revenue		Non-current assets		Investments[1)]	
	2022	2021	**2022**	2021	**2022**	2021
Norway	9,010	273	34,939	36,334	2,428	2,859
Germany	21,723	13,926	2,876	2,605	366	214
Spain	8,868	7,675	866	803	127	47
France	9,278	7,635	2,248	2,336	122	112
Italy	7,983	5,588	569	527	70	47
Poland	7,652	5,513	792	762	111	61
Austria	4,487	3,416	487	318	197	49
Sweden	3,575	3,143	1,185	742	531	66
Belgium	2,691	2,177	738	764	28	43
The Netherlands	2,822	1,991	625	669	11	27
Czech Republic	2,167	1,951	-	-	-	-
Portugal	2,060	1,653	121	103	23	10
Denmark	1,795	1,500	793	841	86	95
Finland	1,100	760	2	2	1	2
Hungary	1,029	746	1,168	979	298	132
Slovakia	699	331	393	433	154	175
Other EU	2,672	1,954	226	215	30	38
Total EU	**80,600**	**59,958**	**13,089**	**12,098**	**2,155**	**1,118**
United Kingdom	8,283	4,845	1,162	1,383	124	43
Switzerland	6,220	5,508	162	176	6	7
Turkey	3,537	2,918	1	2	1	1
Other Europe	773	758	-	-	-	-
Total Europe	**108,423**	**74,260**	**49,353**	**49,994**	**4,714**	**4,028**
USA	48,334	34,173	10,571	8,709	1,954	824
Canada	6,524	2,820	2,172	1,965	307	214
Brazil	9,621	8,784	32,780	25,314	6,021	3,360
Mexico	2,372	1,674	157	215	10	26
Other America	569	399	42	36	18	7
China	5,096	5,629	846	665	267	49
Japan	5,729	5,168	5	8	-	1
Singapore	6,215	3,739	5	8	-	4
South Korea	2,513	2,110	-	-	-	-
Qatar	2,278	1,809	12,438	10,704	-	-
Bahrain	1,870	1,439	449	426	16	-
Taiwan	1,417	1,417	-	-	-	-
India	1,834	1,329	11	146	1	4
Thailand	1,099	1,211	-	-	-	-
Other Asia	1,856	1,597	-	-	-	-
Australia and New Zealand	1,641	1,766	660	607	82	73
Africa	538	328	-	1	-	-
Total outside Europe	**99,507**	**75,393**	**60,137**	**48,804**	**8,676**	**4,561**
Total	**207,929**	**149,654**	**109,490**	**98,799**	**13,391**	**8,589**

[1)] Additions to property, plant and equipment (capital expenditures) plus long-term securities, intangible assets, long-term advances and investments in equity accounted investments, including amounts recognized in business combinations. The table includes investments in continuing operations only.

Note 1.5 Significant subsidiaries and changes to the group

Accounting policies for business combinations

Business combinations

Business combinations are accounted for using the acquisition method in accordance with IFRS 3 Business Combinations. Consideration is the sum of the fair values, as of the date of exchange, of the assets transferred, liabilities incurred or assumed, and equity instruments issued in exchange for control of the acquiree. The fair value of Hydro's pre-existing ownership interest in an acquiree is included in the consideration, with any gain or loss recognized in Other income, net.

The acquiree's identifiable assets, liabilities and contingent liabilities are recognized separately at the acquisition date at their fair value irrespective of any non-controlling interest, and goodwill recognized to the extent the consideration exceeds identified net assets.

The interest of non-controlling shareholders in the acquiree is initially measured as the non-controlling interests' proportion of the fair value of the net assets recognized (partial goodwill method, see note 2.3 Goodwill), or as the non-controlling interests' proportion of the fair value of the acquiree (full goodwill method, see note 2.3 Goodwill). Non-controlling interests are subsequently adjusted for changes in equity of the subsidiary after the acquisition date.

Assets held for sale and Income from discontinued operations

Assets held for sale are reported separately in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations, provided that the sale is highly probable, which includes the criteria that management is committed to the sale, and that the sale will be completed within one year. Assets held for sale are not depreciated but are measured at the lower of carrying value and the fair value less costs to sell for the asset group. Assets are not reclassified in prior period balance sheets. Immaterial disposal groups are not reclassified.

A discontinued operation is a component of Hydro that is held for sale or has been disposed of. A discontinued operation is a separate major line of business or geographical area of operations. Related cash flows, results of operations and gain or loss from disposal are reported separately as Income (loss) from discontinued operations.

Assets held for sale, liabilities in disposal groups and income and expense from discontinued operations are excluded from specifications presented in the notes unless otherwise stated.

Significant judgment in accounting for business combinations

In a business combination, consideration, assets and liabilities are recognized at estimated fair value, and any excess purchase price included in goodwill. Where Hydro had an existing ownership interest in the acquiree, that interest is also reassessed to determine its acquisition date estimated fair value, resulting in an acquisition date gain or loss. In the businesses Hydro operates, fair values of individual assets and liabilities are normally not readily observable in active markets. Estimation of fair values requires the use of valuation models for acquired assets and liabilities as well as ownership interests. Such valuations are subject to numerous assumptions and are thus uncertain. The quality of fair value estimates may impact periodic depreciation and amortization of fixed assets, and assessment of possible impairment of assets and/or goodwill in future periods.

Subsidiaries with significant non-controlling interests

The Hydro group consists of about 160 companies in about 40 countries. Most subsidiaries, including the large operating units in Norway, are 100 percent owned, directly or indirectly, by Norsk Hydro ASA. A list of significant subsidiaries is included in note 7 Shares in subsidiaries to the separate accounts of Norsk Hydro ASA later in this report. Restrictions in the ability to transfer dividend based on reported results and/or equity in the relevant subsidiaries exist in most countries where we operate. In some countries, including Brazil, there are also legal restrictions in our ability to integrate cash holdings in subsidiaries in the group's cash pool. There are non-controlling interests in some subsidiaries. The more significant ones are described below.

Albras

Hydro holds 51 percent of the shares in the Brazilian aluminium smelter Alumínio Brasileiro S.A. (Albras), which is part of Hydro Aluminium Metal. The non-controlling owner has significant influence on certain decisions in the entity, including operational and investment budgets. The non-controlling interests in Albras amounted to NOK 2,711 million as of December 31, 2022 and NOK 1,933 million as of December 31, 2021. Funds held by the entity are not available to the group through cash pool arrangements. Dividends need to be approved by the shareholders jointly. The shareholder agreement supports transfer of dividend to the extent possible under statutory regulations. The smelter produces standard ingots, which are sold to its shareholders, or the entities appointed by the shareholders, in proportion to ownership interest at a price based on prevailing aluminium prices at the London Metal Exchange and product premiums. In response to the regime for sales taxes in Brazil, an increasing share of the production is sold to domestic customers rather than exported.

Slovalco

Hydro holds 55 percent of the total shares and 60 percent of the voting interest in the Slovac aluminium plant Slovalco a.s, which is part of Hydro Aluminium Metal. The non-controlling owner has significant influence on certain decisions in the entity, including operational and investment budgets. The plant is written down as impaired, see note 2.5 Impairment of non-current assets. The power purchase contracts recognized as derivative contracts and measured at fair value in the annual report 2021 expired at the end of 2022. The non-controlling interests in Slovalco amounted to NOK 2,111 million as of December 31, 2022 and NOK 1,810 million as of December 31, 2021. Funds held by the entity are not available to the group through cash pool arrangements. Dividends need to be approved by the shareholders jointly. The shareholder agreement supports transfer of dividend to the extent possible under statutory regulations. The plant produces metal products, of which the majority is sold to Hydro at a price based on prevailing aluminium prices at the London Metal Exchange and product premiums.

Alunorte

Hydro holds 94 percent of the shares in the Brazilian alumina refinery Alumina do Norte do Brasil S.A. (Alunorte), which is part of Hydro Bauxite & Alumina. Following a capital increase approved by the extraordinary annual meeting in December 2022, Hydro increased its ownership share from 92 to 94 percent. The non-controlling owners hold options to participate in the capital increase, expiring in the first quarter of 2023. The non-controlling owners have limited influence on the operational decisions. The non-controlling interests in Alunorte amounted to NOK 517 million as of December 31, 2022 and NOK 554 million as of December 31, 2021. Funds held by the entity are not available to the group through cash pool arrangements. Dividends need to be approved by the shareholders jointly. The shareholder agreement supports transfer of dividend to the extent possible under statutory regulations. The refinery produces alumina, which is sold to its shareholders in proportion to ownership interest at a price based on prevailing alumina prices.

The table below summarizes key figures for Albras, the only subsidiary with non-controlling interests considered material, as included in the group financial statements. Fair value adjustments from Hydro's acquisition of the subsidiary are included. Intercompany transactions and balances are included, and any internal profit and loss in inventory and fixed assets purchased from group companies are not eliminated in the numbers below.

	Albras	
Amounts in NOK million	**2022**	2021
Internal revenue	5,928	5,003
External revenue	5,305	4,503
Earnings before financial items and tax	856	2,544
Net income	804	1,592
Other comprehensive income	1,229	(153)
Total comprehensive income	2,032	1,439
Net cash flows from operating activities	898	1,534
Net cash flows from investing activities	(1,204)	(986)
Net cash flows from financing activities	260	(610)
Cash and cash equivalents	273	319
Other current assets	3,614	2,449
Non-current assets	5,332	3,940
Current liabilities	(2,049)	(2,033)
Non-current liabilities	(1,639)	(732)
Equity attributable to Hydro	(2,820)	(2,010)
Equity attributable to non-controlling interests	(2,711)	(1,933)
Share of net income attributable to non-controlling interest	996	779
Dividends paid to non-controlling interests	119	260

Discontinued operations and assets held for sale
Hydro entered into an agreement to sell Hydro Rolling to KPS Capital Partners on March 5, 2021. The transaction was completed on June 1, 2021. The sold business comprised the Hydro Rolling segment, and related pension liabilities and certain support functions reported as part of Other activities. The transaction was subject to approval in the EU and certain other jurisdictions. The assets and liabilities in the divested business were reported as Assets held for sale and Liabilities in disposal groups as of the beginning of March 2021 until completion of the transaction. The results of operations in the divested businesses are reported separately under the caption Discontinued operations. The gain on sale of the business is also reported in this line item. No interest expense related to loans has been allocated to discontinued operations. Cash flows from discontinued operations are presented separately.

Sales from Hydro to the discontinued operations mainly represent aluminium sheet ingot and liquid aluminium as well as alumina and power delivered from Hydro's continued business to the rolling operations, priced with reference to observable market prices. These elements of cost were included in the result from discontinued operations of 2021 as such costs were required to achieve the sales reported for the discontinued operations. Most of the supply arrangements continue under the same or similar terms. Further, Hydro charged the discontinued business for certain shared services and other expenses incurred jointly, which remained charged to the discontinued operations in 2021, while shared administration costs and other corporate charges were not included in the discontinued operations.

The gain on sale in 2021 was NOK 79 million including recycling of an accumulated currency gain of NOK 554 million. The final consideration is subject to certain potential adjustments, mainly related to transfer taxes for which Hydro has assumed the responsibility. In 2022, a positive adjustment to estimated transaction related costs in the amount of NOK 36 million was recognized, increasing the total gain to NOK 115 million.

Summary of financial data for discontinued operations

NOK million	2022	2021
Revenue	-	11,637
Depreciation, amortization and impairment	-	178
Other expenses	-	10,330
Earnings before financial items and tax	-	1,149
Financial income (expense), net	-	40
Income (loss) before tax	-	1,189
Income tax expense	-	407
Income (loss) from discontinued operations	-	783
Impairment of discontinued operations	-	850
Gain on disposal (net of tax)	36	79
Gain (loss) from discontinued operations	36	12
Net cash provided by (used in) operating activities	-	(902)
Net cash provided by (used in) investing activities	-	4,563
Net cash used in financing activities	(54)	(13)
Foreign currency effects on cash	-	2
Net cash provided by discontinued operations	(54)	3,650

Section 2 – Long-lived assets

Note 2.1 Property, plant and equipment

Accounting policies for property, plant and equipment
Property, plant and equipment (PP&E) is recognized at acquisition cost. The carrying value of PP&E is comprised of the historical cost less accumulated depreciation and any accumulated impairment losses. The carrying value also includes the estimated value of the asset retirement obligation upon initial recognition of the liability. Hydro uses the cost model for PP&E and any investment properties.

Capitalized maintenance
Expenditures for maintenance and repairs applicable to production facilities are capitalized in accordance with IAS 16 Property, Plant and Equipment when such costs are incurred on a scheduled basis with a time interval of greater than one year. Expenditures that regularly occur at shorter intervals are expensed as incurred. Major replacements and renewals are capitalized and any assets replaced are retired.

Stripping cost
Stripping costs incurred during the mining production phase are allocated between cost of inventory produced and the existing mine asset. Stripping costs are allocated as a component of the mine asset in the event they represent significantly improved access to ore. Stripping costs include such activities as removal of vegetation as well as digging the actual pit for mining the ore.

Capitalized interest
Hydro capitalizes borrowing costs on qualifying assets in accordance with IAS 23 Borrowing Costs. Currency gains or losses related to Hydro's foreign currency denominated borrowings are not capitalized.

Hydro's property, plant and equipment
The main components of Hydro's property, plant and equipment is production related machinery and buildings in Hydro's more than 100 operating plants. PP&E includes leased assets, see note 2.6 Leases.

Amounts in NOK million	Land and buildings	Machinery and equipment	Plant under construction	Total
Cost				
December 31, 2020	34,961	100,064	4,402	139,427
Additions	221	4,099	3,458	7,778
Disposals	(425)	(2,469)	(5)	(2,900)
Companies sold	(54)	(233)	(1)	(288)
Transfers	658	2,665	(3,323)	-
Reclassified to Assets held for sale	(4,604)	(23,572)	(434)	(28,610)
Foreign currency translation effect	(749)	(2,230)	(123)	(3,102)
December 31, 2021	30,006	78,324	3,975	112,305
Additions	495	3,557	7,370	11,421
Disposals	(101)	(2,090)	(379)	(2,570)
Companies sold	(77)	(109)	(1)	(187)
Transfers	742	2,449	(3,191)	-
Foreign currency translation effect	2,528	7,951	522	11,001
December 31, 2022	**33,598**	**90,082**	**8,296**	**131,976**
Accumulated depreciation and impairment				
December 31, 2020	(15,011)	(59,949)	(222)	(75,182)
Depreciation for the year	(1,362)	(6,221)	-	(7,583)
Impairment losses	(172)	(251)	(12)	(435)
Disposals	183	1,843	-	2,026
Companies sold	55	213	-	268
Reclassified to Assets held for sale	2,224	19,545	-	21,769
Foreign currency translation effect	254	1,171	12	1,437
December 31, 2021	(13,830)	(43,649)	(222)	(57,701)
Depreciation for the year	(1,402)	(6,762)	-	(8,163)
Impairment losses	(5)	(297)	(29)	(331)
Disposals	31	1,945	211	2,187
Companies sold	15	80	-	95
Transfers	(129)	103	27	-
Foreign currency translation effect	(1,090)	(4,275)	(37)	(5,403)
December 31, 2022	**(16,415)**	**(52,854)**	**(51)**	**(69,319)**
Carrying value				
December 31, 2021	16,176	34,676	3,753	54,605
December 31, 2022	**17,183**	**37,228**	**8,245**	**62,656**

Note 2.2 Intangible assets

Accounting policies for intangible assets
Intangible assets acquired individually or as a group are recognized at cost when acquired. Intangible assets acquired in a business combination are recognized at fair value separately from goodwill when they arise from contractual or legal rights or can be separated from the acquired entity and sold or transferred.

Emission rights
Government granted and purchased CO_2 emission allowances expected to be used towards Hydro's own emissions are recognized as intangible assets at nominal value (cost). The amounts are not amortized but are tested for impairment. Actual CO_2 emissions which exceed the level covered by emission rights are recognized as a liability. Any sale of excess emission rights is recognized at the time of sale at the transaction price. CO_2 emission allowances purchased for trading are measured and classified as inventory.

Research and development
Research expenditures are expensed as incurred. Development costs are capitalized as intangible assets at cost in accordance with IAS 38 Intangible Assets when the recognition criteria are met, including probable future economic benefit and that the cost can be measured reliably.

To the extent development costs are directly contributing to the construction of a fixed asset, the development costs are capitalized as part of the asset provided all criteria for capitalizing the cost are met. Costs incurred during the preliminary project stage, as well as maintenance costs, are expensed as incurred.

Exploration cost
Exploration cost for mineral resources are expensed as incurred. Costs related to acquired exploration rights are allocated to the relevant areas and capitalized. An area represents a unit that may be utilized based on shared infrastructure and may include several licenses. Exploration rights are transferred to mine development cost when development starts. Amortization of transferred mineral rights starts when extraction of the resources starts. Exploration rights related to undeveloped areas remain on the balance sheet as intangible assets (mineral rights) until a development is decided or a decision not to develop the area is made.

Significant judgment in accounting for research and development
In assessing whether activities should be accounted for as research expenditures or capitalized as development costs, significant judgement is applied in evaluating the technical feasibility of completing the intangible asset and how the intangible asset will generate probable future economic benefits.

Hydro's intangible assets

Hydro holds intangible assets mainly as complementary resources to its physical assets. Waterfall rights are fundamental for production of hydroelectrical power, however, a significant share of such rights was granted to Hydro rather than purchased. A significant share of acquired waterfall rights have indefinite life and are thus not amortized. Mineral rights are undeveloped rights related to Hydro's mining operations in Brazil. Other intangible assets include customer relations, technology and other intangible assets identified in acquisitions, in addition to proprietary technology developed internally, and certain other types of intangible assets.

See note 10.2 Research and development for information regarding expensed research expenditures.

Amounts in NOK million	Intangible assets under development	Mineral and waterfall rights	Software	Technology	Acquired sourcing contracts	Other intangibles assets	Total
Cost							
December 31, 2020	127	905	1,675	2,084	761	1,930	7,482
Additions	56	6	49	-	-	109	220
Disposals	-	-	(16)	(1)	-	(80)	(97)
Transfers	(104)	-	63	42	-	-	-
Reclassified to Assets held for sale	(10)	-	(602)	(37)	-	-	(650)
Foreign currency translation effect	(2)	(36)	(47)	(66)	(43)	(22)	(216)
December 31, 2021	66	875	1,121	2,022	718	1,937	6,740
Additions	45	4	22	-	-	112	182
Disposals	-	(10)	(49)	(15)	-	(115)	(189)
Transfers	(49)	-	48	1	-	-	-
Foreign currency translation effect	4	131	87	154	156	163	695
December 31, 2022	**67**	**999**	**1,230**	**2,162**	**874**	**2,096**	**7,427**
Accumulated amortization and impairment							
December 31, 2020	-	(129)	(1,316)	(710)	(491)	(507)	(3,154)
Amortization for the year [1)]	-	(3)	(102)	(190)	(45)	(143)	(483)
Impairment losses	-	-	(2)	-	-	-	(2)
Disposals	-	-	16	1	-	-	17
Reclassified to Assets held for sale	-	-	576	31	-	-	607
Foreign currency translation effect	-	6	39	21	28	10	105
December 31, 2021	-	(126)	(789)	(847)	(508)	(640)	(2,910)
Amortization for the year [1)]	-	(3)	(87)	(186)	(109)	(153)	(537)
Impairment loss	-	-	(4)	-	-	-	(4)
Disposals	-	-	40	14	-	19	73
Foreign currency translation effect	-	(23)	(67)	(68)	(112)	(56)	(327)
December 31, 2022	**-**	**(152)**	**(907)**	**(1,087)**	**(729)**	**(830)**	**(3,705)**
Carrying value							
December 31, 2021	66	749	332	1,175	210	1,297	3,830
December 31, 2022	**67**	**847**	**322**	**1,075**	**145**	**1,266**	**3,722**

[1)] Amortization of a sourcing contract is reported as Raw material and energy expense in the income statement.

Note 2.3 Goodwill

Accounting policies for goodwill

Goodwill is recognized as a part of business combinations. Goodwill is initially measured either as the excess of the consideration over Hydro's interest in the fair value of the acquiree's identifiable net assets (partial goodwill), or as the fair value of 100 percent of the acquiree in excess of the acquiree's identifiable net assets (full goodwill). The method is elected on a transaction-by-transaction basis. Hydro has applied the partial goodwill method for all business combinations completed prior to December 31, 2022. Goodwill is not amortized, but is tested for impairment annually, and more frequently if indicators of possible impairment are observed, in accordance with IAS 36 Impairment of Assets. Goodwill is allocated to the cash generating units or groups of cash generating units expected to benefit from the synergies of the combination and that are monitored for internal management purposes.

Hydro's goodwill

Goodwill allocated to Hydro Extrusions was recognized in the acquisition of Sapa AS in 2017. Goodwill allocated to Hydro Bauxite & Alumina was recognized in the acquisition of certain aluminium businesses, mainly in Brazil, in 2011. Goodwill allocated to Hydro Metal Markets was recognized in acquisitions undertaken more than 20 years ago.

Amounts in NOK million	Hydro Extrusions	Hydro Bauxite & Alumina	Hydro Metal Markets	Total
Cost				
December 31, 2020	3,932	1,708	405	6,045
Foreign currency translation effect	(16)	(96)	4	(108)
December 31, 2021	3,916	1,612	409	5,937
Foreign currency translation effect	399	351	44	793
December 31, 2022	**4,315**	**1,963**	**453**	**6,730**
Accumulated impairment				
December 31, 2020	(1,017)	-	-	(1,017)
Foreign currency translation effect	(25)	-	-	(25)
December 31, 2021	(1,042)	-	-	(1,042)
Foreign currency translation effect	(131)	-	-	(131)
December 31, 2022	**(1,173)**	**-**	**-**	**(1,173)**
Carrying value				
December 31, 2021	2,874	1,612	409	4,895
December 31, 2022	**3,142**	**1,963**	**453**	**5,557**

Note 2.4 Depreciation and amortization expense

Accounting policies for depreciation and amortization
Depreciation and amortization expenses are measured on a straight-line basis over the estimated useful life of the asset, commencing when the asset is ready for its intended use. Mine property and development costs in extractive activities are depreciated using the unit-of-production method, using proved and probable reserves. Tangible and intangible assets with an indefinite useful life are not depreciated. Estimated useful life by category is as follows:

- Machinery and equipment, initial investment 4-30 years, for power plants up to 75 years
- Machinery and equipment, capitalized maintenance 1-15 years
- Buildings 20-50 years
- Intangible assets with finite lives 3-10 years, for rights related to hydroelectric power production up to 50 years

A component of an item of property, plant and equipment with a significantly differing useful life and a cost that is significant in relation to the item is depreciated separately. At each financial year-end Hydro reviews the residual value and useful life of its assets, with any estimate changes accounted for prospectively over the remaining useful life of the asset.

Significant judgment in accounting for depreciation and amortization expense
Significant judgement is applied in the assessment of the useful life of the assets in Hydro's operations. Useful life may be shorter than technical remaining life. Expected life is influenced by technology development, including when new technology with lower or zero emissions becomes available and when such technologies may make existing assets obsolete. Our estimate is that phasing in of new technology will not significantly impact producing assets until after 2030, when we expect lower emission technologies to become available at industrial scale.

Physical climate risk such as changes to weather patterns and severity of rain, wind, flooding, and other events impact our assessment. Hydro has not identified material assets expected to have a significantly shorter life due to climate-related risks.

Specification of depreciation and amortization by asset category

Amounts in NOK million	2022	2021
Buildings	1,402	1,362
Machinery and equipment	6,762	6,221
Intangible assets	429	439
Depreciation and amortization from discontinued operations	-	(178)
Depreciation and amortization expense in continuing operations	**8,593**	**7,844**

Note 2.5 Impairment of non-current assets

Accounting policies for impairment of property, plant and equipment and intangible assets
Property, plant and equipment and intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable, in accordance with IAS 36 Impairment of Assets. Goodwill and intangible assets with indefinite life are required to be tested for impairment annually, in addition to any tests required when impairment indicators are determined to be present. Hydro has elected to do the annual impairment test of goodwill in the fourth quarter. Exploration cost for undeveloped mining areas are assessed for impairment under IFRS 6 Exploration for and Evaluation of Mineral Resources.

When a Cash Generating Unit (CGU) or an asset is tested for impairment, the recoverable amount is estimated as the higher of the CGU's fair value less cost of disposal, or its value in use. The carrying amount is not recoverable if it exceeds the recoverable amount. An impairment loss is recognized in the amount that the carrying value exceeds its recoverable amount. Losses are reversed in the event of a subsequent increase in the recoverable amount of an impaired asset, however, impairment of goodwill is not reversed.

Significant judgment in accounting for impairment of non-current assets
IAS 36 requires that Hydro assess conditions that could cause an asset or a CGU to become impaired. The identification of CGUs involves judgment, including assessment of where active markets exist, and the level of interdependency of cash inflows. For Hydro, the CGU is either the individual plant, a group of plants that forms an integrated value chain where no independent prices for the intermediate products exist, a group of plants that are combined and managed to serve a common market, or a group of assets where circumstances otherwise indicate significant interdependencies. Assessing which indicators that may cause a CGU to be impaired includes such conditions as the macroeconomic environment impacting prices, supply and demand, significant changes in Hydro's planned use of the assets or expected changes to technology, regulations, or other frame conditions. All of these changes may impact the combination of product prices, raw material cost and energy cost, resulting in changes to the production margin to cover the carrying value of net assets in the CGU. Expected or reasonably possible climate and environmental changes as well as regulatory changes responding to such changes, impacts the assessment of financial viability and remaining useful life. Such factors are assessed in the same way as uncertain market prices for input factors and products, impacting cash flow estimates used for the tests.

Directly observable market prices rarely exist for our assets. However, fair value may be estimated based on recent transactions on comparable assets, internal models used by Hydro for transactions involving the same type of assets or other relevant information. Calculation of value in use is a discounted cash flow calculation based on continued use of the assets in their present condition, excluding potential exploitation of improvement or expansion potential, and including certain entity specific synergies or other positions.

Determination of the recoverable amount involves management estimates on highly uncertain matters, such as commodity prices and their impact on markets and prices for upgraded products, development in demand, inflation, operating expenses and tax and legal systems. We use internal business plans, quoted market prices, external market and industry analysis and our best estimate of long-term development in commodity prices and production margins, currency rates, discount rates and other relevant information. Hydro's long-term assumptions for key prices and rates, such as prices on aluminium, alumina and key energy carriers, macroeconomic development and certain other key factors for our production facilities is important input to the analysis. This set of assumptions reflects megatrends such as the green transition and Hydro's view on relative strength of our products compared to alternative materials, development in prices and cost, growth expectations and other relevant factors. These planning assumptions are consistent with Hydro's strategy and the aim to limit global warming to 1.5 degrees Celsius as expressed in the Paris agreement. Our assumptions are one set of possible financial effect of achieving this goal. Other alternative paths may be more or less beneficial to Hydro's businesses.

A detailed forecast of net cash flows is developed for a period of three to five years with projections thereafter, reflecting our view of the business cycle. Certain replacement investments are specifically modelled based on individual assets expected useful life. Hydro does not include a general growth factor to volumes for the purpose of impairment tests, however, cash flows are generally increased by expected inflation and, where market conditions are depressed, we consider whether full or partial market recovery towards previously observed volumes is justified. Estimated cash flows are discounted with a nominal risk adjusted discount rate specific for the business activity and country.

Uncertainty related to world economic development and its impact on demand and prices for Hydro's key products and input factors has been significant during the period, driven by the Ukraine war, energy shortages, in particular in Europe, increased inflation and interest rates, as well as the Covid-19 pandemic, and supply chain disruptions.

Tests performed in 2022 and 2021

Tests for impairment have been performed for all CGUs with mandatory annual tests and the CGUs where impairment indicators have been identified. The recoverable amounts for these units have been determined estimating the Value in Use (VIU) of the asset and/or, if appropriate, its fair value less cost of disposal (FV), and comparing the highest of the two against the carrying value of the CGUs. The calculation of VIU has been based on management's best estimate, reflecting Hydro's business planning process. The discount rates are derived as the weighted average cost of capital (WACC) for a similar business in the same business environment, on an over-the business-cycle view, using 10 years government bond rates, a US equity risk premium, credit spreads and country risk premiums. Beta estimates are reviewed from time to time, considering actual Hydro share observations versus different market indices, analysis of selected peers and external views. Credit spreads are based on Hydro's credit spreads, while country risk is based on the premiums published by the Swedish Export Credit Agency EKN. The post-tax rates are converted to pre-tax rates using the nominal tax rates in the relevant countries. For Hydro's businesses the pre-tax nominal discount rate is estimated at between 8 percent and 17 percent (2021: 5.5-15.00 percent). The higher rates are applicable for assets within the Aluminium Metal activities in Brazil, while the lower rates are applicable for assets within Extrusions in Europe.

Hydro has incurred the following impairment losses during 2022 and 2021:

Amounts in NOK million	**2022**	2021
Classification by asset category		
Impairment losses		
Property, plant and equipment	331	435
Other intangible assets	4	2
Total impairment of non-current assets	**336**	**437**
Impairment loss from discontinued operations		850
Classification by segment		
Impairment losses		
Hydro Aluminium Metal	77	286
Hydro Extrusions	258	150
Total impairment of non-current assets	**336**	**437**

Goodwill is allocated to CGUs or groups of CGUs as shown in the following table:

Amounts in NOK million	**2022**	2021
Extrusion North America (Hydro Extrusions)	1,607	1,427
Extrusion Europe (Hydro Extrusions)	824	779
Building Systems (Hydro Extrusions)	552	521
Precision Tubing (Hydro Extrusions)	159	147
Bauxite & Alumina Operations	1,963	1,612
Recycling (Hydro Metal Markets)	453	409
Total goodwill	**5,557**	**4,895**

Annual mandatory impairment tests

Hydro Extrusions

Goodwill in Hydro Extrusions is allocated to four groups of CGUs reflecting the way the business is managed to serve the relevant markets. The groups of CGUs are as follows:

Extrusion North America covers production plants, marketing and product development in the US and Canada. The operation consists of 21 production plants, recognized intangible assets and goodwill from Hydro's acquisition.

Extrusion Europe covers production plants, marketing and product development in Europe, mainly within the EU. The operation consists of 32 production plants, recognized intangible assets and goodwill from Hydro's acquisition.

Building Systems covers production plants, product warehouses, marketing and product development facilities, mainly in Europe, and sales and marketing offices covering a wider presence. The operation is present at 59 locations in 26 countries. The asset base consists of a limited number of production plants, several warehouses of differing size and complexity, three brands, other intangible assets and goodwill from Hydro's acquisition.

Precision Tubing covers production plants, marketing and product development on four continents. The operation consists of 10 production plants in South America, Asia, Europe and North America, recognized intangible assets and goodwill from Hydro's acquisition.

The impairment tests for all of the groups of CGUs described above are cash flow models expressed in nominal terms using forecasts for the first five years based on internal business plans approved by management. Margins, volumes and investments are considered highly correlated, as high margin above the metal value is achieved through production of more complex products, requiring higher cost and/or more expensive equipment. We have thus not considered development in margins, cost and volume separately. Cash flows have been projected as terminal values beyond the five-year forecast period with a zero nominal growth assumed. Key assumptions are development in annual net cash flows, comprising volume and cost development in relevant market segments, as well as the discount rate.

The main assumptions and sensitivities are shown in the tables below. The sensitivities represent a stress test, identifying changes in each parameter which would result in a recoverable amount equal to the carrying amount of the CGU, while keeping all other parameters unchanged. The changed parameter is applied for the entire period, including the terminal value. The decrease in annual cash flows does not represent a reasonably possible scenario developed by Hydro, as changes in the market resulting in significantly reduced cash flows for individual plants or the whole business unit is likely to be mitigated with measures to reduce costs, including sale or closure of production lines or plants similar to what is currently ongoing.

Amounts in NOK million	Extrusion North America	Extrusion Europe	Building Systems	Precision Tubing
Carrying value of goodwill	1,607	824	552	159
Carrying value of other assets	7,272	6,757	2,749	2,446
Carrying value of CGU	8,879	7,581	3,301	2,605
Recoverable amount	14,366	15,244	7,786	8,474
Recoverable amount in excess of carrying value	5,486	7,663	4,484	5,869
Key assumptions				
Terminal value growth	0.0%	0.0%	0.0%	0.0%
Discount rate	10.50%	9.00%	9.00%	10.25%
Stress test				
Discount rate - % change	61%	91%	149%	204%
Discount rate - % point	16.90%	17.20%	22.40%	31.10%
Annual reduction in net cash flow all years	38%	50%	58%	69%

Hydro Bauxite & Alumina
Goodwill in Hydro Bauxite & Alumina is allocated to a CGU consisting of the Alunorte alumina refinery, the main bauxite source Paragominas and certain related activities.

The recoverable amount has been determined based on a VIU calculation. VIU is estimated at NOK 21.3 billion. The value equals the carrying value of NOK 21.2 billion. The calculation used cash flow forecasts in BRL based on internal plans approved by management covering a five-year period. Production volumes have been assumed at nameplate capacity reflecting the measures taken to mitigate downside risk of production shortfalls, including recent and approved investments in asset integrity. All significant price assumptions are internally derived based on external references, reflecting both price assumption used for planning purposes and updated market observations at year-end. Cash flows have been projected for the following 35 years based on the five-year detailed forecast period using Hydro's long-term assumptions for alumina prices and key raw material prices. Investments to replace equipment with a shorter expected life than the total structure is estimated based on internal plans. The CGU is expected to remain in operation for at least the 40-year period. Improvements expected from certain initiated equipment replacements are included. This includes the ongoing investment facilitating the change in energy supply replacing coal with natural gas at the alumina refinery, Alunorte. Further possible and/or planned improvements are not included in the cash flow forecasts. Cash flows beyond the five-year period are inflated by the expected long-term inflation levels in Brazil and the main western economies.

The main assumptions to which the test is sensitive are shown in the table below:

	Assumptions	
	2023	Long-term
Exchange rate BRL/USD	5.27	
Alumina price, long-term price represent real terms 2022 (USD/mt)	371	355
Production volume alumina (million mt)	6.25	6.35
Discount rate nominal, pre-tax	16.25%	16.25%

Significant cash flows are denominated in US dollars. These are translated to BRL at a rate of 5.27 for 2023 with a stronger BRL in the period 2024 to 2030, reaching a nominal rate of 5.27 in 2029. For future periods the exchange rate is projected with a rate development reflecting the inflation difference of 1.1 to 1.3 percentage points between international inflation and the higher expected Brazil specific inflation.

The sensitivities presented below indicates how changes in key parameters impact the recoverable amount. The changed parameter is applied for the entire period, while keeping all other parameters unchanged. The decrease in annual cash flows is reasonably possible, at least for shorter periods. As the key parameters are interdependent, a change in the indicated range would not be expected to continue for the entire period of operation without impacting other parameters. The VIU equals the carrying amount, which indicates that any combination of negative changes to one or more parameter compared to the assumptions in the test without offsetting positive changes would result in a need for impairment write-down of the CGU.

	Change in assumption	Value 2023	VIU in excess of carrying amount (NOK million)
Exchange rate BRL/USD	(5%)	5.01	(6,130)
Alumina price, real term 2022 (USD/mt)	(10)	361	(4,769)
Cash flow from operating activities	(5%)		(1,997)
Discount rate (% point)	1%-point	17.25%	(1,649)

Other mandatory tests
For Hydro Metal Markets the impairment test on goodwill has been based on approved business plan for the next year, managements best estimate of cash flows for the following four years and extrapolated to a 15 years cash flow estimate, providing a VIU exceeding the carrying value.

Hydro also has indefinite life intangible assets of NOK 138 million related to the Vigeland power plant in Norway. This CGU is tested for impairment using a FV approach based on observed transaction values for power production assets in the Nordic region. The recoverable amount, estimated as a post-tax fair value, exceeds the carrying amount significantly.

Impairment tests based on indications of loss in value

Hydro Extrusions
The CGU Precision Tubing Brazil, consisting of three production facilities, was tested for impairment as of the end of 2022 due to deteriorating financial performance in 2022 and expectations to long-term pressure on profitability in a challenging market situation. The recoverable amount was determined as VIU based on Hydro's internal assumptions for production volumes, financial margins, currency exchange rates and timing of cash flows. The estimated VIU amounted to NOK 193 million using a discount rate of 14.25 percent. The resulting impairment loss amounted to NOK 204 million.

During 2022, an impairment loss of NOK 54 million was recognized following an announcement of intended closure and sale of parts of the production facilities at a European plant. The recoverable amount was determined based on estimated selling price.

During 2021, some assets related to plants and activities that were sold or closed, mainly in Europe, were written down to estimated selling price, recognizing impairments of NOK 150 million.

Hydro Aluminium Metal
For the primary aluminium plant Slovalco, NOK 77 million was recognized as impairment losses in 2022 following the decision to curtail smelter production. The impairment included an adjustment of asset retirement obligations. The carrying values of the assets related to electrolysis are fully impaired as of December 31, 2022. The plant has been regularly tested for impairment over several years, and was last written down by NOK 286 million in 2021.

The primary aluminium plant Albras was tested for impairment as of the end of 2022 due to high and volatile inflation rates and prices of raw material. In addition, the process of obtaining power contracts to replace current contracts expiring in 2024, exposes the plant to uncertainty regarding future power prices. The recoverable amount exceeded the carrying amount.

Note 2.6 Leases

Accounting policies for leases
At inception of a contract, Hydro assesses whether a contract is, or contains, a lease. Leased assets with a remaining lease period of less than 12 months at inception are excluded from lease accounting. Further, leases of assets of a low value (small asset leases), mainly such items as PCs, office equipment and similar, are excluded from lease accounting. When measuring leases, Hydro include fixed lease payments for extension periods reasonably certain to be used. As a practical expedient, non-lease components are not separated from lease contracts for most asset classes. For production facilities and transportation assets, such as vessels used for transportation of material, the operating cost is a significant non-lease component, and is excluded from lease accounting. Variable lease payments, including service elements related to leases which are fully variable amounts, are recognized as operating expenses in the periods incurred.

Right-of-use assets are included in property, plant and equipment, see note 2.1 Property, plant and equipment. Lease liabilities are included in debt, see note 7.4 Short and long-term debt.

Significant judgment in accounting for leasing
Significant judgment is required to determine whether some service contracts conveys the right to control an asset to Hydro, and thus is, or contains, a lease. Hydro has a limited number of such contracts; however, they do exist in some arrangements with service providers for maintenance services, transportation services, and some operational subcontractors. In assessing whether such contracts are leases, Hydro assesses both the share of the supplier's capacity for relevant assets that is available for Hydro as well as how decisions are made.

Judgment is also applied in assessing whether renewal options are reasonably certain to be utilized. In assessing such issues, Hydro considers such factors as the level of operational integration and dependency as well as historic practices for renewals.

For some contracts where all, or close to all, produced products are purchased by Hydro with no or very limited fixed payments, the contract may be deemed a lease with fully variable payments. Currently, Hydro has no significant such contracts.

Hydro's leases

Hydro uses lease contracts primarily where lease or rental contracts provide operational benefits or flexibility compared to owning assets. Leased land and buildings are used for warehouses, office space and certain other arrangements where the need for such space is of a temporary nature or where land and/or buildings are not available for purchase. This is the case in some countries, and also in co-locations with certain other businesses such as in port areas. Further, Hydro has a lease arrangement for its head office in Oslo, Norway, and certain other office locations where the location is independent of production facilities. Production equipment is leased or rented where the access to the specific assets is combined with significant services, for instance seaborn transport operated by the supplier/lessor. Operational services in combination with leasing of assets is also used for such services as maintenance activities, earth-moving operations, and certain other non-core services. Leasing or rental is in some instances also used for equipment operated by Hydro, often under contracts significantly shorter than the assets' useful life.

Hydro determines its incremental borrowing rate by obtaining interest rates from various external financing sources, and makes adjustments for currency and duration to reflect the terms of the lease.

Right-of-use assets

Amount in NOK million	Machinery and equipment	Buildings and land	Total
December 31, 2020	1,326	1,281	2,607
Depreciations and impairment loss	(720)	(295)	(1,015)
Additions	1,016	98	1,115
Disposals	(7)	(15)	(22)
Foreign currency translation effect	(71)	(28)	(99)
Reclassified to Assets held for sale	(71)	(95)	(166)
December 31, 2021	1,473	946	2,419
Depreciations and impairment loss	(895)	(258)	(1,153)
Additions	855	350	1,205
Disposals	(30)	(3)	(33)
Foreign currency translation effect	238	46	284
December 31, 2022	**1,641**	**1,081**	**2,722**

Total cash outflows for leases in Hydro's continuing operations in 2022 was NOK 1,020 million (2021: NOK 997 million).

Interest expense relating to lease in continuing operations recognized in the income statement for 2022 was NOK 177 million (2021: NOK 153 million).

Leases expensed in continuing operations in the period amounts to NOK 289 million (2021: NOK 246 million) and refers to leases of short term, low value or leases with variable payments.

Hydro has a limited amount of lease contracts not accounted for as right-of-use assets and lease liabilities at the balance sheet because they are exempted as small asset leases or short-term leases. Future minimum lease payments due under non-cancellable leases are NOK 75 million (2021: NOK 67 million).

Note 2.7 Other non-current assets

Amounts in NOK million	2022	2021
Derivative instruments	1 398	490
Long-term collateral for liabilities	106	1 945
Equity securities at fair value through other comprehensive income	904	989
Securities at fair value through profit or loss	21	14
Income taxes, VAT and other sales taxes	2 533	2 033
Employee loans	12	13
Other receivables	622	559
Other non-current assets	**5,596**	**6,045**

Section 3 – Investments in other companies

Note 3.1 Investments in joint arrangements and associates

Accounting policies for investments in joint arrangements and associates

Investments in associates and joint ventures

A joint arrangement is an entity, asset or operation that is subject to contractually established joint control. Special voting rights may extend control beyond what is conveyed through the owners' proportional ownership interest. Such rights may take the form of a specified number of board representatives, the right of refusal for important decisions, or the requirement of a qualified majority for important decisions which effectively results in joint control with the specific ownership situation. Joint ventures are joint arrangement which represents a residual interest in the arrangement rather than an interest in assets and responsibility for liabilities.

An associate is an equity investment in which Hydro has the ability to exercise significant influence, which is the power to participate in the financial and operating policy decisions of the entity. Significant influence is assumed to exist when Hydro owns between 20 and 50 percent of the voting rights unless other terms and conditions affect Hydro's influence.

Hydro accounts for investments in associates and participation in joint ventures using the equity method. This involves recognizing Hydro's interest based on its proportional share of the entity's equity, including any excess values and goodwill. Hydro recognizes its share of net income, including depreciation and amortization of excess values and any impairment losses, in Share of the profit (loss) in equity accounted investments. Other comprehensive income derived from associates and joint ventures is included in Hydro's Other comprehensive income. Hydro's proportional share of unrealized profits resulting from transactions with associates and joint ventures, including transfer of businesses, is eliminated. Accounting policies used by associates and joint ventures may differ from the accounting policies adopted by Hydro. Differences in recognition or measurement are adjusted for prior to equity accounting.

Investments in associates and joint ventures are tested for impairment when there are indications of a possible loss in value. An impairment loss is recognized if the recoverable amount, estimated as the higher of fair value less cost of disposal or value in use, is below Hydro's carrying value. Impairment losses are reversed if circumstances change and the impairment situation is no longer deemed to exist.

Hydro is involved in one associate for which the results of operations is taxable profit or loss for the owners rather than the associate, a tax transparent company. Hydro provides for deferred tax on temporary differences in the associate to the extent such temporary differences are expected to reverse within the foreseeable future, or such reversal is not controlled by Hydro. Deferred tax on other temporary differences is not recognized.

Loans to associates and joint ventures are measured under IFRS 9 Financial instruments. Loans where contractual cash flows are only payments of principal and interest on specific dates are measured at amortized cost with expected credit losses provided for. Other loan arrangements are measured at fair value. Loans and receivables to associates and joint ventures are presented as part of other similar loans to unrelated parties. Income and expenses related to loans are included in finance income and expense.

Investments in joint operations and jointly owned assets

Joint operations are arrangements under contractually joint control where the joint operators have an interest in the assets; or benefits from the service potential of the assets; as well as have a direct obligation for the liabilities of the joint arrangement. Joint operations can result from the legal form of the arrangement or other facts and circumstances resulting in an interest in the service potential of the asset and obligation for liabilities. Jointly owned assets are arrangements where Hydro and the other partners have a direct ownership in specifically identified assets, but where joint control is not established. Hydro recognizes its share of assets, liabilities, revenues, if any, and expenses of joint operations and jointly owned assets on a line-by-line basis in the group financial statements.

Significant judgment in accounting for joint arrangements and associates
Hydro is engaged in various arrangements on a joint basis with other companies. In assessing whether joint control exists for these arrangements we evaluate the legal framework and contracts governing the arrangement combined with an assessment of which decisions that significantly influence the return from the arrangement. Arrangements owned on a 50/50 basis and/or governed by unanimous decisions constitute the majority of our joint arrangements.

Most of our joint arrangements are joint production facilities supplying metal and other products for Hydro's value chain. Hydro assesses whether joint arrangements are joint operations where Hydro has a direct interest in the assets and direct liability to settle obligations, directly or indirectly, or a joint venture where we have an interest in the net assets of the joint arrangement. In this assessment we evaluate the contracts governing the arrangement and the legal framework for the type of entity in which the arrangement is operated. Hydro is engaged in both joint arrangements that are considered joint ventures, and arrangements that are concluded to be joint operations.

Hydro's joint operations

Of our joint operations, two are classified as joint operations based on the legal form of the operations. These are Tomago, an aluminium smelter in Australia, and Skafså Kraftverk ANS, a power producer in Norway. The anode producer Aluminium & Chemie Rotterdam B.V., Aluchemie, in the Netherlands, is classified as a joint operation based on contractual arrangements. The operation was closed at the end of 2021 and closure and remediation of the site is ongoing.

Tomago and Aluchemie is part of Hydro Aluminium Metal, while Skafså Kraftverk ANS is part of Hydro Energy.

Hydro's joint ventures

The following joint venture is considered material for Hydro:

Qatar Aluminium Ltd. (Qatalum) is a primary aluminium smelter with a dedicated power plant located in Qatar. Qatalum has an annual production capacity of about 600,000 mt of liquid metal. Qatalum is owned by Hydro and Qatar Aluminium Manufacturing Company Q.P.S.C. (50 percent each). Qatar Energy, previously Qatar Petroleum, controls Qatar Aluminium Manufacturing Company, which is listed on the Qatar Stock Exchange. Qatalum was at the outset granted a ten-year income tax holiday, expiring in 2020. There has been a long period of uncertainty with regards to the applicable tax rate for Qatalum after the expiry of the tax holiday in 2020. It has been Hydro's consistent position that the generally applicable tax rate, currently at 10 percent, should apply to Qatalum after the expiry of the tax holiday. However, the joint venture partners have not been able to agree on a common interpretation of the applicable tax law, and Qatalum filed its 2020 tax return applying a 35 percent tax rate on 30 June 2021. Hydro is pursuing alternative measures to protect its financial interest in this matter.

Hydro is committed to sell fixed quantities of alumina and purchase all products from Qatalum at market prices. Purchases of metal from Qatalum amounted to NOK 20,237 million in 2022 and NOK 14,172 million in 2021. Related payables amounted to NOK 2,277 million in 2022 and NOK 1,360 million at the end of 2021. Sales from Hydro to Qatalum amounted to NOK 2,630 million in 2022 and NOK 2,031 million in 2021, primarily alumina. Related receivables amounted to NOK 99 million and NOK 0 million at the end of the periods.

Qatalum is part of Hydro Aluminium Metal.

Hydro's associates

The following associate is considered material for Hydro:

Lyse Kraft DA, a power producer headquartered in Stavanger, operates power plants in the southwest of Norway and holds ownership interests in two arrangements in nearby areas. The company became an associate as of December 31, 2020 when Hydro transferred certain power production assets as a contribution in kind to Lyse Kraft. Hydro owns 25.6 percent of the company, while Lyse AS holds a controlling ownership share of 74.4 percent.

The annual production of Lyse Kraft DA amounts to about 9.5 TWh, which is contributed in kind to the owners corresponding to ownership share. The owners are responsible for paying all costs in the partnership, both for operating costs and future investments, which for Hydro amounted to expenses of NOK 84 million and related accounts payable of NOK 54 million for the year 2022. Hydro sells or consumes the received power in accordance with its operating needs for power. Hydro is also the operator of the power plants and is compensated for all costs incurred in this respect. Sales of services from Hydro amounted to NOK 289 million and related receivables amounted to NOK 52 million.

Recognized deferred tax liability in the consolidated statements was NOK 1,150 million as of December 31, 2022 and NOK 915 million as of December 31, 2021, related to temporary differences for which reversal of the differences are not controlled by Hydro. The increase from 2021 to 2022 mainly originates from a legal restructuring of the associate group transferring tax liabilities to the owners, including Hydro, of the tax transparent group.

Lyse Kraft DA is part of Hydro Energy.

Key information about significant investments

The table below summarizes key figures for the joint venture Qatalum for 2022 and 2021. The figures are on the same basis as used for inclusion in the group financial statements, reflecting Hydro's accounting policies. Fair value adjustments from Hydro's contribution of assets to the joint venture are included. Intercompany transactions and balances are included, and internal profit and loss in inventory and fixed assets purchased from group companies are not eliminated in the numbers below. All amounts are for the joint venture on 100 percent basis. Balance sheet amounts are at the end of the years 2022 and 2021.

	Qatalum Year/year ended	
Amounts in NOK million	**2022**	2021
Revenue	21,032	14,737
Depreciation, amortization and impairment	2,275	2,046
Earnings before financial items and tax	5,276	4,286
Financial income (expense), net[1)]	(474)	(336)
Income tax expense	(1,705)	(936)
Net income (loss)	3,097	3,014
Other comprehensive income	2,887	551
Total comprehensive income	5,984	3,565
Cash and cash equivalents	4,696	1,723
Other current assets	7,038	6,643
Non-current assets	30,601	28,680
Current financial liabilities	264	302
Non-current financial liabilities	13,482	12,414
Other liabilities	3,720	2,972
Net assets	24,870	21,359
Hydro's share of net assets	12,435	10,679
Accumulated elimination of internal gain in inventory	4	24
Carrying value of Hydro's equity investment	12,438	10,704

1) Financial income (expense), net includes interest expense for Qatalum with NOK 415 million and NOK 211 million for 2022 and 2021, respectively.

Hydro also holds interests in other associates and joint ventures accounted for using the equity method. The most significant interests are part of the business units Hydro Rein and Hydro Batteries, which are parts of Hydro's growth strategy within renewable energy in the segment Hydro Energy.

The interests held by Hydro Rein consist of entities developing wind and solar power plants, currently in Sweden and Brazil. The projects are under development and further capital contributions are expected before reaching the operational phase. Parts of the future estimated production volume from these projects have been contracted through power purchase agreements at fixed prices with Hydro, both Hydro Energy and units in other segments.

The batteries business unit in Hydro Energy aims to develop leading sustainable battery businesses in Europe, by investments in the battery value chain. The interests held by Batteries consist of the joint venture Vianode, and the associates Corvus and Hydrovolt. The portfolio includes projects under development that will require further capital contributions as well as technical and commercial development before reaching operational phase.

For 2022, Hydro has delivered services to these associates and joint ventures amounting to NOK 39 million with a corresponding accounts receivable of NOK 7 million.

The following table provides a summary of changes in carrying value for Hydro's joint ventures and associates.

Amounts in NOK million	Qatalum	Other JVs	Lyse Kraft DA	Other associates	Total
December 31, 2020	10,457	-	6,805	27	17,288
Hydro's share of net income (loss)	1,507	(8)	(64)	(13)	1,422
Dividends and other payments received by Hydro	(1,559)	-	-	-	(1,559)
Companies acquired/(sold), net	-	12	45	454	510
Amortization	-	-	(17)	-	(17)
Changes elimination of internal gain in inventory	24	-	-	-	24
Foreign currency translation and other	276	-	-	(2)	274
December 31, 2021	10,704	4	6,768	467	17,942
Hydro's share of net income (loss)	1,548	(49)	(64)	(35)	1,400
Dividends and other payments received by Hydro	(1,237)	-	-	-	(1,237)
Companies acquired/(sold), net[1)]	-	-	-	(145)	(145)
Capital increase	-	410	59	1,317	1,787
Amortization	-	(2)	(17)	(20)	(40)
Changes elimination of internal gain in inventory	(21)	-	-	-	(21)
Foreign currency translation and other[2)]	1,444	-	97	(4)	1,536
December 31, 2022	**12,438**	**363**	**6,842**	**1,578**	**21,222**

1) A gain of NOK 65 million was recognized in 2022 following the sale of 24% of the ownership share in wind power project Stor-Skälsjön.
2) Following a change in legal structure in the associate Lyse Kraft DA, a tax liability was transferred to Hydro consolidated.

Section 4 – Uncertain assets and liabilities

Note 4.1 Uncertain assets and liabilities

Accounting policies for uncertain liabilities resulting in provisions, contingent liabilities
Accounting policies for uncertain liabilities resulting in provisions, contingent liabilities
Provisions are recognized when Hydro has a present obligation (legal or constructive) as a result of a past event and it is probable (more likely than not) that Hydro will be required to settle the obligation. Uncertain outcomes are measured as the expected value of reasonably possible outcomes. Provisions are based on the current legal framework and remediation standards. The provision is measured as the present value of the cash flows estimated to settle the obligation. Expected cash flows are discounted with a risk-free interest rate, usually a government bond rate for the duration to expected settlement.

A contingent liability is a possible obligation that arises from a past event, with the resolution of the contingency dependent on uncertain future events, or a present obligation where no outflow is probable. Contingent liabilities are not recognized on the balance sheet, the existence of such contingent liabilities and, if estimable the approximate size, are disclosed unless the possibility of an outflow of economic resources is remote.

Asset retirement obligations
Hydro recognizes liabilities for the estimated fair value of asset retirement obligations (ARO) relating to assets where such obligations exists, in the period incurred in accordance with IAS 37 Provisions, Contingent Liabilities and Contingent Assets. The provision is estimated as the present value of costs relating to the restoration or rehabilitation of industrial or mining sites and/or dismantlement or removal of buildings or other assets. The liability is recognized when an asset is constructed and ready for use or when the obligation is incurred if imposed at a later date. Related asset retirement costs are capitalized and depreciated over the useful life of the asset. Accretion expense is recognized for the change in the present value of the liability and classified as part of Financial expense. Other changes to estimated fair value of ARO are recognized when identified. The increase or reduction to the liability is recognized as an increase or reduction of the value of the asset unless the asset is no longer in use, in which case the change is recognized in operating expenses. Liabilities that are conditional on a future event (e.g. the timing or method of settlement) are recognized when the value of the liability can be reasonably estimated.

Exit and disposal costs
Hydro recognizes a provision in the amount of the direct costs associated with an exit and/or disposal activity when a formal commitment to a detailed exit plan is made and communicated to those affected. A provision for termination benefits to employees is recognized as of the date of notification to individual employees or their representatives.

Uncertain assets
Assets where the existence of an asset or Hydro's control with the resources is less than virtually certain are contingent assets. Contingent assets are not recognized.

Significant judgment in accounting for contingent assets and liabilities, uncertain assets and liabilities
Evaluation of uncertain liabilities and contingent liabilities and assets requires judgment and assumptions regarding the probability of realization and the timing and amount, or range of amounts, that may ultimately be incurred. Such estimates may vary from the ultimate outcome as a result of differing interpretations of laws and facts.

The main judgmental assessments falls into two categories; whether a liability exists, and the amount of a possible liability. The existence or non-existence of a liability is a legal and/or factual assessment. The measurement of a possible liability is more challenging for requirements to remediate or rectify alleged wrong-doing than for monetary claims of compensation. In relation to perceived non-compliance with laws and regulations, authorities, non-governmental organizations, or others may claim that Hydro is responsible for mitigating actions and compensation. The legal basis for such claims as well as cost calculation and other aspects can be difficult to assess.

Hydro's industrial and mining activities are subject to a wide range of environmental laws and regulations, including end-of-life remediation regulations. The extent of site and off-site contamination, the remediation methods, and requirements that relevant environmental authorities may impose, are uncertain. The long-term use of sites, with increasing awareness of effects of contamination in society, and generally lower acceptance of contamination in communities over time impacts the content of legal standards and the responsibility of companies involved in such activities. Further, changes in remediation methods and requirements and the uncertainty of cost levels for actions to be performed years and decades into the future contribute to the uncertainty in assessing and measuring such obligations. Remediation and closure activities expected to be conducted far into the future are less accurately measured than near-term planned activities. Consequently, there is significant uncertainty inherent in the estimates.

Indirect tax regimes are complex in many jurisdictions and cross-border. Basis for such taxes may differ from actual transaction prices. Tax authorities may challenge Hydro's calculation of taxes and credits from prior periods. Such processes may lead to changes to prior periods' operating or financial expenses to be recognized in the period of change.

Provisions

	2022			2021		
Amounts in NOK million	Short-term	Long-term	Total	Short-term	Long-term	Total
Environmental clean-up and asset retirement obligations (ARO)	716	3,880	4,596	535	3,670	4,205
Employee benefits	1,482	435	1,917	1,417	387	1,804
Indirect taxes	37	281	318	5	209	215
Rationalization and closure cost	231	48	279	167	45	212
Other	540	645	1,185	1,003	460	1,464
Total provisions	**3,005**	**5,289**	**8,294**	**3,128**	**4,772**	**7,899**

The following table includes a specification of changes to provisions for the year ending December 31, 2022.

Amounts in NOK million	Environmental clean-up and ARO	Employee benefits	Indirect taxes	Rationalization and closure cost	Other	Total
Specification of change in provisions						
December 31, 2021	4,205	1,804	215	212	1,464	7,899
Additions and effect of change in discount rate	348	1,855	63	126	623	3,015
Used during the year	(472)	(1,700)	(17)	(56)	(876)	(3,121)
Reversal of unused provisions	(55)	(134)	-	(13)	(252)	(454)
Accretion expense and effect of change in discount rate	154	5	10	-	28	197
Foreign currency translation	416	87	48	10	198	759
December 31, 2022	**4,596**	**1,917**	**318**	**279**	**1,185**	**8,294**

Provisions for environmental clean-up and asset retirement obligations relate to production facilities currently in operation and facilities that are closed. The obligations relate to such actions as remediation, restoration or rehabilitation of industrial or mining sites, disposal of contaminated material and related activities. Hydro has provided for demolition of buildings and installations only where there is a legal or contractual obligation, or a specific decision to demolish, which is the case for few sites. The provision represents the present value of expected outflows at the times of expected payments. There is significant uncertainty both in the timing and amount of these remediation actions, as they are linked to future business decisions as well as decisions and approval by authorities in the jurisdictions we operate. Provisions are based on the current legal framework and standards. Hydro is in the process of assessing whether the Global Industry Standard on Tailings Management (GISTM), issued by ICMM[1], PRI[2] and UNEP[3], will require additional effort and costs. Currently, no significant additional obligations have been identified. The GISTM framework may not be fully reflected in the remediation standards used for estimating actions and cost. No significant changes in cost estimates have been identified.

The most significant provisions relate to the following sites and issues. For Hydro Bauxite & Alumina's mine in Brazil we have obligations to remediate the tailing areas and mining sites, including reforestation of the area and monitoring and maintenance of the site after initial remediation. For Hydro Bauxite & Alumina's alumina refinery in Brazil we have obligations to remediate bauxite residue deposits, including monitoring the contamination levels and other aspects after initial remediation. Some activities related to these obligations are currently performed as integrated processes with ongoing deposit of residues produced in the alumina production. For Hydro Aluminium Metal's closed Kurri Kurri smelter site in Australia we have obligations to remediate certain contaminated areas at the site and have now secured approval for the appropriate long-term containment of historical spent pot lining and certain other waste material. The work is progressing and is expected to be completed early 2024. Once completed, and following a management period of five years, the containment cell will transfer to state ownership. Further, Hydro has provided for various remediation obligations in Hydro Extrusions related to both closed sites, whether previously operated or not, and for some currently active sites. Hydro also has obligations for remediation of contamination on site and in areas related to historic industrial activities, mainly in Germany and Norway, reported in Other and eliminations. The more significant of these sites are the sites in Schwandorf in Germany and the Grenland area in Norway. The GISTM may impact remediation requirements for some of these sites. For many of these provisions, there are no standard remediation methods available and cost is therefore uncertain. The provision also includes remediation of spent pot lining and certain other process related waste in all active smelters, remediation of certain known landfills and removal of limited contaminated material as well as site clearance for certain leased land. Provisions also exist for certain liabilities related to Norwegian power plant concessions to be reverted to the Norwegian Government.

Provisions for employee benefits relate to expected short-term performance bonus payments and short and long-term provisions for expected bonus payments that are based on the number of years of service, primarily for our European operations. Such bonuses are expected to be paid in periods between 10 to 50 years of service, or upon termination of employment.

Indirect taxes include taxes not related to taxable income, such as value added taxes, duties and property taxes. Provision for indirect taxes is mainly related to operations in Brazil.

Rationalization and closure cost include provisions in Hydro Extrusions for costs related to plant closures and employee reductions to reduce their footprint in response to challenging market conditions. The provision also includes costs related to the closure of Hydro's joint operation Aluchemie.

Other includes insurance provisions related to insurance contracts issued by Hydro's captive insurance company, Industriforsikring AS, to external parties including associates and joint arrangements, provisions for legal and other disputes, community donations and other contributions committed, certain liabilities related to representation and warranty provisions related to sale of businesses.

Hydro has entered into several agreements with authorities at local and state levels in Pará, Brazil, requiring Hydro to improve operational security and to make additional efforts and investments related to local societies close to the plants and to the social development of communities in Barcarena. The most significant agreements were entered into in 2018 related to the alumina refinery, Alunorte. Total remaining provisions related to these obligations are about NOK 450 million as of December 31, 2022.

[1] International Council on Mining and Metals
[2] Principles for Responsible Investment
[3] UN environment programme

Contingent liabilities and contingent assets
Hydro is involved in or threatened with various legal and tax matters arising in the ordinary course of business. Where Hydro considers an obligation to be possible, i.e. not probable yet not remote, it is disclosed as a contingent liability.

Hydro is involved in a significant number of tax cases related to various types of taxes. Hydro's businesses in Brazil have a large portfolio of cases disputed by tax authorities, of which the majority relates to indirect taxes. Disputes include cases in the administrative and legal dispute systems with various background and risk of loss. In total known cases amount to about NOK 4 billion, of which losses are considered possible in cases amounting to about NOK 3.3 billion. A significant share of those amounts is covered by tax indemnifications from acquisition. The final outcome of these cases is not expected until several years into the future, and is highly uncertain. Additional cases may be raised by tax authorities based on tax declarations for periods not yet assessed, or when interpretation of tax regulations change. Hydro has provided for individual tax cases where the risk of loss is considered above 50 percent. Provisions for indirect taxes are included in provisions disclosed above, while provisions for income tax expenses are included in Taxes payable.

Hydro has environmental liabilities related to several sites and issues. Where remediation is acknowledged as Hydro's responsibility or a legal obligation is deemed to exist, a provision for the best estimate of costs to be incurred is established. For many of our industrial sites, in particular sites where operation is expected to continue indefinitely, remediation costs are difficult to assess. The precise need for remediation actions, their method, timing and cost has not yet been planned, and hence the cost is uncertain. For some impacted areas it is not yet known whether remediation will be required. This may depend on the pace of any natural attenuation, and development in what the environmental authorities judge to be reasonable remediation requirements. For some areas, the exact extent of pollution may be uncertain. If an environmental risk assessment has concluded that the current risk is acceptable, a detailed sampling program may not have been carried out. Obligations for historic contamination of sites and surrounding areas in addition to areas provided for may be identified and deemed Hydro's responsibility in the future, whether related to currently owned or used sites, or sites we previously have owned and/or used. The cost of remediation of any additional contamination deemed Hydro's responsibility is uncertain.

Authorities and non-governmental organizations have filed several lawsuits related to the Alunorte incident, claiming a combination of mitigating actions and financial compensation. The argumentation, cost calculation and legal basis for these claims is still highly uncertain. Further claims may still be received. Given the limited information about claimed physical and moral damages to be compensated, and the extent and cost of mitigating actions claimed, or the extent or content of other potential claims and lawsuits, it is not possible at this time to provide a range of possible outcomes or a reliable estimate of potential future exposure for Hydro. It is further not possible to estimate the timing of when such claims may be determined or when any payments may arise.

Hydro is also exposed to increased product warranty and product liability responsibilities, both as result of contractual commitments and caused by liability under background law. Product warranty and product liability may impose significant costs depending amongst other things on the application of the product sold. Similarly, disputes over whether failure to deliver products under contract are related to force majeure or not occur from time to time, both for Hydro's delivery obligations and rights. Such disputes may involve significant amounts and outcomes may be difficult to assess.

Hydro is exposed to legal cases based on contractual or other basis, including related to contract delivery or purchase obligations or warranties and representations given in relation to sale of businesses. Where a payment is probable, a provision for the likely amount is recognized.

Section 5 – Income and expenses

Note 5.1 Revenue from contracts with customers

Accounting policies for revenue recognition
Hydro accounts for revenue in accordance with IFRS 15 Revenue from Contracts with Customers.

IFRS 15 requires us to, for each contract with a customer, identify the performance obligations, determine the transaction price, allocate the transaction price to performance obligations to the extent the contract covers more than one performance obligation, determine whether revenue should be recognized over time or at a point in time, and, finally, recognize revenue when or as performance obligations are satisfied.

A performance obligation is satisfied when or as the customer obtains control with the goods or services delivered.

Revenue from sale of physical products are recognized when control is transferred to the customer, which usually occurs at delivery.

A contract for sale of electricity is considered one performance obligation and recognized as electricity is delivered to customers through the relevant grid.

Margins related to the trading of derivative commodity instruments, including instruments used for risk management purposes, purchase or delivery of physical commodities on a commodity exchange, and physical commodity purchases and sales agreed in combination with a single counterpart, are presented on a net basis in the income statement with trading margins included in revenues.

Significant judgment in accounting for revenue
The significant judgment in applying IFRS 15 for Hydro is related to which contracts that qualify for recognition over time, versus recognition at a point in time; at delivery to customer.

Hydro's main performance obligations can be described as follows:
- sale of products, produced independent of customer orders
- sale of products, produced to customer order
- sale of products made to customer specifications and order
- sale of electricity

For products which are not made to the customer's specification, performance obligations are either the individual product, the delivery in total, or an agreed volume of products delivered in more than one delivery. Contracts covering a fixed, committed volume at fixed or determinable prices are relevant for this assessment. Delivery period for such contracts can cover a period of a few weeks, and up to one year. Some few contracts cover more than one year. Prices are usually a combination of fixed elements and market references such as the aluminium price at the London Metal Exchange or other market references, at, or prior to, delivery. Revenue related to products that are not made to the customers' specification is recognized at delivery of products to customers. Such contracts accounts for the majority of sales in the segments Hydro Bauxite & Alumina, Hydro Aluminium Metal and Hydro Metal Markets, and a significant share of sales in Hydro Extrusions. Some of these contracts include an element of freight services, which is considered a separate performance obligation under IFRS 15, and related revenue is recognized over the time of journey.

For products made to customer specifications and orders, we have assessed whether the finished product has an alternative use to Hydro, and whether Hydro at all times has an enforceable right to payment for performance completed to date. For contracts where both of these conditions are fulfilled, revenue shall be recognized over time from commencement of production of the specialized product until completion of delivery to the customer. For Hydro's products, the alternative use of customer designed products would, in most cases, be as an input to the production of other products rather than for sale of the product unchanged. We have assessed whether Hydro has an enforceable right to payment for performance completed to date, including a reasonable margin, throughout the production period. The assessment is primarily related to the segment Hydro Extrusions. The main assessment is related to which compensation Hydro would be entitled to in a situation where firm orders are canceled or amended by the customer. Our conclusion is that for close to all contracts we do not have an enforceable right to payment as described in IFRS 15, and revenue is thus recognized at a point in time. However, as our conclusions depends both on legal assessment of a large number of contracts in many countries, and on the understanding of what constitutes an enforceable right to payment under IFRS 15, we might reach a different conclusion in the future for some contracts, or for new contracts covering similar products and customer segments entered into in the future. Also for these contracts, prices are fixed at the time of delivery.

Payment and warranty terms

Payment terms for products vary between customer segments and regions. The predominant terms vary between 30 to 90 days, and up to 210 days in some markets.

Hydro's warranty terms vary by product and business segment. Generally, Hydro provides warranty that product complies with specification, and offer repair, replacement or refund of consideration paid for breaches. Such warranties are limited in time, for most products not exceeding 12 months. Individual contracts may include more extensive warranty clauses where Hydro takes responsibility also for some consequential damages, mainly related to more complex products such as certain automotive parts. Warranty liability is to some degree influenced by legal requirements, which may extend the time period for Hydro's liability.

Other information

Sale of electricity, primarily from the Hydro Energy segment, is recognized as revenue as electricity is delivered to customers through the relevant grid. Sale of energy from other segments represent excess energy purchased under contracts exceeding the operational needs, and relate to periodic maintenance stops or curtailment. Revenue from sale of energy includes the revenue from sale of concession power, a legal requirement to deliver a certain part of volume produced in Norway to local authorities at a reduced price. Revenue from concession power amounted to NOK 77 million and NOK 70 million in 2022 and 2021, respectively.

Realized and unrealized changes in fair value of commodity derivatives are also presented as part of revenue. These amounts are measured at fair value as required by IFRS 9 Financial Instruments. The instruments are mainly aluminium and power contracts used for risk management purposes, and are included in Other revenue in the table below.

Hydro's revenue divided by segment and geographic location of the customer is shown in note 1.4 Operating and geographic segment information. Revenue divided by product type for the main product groups sold are as follows:

Amounts in NOK million	**2022**	2021
Standard ingots	19,824	14,207
Extrusion ingots	37,293	28,837
Foundry alloys	15,957	12,496
Sheet ingots	8,838	5,694
Other casthouse products	6,534	5,676
Extruded profiles	71,676	53,665
Building system products	10,744	9,039
Precision tubing products	5,132	3,927
Alumina	20,315	15,372
Power	4,744	2,731
Other goods and services[1)]	4,731	4,679
Total revenue from contracts with customers	205,789	156,322
Other revenue[2)]	2,140	(6,668)
Total revenue	**207,929**	**149,654**

1) Includes sale of bauxite, revenue from allocated freight and conversion services for customers' scrap
2) Other revenue includes realized and unrealized changes in the fair value of derivative instruments, mainly used for risk management purposes with a gain of NOK 1,677 in 2022 and a loss of NOK 6,710 million in 2021, mainly related to aluminium contracts.

Note 5.2 Other income

Accounting policies for Other income, net
Transactions resulting in income from activities other than normal production and sales operations are classified as Other income, net. This includes gains and losses resulting from the disposal of PP&E and intangible assets, investments in subsidiaries, associates or joint ventures as well as government grants, insurance compensation, and rental revenue.

Government grants
Government grants are recognized in accordance with IAS 20 Accounting for Government Grants and Disclosure of Government Assistance. Grants are recognized when there is a reasonable assurance that Hydro will comply with relevant conditions and that the grants will be received. Government grants are deferred in Other non-current liabilities until the associated activity is performed or expenses recognized. Investment grants are recognized over the period the associated asset is depreciated. All government grants are recognized in Other income, net. Investment grants are included in Investing activities in the statement of cash flows.

Significant judgment in accounting for government grants
Government grants are to varying degree governed by objectively determinable terms. For some government grants, such as the CO_2 compensation scheme in Norway, the framework for receiving grants is determined in firm regulations, while the actual aid intensity is politically determined as part of the state budget for the year of payment, which is determined at the end of the year of earning. Hydro estimates the grant to be received for interim periods with updates to the estimates as new information becomes available. Similar mechanisms exist for other grants, for some not concluded at the end of the year of earning. None of these other grant programs are material to Hydro for 2022 or 2021.

Amounts in NOK million	2022	2021
Gain on sale of property, plant and equipment and intangible assets	117	278
Net gain (loss) on sale of subsidiaries, associates and joint ventures	131	78
Government grants[1)]	3,207	934
Insurance compensation	659	521
Other	292	407
Other income, net	**4,406**	**2,219**

[1)] Government grants includes CO_2 compensation and investment grants related to Hydro's pilot facility on Karmøy.

CO_2 compensation regime in Norway
Hydro is entitled to apply for compensation for indirect costs associated with CO_2 emittance. The compensation scheme in Norway for the period 2021 to 2030 has been formed and implemented during the period from early 2021 through 2022. Hydro earns compensation during the year of consumption of electricity to produce aluminium. The compensation level is approved by the Norwegian Parliament at the end of the year of earning. The precise amount is approved and paid in the following year. Hydro recognizes estimated entitled CO_2 compensation as earned based on the approved regulation and expected compensation level, for sold products. During 2021, Hydro recognized about NOK 650 million for aluminium produced and sold during 2021. During 2022, Hydro recognized about NOK 900 million for aluminium sold in 2021, which is now received. For 2022 Hydro has recognized expected, not approved CO_2 compensation of about NOK 2,100 million for aluminium sold in 2022.

Note 5.3 Raw material and energy expense

Amounts in NOK million	2022	2021
Raw material expense and production related cost	135,194	92,073
Change in inventories own production	(5,821)	(3,230)
Raw material and energy expense	**129,373**	**88,843**

Raw material expense and production related cost include effect of commodity derivative instruments. See note 8.3 Derivative instruments and hedge accounting.

Section 6 – Specification of operating capital elements

Note 6.1 Inventories

Accounting policies for inventories
Inventories are valued at the lower of cost, using the first-in, first-out method (FIFO), or net realizable value. Net realizable value is the estimated selling price in the ordinary course of business less estimated costs of completion and selling costs. Inventory cost includes direct materials, direct labor and a portion of production overhead (manufactured goods) or the purchase price of the inventory. Abnormal amounts of idle facility expense, freight, handling costs, and wasted materials are recognized as expense in the current period. Inventory write-downs to net realizable value occurs when the cost of the inventory is not recoverable, and is reversed in later periods if there is clear evidence of an increase in the net realizable value.

Amounts in NOK million	2022	2021
Spare parts and raw materials	10,521	6,896
Work in progress	3,857	2,624
Alumina	1,888	1,883
Aluminium casthouse products	10,426	7,250
Fabricated products	3,343	3,139
Inventories	**30,035**	**21,791**

Raw materials include purchased raw materials such as bauxite, caustic soda, oil, coal and other input factors used in the production; however, excluding alumina and aluminium intended for use in Hydro's production of other products. All amounts are net of any write-downs.

Note 6.2 Trade and other receivables

Accounting policies for trade receivables
Trade receivables are initially recognized at transaction price, subsequently accounted for at amortized cost and are reviewed for impairment on an ongoing basis. Individual accounts are assessed for impairment taking into consideration indicators of financial difficulty and management assessment. Portfolios of trade receivables where expected losses are more than insignificant are reduced for those expected losses. Discounting generally does not have a material effect on trade receivables, however, in special cases discounting may be applied. Hydro's business model for most trade receivable is to hold the receivables to collect the contractual cash flows. For some portfolios of trade receivables, factoring is applied.

Significant judgment in accounting for receivables
In some jurisdictions, including Brazil, significant tax credit amounts are generated for use against future indirect and/or income tax payments. Repayment in cash is made subject to a set of conditions, including availability of funds at the tax authorities, and cannot be expected on a regular basis. The value of such credits depends on future generation of taxes. Economic conditions and tax regulations may change and lead to a different conclusion regarding recoverability.

Amounts in NOK million	2022	2021
Trade receivables	18,154	17,350
VAT and other sales taxes	1,585	726
Other current receivables	4,687	2,891
Allowance for credit losses	(439)	(388)
Trade and other receivables	**23,988**	**20,579**

Of total trade receivables at year end 2022, about 9 percent were past due, with the majority within 30 days. The Hydro Extrusions segment have the majority of overdue receivables.

Note 6.3 Trade and other payables

Amounts in NOK million	2022	2021
Accounts payable	18,803	18,359
Payroll and value added taxes	3,320	3,048
Accrued liabilities and other payables	2,250	1,303
Trade and other payables	**24,374**	**22,710**

Section 7 – Capital management and cash management

Note 7.1 Capital management

Hydro's capital management policy is to maximize value creation over time, while maintaining a strong financial position, an investment grade credit rating, and strong liquidity. During 2022 net cash provided by operating activities exceeded net cash used in investing activities plus dividends paid.

Credit rating
To secure access to capital markets at attractive terms and remain financially solid, Hydro aims to maintain an investment grade credit rating from the leading agencies, S&P Global (current rating BBB, stable outlook) and Moody's (current rating Baa3, stable outlook). Hydro's key targets for financial solidity are described below.

Funding and liquidity
Hydro manages its funding requirements centrally to cover group operating requirements and long-term capital needs. Hydro has an ambition to access national and international capital markets as primary sources for external long-term funding.

As of December 31, 2022, Hydro held NOK 29.8 billion in cash and cash equivalents. In addition, NOK 0.8 billion were held as time deposits, classified as short-term investments. These instruments are managed as part of Hydro's liquidity management, aiming to optimize the return on cash positions. Hydro's policy is that the maturity of such positions shall be shorter than 12 months. Time deposits are normally available at shorter notice, subject to bank approval and potential break costs. Hydro has a syndicated USD 1,600 million revolving credit facility maturing in December 2026, including a USD 1,500 million swingline as a sub-facility to cover short-term liquidity needs. In 2022 Hydro established an additional syndicated revolving credit facility of USD 1,300 million to support potential short-term liquidity needs. The facility has an initial 12-month tenor and can be extended two times six months at Hydro's option. Both facilities were undrawn per year-end 2022. In addition, Hydro has access to overdraft facilities and liquidity lines which provide additional short-term liquidity.

Funding of subsidiaries, associates and jointly controlled entities
Normally the parent company, Norsk Hydro ASA, extends loans or equity to fully-owned subsidiaries to fund capital requirements. All financing is executed on an arm's length basis. To the extent Hydro offers loans to part-owned subsidiaries and investments in associates and joint arrangements, the policy is to participate according to Hydro's ownership share, on equal terms with the other owners. Project financing is used for certain funding requirements mainly to mitigate risk while also considering partnership and other relevant factors.

Trade finance products such as factoring and reverse factoring are used to some extent by subsidiaries, mainly to facilitate risk mitigation in specific trade relations or markets. Hydro has internal guidelines limiting the use of such instruments to where it adds commercial value, as these instruments should not be used as a source for funding. Hydro has set a total limit for such arrangements including any type of sales of receivables. The limit is currently NOK 3.6 billion but was not fully utilized at year-end.

Shareholder return
Long-term return to shareholders should reflect the value created by Hydro, and consists of dividends and share price development. Hydro aims to provide its shareholders with a competitive return compared with alternative investments in similar companies. Hydro's ambition is, in the long term, to pay out, on average, minimum 50 percent of adjusted net income as ordinary dividend over the cycle, with a dividend floor of NOK 1.25 per share. Dividends for a particular year are based on expected future earnings and cash flow, future investment opportunities, the outlook for world markets and Hydro's current financial position. Share buybacks or extraordinary dividends may be used to supplement ordinary dividends during periods of strong financial results after considering the status of the business cycle and capital requirements for future growth.

Hydro's capital management measures
Hydro's management uses the Adjusted net cash (debt) to adjusted EBITDA ratio to assess the group's financial solidity and ability to absorb volatility in the markets. Hydro targets, over the business cycle, a ratio of average Adjusted net cash (debt) to adjusted EBITDA below 2. Historically, weak cash generation has been the main challenge for Hydro and the aluminium industry in general. Given historical industry cyclicality, this means that the ratio will be well below 2x in the stronger parts of the cycle, to be able to absorb the impact from industry cycle downturns and maintain financial flexibility in periods of adverse market conditions. As a result, capital structure has not represented a credit constraint. In 2022 Hydro introduced a target for Adjusted net debt of around NOK 25 billion over-the-cycle, as a supporting measure on capital structure. At year-end, the Adjusted net debt level will normally be below this target in anticipation of coming dividend payment. Hydro continuously evaluates the efficiency of the capital structure and takes this into account when proposing shareholder distribution.

Net cash (debt) is defined as Hydro's cash and cash equivalents plus short-term investments and cash collateral for long-term liabilities, less short- and long-term interest-bearing debt. Adjusted net cash (debt) excludes cash positions regarded as unavailable for servicing debt, and adds other obligations which are considered debt-like in nature.

Hydro considers the definition of Net cash (debt) to be a relevant metric for valuation purposes, while the Adjusted net cash (debt) definition is a better indicator of Hydro's financial position at the balance sheet date.

The tables below present the calculation of Net cash (debt), Adjusted net cash (debt) and the Adjusted net cash (debt) to adjusted EBITDA ratio.

Adjusted net cash (debt)

Amounts in NOK million	Dec 31 2022	Sep 30 2022	Jun 30 2022	Mar 31 2022	Dec 31 2021	Sep 30 2021	Jun 30 2021	Mar 31 2021
Cash and cash equivalents	29,805	25,852	24,507	21,161	22,923	18,792	20,147	15,011
Short-term investments	4,173	2,511	1,882	8,588	6,763	7,020	3,607	4,348
Bank loans and other interest-bearing short-term debt	(6,746)	(11,085)	(7,796)	(7,072)	(6,428)	(4,186)	(4,183)	(4,701)
Long-term debt	(26,029)	(20,790)	(21,054)	(21,073)	(21,989)	(25,495)	(24,562)	(23,658)
Collateral for long-term liabilities	106	367	767	3,545	1,945	2,647	1,417	722
Net cash (debt)	**1,310**	**(3,145)**	**(1,693)**	**5,149**	**3,213**	**(1,221)**	**(3,574)**	**(8,278)**
Collateral for short-term and long-term liabilities[1)]	(2,563)	(1,243)	(1,718)	(9,653)	(5,304)	(6,305)	(3,156)	(1,167)
Cash and cash equivalents and short-term investments in captive insurance company[2)]	(1,000)	(995)	(1,020)	(1,050)	(1,059)	(1,072)	(1,059)	(1,014)
Net pension obligation at fair value, net of expected income tax benefit[3)]	(270)	959	1,446	993	(774)	648	373	405
Short- and long-term provisions net of expected income tax benefit, and other liabilites[4)]	(3,466)	(3,381)	(3,274)	(3,183)	(3,096)	(2,570)	(2,815)	(2,669)
Adjusted net cash (debt)	**(5,989)**	**(7,806)**	**(6,260)**	**(7,745)**	**(7,019)**	**(10,520)**	**(10,231)**	**(12,723)**

1) Collateral provided as cash, mainly related to derivatives used for risk management.
2) Cash and cash equivalents and short-term investments in Hydro's captive insurance company Industriforsikring AS are assumed to not be available to service or repay future Hydro debt, and are therefore excluded from the measure Adjusted net cash (debt).
3) The expected income tax benefit related to the net pension liability is NOK (591) million and NOK (47) million, respectively, for 2022 and 2021.
4) Consists of Hydro's short and long-term provisions related to asset retirement obligations, net of an expected tax benefit estimated at 30 percent, and other non-current financial liabilities.

Average Adjusted net cash (debt) / adjusted EBITDA

Amounts in NOK million, except ratio	**2022**	2021
Average Adjusted net cash (debt)	(6,950)	(10,123)
Adjusted EBITDA	39,664	28,010
Average Adjusted net cash (debt) / adjusted EBITDA	0.18	0.36

Note 7.2 Cash and cash equivalents

Accounting policies for cash and cash equivalents
Cash and cash equivalents in the balance sheet includes cash, bank deposits and all other monetary instruments with a maturity of less than three months from the date of acquisition and are measured at nominal value. Hydro recognizes cash received when amounts are available on Hydro's bank account. Similarly Hydro recognizes cash payments to settle liabilities when the payment is initiated by Hydro and the amount paid is no longer available.

Liquidity management
Hydro manages its liquidity requirements centrally to cover group operating requirements. Hydro operates cash pools in several currencies where wholly owned subsidiaries participate, to the extent permitted by country legislation. Such cash pool arrangements facilitate netting of cash positions within the group, thereby reducing the requirement for external financing, and centralizing management of aggregated positions. At the end of 2022, NOK 8.0 billion of Hydro's cash position of NOK 29.8 billion was outside such group arrangements, mainly in Brazil and Slovakia.

Note 7.3 Short-term investments

Amounts in NOK million	2022	2021
Equity securities	335	1,749
Debt securities	637	655
Time deposits[1)]	750	1,000
Collateral accounts and other	2,451	3,359
Total short-term investments	**4,173**	**6,763**

[1)] Time deposits in banks with a maturity of three months or more at inception. Short-term bank deposits are normally available at short notice.

Note 7.4 Short and long-term debt

Amounts in NOK million	2022	2021
Bank loans and overdraft facilities	196	574
Current portion of long-term debt	6,549	5,854
Bank loans and other interest-bearing short-term debt	**6,746**	**6,428**

Amounts in NOK million	2022	2021
Unsecured loans	28,998	24,765
Lease liabilities	3,580	3,079
Outstanding debt	**32,578**	**27,844**
Less: Current portion	(6,549)	(5,854)
Total long-term debt	**26,029**	**21,989**

The majority of long-term loans are held by the parent company. There are no financial covenants for those loans. Some loans held by part-owned subsidiaries have financial covenants as part of the terms.

Long-term debt includes seven bonds in NOK listed on the Oslo Stock Exchange (Euronext Oslo) and two bonds in EUR listed on the Irish Stock Exchange (Euronext Dublin). As of December 31, 2022, the market value of these bonds is approximately NOK 0.7 billion lower than the carrying value which is the amortized cost.

Reconciliation of liabilities arising from financing activities

Amounts in NOK million	Long-term debt	Bank loans and other interest-bearing short-term debt	Other	Total liabilities from financing activities
December 31, 2020	24,811	4,748	-	29,559
Cash flows - continuing operations	2,964	(4,561)	-	(1,596)
Cash flows - discontinued operations	-	(13)	-	(13)
Non-cash changes:				
Net change in current balance	(6,426)	6,426	-	-
New leases	1,115	-	-	1,115
Lease debt cancellations	(14)	-	-	(14)
Divestments	(137)	(35)	-	(173)
Amortizations	21	-	-	21
Foreign currency effects	(345)	(136)	-	(481)
December 31, 2021	21,989	6,428	-	28,418
Cash flows - continuing operations	8,225	(6,706)	44	1,564
Non-cash changes:				
Net change in current balance	(6,467)	6,467	-	-
New leases	1,208	-	-	1,208
Lease debt cancellations	(19)	-	-	(19)
Amortizations	22	-	-	22
Foreign currency effects	1,070	557	-	1,628
December 31, 2022	**26,029**	**6,746**	**45**	**32,819**

Note 7.5 Finance income and expense

Amounts in NOK million	2022	2021
Interest income (amortized cost)	652	194
Dividends received and net gain (loss) on securities	(33)	69
Interest and other finance income	**619**	**263**
Foreign currency exchange gain (loss)	2,192	1,404
Interest expense (amortized cost)	(1,090)	(956)
Accretion	(170)	(153)
Other	99	(46)
Interest and other finance expense	**(1,161)**	**(1,156)**
Finance income (expense), net	**1,649**	**510**

Accretion represent the period's interest component for pension obligations, asset retirement obligations and other liabilities measured as present value of future expected payments.

Note 7.6 Shareholders' equity

Share capital

Number of shares	Ordinary shares issued	Treasury shares	Ordinary shares outstanding
December 31, 2020	2,068,998,276	(19,873,558)	2,049,124,718
Treasury shares issued to employees		2,350,944	2,350,944
December 31, 2021	2,068,998,276	(17,522,614)	2,051,475,662
Treasury shares issued to employees		1,070,211	1,070,211
Treasury shares acquired		(10,141,000)	(10,141,000)
December 31, 2022	**2,068,998,276**	**(26,593,403)**	**2,042,404,873**

The share capital of Norsk Hydro ASA as of December 31, 2022 and 2021 was NOK 2,271,760,107 consisting of 2,068,998,276 ordinary shares at par value of NOK 1.098 per share, all fully paid. All shares have equal rights and are freely transferable.

Treasury shares

On September 20, 2022, the Extraordinary General Meeting authorized buyback of shares in the market in the price interval of NOK 20 to NOK 150 per share. The authorization applies from September 20, 2022, until September 20, 2023. The repurchased shares are to be used for cancellation through capital reduction. The Ministry of Trade, Industry and Fisheries has agreed to participate in a redemption of a proportional number of shares in order to leave its ownership interest unchanged. Including the share redemption, a total of 100,000,000 shares may be cancelled. A final decision on cancelling any of the shares repurchased must be approved by a minimum of two-thirds of the shares represented at a General Meeting. Total number of shares repurchased in 2022 was 10,141,000.

The remaining 16,452,403 treasury shares may, pursuant to the decision of the General Meeting at the time these shares were acquired, be used as consideration in connection with commercial transactions or share schemes for the employees and representatives of the Board of Directors.

Per December 31, 2022, treasury shares amounted to NOK 1,229 million, comprised of NOK 29 million share capital and NOK 1,200 million retained earnings.

Change in Other components of equity

The table below specifies the changes in Other components of equity for 2022 and 2021

Change in Other components of equity

The table below specifies the changes in Other components of equity for 2022 and 2021.

Amounts in NOK million	2022	2021
Items that will not be reclassified to income statement:		
Remeasurement postemployment benefits		
January 1	2,697	(1,314)
Remeasurement postemployment benefits during the year	968	2,811
Deferred tax offset	(184)	(435)
Reclassified to retained earnings on divestment of subsidiaries	-	1,635
December 31	3,481	2,697
Unrealized gain (loss) on assets measured at FVOCI		
January 1	(779)	(665)
Period unrealized gain (loss) on FVOCI securities	40	(115)
December 31	(740)	(779)
Items that will be reclassified to income statement:		
Currency translation differences		
January 1	(11,114)	(9,160)
Currency translation differences during the year	8,428	(1,377)
Reclassified to Net income on sale of foreign operation	(4)	(578)
December 31	(2,690)	(11,114)
Cash flow hedges - See note 8.3 Derivative instruments and hedge accounting		
January 1	(284)	90
Period gain (loss) recognized in Other comprehensive income	781	(348)
Reclassification of hedging gain (loss) to Net income	(238)	(40)
Tax expense	81	14
December 31	340	(284)
Other components of equity in equity accounted investments		
January 1	**-**	**137**
Period gain (loss) recogized in Other comprehensive incom	6	-
Reclassified to Net income on divestment of equity accounted investments	-	(137)
December 31	6	-
Total other components of equity attributable to Hydro shareholders as of December 31	**1,835**	**(6,892)**
Total other components of equity attributable to non-controlling interests as of December 31	**(1,438)**	**(2,589)**

Earnings per share

Basic and diluted earnings per share is computed using Net income attributable to Hydro shareholders and the weighted average number of outstanding shares in each year. There are no significant diluting elements. The weighted average number of outstanding shares used for calculating basic and diluted earnings per share was 2,050,779,399 for 2022 and 2,050,818,686 for 2021.

Hydro's outstanding founder certificates and subscription certificates entitle the holders to participate in any share capital increase, provided that the capital increase is not made in order to allot shares to third parties as compensation for their transfer of assets to Hydro. These certificates represent dilutive elements for the earnings per share computation.

Note 7.7 Dividends

Hydro's Board of Directors proposes a dividend per share in connection with the approval of the annual result in February. The Annual General Meeting considers this proposal, normally in May, and the approved dividend is then paid to the shareholders. Dividends are usually paid once each calendar year, generally occurring in May. In 2022 there have been two dividend payments. Dividend of NOK 5.40 per share was approved by the Annual General Meeting and paid in May, and an additional dividend of NOK 1.45 per share was approved by the Extraordinary General Meeting and paid in September. For non-Norwegian shareholders, Norwegian withholding tax will be deducted at source in accordance with the applicable Norwegian tax regulations.

For fiscal year 2022 the Board of Directors has proposed a dividend of NOK 5.65 per share to be paid in May 2023. The Annual General Meeting, scheduled to be held May 10, 2023, will consider this dividend proposal. If approved, this would be a total dividend of approximately NOK 11.540 million. In accordance with IFRS, the fiscal year 2022 proposed dividend is not recognized as a liability in the 2022 financial statements.

Dividends declared and paid in 2022 and 2021 for the prior fiscal year, respectively, are as follows:

	Paid in 2022 for fiscal year 2021	Paid in 2021 for fiscal year 2020
Dividend per share paid, NOK	6.85	1.25
Total dividends paid, NOK million	**14,060**	**2,564**
Date proposed	February 21 and July 21, 2022	February 11, 2021
Date approved	May 10 and September 20, 2022	May 6, 2021
Dividend payment date	May 20 and September 30, 2022	May 19, 2021

Dividends to non-controlling shareholders in Hydro's subsidiaries are reported as dividends in Consolidated statements of changes in equity.

Section 8 – Financial risk and financial instruments

Note 8.1 Financial and commercial risk management

Hydro is exposed to market risks related to the prices of products produced and sold, and the input factors purchased and used, as well as currency risk. Risks may differ short-term and long-term. Short-term risks are to a large extent related to global and regional market volatility. Longer term risks are also impacted by megatrends such as the green shift and relative competition strength for countries and regions.

Hydro's products, both aluminium and renewable energy, are important for the green shift. With CO_2 intensity well below the industry average and aluminium products with low emissions attracting a premium above generic metal prices we believe we have a competitive advantage. To retain and improve this advantage, we are dependent on succeeding in planned initiatives to further reduce CO_2 intensity in our products, such as developing new technology and sourcing sufficient renewable energy. Further, continued market preference for low carbon aluminium will benefit Hydro. Changes in regulatory conditions, such as global or regional carbon prices will impact the competitive landscape. Depending on how and where such carbon prices are introduced, Hydro may benefit from changes, while it is also a risk that some of the plants will experience cost disadvantages during the transition period.

Short- and medium-term price risks are managed based on the margin between sales prices and cost of raw materials and energy cost. Margin risks are managed partly at segment level and partly combined for the group.

Hydro's main strategy for managing volatility in the markets is to maintain strong liquidity, a strong balance sheet and an investment grade credit rating. In addition, a combination of financial and physical contracts, including derivatives, is used to manage margin risk.

Hydro's sales contracts mainly cover periods for up to one year, supplemented with frame arrangements that can cover several years. Prices are usually determined with reference to observed market prices or fixed, negotiated prices determined no more than one year prior to delivery. Raw materials are purchased with prices fixed for periods varying between a few months up to three years. Some key raw materials, including bauxite and alumina, is purchased under long-term contracts with prices linked to observable market prices. Energy, in particular electricity for use in aluminium smelters, is purchased at long-term contracts with duration up to 20 years, mainly at fixed prices. Energy for other production facilities, including natural gas, fuel oil and coal, is purchased under contracts where prices are fixed for shorter intervals. Hydro secures access to most key input factors through contracts covering at least four months, for many raw materials longer periods. Price risks for raw materials and energy are managed mainly through price clauses in the relevant contracts, supplemented with derivatives where considered beneficial. The main purpose is to manage risks related to market volatility in a period of up to four years.

Prices for products sold and raw material and energy are denominated in various currencies which exposes Hydro to currency risk. Where production margin is subject to significant currency risks, and such risks are not offset across the group, currency derivatives are to some extent used to mitigate unwanted risks.

Commodity price risk exposure

Aluminium

Regional market-places for aluminium sold as standard ingot exists several places. London Metal Exchange (LME) is the most important to Hydro, and is the point of reference in many contracts, both for sale and purchase of products and for derivatives. Hydro produces and recycles aluminium, which is partly sold as casthouse products and partly consumed in production of upgraded industrial products in Hydro Extrusions. Hydro also purchases aluminium for use in Extrusions and for recycling. Hydro engages in limited trading activities to optimize capacity utilization, reduce logistical costs and strengthen the market positions, in addition to some speculative trading activities within strict volume and risk limits.

Short-term price risk for aluminium relates to time difference in pricing of purchases of aluminium for use in production of upgraded product or for resale, compared to sale of aluminium. Hydro enters into aluminium future contracts on LME with a maturity of mainly one to three months to mitigate unwanted price risk short term. The main purpose is to achieve an average LME aluminium price on smelter production. In addition, Hydro seeks to mitigate timing risk in the pricing patterns for sale of upgraded products, purchase of aluminium for recycling, and purchase of third-party products (back-to-back hedging). Hydro manages these exposures on a portfolio basis, taking derivative positions based upon net exposures.

Long-term price risk for aluminium is managed with the aim to achieve a reasonable production margin measured as the difference between the aluminium price and the prices of key raw materials alumina, pitch, petroleum coke, anodes, and energy. Prices for raw materials and energy are to a limited extent linked to, or correlated with, the aluminium price. Hydro enters into derivative forward sale contracts both on the LME and with banks to secure prices on parts of the planned aluminium production as part of securing a margin level for periods up to about three years combined with locking in prices for a part of raw materials through fixed-price sourcing contracts or derivatives when considered beneficial, whether based on the market situation or to secure cash flow for specific projects.

Hydro's sales of primary aluminium and aluminium casthouse products include a premium above the quoted price on LME. The pricing of these premiums can be volatile, and is related to physical demand and supply, with regional and product-related differences. There are limited possibilities for hedging future premiums, except for standard ingot premiums, for which a forward market exists. Hydro has from time to time entered into contracts for standard ingot premiums to mitigate risk in sales contracts.

Bauxite and alumina

Hydro's production of alumina normally exceeds the alumina consumption in its primary aluminium production. In addition, Hydro has long-term agreements to purchase alumina from third parties. The majority of purchase and sale contracts are priced with reference to alumina spot price indexes, however, some long-term contracts with links to the aluminium price on LME exists. Prices for aluminium and alumina have historically been correlated over longer periods, however, price development may differ significantly short term. Alumina forward markets are considered to have limited liquidity.

Hydro is a producer and consumer of bauxite. Hydro's need for bauxite is secured through own production as well as by long-term contracts. The purchasing contracts have links to the LME aluminium price and to the alumina spot price development with a certain time-lag.

Energy

Energy Hydro is a large consumer of energy in several countries. Energy is consumed as electrical power, natural gas, fuel oil and coal, with power as the main energy carrier. Hydro also has significant power production in Norway. Hydro's power consumption is mainly secured through long-term contracts with power suppliers, including project companies with a limited production portfolio, and through Hydro's own production. Energy production and prices are to an increasing degree volatile, both from the increased volume of renewable energy from solar and wind for which available volume fluctuates with weather conditions, from initiatives to reduce CO_2 emissions through market mechanisms such as cap-and-trade schemes and other regulatory initiatives, as well as the energy shortage in Europe caused by the Ukraine war and related market constrains.

Hydro's own electricity production is influenced by hydrological conditions which can vary significantly, and where production short-term is managed to match physical need and market prices. The net power position in Norway is balanced out in the Nordic power market through hourly sales and purchases.

Hydro is engaged in development projects for new renewable energy, mainly solar and wind power projects in Brazil and Scandinavia. These projects, which for the main part will commence production during 2023 and later years, are intended partly as energy supply to Hydro's production facilities, and partly for sale to others.

Hydro also uses fossil energy carriers, mainly fuel oil and coal in the alumina refinery Alunorte and natural gas for casthouses and other industrial processes. The use of fuel oil and coal is expected to be significantly reduced and replaced with natural gas and electricity towards 2025.

In order to manage risks related to price and volume fluctuations, Hydro utilizes mainly physical contracts securing purchase of power at fixed prices or with relevant price links, for some contracts to the aluminium price. Fossil fuels are mainly purchased on contracts with a duration of up to four years or contracts priced to observable market prices. Physical sourcing contracts are supplemented with derivatives such as future contracts, forwards and options. Hydro also participates in trading activities within strict volume and risk limits.

Foreign currency risk exposure

The prices of Hydro's upstream products bauxite, alumina and primary aluminium, are mainly denominated in US dollars, while sale of mid- and downstream products are mainly priced in US dollars and Euro. Further, the prices of major raw materials used in Hydro's production processes are quoted in US dollars in the international commodity markets, while power is predominantly priced in Euro in Europe, including Norway. Hydro also incurs significant local costs related to the production, distribution and marketing of products in a number of different currencies, mainly Norwegian Krone, Brazilian Real, Euro and US dollar. Hydro's primary operational foreign currency risk is consequently linked to fluctuations in the value of the US dollar and Euro, and in these currencies versus the currencies in which significant costs are incurred. In

addition, Hydro's results and equity are influenced by value changes for the functional currencies of the individual entities and the Norwegian Krone as the Group's presentation currency.

To mitigate the impact of exchange rate fluctuations, long-term debt is mainly maintained in currencies reflecting underlying exposures, liquidity management and cash generation, while considering attractiveness in main financial markets. To reduce the effects of fluctuations in the US dollar and other exchange rates, Hydro also uses foreign currency swaps and forward currency contracts. Commodity derivatives are entered into in various currencies, mainly US dollar, Euro and Norwegian Krone, to reflect currency exposures in the relevant unit.

Foreign currency risk exposure in receivables, payables and loans
Short-term receivables and payables are often held in currencies other than the functional currency of the unit, predominantly in US dollars and Euro. Borrowings and deposits may be denominated in other currencies than the functional currency of the unit. The majority of exposure in financing arrangements exists in the parent company in Norway and in the part-owned subsidiaries, mainly in Brazil.

Embedded currency derivatives in non-financial contracts, including the Euro priced electricity contracts in Norway, contains a currency exposure which is separately recognized.

Interest rate exposure

Hydro is exposed to changes in interest rates, primarily as a result of financing its business operations and managing its liquidity in different currencies. Cash and other liquid resources, as well as debt, are currently mainly held in Norwegian Krone, Euro, US dollars and Brazilian real, and carries short-term interest rates.

Financial instruments and provisions are also exposed to changes in interest rates in connection with valuation and discounting of positions to present value.

Credit risk management

Hydro manages credit risk by setting counterparty risk limits and establishing procedures for monitoring exposures and timely settlement of customer accounts. Credit risk is further limited through use of credit insurance, and, in some markets, sale of receivables to banks. Prepayments or guarantees are required where credit risk is outside the limits set for the relevant counterpart. Hydro is also monitoring the financial performance of key suppliers in order to reduce the risk of default on operations and key projects, and keep in constructive dialogues with relevant contract parties. Our overall credit risk exposure is reduced due to a diversified customer base representing various industries and geographic areas. Enforceable netting agreements, guarantees, and credit insurance, also contribute to a lower credit risk.

Credit risk arising from derivatives is generally limited to net exposures. Exposure limits are established for financial institutions relating to current accounts, deposits and other obligations. Credit risk related to commodity derivatives is limited by settlement through commodity exchanges such as the London Metal Exchange, Nasdaq OMX, Intercontinental Exchange, and banks, and through margin arrangements. Current counterparty risk related to the use of derivative instruments and financial operations is considered moderate.

Liquidity risk

Volatile commodity prices and exchange rates as well as fluctuating business volumes and inventory levels can have a substantial effect on Hydro's cash positions and borrowing requirements.

Margin calls for derivative contracts increased during 2021 from the increased use of such instruments. The risk is managed at group level to balance the commodity price risk and liquidity risk, and secure that sufficient funding to meet contractual obligations are available.

To fund cash deficits of a more permanent nature Hydro will normally raise equity, long-term bond or bank debt in available markets as described in note 7.1 Capital management. Some suppliers have access to supply chain finance facilities, which allows those suppliers to benefit from Hydro's credit profile. The use of such products is limited and does not extend Hydro's credit period beyond normal commercial terms. Further, all other financial liabilities, such as trade payables, with the exception of derivatives, have a final maturity date within one year.

A summary of Hydro's total contractual obligations and commercial commitments to make future payments is presented below:

Amounts in NOK million	2023	2024	2025	2026-2027	Thereafter	Total
Long-term debt including interest (note 7.4)	7,437	7,890	7,245	5,440	8,542	36,554
Unconditional purchase obligations[1)]	58,655	40,959	34,179	65,215	222,396	421,404
Contractual commitments	9,890	3,114	93	30	23	13,149
Short-term and long-term provisions (note 4.1)	3,005	1,229	493	981	5,341	11,050
Total contractual and non-contractual obligations, undiscounted	**78,987**	**53,192**	**42,011**	**71,666**	**236,302**	**482,157**

[1)] Unconditional purchase obligations include long-term contracts with equity accounted investees.

Hydro has long-term contractual commitments for the purchase of aluminium, raw materials, electricity, and transportation. The future non-cancellable fixed and determinable obligations under purchase commitments as of December 31, 2022 are shown in the following table:

Amounts in NOK million	Bauxite, alumina and aluminium	Energy related	Other
2023	34,797	15,680	8,178
2024	25,078	12,241	3,640
2025	23,228	8,899	2,052
2026	23,212	8,224	1,357
2027	23,116	8,281	1,024
Thereafter	136,126	79,707	6,563
Total	**265,558**	**133,032**	**22,814**

Amounts relating to contracts which are entirely or partly linked to market prices such as LME are based on the spot price at the balance sheet date.

The following table specifies Hydro's payment obligations related to investments:

Amounts in NOK million	
Contract commitments for investments in property, plant and equipment	10,039
Additional authorized future investments in property, plant and equipment	7,488
Capital commitments in relation to interest in joint venture	366
Contract commitments for other future investments	2,744
Total	**20,637**

Additional authorized future investments include projects formally approved for development by the Board of Directors or management. General investment frames are excluded from these amounts.

An overview of estimated gross cash flows from derivatives accounted for as liabilities and assets is presented below. Many of these assets and liabilities are offset by cash flows from contracts not accounted for as derivatives.

Risk of significant cash payments or margin calls related to derivative instruments is managed within set volume limits, value-at-risk and tenor limits for relevant activities.

Expected gross cash flows from derivatives accounted for as financial liabilities and financial assets, respectively, as of end of year:

	December 31, 2022		December 31, 2021	
Amounts in NOK million	**Liabilities**	**Assets**	Liabilities	Assets
2022			(3,636)	3,084
2023	(2,658)	903	(2,438)	312
2024	(408)	290	(101)	(30)
2025	(304)	102	(16)	81
Thereafter	(603)	625		
Total	**(3,973)**	**1,920**	**(6,191)**	**3,447**

The cash flows above are to a large extent subject to enforceable netting agreements reducing Hydro's exposure substantially.

For additional information on contracts accounted for at fair value, see note 8.3 Derivative instruments and hedge accounting.

Note 8.2 Financial instruments

Accounting policies for financial instruments

Financial assets

Financial assets represent a contractual right by Hydro to receive cash or another financial asset in the future. Financial assets include financial derivatives and commodity derivative contracts, receivables and equity interests, as well as financial instruments used for cash-flow hedges.

Financial assets are recognized in accordance with IFRS 9 Financial Instruments. On initial recognition, a financial asset is classified as measured at amortized cost, at fair value through other comprehensive income (FVOCI) or at fair value through profit or loss (FVTPL). Classification depends on the contractual terms, the business model and, for some instruments, the company's choice. Financial assets are derecognized when the rights to receive cash from the asset have expired or when Hydro has transferred the asset.

Trade receivables

Trade receivables are initially recognized at transaction price, subsequently accounted for at amortized cost and are reviewed for impairment on an ongoing basis. Individual accounts are assessed for impairment taking into consideration indicators of financial difficulty and management assessment. Portfolios of trade receivable where expected losses are more than insignificant are reduced for those expected losses. Discounting generally does not have a material effect on accounts receivable, however, in special cases discounting may be applied. Hydro's business model for most trade receivable is to hold the receivables to collect the contractual cash flows. For some portfolios of trade receivables, factoring is applied.

Debt instruments

Debt instruments other than trade receivables include bank deposits and all other monetary instruments with a maturity above three months at the date of purchase, investments in debt securities, and certain other receivables. These instruments are measured at amortized cost, with the exception of instruments where cash flows are not contractually fixed and/or consists of other elements in addition to interest and repayments; and thus required to be measured at FVTPL.

Short-term debt instruments are included in Short-term investments. Long-term debt instruments are included in Other non-current assets.

Equity instruments

Hydro's portfolio of trading securities is measured at FVTPL and included in Short-term investments. Other equity investments in companies that are not consolidated or accounted for using the equity method are classified as either FVTPL or FVOCI on an individual investment basis. Hydro classifies investments in other entities with strategic or operational purposes, such as getting access to raw materials or in other ways cooperating with those entities, primarily as FVOCI, as Hydro considers this classification to be more relevant. Any dividend received from such investment is recognized in Finance income. On disposal of these investments, no gain or loss will be recognized in the income statement, however, any related accumulated value change will be reclassified from Other components of equity to Retained earnings.

Financial liabilities

Financial liabilities represent a contractual obligation by Hydro to deliver cash in the future and are classified as either short- or long-term. Financial liabilities include financial derivatives, commodity derivative contracts and other financial liabilities as well as financial instruments used for cash-flow hedges. Financial liabilities, with the exception of derivatives, are initially recognized at fair value, including transaction costs directly attributable to the transaction, and are subsequently measured at amortized cost. Financial liabilities are derecognized when the obligation is discharged through payment, when Hydro has irrevocably initiated payment, or when Hydro is legally released from the primary responsibility for the liability.

Derivative instruments

Derivative instruments are measured at fair value through profit and loss, except when the instruments meet the criteria for cash flow hedge accounting and are designated as hedge instruments. Derivatives, including hedging instruments and embedded derivatives, with expected cash flows within twelve months from the balance sheet date, or held solely for trading, are classified as short-term. Instruments with expected cash flows more than 12 months after the balance sheet date are classified as short and long-term based on the timing of the estimated cash flows.

Derivative contracts are presented gross on the balance sheet unless contract terms include the possibility to settle the contracts on a net basis and Hydro has the intention and ability to do so. The ability to settle net is conditional on simultaneous offsetting cash-flows.

Physical contracts for commodities that are readily convertible to cash are evaluated on a portfolio basis. Portfolios are defined based on business purpose, internal mandates and internal responsibilities. If a portfolio of contracts contains contracts of a similar nature that are settled net in cash, or the underlying products are not intended for own use, the entire portfolio of contracts is recognized at fair value and classified as derivatives. Physical commodity contracts that are entered into and continue to be held for the purpose of the receipt or delivery of the commodity in accordance with Hydro's expected purchase, sale or usage requirements (own use) are not accounted for at fair value. Commodity purchase contracts are generally considered to be the primary source for usage requirements. Hydro's own production of such commodities, for instance electricity, alumina and primary aluminium, is considered to be available for use or sale at Hydro's discretion unless relevant concessions contain restrictions for use.

For commodity contracts with certain contingencies such as dependence on a planned production facility, the contracts are evaluated to determine at which time the arrangement represents a firm commitment and thus potentially is a contract in scope of IFRS 9. Generally, Hydro consider arrangements relying on production in a specific facility not yet existing and for which the final construction decision is not made, not to represent a derivative under IFRS 9.

Derivative commodity instruments are marked-to-market with their fair value recorded in the balance sheet as either assets or liabilities. Valuation models take into consideration uncertainties and variability in volumes to be delivered or received where not contractually fixed. Changes in the fair value of the instruments are reflected in revenue and/or raw material cost. Forward currency contracts and currency options are recognized in the balance sheet and measured at fair value at each balance sheet date with the resulting gain or loss recorded in Finance expense. Interest income and expense relating to swaps are netted and recognized as income or expense over the life of the contract.

Hedge accounting is applied when specific hedge criteria are met, including documentation of the hedge relationship. The changes in fair value of the hedging instruments are offset in part or in full by the corresponding changes in the fair value or cash flows of the underlying hedged exposures. Gains and losses on cash flow hedging instruments are recognized in Other comprehensive income and deferred in the Hedging reserve in Other components of equity until the underlying transaction is recognized in the income statement. Deferred gains and losses relating to forecasted hedged transactions that are no longer expected to occur are immediately recognized in the income statement. Any amounts resulting from hedge ineffectiveness are recognized in the current period's income statement.

An embedded derivative is accounted for as a separate financial instrument, provided that the economic characteristics and risks of the embedded derivative are not closely related to those of the host contract, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and the host contract is not accounted for at fair value. Embedded derivatives are classified both in the income statement and on the balance sheet based on the risks in the derivatives' underlying.

Financial instruments, and contracts accounted for as such, are in the balance sheet included in several line items and classified in categories for accounting treatment.

Significant judgment in accounting for financial instruments
Determining whether contracts qualify as financial instruments at fair value or as contracts for own use involves evaluation of markets, Hydro's use of those instruments and historic or planned use of physically delivered products under such contracts. The assessment includes considerations of production volume, sales volumes and the need for raw materials over the period covered by the contract. Determining whether embedded derivatives are required to be separated and accounted for at fair value involves assessing price correlations and normal market pricing mechanisms for relevant products and marketplaces. Where no directly observable market prices exist, fair value is estimated through valuation models which rely on internal assumptions as well as observable market information such as forward curves, yield curves and interest rates. Market stability impacts the reliability of observed prices and other market information, and consequently, the extent of judgment necessary to estimate appropriate market prices for valuation purposes. Volatility also impacts the magnitude of changes in estimated fair value, which can be substantial, in particular on long-term contracts. Historically, financial and commodity markets have been highly volatile.

The below specification relates to financial statement line items containing financial instruments. Information is classified and measured in accordance with IFRS 9.

The below specification relates to financial statement line items containing financial instruments. Information is classified and measured in accordance with IFRS 9.

Amounts in NOK million	Derivatives at FVTPL[1]	Derivatives identified as hedging instruments	Debt instruments at amortized cost	Financial instruments at FVTPL[2]	Equity instruments at FVOCI	Financial liabilities at amortized cost	Non-financial assets and liabilities[3]	Total
2022								
Assets - current								
Cash and cash equivalents	-	-	29,805	-	-	-	-	29,805
Short-term investments	-	-	3,201	972	-	-	-	4,173
Trade and other receivables	-	-	20,644	-	-	-	3,344	23,988
Other current financial assets	691	264	-	-	-	-	172	1,127
Assets - non-current								
Investments accounted for using the equity method	-	-	-	-	-	-	21,222	21,222
Other non-current assets	1,133	265	739	21	904	-	2,533	5,596
Liabilities - current								
Bank loans and other interest-bearing short-term debt	-	-	-	-	-	6,746	-	6,746
Trade and other payables	-	-	-	-	-	13,892	10,482	24,374
Other current financial liabilities	2,786	-	-	-	-	8	-	2,794
Liabilities - non-current								
Long-term debt	-	-	-	-	-	26,029	-	26,029
Other non-current financial liabilities	1,758	15	-	-	-	45	-	1,817
2021								
Assets - current								
Cash and cash equivalents	-	-	22,923	-	-	-	-	22,923
Short-term investments	-	-	4,359	2,404	-	-	-	6,763
Trade and other receivables	-	-	18,446	-	-	-	2,133	20,579
Other current financial assets	3,408	-	-	-	-	-	248	3,656
Assets - non-current								
Investments accounted for using the equity method	-	-	-	-	-	-	17,942	17,942
Other non-current assets	490	-	2,517	14	989	-	2,033	6,045
Liabilities - current								
Bank loans and other interest-bearing short-term debt	-	-	-	-	-	6,428	-	6,428
Trade and other payables	-	-	-	-	-	13,887	8,823	22,710
Other current financial liabilities	3,885	176	-	-	-	4	-	4,065
Liabilities - non-current								
Long-term debt	-	-	-	-	-	21,989	-	21,989
Other non-current financial liabilities	4,382	255	-	-	-	-	-	4,637

[1] FVTPL is financial instruments at fair value through profit or loss. FVOCI is financial instruments at fair value through other comprehensive income.
[2] Financial Instruments at Fair Value Through Profit or Loss (FVTPL) are instruments required by IFRS 9 to be at FVTPL.
[3] Includes items that are excluded from the scope of IFRS 7, such as investments accounted for using the equity method, except loans to such entities.

Financial assets, classified as current and non-current, represent the maximum exposure Hydro has towards credit risk as at the reporting date.

Collateral or margin calls are required for some financial liabilities, primarily related to derivative transactions. Such collaterals for financial instruments are made in the form of cash deposits, and reported as part of Short-term investments and Other non-current assets. As of December 31, 2022, short-term collateral was NOK 2.5 billion while long-term collateral was NOK 106 million. Corresponding amounts as of December 31, 2021 were NOK 3.4 billion and NOK 1.9 billion, respectively.

Impairment of receivables are disclosed in note 6.2 Trade and other receivables. No other financial assets are currently impaired based on credit losses.

Gains and losses

Realized and unrealized gains and losses from financial instruments and contracts accounted for as financial instruments are included in several line items in the income statement. Below is a reconciliation of the effects from Hydro's financial instruments in the income statements:

Amounts in NOK million	Derivatives at FVTPL	Derivatives identified as hedging instruments	Debt instruments at amortized cost	Financial instruments at FVTPL	Equity instruments at FVOCI	Financial liabilities at amortized cost	Non-financial assets and liabilities	Total[1)]
2022								
Income statement line item								
Revenue	(1,851)	(231)	-	-	-	-	-	(2,082)
Raw material and energy expense	(1,856)	-	-	-	-	-	-	(1,856)
Financial income	-	-	-	31	-	-	-	31
Financial expense	(158)	-	-	-	-	-	-	(158)
Currency effects	(1,266)	-	-	-	-	-	-	(1,266)
Gain/loss in Other comprehensive income								
Recognized in Other comprehensive income (before tax)					(40)			
Removed from Other components of equity and recognized in the income statement					-			
					-			
2021								
Income statement line item								
Revenue	6,581	(41)	-	-	-	-	-	6,540
Raw material and energy expense	(2,819)	-	-	-	-	-	-	(2,819)
Financial income	-	-	-	(69)	-	-	-	(69)
Currency effects	(1,231)	-	-	-	-	-	-	(1,231)
Gain/loss in Other comprehensive income								
Recognized in Other comprehensive income (before tax)					115			
Removed from Other components of equity and recognized in the income statement					-			

[1)] Amounts indicates the total gains and losses to financial instruments for each specific income statement line.

Currency effects, with the exception of currency derivatives, are not included above. Negative amounts indicate a gain.

Sensitivity analysis

In accordance with IFRS, Hydro has chosen to provide information about market risk and potential exposure to hypothetical loss from its use of derivative financial instruments and other financial instruments and derivative commodity instruments through sensitivity analysis disclosures. The sensitivity analysis depicted in the tables below reflects the hypothetical gain/loss in fair values that would occur assuming a 10 percent increase in rates or prices and no changes in the portfolio of instruments held in Hydro's continuing operations as of December 31, 2022 and December 31, 2021. Effects shown below are largely also representative of reductions in rates or prices by 10 percent, but with the opposite sign convention. Only effects that would ultimately be accounted for in the income statement, or equity, as a result of a change in rates or prices, are included. All changes are before tax.

		Gain (loss) from 10 percent increase in						
		Foreign currency exchange rates			Commodity prices			
Amounts in NOK million	Fair value as of December 31[1]	USD	EUR	Other	Aluminium	Other	Interest-rates	Other
2022								
Derivative financial instruments[2]	(638)	(464)	(2,087)	116	-	-	34	81
Other financial instruments[3]	8,652	(119)	(144)	118	-	-	6	34
Derivative commodity instruments[4]	(2,082)	7	(185)	-	(3,080)	246	1	19
Financial instruments at FVOCI[5]	1,430	(614)	-	1	-	-	(5)	91
2021								
Derivative financial instruments[2]	(2,062)	(379)	(2,606)	98	-	-	27	-
Other financial instruments[3]	8,352	137	(341)	(1)	-	-	8	34
Derivative commodity instruments[4]	(2,307)	(140)	195	(1)	(2,385)	475	13	-
Financial instruments at FVOCI[5]	562	(814)	-	1	-	-	-	100

1) The change in fair value due to price changes is calculated based on pricing formulas for certain derivatives, the Black-Scholes/Turnbull-Wakeman models for options and the net present value of cash flows for certain financial instruments or derivatives. Discount rates vary as appropriate for the individual instruments.
2) Includes forward currency contracts and embedded currency derivatives.
3) Includes cash and cash equivalents, investments in securities, bank loans and other interest-bearing short-term debt and long-term debt. Trade payables and trade receivables are also included.
4) Includes all contracts with commodities as underlying, both financial and physical contracts, such as LME contracts and NASDAQ Nordic Power contracts, which are accounted for at fair value.
5) Includes hedging derivatives.

The above sensitivity analysis reflects sensitivities for the instruments held at the balance sheet dates only. Related offsetting physical positions, contracts, and anticipated transactions are not reflected. The calculations do not take into consideration any adjustments for potential correlations between the risk exposure categories, such as the effect of a change in a foreign exchange rate on a commodity price.

The above discussion about Hydro's risk management policies and the estimated amounts included in the sensitivity analysis relates to the balance sheet position as of December 31. Outcomes at other dates could differ materially based on actual developments in the global markets and Hydro's positions. The methods used by Hydro to analyze risks discussed above should not be considered as projections of future events, gains or losses.

The following is an overview of fair value measurements categorized on the basis of observability of significant measurement inputs. Certain items are valued on the basis of quoted prices in active markets for identical assets or liabilities (level 1 inputs), others are valued on the basis of inputs that are derived from observable prices (level 2 inputs), while certain positions are valued on the basis of judgmental assumptions that are to a limited degree or not at all based on observable market data (level 3 inputs). Bilateral contracts with reference to observable prices are considered to be level 2 inputs. The level in this fair value hierarchy within which measurements are categorized is determined on the basis of the lowest level input that is significant to the fair value measurement.

Amounts in NOK million	2022	Level 1	Level 2	Level 3	2021	Level 1	Level 2	Level 3
Assets								
Commodity derivatives	1,539	287	541	711	3,845	163	3,375	307
Currency derivatives	80	-	80	-	53	-	9	44
Cash flow hedges	529	-	529	-	-	-	-	-
Financial assets at FVTPL	993	346	637	10	2,419	348	2,060	11
Financial assets at FVOCI	904	14	-	890	989	-	13	976
Other	204	-	129	75	-	-	-	-
Total	**4,250**	**647**	**1,916**	**1,686**	**7,307**	**512**	**5,457**	**1,338**
Liabilities								
Commodity derivatives	(3,621)	(266)	(2,284)	(1,070)	(6,152)	(604)	(5,130)	(419)
Currency derivatives	(922)	-	(828)	(95)	(2,115)	-	(2,115)	-
Cash flow hedges	(15)	-	(15)	-	(431)	-	(431)	-
Total	**(4,558)**	**(266)**	**(3,127)**	**(1,165)**	**(8,698)**	**(604)**	**(7,676)**	**(419)**

The following is an overview in which changes in level 3 measurements are specified:

	Commodity derivatives				
Amounts in NOK million	Assets	Liabilities	Currency derivatives and other	Financial instruments at FVTPL	Equity instruments at FVOCI
December 31, 2020	14	(107)	-	535	901
Total gains (losses)					
in Income statement	333	(413)	-	-	-
in Other comprehensive income	-	-	-	-	(81)
Purchases	-	-	45	-	182
Settlements	(27)	115	-	(525)	-
Currency translation difference	(12)	(14)	(1)	-	(26)
December 31, 2021	307	(419)	44	11	976
Total gains (losses)					
in Income statement	427	(799)	(71)	-	-
in Other comprehensive income	-	-	-	-	39
Purchases	73	-	-	-	-
Settlements	(272)	243	-	-	-
Currency translation difference	176	(96)	7	(1)	(125)
December 31, 2022	**711**	**(1,070)**	**(20)**	**10**	**890**
Total gains (losses) for the period	**427**	**(799)**	**(71)**	**-**	**39**
Total gains (losses) for the period included in the income statement for assets held at the end of the reporting period	**427**	**(799)**	**(71)**	**-**	**-**

Gains or losses relating to level 3 commodity derivatives appearing in the table above are included in the income statement in Raw material and energy expense. Changes in fair value for embedded derivatives are reported as gains or losses for the period. Changes in fair value for hedge instruments are reported in Other comprehensive income. Dividends received for equity instruments at fair value through other comprehensive income are included in Financial income.

Exposure to level 3 commodity derivatives is decreasing and the sensitivities relating to commodity derivatives are insignificant as of December 31, 2022.

Note 8.3 Derivative instruments and hedge accounting

Accounting policies for classification of embedded derivatives

Embedded derivatives are classified based on the underlying in the contract feature constituting a separable embedded derivative in the table below. Where there is more than one embedded derivative in the same host contract, those embedded derivatives are offset in settlement and thus presented net on the balance sheet.

Changes in the fair value of commodity derivatives are included in operating revenues or cost of goods sold based on classification of underlying risk for embedded derivatives and on the purpose of the instrument for freestanding derivatives. Currency derivatives, whether embedded derivatives or separate instruments, are classified as Finance expense.

Significant judgment for embedded derivatives

Some non-financial contracts contain pricing links that affect cash flows in a manner different than the underlying commodity or other product in the contract. For accounting purposes, these embedded derivatives are separated from the host contract and recognized at fair value for links not closely related to the product in the host contract. Which price links that are closely related requires judgment, assessing common pricing patterns and market development over time. Hydro has separated and recognized at fair value embedded derivatives related to currency and aluminium links from the underlying contracts, mainly in energy contracts.

Commodity derivatives

The following types of commodity derivatives, including embedded derivatives, were recorded at fair value on the balance sheet as of December 31, 2022 and December 31, 2021. Contracts that are designated as hedge instruments in cash flow hedges are not included. Hydro's risk management, including use of derivative instruments, is discussed in note 8.1 Financial and commercial risk management.

Fair values for derivative instruments in the table below includes traditional derivative instruments such as futures, forwards and swaps, physical contracts accounted for at fair value, as well as embedded derivatives.

Amounts in NOK million	**2022**	2021
Assets		
Electricity contracts	709	3,221
Aluminium futures, forwards and options	549	479
Other	281	146
Total	**1,539**	**3,845**
Liabilities		
Electricity contracts	(1,098)	(403)
Aluminium futures, forwards and options	(2,443)	(5,739)
Other	(81)	(10)
Total	**(3,621)**	**(6,152)**

Cash flow hedges

Hydro has to a limited extent used cash flow hedge accounting for its risk management positions. Gains and losses on the hedge derivatives are recognized in Other comprehensive income, and accumulated in the hedging reserve in equity and reclassified into operating revenues or cost when the corresponding forecasted sale or consumption is recognized. In 2022 and 2021, Hydro entered into hedge arrangements for currency in the Alunorte plant and the Albras plant, both in Brazil, to secure the exchange rate between Brazilian Real and US dollar for the period 2021 to 2024. As of 31 December 2022, an amount of USD 664 million is sold forward for 2023-2024 at an average rate of 6.04 Brazilian Real to US dollar.

No ineffectiveness was recognized in the income statement in 2022 or 2021.

The table below gives aggregated numbers related to the cash flow hedges for 2022 and 2021.

Amounts in NOK million	2023	2022	2021
Expected to be reclassified to the income statement during the year	264	(176)	75
Reclassified to the income statement from Other components of equity[1)]		231	41

[1)] Deviates from expected reclassifications due to change in market prices throughout the year. Negative amounts indicate a loss.

An asset of NOK 515 million and liability of NOK 431 million were recognized as the fair value of cash flow hedging instruments for December 31, 2022 and 2021, respectively.

Hydro performs trading operations to reduce currency exposures on commodity positions. The effect of such operations is recognized as a part of Financial expense in the income statement.

For the after tax movement in Hydro's equity relating to cash-flow hedges for 2022 and 2021, please see note 7.6 Shareholders' equity.

Fair Value of Derivative Instruments

The fair value of derivative financial instruments such as currency forwards and swaps are based on quoted market prices. The fair market value of aluminium and electricity futures/forwards and option contracts is based on quoted market prices obtained from the London Metals Exchange and NASDAQ Nordic Power/EEX (European Energy Exchange) respectively. The fair value of other commodity over-the-counter contracts and swaps is based on quoted market prices, estimates obtained from brokers and other appropriate valuation techniques. Where long-term physical delivery commodity contracts are recognized at fair value in accordance with IFRS 9, such fair market values are based on quoted forward prices in the market, and assumptions of forward prices and margins where market prices are not available. Where volumes, delivery profile or other elements are uncertain or contingent on variables outside the parties' control, management's best estimate of such factors and the range of reasonably possible outcomes is reflected in the valuation. Hydro takes credit-spread into consideration when valuating positions when necessary.

For further information on fair values, see note 1.2 Measurement of fair value. See note 8.2 Financial instruments for a specification of the classification of derivative positions according to a fair value hierarchy.

Section 9 – Related parties and remuneration

Note 9.1 Related party information

As of December 31, 2022, The Norwegian state had ownership interests of 34.7 percent of total shares outstanding (2021: 34.6 percent) in Hydro through the Ministry of Trade, Industry and Fisheries. In addition, Folketrygdfondet, which manages the Government Pension Fund – Norway[1] held 6.0 percent (2021: 7.0 percent). There are no preferential voting rights associated with the shares held by the Norwegian State. Hydro has concluded that the Norwegian state's shareholding represents a significant interest in Hydro, and that the State thus is a related party.

Hydro's share buyback program authorized at the extraordinary general meeting in September 2022 has as a prerequisite for buybacks and subsequent cancellation of shares that these transactions do not result in a change to the ownership interest of 34.26 percent of issued shares of the Ministry of Trade, Industry and Fisheries. Share redemptions from the Norwegian state will be carried out at the same price terms as for the buybacks via the stock exchange.

The Norwegian state has ownership interests in a substantial number of companies. The ownership interests in 70 companies are managed by the ministries and covered by public information from the Ministry of Trade, Industry and Fisheries[2]. We have not assessed which of these companies that are controlled by the State. Hydro has business transactions with a number of these companies, including purchase of power from Statkraft and bank services from DNB. Generally, transactions are agreed independently of the possible control exercised by the State.

A significant share of Hydro's defined benefit post-employment plans is managed by the independent pension trust, Norsk Hydros Pensjonskasse. Employees managing and operating the pension trust are employees of Norsk Hydro ASA. Their salaries and other benefits are reimbursed by the pension trust on a monthly basis, in total NOK 11 million for 2022 and NOK 10 million for 2021. Further, the pension trust is located in Hydro's head office. Office costs, including heating and administrative services, are charged with a total of NOK 1 million for both 2022 and 2021. The pension trust provided services to Hydro for administration of unfunded pension plans with NOK 4 million for both 2022 and 2021.

The pension trust owns some of the office space rented by Hydro. The current rental arrangement was entered into in 2015 representing a partial continuation of a rental agreement from 2006, and priced based on market price benchmarks at the time of the agreement in 2006. Hydro has paid a rental of NOK 65 million and NOK 70 million for 2022 and 2021, respectively. The current term of the rental contract expires in February 2027. Hydro also sold electricity to the pension trust for its operational needs at the same office site for a total amount of NOK 20 million in 2022 and NOK 8 million 2021. As of the end of 2022, Hydro's outstanding receivables on Norsk Hydros Pensjonskasse were NOK 5 million, while Hydro's payable to Norsk Hydros Pensjonskasse amounted to NOK 4 million, all settled during January 2023.

Hydro's significant joint arrangements and associates; and transactions with those entities are described in note 3.1 Investments in joint arrangements and associates. Hydro's relationship with partners in joint arrangements are generally limited to a combined effort within a limited area. Hydro considers the joint venture partners as competitors in other business transactions, and do not see these relationships as related party relationships.

Some of the board members or their close members of family serve as board members or executive directors in other companies. In addition, some members of Hydro's corporate management board or their close members of family serve as board members in other companies. Hydro has transactions with some of those companies; however, have not identified any transactions where the relationship is known to have influenced the transaction. Some close family members of members of Hydro's management are employed in non-executive positions in Hydro.

Transactions with related parties are at arm's length principles.

Executive management remuneration is disclosed in the table below. The members of Hydro's Corporate Management Board and the members of Hydro's board of directors during 2022 and 2021 and their individual remuneration is reported in Norsk Hydro ASA Remuneration report 2022.

Amounts in NOK thousand	**2022**	2021
Salary paid	45,151	45,697
Other short-term benefits	20,009	22,928
Pension benefits	6,270	4,763
Long-term incentive	11,432	4,250
Total Corporate Management Board	**82,862**	**77,638**
Fees Board of Directors	6,293	5,242
Total	**89,155**	**82,880**

[1] Shareholding is based on information from the Norwegian Central Securities Depositary (VPS) as of December 31, 2022 and 2021. Due to lending of shares, an investor's holdings registered in its VPS account may vary.

[2] According to information on the Government web site www.regjeringen.no, state ownership.

Note 9.2 Employee remuneration

Accounting policies for employee remuneration

Share-based compensation

Hydro accounts for share-based compensation in accordance with IFRS 2 Share-based Payment. Share-based compensation expense is measured at fair value over the service period and includes social security taxes that will be paid by Hydro at the settlement date. All changes in fair value are recognized in the income statement.

Employee benefits

Payments to employees, such as wages, salaries, social security contributions, paid annual leave and bonus agreements are accrued in the period in which the associated services are rendered by the employee.

Employee share purchase plan

Hydro has established a share purchase plan for employees in Norway. The plan payout is based on whether the share price (adjusted for dividend paid) increases with at least 12 percent or not during the performance period. Employees are eligible to receive an offer to purchase shares under this plan if they were 1) employed by Norsk Hydro ASA or a more than 90 percent owned Norwegian subsidiary, and 2) employed as of December 31 through the final acceptance date of the share purchase offer. Employees are invited to purchase shares with a rebate of 50 percent for a value of NOK 15,000 or NOK 30,000, depending on shareholder return. The share purchase is financed through a non-interest bearing loan from the company with a repayment period of 12 months.

Compensation expense related to the 2021 performance measurement period was accrued and recognized over the service period of December 31, 2021 through March 31, 2022, the final acceptance date of the offer. Details related to the employee share purchase plan are provided in the table below.

Performance measurement period

	2022	2021	2020
Total shareholder return performance target achieved	≥12%	≥12%	≥12%
Employee rebate offered, NOK	15,000	15,000	15,000

Share purchase plan compensation

	2022	2021
Award share price, NOK	90.48	54.70
Number of shares issued, per employee	340	648
Total number of shares issued to employees	1,044,820	2,350,944
Compensation expense related to the award, NOK thousand	48,548	74,208

Employee benefit expense

The average number of employees in Hydro's continuing operations for 2022 and 2021 was 31,770 and 30,982, respectively. As of year-end 2022 and 2021, Hydro employed 32,014 and 31,264 people, respectively. Employees in joint operations are not included. The specification of employee benefit expenses, including employee benefits in joint operations, is given in the table below.

Amounts in NOK million	**2022**	2021
Salary	17,947	15,852
Social security costs	2,626	2,376
Other benefits	1,272	1,094
Pension expense (note 9.3)	1,041	965
Total	**22,886**	**20,287**

Note 9.3 Employee retirement plans

Accounting policies for post-employment benefits

Post-employment benefits are recognized in accordance with IAS 19 Employee Benefits. The cost of providing pension benefits under a defined benefit plan is determined separately for each plan using the projected unit credit method. Past service costs are recognized immediately in the income statement. The interest component of the periodic cost is included in Finance expense. Remeasurement gains and losses are recognized in Other comprehensive income.

Contributions to defined contribution plans are recognized in the income statement in the period in which they accrue. Multiemployer defined benefit plans where available information is insufficient to use defined benefit accounting are accounted for as if the plan were a defined contribution plan.

Significant judgment in accounting for post-employment benefits

Measurement of pension expense and obligations under defined benefit plans requires numerous assumptions and estimates that can have a significant impact on the recognized pension cost and obligation, such as discount rates, mortality, and future pension increases and salary levels.

Employee retirement plans in Hydro

Hydro provides post-employment benefits covering a substantial portion of employees. Plans and benefit levels vary between companies and countries. In recent years, there has been a shift from traditional final salary defined benefit plans to defined contribution and contribution-oriented plans. Many defined benefit plans have been closed to new entrants, and in some defined benefit plans, large groups of employees have converted to defined contribution arrangements. Still, a declining number of employees continues to earn benefits under defined benefit plans.

Pension expense

	2022				2021			
Amounts in NOK million	**Norway**	**Germany**	**Other**	**Total**	Norway	Germany	Other	Total
Defined benefit plans	87	22	55	164	105	18	48	172
Defined contribution plans	216	-	413	630	198	-	318	516
Multiemployer plans	52	-	-	52	46	-	-	46
Termination benefits and other	69	11	46	126	121	12	22	155
Social security cost	51	-	19	70	54	-	22	76
Pension expense	**475**	**33**	**533**	**1,041**	**525**	**30**	**410**	**965**
Interest expense (income)	(61)	29	10	(22)	(23)	16	14	7
Remeasurement (gain) loss in other comprehensive income	(84)	(616)	(268)	(968)	(2,462)	(16)	(333)	(2,811)

Recognized defined benefit asset and liability

	2022				2021			
Amounts in NOK million	**Norway**	**Germany**	**Other**	**Total**	Norway	Germany	Other	Total
Defined benefit obligation major plans	(11,556)	(2,087)	(3,727)	(17,370)	(12,696)	(2,594)	(5,516)	(20,806)
Plan assets	15,142	-	3,497	18,639	16,051	-	5,353	21,404
Reimbursement rights	262	-	-	262	287	-	-	287
Liability other plans	(74)	(122)	(395)	(591)	(88)	(186)	(618)	(893)
Social security cost	(605)	-	(14)	(619)	(648)	-	(71)	(719)
Net defined benefit asset (liability)	**3,171**	**(2,210)**	**(640)**	**321**	**2,906**	**(2,780)**	**(853)**	**(727)**
Recognized prepaid pension	8,064	36	473	8,573	8,152	34	708	8,894
Recognized pension liability	(4,893)	(2,245)	(1,113)	(8,252)	(5,246)	(2,814)	(1,561)	(9,621)
Net amount recognized	**3,171**	**(2,210)**	**(640)**	**321**	**2,906**	**(2,780)**	**(853)**	**(727)**

Other plans include some minor plans in various entities and countries. These plans may be funded or unfunded. None of these plans are considered material, neither individually nor combined.

Change in defined benefit obligation (DBO)

	2022				2021			
Amounts in NOK million	**Norway**	**Germany**	**Other**	**Total**	Norway	Germany	Other	Total
Opening Balance	(12,696)	(2,594)	(5,516)	(20,806)	(13,348)	(11,848)	(5,869)	(31,065)
Current service cost	(83)	(22)	(31)	(135)	(98)	(61)	(32)	(192)
Past service cost and curtailment gain (loss)	-	-	3	3	-	-	18	18
Interest expense	(235)	(27)	(104)	(366)	(217)	(25)	(80)	(322)
Actuarial gain (loss) demographic assumptions	-	-	(5)	(5)	-	-	9	9
Actuarial gain (loss) economic assumptions	1,019	598	1,916	3,534	249	91	246	586
Experience gain (loss)	(176)	(53)	(101)	(331)	52	(19)	24	57
Benefit payments	677	150	217	1,044	651	172	210	1,033
Termination benefits	(71)	-	-	(71)	(77)	-	-	(77)
Settlements	10	-	-	10	-	-	-	-
Assets held for sale	-	-	-	-	92	8,669	-	8,761
Foreign currency translation	-	(140)	(107)	(248)	-	426	(42)	385
Closing Balance	**(11,556)**	**(2,087)**	**(3,727)**	**(17,370)**	**(12,696)**	**(2,594)**	**(5,516)**	**(20,806)**

Change in pension plan assets

	2022				2021			
Amounts in NOK million	**Norway**	**Germany**	**Other**	**Total**	Norway	Germany	Other	Total
Opening Balance	16,051	-	5,353	21,404	14,927	-	5,420	20,347
Interest income	302	-	109	411	247	-	80	327
Return on plan assets above (below) interest income	(800)	-	(1,877)	(2,677)	1,449	-	(102)	1,347
Company contributions	35	-	6	41	17	-	39	56
Benefit payments	(446)	-	(193)	(639)	(432)	-	(185)	(617)
Assets held for sale	-	-	-	-	(157)	-	-	(157)
Foreign currency translation	-	-	100	100	-	-	101	101
Closing Balance	**15,142**	**-**	**3,497**	**18,639**	**16,051**	**-**	**5,353**	**21,404**

Analysis of the defined benefit obligation (DBO)

	2022				2021			
Amounts in NOK million	**Norway**	**Germany**	**Other**	**Total**	Norway	Germany	Other	Total
Active members	(2,079)	(326)	(422)	(2,827)	(2,523)	(435)	(619)	(3,576)
Deferred members	(801)	(188)	(1,284)	(2,273)	(923)	(330)	(2,182)	(3,435)
Pensioners	(8,676)	(1,574)	(2,021)	(12,271)	(9,251)	(1,829)	(2,715)	(13,795)
Defined benefit obligation	**(11,556)**	**(2,087)**	**(3,727)**	**(17,370)**	**(12,696)**	**(2,594)**	**(5,516)**	**(20,806)**
Weighted average duration (years)	11.2	10.7			12.3	13.1		

Contributions to pension plans, benefit payments from unfunded pension plans, and social security tax imposed on such contributions and payments amounted to a cash outflow of about NOK 1,300 million for 2022 and about NOK 1,150 million for 2021. Hydro's cash impact is expected to be at the same level in the coming year.

Hydro's main pension plans are offered in Norway and Germany. The plans are described below:

Norway
Hydro has closed the main defined benefit plans for new members, and the majority of employees are now covered by defined contribution plans. The defined benefit plans are both funded and unfunded. The main funded plan is managed by Norsk Hydros Pensjonskasse, a separate, regulated legal entity. Hydro's pension plans complement the public pension schemes in Norway.

Hydro participates in a tariff-based pension plan that entitles the majority of its Norwegian employees life-long supplementary benefits. The benefits are financed through a pooled arrangement by private sector employers (avtalefestet pensjon, AFP) where also the Norwegian state contributes. The plan is a defined benefit plan with limited funding and where plan assets are not segregated. The information required to calculate the share of the plan and account for the plan as a defined benefit plan is not available from the plan administrator. Hydro therefore accounts for the plan as if it were a defined contribution plan. The employer contributions are included in Multiemployer plans.

Significant actuarial assumptions for the main Norwegian defined benefit plans include:

	Benefit obligation	Benefit expense	Benefit obligation	Benefit expense
Assumptions	**2022**	**2022**	2021	2021
Discount rate	3.2%	1.9%	1.9%	1.7%
Expected pension increase	1.75%	1.25%	1.25%	1.25%
Mortality basis	K2013	K2013	K2013	K2013

The discount rate is based on the yield on covered bonds (debt securities backed by cash flows from mortgages) issued in Norway. The market for covered bonds has developed in size and liquidity, and we deem this market to be sufficiently deep to serve as reference for the discount rate for our post-employment benefit plans in Norway.

The sensitivities shown in the table below have been calculated for the main Norwegian plans illustrating the effects of changing one assumption while keeping the other assumptions unchanged. Possible correlation between assumptions is not reflected in the calculations.

Sensitivities decrease (increase) benefit obligation year end

Amounts in NOK million, except percent	**2022**	**2022**
Discount rate increase 0.5% point	5.3%	617
Salary increase 0.5% point	(0.4%)	(50)
Pension increase 0.5% point	(5.6%)	(642)
One year longer life all members	(4.4%)	(508)

The plan assets in the funded plans provided through Norsk Hydros Pensjonskasse were invested as follows at the end of 2022 and 2021:

Amounts in NOK million, except percent	**2022**	**2022**	2021	2021
Cash and cash equivalents	4.4%	652	3.3%	526
Equity instruments Norway	19.2%	2,867	21.5%	3,406
Equity instruments other countries	21.6%	3,220	23.5%	3,728
Debt instruments	24.6%	3,675	25.3%	4,005
Investment funds	12.9%	1,918	10.5%	1,657
Real estate	17.4%	2,592	15.9%	2,509
Total	**100.0%**	**14,925**	**100.0%**	**15,832**

Real estate consists of office buildings in the Oslo area. A share of the buildings are leased and occupied by Hydro. Investment funds are primarily private equity funds investing in unlisted companies across various industries in Europe, the US and Asia, and infrastructure funds investing in Europe (EEA, Switzerland, and in the UK). Equity instruments are held through liquid funds invested in listed companies in Norway and globally. Debt instruments are mainly bond issues with maturities up to 10 years and investment grade rating.

Germany
In Germany, the majority of plan members are covered by defined benefit plans that offer benefits based on final salary level and the number of years in service. The main plans are unfunded. Hydro's main plans are closed to new entrants, and all new employees are now offered benefits under defined contribution-oriented plans. These plans are unfunded and treated as defined benefit plans for financial reporting purposes. Following Hydro's sale of its Rolling business in 2021, the impact of these benefit plans was reduced significantly.

Other
Other includes Hydro's post-employment benefits outside Norway and Germany. Most employees affected are covered by defined contribution plans. Defined benefit plans relate largely to the UK and the US, where the majority of the benefit obligation is financed and administered through independent pension trusts.

Section 10 – Other information

Note 10.1 Income taxes

Accounting policies for income taxes, current and deferred
Taxes payable is based on taxable profit for the year, which excludes items of income or expense that are taxable or deductible in other years. Taxable profit also excludes items that are never taxable or deductible. Hydro's liability for current tax is calculated using tax rates that have been enacted or substantively enacted as of the balance sheet date.

Deferred income tax expense is calculated using the liability method in accordance with IAS 12 Income Taxes. Deferred tax assets and liabilities are classified as non-current in the balance sheet and are measured based on the difference between the carrying value of assets and liabilities for financial reporting and their tax basis when such differences are considered temporary in nature. For items recognized as an asset and a liability at inception, such as an asset retirement obligation or a lease, temporary differences related to the asset and liability are considered in combination, and deferred tax assets and liabilities are recognized on changes to the temporary differences through the life of the items. Temporary differences related to intercompany profits are deferred using the buyer's tax rate. Deferred tax assets are reviewed for recoverability every balance sheet date, and the amount probable of recovery is recognized.

Deferred income tax expense represents the change in deferred tax asset and liability balances during the year, except for the deferred tax related to items recognized in Other comprehensive income or resulting from a business combination or disposal. Changes resulting from amendments and revisions in tax laws and tax rates are recognized when the new tax laws or rates become effective or are substantively enacted. Uncertain tax positions are recognized in the financial statements based on management's expectations.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities, when they relate to income taxes levied by the same taxation authority, and when the Group intends to settle its current tax assets and liabilities on a net basis.

Deferred taxes are not provided on undistributed earnings of subsidiaries when the timing of the reversal of this temporary difference is controlled by Hydro and is not expected to happen in the foreseeable future. This is applicable for the majority of Hydro's subsidiaries.

Significant judgment in accounting for income taxes
Hydro is involved in a significant number of tax cases related to various types of taxes. Hydro's widespread business operations expose us to several tax regimes and their interaction. We see that tax authorities challenge transfer prices to an increasing degree. Although Hydro currently has no significant transfer price disputes with tax authorities, the long value chain with a large number of internal transactions and business operations covering multiple tax jurisdictions expose us to such disputes, both related to prior and future transactions.

Valuation of deferred tax assets is dependent on management's assessment of future recoverability of the deferred benefit. Expected recoverability may result from expected taxable income in the future, planned transactions or planned tax optimizing measures, all of which may be uncertain. Economic conditions may change and lead to a different conclusion regarding recoverability. Tax authorities in different jurisdictions may challenge Hydro's calculation of taxes payable from prior periods. Such processes may lead to changes to prior periods' taxable income, resulting in changes to income tax expense in the period of change, as well as interest and fines.

Amounts in NOK million	2022	2021
Income (loss) before tax	32,365	18,397
Current income tax expense	6,891	4,565
Deferred tax expense (benefit)	1,093	(97)
Total income tax expense (benefit)	**7,984**	**4,467**

Components of deferred taxes

Amounts in NOK million	2022	2021
Origination and reversal of temporary differences	1,038	108
Change in deferred tax asset from tax loss carryforwards	(874)	478
Effect of tax rate changes	36	32
Net change in unrecognized deferred tax assets	1,383	(477)
Tax (expense) benefit allocated to Other comprehensive income	(491)	(238)
Deferred tax expense (benefit)	**1,093**	**(97)**

Reconciliation of tax expense to Norwegian nominal statutory tax rate

Amounts in NOK million	2022	2021
Expected income taxes at statutory tax rate[1)]	7,120	4,047
Hydro-electric power surtax[2)]	251	649
Equity accounted investments	(305)	(309)
Foreign tax rate differences[3)]	566	497
Deferred tax asset not recognized and expired tax loss carryforwards[3)]	787	(431)
Prior year adjustments[4)]	(346)	(180)
Other tax effects	(89)	194
Income tax expense (benefit)	**7,984**	**4,467**

1) Norwegian nominal statutory tax rate is 22 percent. The table is based on this tax rate.
2) A surtax of a certain percentage is applied to taxable income, with certain adjustments, for Norwegian hydro-electric power plants. The effective tax rate has increased from 37 percent to 45 percent with effect for 2022. The surtax comes in addition to the normal corporate taxation. The surtax for 2022 includes a positive effect of the legal restructuring of the associate Lyse Kraft DA, resulting in lower power surtax of about NOK 550 million related to change in surtax basis in year of restructuring. The initially estimated surtax was expensed as part of cost of power purchased from the associate.
3) The effect of reassessment of recoverability of deferred tax assets is mainly related to Brazil in 2022, and several European countries and Australia in 2021. Foreign tax rate differences include a related tax expense amounting to NOK 510 million in 2022 and a tax benefit of NOK 111 million in 2021.
4) Prior year adjustments in 2022 include effects of favorable tax settlements in Germany amounting to NOK 156 million and Brazil amounting to NOK 146 million.

Tax effects of temporary differences and tax loss carryforwards giving rise to deferred tax assets and liabilities

Amounts in NOK million	Assets 2022	Liabilities 2022	Assets 2021	Liabilities 2021
Inventory valuation	530	(327)	495	(252)
Accrued expenses	2,105	(268)	1,782	(215)
Property, plant and equipment	8,546	(12,747)	7,136	(11,457)
Intangible assets	1,564	(2,290)	1,310	(2,067)
Pensions	1,467	(1,875)	1,840	(1,887)
Derivatives	978	(598)	1,981	(838)
Other	1,052	(2,628)	794	(1,680)
Tax loss carryforwards	6,171		4,711	
Subtotal	22,413	(20,733)	20,049	(18,397)
Of which not recognized as tax asset	(4,312)		(2,729)	
Gross deferred tax assets (liabilities)	**18,101**	**(20,733)**	**17,320**	**(18,397)**
Net deferred tax assets (liabilities)		**(2,632)**		**(1,077)**

Reconciliation to balance sheets

	2022	2021
Deferred tax assets	2,163	2,588
Deferred tax liabilities	4,796	3,665
Net deferred tax assets (liabilities)	**(2,632)**	**(1,077)**

Recognition of net deferred tax asset is based on expected taxable income in the future.

At the end of 2022, Hydro had tax loss carryforwards of NOK 20,479 million, mainly in Brazil, Spain, Australia and Italy. Of the total, NOK 18,658 million is without expiration. The majority of the tax loss carryforwards with an expiry date expire after 2027. Tax assets are recognized for about 35 percent of the tax losses.

Note 10.2 Research and development

Accounting principles for research and development
Research expenditures are expensed as incurred. Development costs are capitalized as intangible assets at cost in accordance with IAS 38 Intangible Assets when the recognition criteria are met, including probable future economic benefit and that the cost can be measured reliably.

See note 2.2 Intangible assets for further details.

Research and development in 2022 and 2021
Hydro carries out its main research and development activities through research centres in the business areas. Total expensed research and development cost was NOK 655 million in 2022 and NOK 512 million in 2021. The greater part of the expensed research and development costs relates to in-house research and application development organizations, while the remainder represents work carried out by external institutions. Government grants have been received on basis of some of the projects, recognized as other income, i.e. have not deducted in the amounts mentioned above.

Hydro undertakes research and development activities to deliver on its strategic direction, including meeting its sustainability ambitions. Hydro is committed to achieving net-zero emissions in terms of Scope 1 and 2 by 2050 or earlier and expects to have initiatives in place for cutting own carbon emissions by 30 percent by 2030. To deliver on this commitment, new technologies enabling the delivery of net zero products and net zero operations are needed, to which research and development activities have been initiated. The activities are carried out throughout the value chain of Hydro.

Alumina
Bauxite residue is a leftover material from the process of refining bauxite into alumina at the Alunorte refinery. Hydro and Senai Institute of Innovation in Mineral technologies (ISI-TM) initiated a partnership in 2019 to develop methods and processes for the reuse of bauxite residues, including industrial application and extraction of other minerals from the residues, and opportunities for applying the residue as a soil conditioner in local agriculture.

Development projects also include development of methods for replacing coal fired boilers with electrical boilers at the alumina refinery Alunorte with the aim of reducing greenhouse gas emissions.

Primary aluminium production
Aluminium production is an industry with hard-to-abate emissions, requiring development and maturement of technologies to reduce emissions. Hydro is pursuing technology pathways toward near zero aluminium. To secure the value of existing primary aluminium plants, Hydro is developing carbon capture and storage (CCS) solutions that can be retrofitted into the existing plants. Hydro is planning to test and pilot the most promising CCS technology, up to industrial scale pilot by 2030.

Another pathway more suited for greenfield aluminium plants is Hydro's proprietary HalZero technology. This technology converts alumina to aluminium chloride prior to electrolysis in a process where chlorine and carbon are kept in closed loops, resulting in a fully decarbonized process. Hydro has been working on lab-scale development of this technology for five years and has now developed a roadmap to bring this to an industrial scale pilot before 2030.

Aluminium recycling
Zero-carbon aluminium can also be achieved by recycling more post-consumer scrap. Using only post-consumer scrap, Hydro will be able to produce a near-zero carbon product at a competitive cost. Hydro has patented aluminium sorting technology, and regularly seek to improve and further develop technology and processes, including sorting technology for post-consumer scrap.

Hydro is also preparing to test casthouse decarbonization technology for the recycling and primary plants to reach net-zero. Hydrogen based processes is developed and planned to be tested at pilot scale for furnaces.

Extrusion
Extrusion is engaged in development projects in close cooperation with its customers. Many projects aim at improving the design and usability of the products, including developing new application of extruded aluminium products with the aim to replace other materials. The technology and production processes are also regularly improved through development projects involving both the research and development centres and the production units.

Energy
Hydro's green hydrogen unit, Hydro Havrand explore opportunities of using green hydrogen based on renewable energy to replace fossil fuels across a range of sectors with hard-to-abate processes. This includes many heavy industries where a part of the production process often requires temperatures far higher than what electricity can produce, as well as the maritime sector and long-distance transport. The projects are in early phases.

Note 10.3 Cash flow information

Cash disbursements and receipts included in cash from continuing operations

Amounts in NOK million	2022	2021
Income taxes paid	5,312	2,862
Interest paid	1,034	904
Interest received	652	194
Dividends received	-	1

In 2022 and 2021, non-cash investing activities for asset retirement costs amounted to NOK 276 million and NOK 616 million, respectively. In 2022 and 2021, non-cash investing activities for leased assets amounted to NOK 1,208 million and NOK 1,113 million, respectively.

Note 10.4 Auditor's remuneration

KPMG is the Group auditor of Norsk Hydro ASA. The following table shows fees to the appointed auditors for 2022 and 2021. For all categories the reported fee is the recognized expense for the year.

Amounts in NOK million	Audit[1]	Audit related services[2]	Other services[3]	Tax related services	Total
2022					
Norway	9	3	2	-	14
Outside Norway	33	1	4	3	41
Total	**42**	**3**	**6**	**3**	**55**
20201					
Norway	7	3	2	-	11
Outside Norway	34	-	2	3	40
Total	**42**	**3**	**4**	**3**	**51**

[1] Audit fees of NOK 42 million (2021: NOK 42 million) reflect audit fees from KPMG in the amount of NOK 39 million (2021: NOK 38 million)
[2] Audit related fees of NOK 3 million in 2022 were fees to KPMG
[3] Other services 2022 include KPMG's review of viability performance

Note 10.5 Changes in accounting principles and new pronouncements

Changes in accounting principles
Hydro has not implemented any new accounting standards or otherwise made any changes to accounting policies during 2022.

New pronouncements
None of the issued, not yet effective, accounting standards or amendments to such standards, including IFRS 17 Insurance Contracts, are expected to have significant effects for Hydro's financial reporting. Further, none of the recently issued IFRS Interpretations Committee agenda decisions are expected to significantly change Hydro's accounting policies or practices.

Financial statements Norsk Hydro ASA

Income statements

Amounts in NOK million	Notes	2022	2021
Other income	14	219	261
Total operating income		219	261
Employee benefit expense	2, 3	751	713
Depreciation	4	82	80
Other expenses	8	1,538	1,438
Expenses recharged to subsidiaries	8	(1,487)	(1,479)
Total operating expenses		883	751
Operating loss		(665)	(490)
Financial income, net	5	5,786	2,409
Income before tax		5,121	1,919
Income taxes	6	(225)	(103)
Net income		4,896	1,816
Appropriation of net income and equity transfers			
Dividend proposed		11,540	11,078
Retained earnings		(6,643)	(9,262)
Total appropriation		4,896	1,816

Statements of comprehensive income

Amounts in NOK million	Notes	2022	2021
Net income		4,896	1,816
Other comprehensive income			
Items that will not be reclassified to income statement			
Remeasurement postemployment benefits, net of tax	2	44	609
Other comprehensive income		44	609
Total comprehensive income	13	**4,941**	**2,425**

Balance sheets

Amounts in NOK million, December 31	Notes	2022	2021
Assets			
Property, plant and equipment and intangible assets	4	514	522
Shares in subsidiaries	7	57,052	57,052
Receivables from subsidiaries	8, 10	15,720	13,131
Prepaid pension, investments and other non-current assets	2, 9	6,301	6,182
Total financial non-current assets		79,073	76,365
Receivables from subsidiaries	8	3,304	7,771
Prepaid expenses and other current assets		193	102
Short-term investments		750	2,404
Cash and cash equivalents		21,770	18,264
Total current assets		26,016	28,542
Total assets		**105,603**	**105,429**

Amounts in NOK million, December 31	Notes	2022	2021
Equity and liabilities			
Paid-in capital			
Share capital	13	2,272	2,272
Treasury shares	13	(29)	(19)
Paid-in premium	13	28,987	28,987
Other paid-in capital	13	230	169
Retained earnings			
Retained earnings	13	10,053	19,634
Treasury shares	13	(1,200)	(565)
Equity	13	**40,313**	**50,478**
Long-term provisions	2, 9	3,640	3,727
Long-term debt	12	17,320	16,091
Other long-term liabilities		17,320	16,091
Bank loans and other interest-bearing short-term debt		2,305	3,020
Dividends payable		11,540	11,078
Payables to subsidiaries	8, 10	29,345	20,350
Other current liabilities		1,140	684
Total current liabilities		44,330	35,132
Total equity and liabilities		**105,603**	**105,429**

Statements of cash flows

Amounts in NOK million	**2022**	2021
Net income	4,896	1,816
Depreciation	82	80
Net foreign exchange (gain) loss	(745)	(585)
Net purchases of trading securities	1,407	(1,407)
Changes in receivables and payables, and other items	(934)	112
Net cash provided by operating activities	**4,706**	**16**
Purchases of short-term investments	(1,250)	(3,000)
Proceeds from sales of short-term investments	1,500	4,500
Net sales (purchases) of other investments	(24)	522
Net cash provided by (used in) investing activities	**226**	**2,022**
Dividends paid	(14,060)	(2,564)
Repurchases of shares	(661)	-
Proceeds from shares issued	48	48
Other financing activities, net	12,667	4,841
Net cash provided by (used in) financing activities	**(2,006)**	**2,325**
Foreign currency effects on cash	580	122
Net increase in cash and cash equivalents	3,506	4,485
Cash and cash equivalents at beginning of year	18,264	13,779
Cash and cash equivalents at end of year	**21,770**	**18,264**

Notes to the financial statements Norsk Hydro ASA

Note 1 Summary of significant accounting policies

The financial statements of Norsk Hydro ASA are prepared in accordance with the Norwegian accounting act and regulation on simplified application of international accounting standards (forskrift om forenklet anvendelse av internasjonale regnskapsstandarder – simplified IFRS).

Financial statement preparation requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses as well as disclosures of contingencies. Actual results may differ from estimates. Interest rates used for calculating net present values are rounded to the nearest 10 basis points for post-employment benefits, to the nearest 25 basis points for other non-financial assets and liabilities. As a result of rounding adjustments, the figures in one or more columns included in the financial statements may not add up to the total of that column.

Shares in subsidiaries, associates and joint ventures

Shares in subsidiaries, associates and joint ventures are presented according to the cost method. Group relief received is included in dividends from subsidiaries. Dividend from subsidiaries is recognized in the year for which it is proposed by the subsidiary to the extent Norsk Hydro ASA can control the decision of the subsidiary through its share holdings. Shares in subsidiaries, associates and joint ventures are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may exceed the recoverable amount of the investment. An impairment loss is reversed if the impairment situation is deemed to no longer exist.

Employee retirement plans

Norsk Hydro ASA accounts for employee retirement plans in accordance with IAS 19 Employee Benefits. See note 9.3 Employee retirement plans to the consolidated financial statements for description of the accounting policies.

Foreign currency

The functional currency of the company is the Norwegian krone, NOK. Realized and unrealized currency gains or losses on transactions denominated in other currencies than NOK, as well as currency gains or losses on assets and liabilities denominated in a currency other than NOK, are included in Financial income, net.

Cash and cash equivalents

Cash and cash equivalents include cash, bank deposits and all other monetary instruments with a maturity of less than three months at the date of purchase.

Short-term investments

Short-term investments include bank deposits and all other monetary instruments with a maturity between three and twelve months at the date of purchase and current listed equity and debt securities held for trading and valued at fair value. The resulting unrealized holding gains and losses are included in Financial income, net. Investment income is recognized when earned.

Property, plant and equipment

Property, plant and equipment is carried at historical cost less accumulated depreciation and impairment losses. According to IAS 36 Impairment of Assets, such assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The impairment of long-lived assets is recognized when the recoverable amount determined as the higher of fair value less cost to sell or value in use of the asset or group of assets is less than the carrying value. The amount of the impairment is the difference between the carrying value and the recoverable amount. An impairment loss is reversed if the impairment situation is deemed to no longer exist.

Leased assets

Leased assets are recognized as right-of-use assets in accordance with IFRS 16 Leases, with contractually fixed future payments recognized as lease liabilities. When measuring leases, fixed lease payments for extension periods reasonably certain to be used are included. As a practical expedient, non-lease components are not separated from lease contracts. Leases of assets of a low value, manly such items as PCs, office equipment and similar, are excluded from lease accounting. Right-of-use assets are included in Property, plant and equipment, and lease liabilities are included in Long-term debt. See note 2.6 Leases to the consolidated financial statements for additional information.

Intangible assets

Intangible assets acquired individually or as a group are recognized at fair value when acquired, in accordance with IAS 38 Intangible Assets. Intangible assets are amortized on a straight-line basis over their useful life and tested for impairment whenever indications of impairment are present.

Derivative instruments

Forward contracts and options for purchase or sale of currency or interest are recognized in the financial statements and measured at fair value at each balance sheet date. The resulting unrealized gain or loss is presented in Financial income, net.

Norsk Hydro ASA has decided to utilize the option in the regulation to exclude embedded derivatives and contracts deemed to be derivatives based on the underlying product being readily convertible to cash and not for own use when the contract is with a subsidiary, i.e. such features are not separated from the host contract.

Loans and other financial liabilities

Loans and other financial liabilities include issued bonds, bank loans and similar. Loans are measured at amortized cost.

Provisions

Provisions are recognized when Norsk Hydro ASA has a present obligation (legal or constructive) as a result of a past event, it is probable (more likely than not) that Norsk Hydro ASA will be required to settle the obligation, and a reliable estimate can be made of the amount, taking into account the risks and uncertainties. The provision is measured at the present value of the cash flows estimated to settle the obligation. Uncertain outcomes are measured as the expected value of reasonably possible outcomes.

Contingencies and guarantees

Norsk Hydro ASA recognizes a liability for the fair value of obligations it has undertaken in issuing guarantees. Contingencies are recognized in the financial statements when probable of occurrence and reliably estimable.

Share-based compensation

Norsk Hydro ASA accounts for share-based payment in accordance with IFRS 2 Share-Based Payment. See note 9.2 Employee remuneration to the consolidated financial statements for additional information.

Risk management

For information about risk management in Norsk Hydro ASA see note 8.1 Financial and commercial risk management to the consolidated financial statements.

Income taxes

Deferred income tax expense is calculated in accordance with IAS 12 Income Taxes. Under IAS 12, deferred tax assets and liabilities are measured based on the differences between the carrying values of assets and liabilities for financial reporting and their tax basis which are considered temporary in nature. Deferred income tax related to remeasurements of pension obligations are recognized through Other comprehensive income. The tax effect of equity transactions, excluded transfers to owners, is recognized as a part of the equity transaction and do not affect the income tax expense. Other changes in deferred income tax asset and liability balances during the year represent the deferred income tax expense. Changes resulting from amendments and revisions in tax laws and tax rates are recognized when the new tax laws or rates are enacted.

Note 2 Employee retirement plans

The majority of employees in Norsk Hydro ASA is covered by a defined contribution plan for salaries up to 12G, where G equals the base amount in the National Insurance Scheme. In addition, a smaller group of employees earns benefits on salaries above 12G in a defined contribution based plan closed to new entrants. Norsk Hydro ASA has closed the main defined benefit plans covering a declining number of employees. The defined benefit plans are funded for benefits earned on salaries up to 12G and unfunded for salaries above this level and for early retirement and termination benefits. The plans comply with legal requirements for occupational pensions in Norway.

Norsk Hydro ASA participates in a pension plan that entitles the majority of its employees life-long benefits in addition to other pension benefits. The benefits are financed through a pooled arrangement by private sector employers (avtalefestet pensjon, AFP) where also the Norwegian state contributes. The plan is a defined benefit plan with limited funding and where plan assets are not segregated. The information required to calculate the share of the plan and account for the plan as a defined benefit plan is not available from the plan administrator. Hydro therefore accounts for the plan as if it were a defined contribution plan. The employer contributions are included in Multiemployer plans.

Pension cost

Amounts in NOK million	2022	2021
Defined benefit plans	28	32
Defined contribution plans	37	35
Multiemployer plans	6	6
Termination benefits and other	6	1
Social security cost	9	8
Pension expense	86	82
Interest expense (income)	(65)	(43)
Remeasurement (gain) loss in other comprehensive income	(57)	(780)

Recognized defined benefit assets and liability

Amounts in NOK million	2022	2021
Defined benefit obligation major plans	(4,676)	(5,212)
Plan assets	8,260	8,587
Reimbursement rights	262	287
Liability other plans	(5)	(4)
Social security cost	(316)	(347)
Net defined benefit asset	3,525	3,310
Recognized prepaid pension	6,080	6,125
Recognized pension liability	(2,554)	(2,815)
Net amount recognized	3,525	3,310

Change in defined benefit obligation (DBO)

Amounts in NOK million	2022	2021
Opening Balance	(5,212)	(5,465)
Current service cost	(27)	(31)
Interest expense	(96)	(90)
Actuarial gain (loss) economic assumptions	395	99
Experience gain (loss)	(49)	(41)
Benefit payments	314	316
Terminations benefits	(1)	-
Closing Balance	(4,676)	(5,212)

Change in pension plan assets

Amounts in NOK million	2022	2021
Opening Balance	8,587	7,919
Interest income	162	134
Return on plan assets above (below) interest income	(306)	719
Benefit payments	(182)	(184)
Closing Balance	8,260	8,587

Analysis of the defined benefit obligation (DBO)

Amounts in NOK million	2022	2021
Active members	(725)	(862)
Deferred members	(439)	(520)
Pensioners	(3,512)	(3,830)
Defined benefit obligation	(4,676)	(5,212)

	2022		2021	
	Benefit obligation	Benefit expense	Benefit obligation	Benefit expense
Assumptions				
Discount rate	3.20%	1.90%	1.90%	1.70%
Expected pension increase	1.75%	1.25%	1.25%	1.25%
Mortality basis	K2013	K2013	K2013	K2013

See note 9.3 Employee retirement plans in notes to the consolidated financial statements for information about sensitivities.

Note 3 Management remuneration, employee costs and auditor fees

See Norsk Hydro ASA Remuneration report 2022 for information and details related to the Corporate Management Board remuneration and Board of Directors' remuneration. Costs for some corporate management board members employed by subsidiaries are charged to Norsk Hydro ASA for services rendered as members of the Corporate Management Board.

See note 9.2 Employee remuneration in the notes to the consolidated financial statements for information on the employee share purchase plan.

The average number of employees in Norsk Hydro ASA was 390 in 2022 as compared to 385 in 2021. As of year-end 2022 and 2021, Norsk Hydro ASA employed 405 and 375 employees, respectively.

Total loans given by Norsk Hydro ASA to Norwegian employees as of December 31, 2022 were NOK 15 million, consisting of unsecured loans related to the employee share purchase plan.

Payroll related expenses are presented in the table below.

Amounts in NOK million	2022	2021
Employee benefit expense:		
Salaries	580	560
Social security costs	82	71
Other benefits	2	1
Pension expense (note 2)	86	82
Total	**751**	**713**

Note 4 Property, plant and equipment and intangible asset

Leases expensed in the period amounts to NOK 19 million and refers to leases of short term, low value or leases with variable payments.

Amounts in NOK million	Property, plant and equipment	Intangible assets	Total
Cost December 31, 2021	794	164	958
Additions at cost	59	12	71
Disposals at cost	(61)	(7)	(69)
Accumulated depreciation and impairment December 31, 2022	(356)	(90)	(446)
Carrying value December 31, 2022	435	79	514
Depreciation and impairment in 2022	(69)	(14)	(82)

Intangible assets mainly consist of software.

Note 5 Finance income and expense

Amounts in NOK million	2022	2021
Dividends from subsidiaries	5,025	1,850
Interest from group companies	591	359
Other interest income	265	59
Interest paid to group companies	(282)	(16)
Other interest expense	(619)	(498)
Net foreign exchange gain (loss)	745	585
Other, net	61	70
Financial income (expense), net	**5,786**	**2,409**

Note 6 Income taxes

The tax effect of temporary differences resulting in deferred tax assets (liabilities) are:

	Temporary differences Tax effect	
Amounts in NOK million	**2022**	2021
Short-term items	80	40
Long-term receivables from subsidiaries	(372)	-
Pensions[1)]	(776)	(728)
Long-term debt	226	44
Other long-term items	(47)	(27)
Deferred tax assets (liabilities)	**(888)**	**(671)**

[1)] Includes NOK (13) million and NOK (172) million of tax benefit (expense) allocated to equity in 2022 and 2021 respectively.

Taxable temporary differences and deductible temporary differences, which reverse or may reverse in the same period, are netted.

Reconciliation of tax expense

Amounts in NOK million	**2022**	2021
Income (loss) before taxes	5,121	1,919
Expected income taxes at statutory tax rate	1,127	422
Dividend exclusion	(924)	(352)
Permanent differences and other, net	22	33
Income tax expense (benefit)	**225**	**103**
Components of income taxes		
Current income taxes	20	45
Change in deferred taxes	205	58
Income tax expense (benefit)	**225**	**103**

See note 10.1 Income taxes in the consolidated financial statements for further information.

Taxes payable were NOK 27 million per December 31, 2022 and NOK 50 million per December 31, 2021.

Note 7 Shares in subsidiaries

The following shares in subsidiaries are directly owned by Norsk Hydro ASA.

Company name	Country	Location	Percentage of shares owned by Norsk Hydro ASA	Book value (NOK million)
Hydro Aluminium AS	Norway	Oslo	100.00	51,293
Hydro Energi AS	Norway	Oslo	100.00	5,643
Hydro Aluminium Deutschland GmbH[1)]	Germany	Grevenbroich	25.04	92
Industriforsikring AS	Norway	Oslo	100.00	20
Hydro Kapitalforvaltning AS	Norway	Oslo	100.00	4
Total				**57,052**

[1)] The company is owned 74.96 percent by Hydro Aluminium AS, and 25.04 percent by Norsk Hydro ASA.

Percentage of shares owned equals percentage of voting shares owned. Several of the above-mentioned companies also own shares in other companies.

In addition to the directly owned subsidiaries listed above, Norsk Hydro ASA has the following subsidiaries with significant operational activities. Sales offices, companies mainly serving as holding companies, and dormant companies, as well as companies holding smaller operational activities are not included in the list below. A full list of subsidiaries is available in Hydro's country by country reporting and at Hydro.com. The companies are listed by the business area in which the majority of their activities are managed.

Company name	Country	Ownership
Hydro Bauxite & Alumina		
ALUNORTE - Alumina do Norte do Brasil S.A.	Brazil	93.96%
Mineração Paragominas SA	Brazil	100.00%
Hydro Aluminium Metal		
Hydro Aluminium Australia Pty Limited	Australia	100.00%
ALBRAS - Alumínio Brasileiro SA	Brazil	51.00%
Sør-Norge Aluminium AS	Norway	100.00%
Slovalco a.s.	Slovakia	55.30%
Hydro Metal Markets		
Extrusion Services S.a.r.l	France	100.00%
Hydro Aluminium Gießerei Rackwitz GmbH	Germany	100.00%
Hydro Aluminium Clervaux S.A.	Luxembourg	100.00%
Hydro Aluminium Iberia S.A.U	Spain	100.00%
Hydro Aluminium Deeside Ltd.	United Kingdom	100.00%
Hydro Aluminium Metals USA, LLC	United States	100.00%

Company name	Country	Ownership
Hydro Extrusions		
Hydro Extrusion Nenzing GmbH	Austria	100.00%
Hydro Building Systems Belgium NV	Belgium	100.00%
Hydro Extrusion Lichtervelde NV	Belgium	100.00%
Hydro Extrusion Raeren SA	Belgium	100.00%
Hydro Extrusion Brasil S.A.	Brazil	100.00%
Hydro Extrusion Canada Inc.	Canada	100.00%
Hydro Aluminium Fabrication (Taicang) Co. Ltd	China	100.00%
Hydro Precision Tubing (Suzhou) Co. Ltd.	China	100.00%
Hydro Extrusion Denmark A/S	Denmark	100.00%
Hydro Precision Tubing Tønder A/S	Denmark	100.00%
Hydro Building Systems France Sarl	France	100.00%
Hydro Extrusion Albi SAS	France	100.00%
Hydro Extrusion Lucé/Chateauroux SAS	France	100.00%
Hydro Extrusion Puget SAS	France	100.00%
Hydro Building Systems Germany GmbH	Germany	100.00%
Hydro Extrusion Deutschland GmbH	Germany	100.00%
Hydro Extrusion Offenburg GmbH	Germany	100.00%
Hydro Building Systems Extrusion GmbH	Germany	100.00%
Hydro Extrusion Hungary Kft	Hungary	100.00%
Hydro Building Systems Italy S.P.A.	Italy	100.00%
Hydro Extrusion Italy S.r.l.	Italy	100.00%
Hydro Building Systems Atessa s.r.l.	Italy	100.00%
Hydro Extrusion Drunen B.V.	Netherlands	100.00%
Hydro Extrusion Hoogezand B.V.	Netherlands	100.00%
Hydro Extrusion Norway AS	Norway	100.00%
Hydro Extrusion Poland Sp. z.o.o	Poland	100.00%
Hydro Aluminium Extrusion Portugal HAEP S.A.	Portugal	100.00%
Hydro Extrusion Slovakia a.s.	Slovakia	100.00%
Hydro Building Systems Spain S.L.U.	Spain	100.00%
Hydro Extrusion Spain S.A.U.	Spain	100.00%
Hydro Extrusion Sweden AB	Sweden	100.00%
Hydro Aluminium UK Ltd.	United Kingdom	100.00%
Hydro Building Systems UK Ltd.	United Kingdom	100.00%
Hydro Extrusion Portland Inc	United States	100.00%
Hydro Extrusion USA LLC	United States	100.00%
Hydro Precision Tubing Monterrey LLC	United States	100.00%
Hydro Precision Tubing USA LLC	United States	100.00%

Note 8 Related party information

Norsk Hydro ASA employs key management personnel, including the majority of the Corporate Management Board and central staffs managing and safeguarding key processes such as business planning and performance follow-up, financial reporting, financing and payment services, IT infrastructure, policy and security, HR processes, legal framework and governance, and other group-wide processes. Costs incurred for employees and purchased goods and services are charged to subsidiaries to the extent the subsidiaries benefit from those processes. Such corporate costs are charged based on the actual cost of the corporate processes and as such reflects a cost coverage rather than revenue from contracts with customers. Costs associated with servicing shareholders is not recharged to subsidiaries. Total corporate costs charged to subsidiaries amounted to NOK 734 million and NOK 783 million in 2022 and 2021, respectively. Amounts invoiced during 2021 included certain charges related to the sale of Hydro Rolling, partly incurred during 2020. The agreement allowing Norsk Hydro ASA to charge subsidiaries holding the shares to be sold was established in 2021 in connection with the sales agreement for the business.

Norsk Hydro ASA also operates shared services in Norway, offering services within accounting, HR and IS/IT operation. These day-to-day services are charged based on usage of the services at prices reflecting the actual cost rather than agreed prices for such services, and as such are not considered revenue from contracts with customers. Total charges for shared services charged to subsidiaries based on incurred costs amounted to NOK 753 million and NOK 696 million in 2022 and 2021, respectively.

Receivables related to corporate costs and shared services amounted to NOK 68 million and NOK 205 million per December 31, 2022 and 2021, respectively.

Further, Norsk Hydro ASA offers project services to its subsidiaries and certain affiliated companies including associates and joint ventures. Services includes project planning and management and are offered at agreed prices for services under similar terms to internal and external customers. Such services are charged to subsidiaries with NOK 58 million and NOK 51 million in 2022 and 2021 respectively, presented as revenue. In addition, certain other services were invoiced to subsidiaries with NOK 7 million in both 2022 and 2021.

Norsk Hydro ASA owns the power production facilities at Notodden, Norway. The power production is managed by the subsidiary Hydro Energi AS who purchased all power produced under a long-term contract at fixed price entered into in 2019. Total consideration was NOK 104 million and NOK 135 million in 2022 and 2021, respectively.

Norsk Hydro ASA operates the cash pooling arrangements in Hydro. Further, Norsk Hydro ASA extends loans to subsidiaries, associates and jointly controlled entities at terms and conditions reflecting prevailing market conditions for corresponding services, allowing for a margin to cover administration and risk. Short- and long-term receivables from subsidiaries and short-term payables to subsidiaries shown in the balance sheet relates to these activities, and also covers some derivative instruments shown in note 10 Financial instruments, as well as receivables related to internal charges. See note 5 Financial income and expense for information on interest paid to and received from group companies.

For information on transactions with employees and management, see note 3 Management remuneration and employee costs and Norsk Hydro ASA Remuneration report 2022. See note 9.1 Related party information in the notes to the consolidated financial statements for identification of related parties and primary relationships with those parties. See note 11 Guarantees for information on guarantees provided on behalf of subsidiaries and jointly controlled entities.

Audit fees were NOK 5 million and NOK 4 million in 2022 and 2021, respectively. Fees for audit related services were NOK 1 million in 2021. Fees for other services were NOK 2 million in both 2022 and 2021.

Note 9 Specification of balance sheet items

Amounts in NOK million	2022	2021
Securities	10	10
Prepaid pension	6,080	6,125
Other non-current assets	212	47
Total prepaid pension, investments and other non-current assets	**6,301**	**6,182**
Pension liability	2,554	2,815
Deferred tax liabilities	888	671
Other long-term provisions	198	241
Total long-term provisions	**3,640**	**3,727**

Note 10 Financial instruments

Norsk Hydro ASA offers currency derivatives to subsidiaries using such instruments for risk management. Contracts are recognized at estimated market value, determined by calculating the contractual cash flows using currency rates at the balance sheet date and discounting those cash flows to a present value. At the end of 2022 and 2021, the value of currency forward contracts outstanding with subsidiaries were as follows:

Amounts in NOK million	2022	2021
Currency forward contracts, short-term	(7)	(7)
Currency forward contracts, long-term	(1)	2
Financial income, net	**(8)**	**(6)**

The contracts represent exposure mainly in Euro and US dollars. In addition, there are some contracts with exposure to British pounds, Japanese yen, Danish krone and Swedish krone representing lower amounts. The contracts mature no later than 2024.

Note 11 Guarantees

Norsk Hydro ASA provides guarantees arising in the ordinary course of business including stand-by letters of credit, performance bonds and various payment or financial guarantees. All commercial guarantees are on behalf of subsidiaries.

Amounts in NOK million	2022	2021
Commercial guarantees	2,455	2,925
Total guarantees not recognized	**2,455**	**2,925**

Note 12 Long-term debt

Amounts in NOK million	2022	2021
EUR	8,395	7,924
NOK	10,985	9,986
SEK	-	972
Total unsecured loans	19,381	18,883
Lease liabilities	244	228
Outstanding debt	19,625	19,111
Less: Current portion	(2,305)	(3,020)
Total long-term debt	**17,320**	**16,091**

As of December 31, 2022, long-term debt that falls due after 2027 amounted to NOK 7,165 million. See note 7.4 Short and long-term debt in notes to the consolidated financial statements for further information. For a description of Hydro's policies for funding and liquidity, see note 7.1 Capital management in notes to the consolidated financial statements.

Note 13 Number of shares outstanding, shareholders and equity reconciliation

The share capital of Norsk Hydro ASA as of December 31, 2022 was NOK 2,271,760,107 consisting of 2,068,998,276 ordinary shares at NOK 1.098 per share. As of December 31, 2022, Norsk Hydro ASA had purchased 26,593,407 treasury shares at a cost of NOK 1,229 million. See Consolidated statements of changes in equity and note 7.6 Shareholders' equity for additional information.

The table shows shareholders holding one percent or more of the total 2,068,998,276 shares outstanding as of December 31, 2022, according to information in the Norwegian securities' registry system (Verdipapirsentralen).

Name	Number of shares
The Ministry of Trade, Industry and Fisheries of Norway	708,865,253
Folketrygdfondet	122,501,346
State Street Bank and Trust Comp[1)]	63,441,354
JP Morgen Chase Bank, N.A., London[1)]	26,890,271
State Street Bank and Trust Comp[1)]	25,799,757
State Street Bank and Trust Comp[1)]	25,656,822
Clearstream Banking S.A.[1)]	24,223,137
J.P. Morgen SE[1)]	22,439,899
JP Morgen Chase Bank, N.A., London[1)]	21,165,414

[1)] Nominee accounts.

Changes in equity

Amounts in NOK million	Paid-in capital	Retained earnings	Total equity
December 31, 2021	31,409	19,069	50,478
Total Comprehensive Income	-	4,941	4,941
Dividend paid in 2022 not accrued[1)]	-	(2,982)	(2,982)
Dividend proposed	-	(11,540)	(11,540)
Treasury shares	51	(635)	(584)
December 31, 2022	**31,460**	**8,853**	**40,313**

[1)] The Extraordinary General Meeting September 20, 2022 approved the distribution of a dividend of NOK 1.45 per share to the Company's shareholders.

Note 14 Other income

Other income in Norsk Hydro ASA includes charges for goods and services to subsidiaries. The main part represents sale of energy produced at the parent company's power plant to the subsidiary Hydro Energi AS. In addition, the parent company is responsible for the group's internal engineering group, offering project execution services, mainly to subsidiaries, but also to associates and joint ventures, and occasionally to other companies. Government grants supporting research and development activities are also included.

Statement from the Board and the CEO of Norsk Hydro ASA

Norsk Hydro ASA (the parent company) had a net income of NOK 4,896 million in 2022 compared to NOK 1,816 million in 2021. The result reflects increased dividends from subsidiaries in 2022 compared to 2021.

Hydro's Board of Directors proposes to pay a dividend of NOK 5.65 per share and an additional NOK 2.0 billion in share buyback for 2022, for approval by the Annual General Meeting on May 10, 2023. The proposed payment demonstrates the company's commitment to provide a predictable dividend to shareholders. Hydro's dividend policy reflects our ambitions to lift performance and cash returns to shareholders over the cycle. The dividend policy is to pay out a minimum of 50 percent of adjusted net income over the cycle with a NOK 1.25 per share dividend floor.

According to section 3-3a of the Norwegian Accounting Act, the Board of Directors confirms that the financial statements have been prepared on the assumption of a going concern.

Oslo, February 13, 2023

Dag Mejdell *Chair*	Rune Bjerke *Deputy chair*	Arve Baade *Board member*	Petra Einarsson *Board member*	Kristin F. Kragseth *Board member*	Peter Kukielski *Board member*

Bjørn Petter Moxnes *Board member*	Philip Graham New *Board member*	Torleif Sand *Board member*	Margunn Sundve *Board member*	Marianne Wiinholt *Board member*	Hilde Merete Aasheim *President and CEO*

The below listed parts of the Hydro Annual Report 2022 constitute the Report of the Board of Directors

Regulation	Content	Annual Report Chapter Reference	Page reference
Norwegian accounting act			
Section 3-3a, 1st para	Information regarding the nature and location of the business, including information on any branch offices.	About Hydro Letter to stakeholder Our business	5 6-8 17-29
Section 3-3a, 2nd para	Review of the development and results of the company's operations and position together with a description of the key risks and uncertainty factors facing the company, hereunder also information on research and development activities.	Performance review Governance - Risk section Innovation and technology transition	30-38 40-55 99-102
Section 3-3a, 5th par	A description that provides a basis for assessing the company's further outlook, including whether the results for the year agree with previously stated target results and expected developments and give reason for any discrepancy	Letter to stakeholder Strategic direction and key developments Performance review	6-8 10-16 30-38
Section 3-3a, 6th para	Information regarding any financial risk that is significant to the evaluation of the company's assets, liabilities, financial position and results.	Hydro's key financial exposures Governance - Risk section	36 40-55
Section 3-3a, 7th para, cfr. Section 4-5	Information regarding the going concern assumption.	Statement from the Board and the CEO	185
Section 3-3a, 8th para	Proposal for the allocation of profit or settlement of loss.	Financial income statement Norsk Hydro ASA	171
Section 3-3a, 9th para	Information about the work environment, along with an overview of implemented measures relevant to the working environment and including information on injuries, accidents and sick leave rates.	Our people and work environment	116-122
Section 3-3a, 10th para	Information on matters relating to the business, hereunder its factor inputs and products, which may result in a not insignificant impact on the external environment. The environmental impact each aspect of the business has or may have, as well as measures implemented or planned implemented to prevent or reduce any negative environmental impacts, shall be stated	Our business Sustainability	17-29 78-122
Section 3-3a, 11th para	Information on whether insurances covering the board members' and CEO's potential liabilities towards the company and third parties are maintained, including information on the relevant insurance coverage.	Norwegian Code of Practice for Corporate Governance - Chapter 2	71-77
Section 3-3a, 12th para, cfr. Securities Trading Act Section 5-8a (1)	Shareholders information: A description of any provisions of articles of association that restrict the right to trade in the shares of the company.	Not applicable	-
Section 3-3a, 12th para, cfr. Securities Trading Act Section 5-8a (2)	Shareholders information: A description of who exercises the rights attached to shares in any employee share schemes where authority is not exercised directly by the employees covered by the scheme.	Not applicable	-
Section 3-3a, 12th para, cfr. Securities Trading Act Section 5-8a (3)	Shareholders information: Any agreements between shareholders which are known to the company and which restrict the possibilities of trading in or exercising voting rights attached to shares.	Not applicable	-
Section 3-3a, 12th para, cfr. Securities Trading Act Section 5-8a (4)	Shareholders information: Any significant agreements to which the company is a party, the terms of which take effect, alter or terminate as a result of a takeover bid, and a description of those terms.	Not applicable	-
Section 3-3b	Report on corporate governance.	Corporate governance	39-77
Section 3-3c, first para	Report on social responsibility.	Sustainability	78-122
Section 3-3d	Report on payments to the authorities, etc. (Country-by-country reporting) .	Country-by-country reporting	193-203
Equality and Anti-Discrimination Act			
Section 26a	Accounting for the factual status of gender equality, equal pay and diversity, and actions taken to fulfill requirements.	Sustainability - Diversity, inclusion & belonging	120-122
Norwegian Companies Act			
Paragraph 6-16 a and b	Management remuneration	Management remuneration report	-
UK Modern Slavery Act 2015 **Australian Modern Slavery Act 2018**	Information regarding steps taken to ensure that modern slavery is not taking place in Hydro's operations or its supply chain.	Sustainability *Responsible supply chain* *Local community value creation* *Human rights*	78-122 109-112 113-115 103-108

Responsibility statement from the Board and the CEO

We confirm to the best of our knowledge that the consolidated financial statements for 2022 have been prepared in accordance with IFRS as adopted by the European Union, as well as additional information requirements in accordance with the Norwegian Accounting Act, that the financial statements for the parent company for 2022 have been prepared in accordance with the Norwegian Accounting Act the regulation on simplified application of international accounting standards (FOR-2008-01-21-57), and that the information presented in the financial statements gives a true and fair view of the assets, liabilities, financial position and result of Norsk Hydro ASA and the Hydro Group for the period. We also confirm to the best of our knowledge that the Annual Report includes a true and fair review of the development, performance and financial position of Norsk Hydro ASA and the Hydro Group, together with a description of the principal risks and uncertainties that they face, and that the country by country report for 2022 has been prepared in accordance with the Norwegian Accounting Act §3-3d and the Norwegian Security Trading Act §5-5a.

Oslo, February 13, 2023

Dag Mejdell *Chair*	Rune Bjerke *Deputy chair*	Arve Baade *Board member*	Petra Einarsson *Board member*	Kristin F. Kragseth *Board member*	Peter Kukielski *Board member*
Bjørn Petter Moxnes *Board member*	Philip Graham New *Board member*	Torleif Sand *Board member*	Margunn Sundve *Board member*	Marianne Wiinholt *Board member*	Hilde Merete Aasheim *President and CEO*

Independent auditor’s report

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To the General Meeting of Norsk Hydro ASA

Independent Auditor’s Report

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Norsk Hydro ASA, which comprise:

- the financial statements of the parent company Norsk Hydro ASA (the Company), which comprise the balance sheet as at 31 December 2022, the income statement, statement of comprehensive income and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, and
- the consolidated financial statements of Norsk Hydro ASA and its subsidiaries (the Group), which comprise the balance sheet as at 31 December 2022, the income statement, statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion

- the financial statements comply with applicable statutory requirements,
- the financial statements give a true and fair view of the financial position of the Company as at 31 December 2022, and its financial performance and its cash flows for the year then ended in accordance with simplified application of international accounting standards according to section 3-9 of the Norwegian Accounting Act, and
- the consolidated financial statements give a true and fair view of the financial position of the Group as at 31 December 2022, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the EU.

Our opinion is consistent with our additional report to the Board Audit Committee.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor’s Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Company and the Group as required by relevant laws and regulations in Norway and the International Ethics Standards Board for Accountants’ International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

To the best of our knowledge and belief, no prohibited non-audit services referred to in the Audit Regulation (537/2014) Article 5.1 have been provided.

We have been the auditor of the Company for 13 years from the election by the general meeting of the shareholders on 4 May 2010 for the accounting year 2010 with a renewed election on the 11 May 2020.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Impairment assessment of goodwill, intangible and non-current assets

Refer to Note 1.1 Reporting entity, basis of preparation and significant accounting policies, Note 2.1. Property, plant and equipment, Note 2.2 Intangible assets, Note 2.3 Goodwill, Note 2.4 Depreciation and amortization expense, and Note 2.5 Impairment of non-current assets

The key audit matter	*How the matter was addressed in our audit*
The Group's operations are sensitive to certain commodity prices and other factors, including aluminum and alumina prices, energy prices, inflation rates, relevant foreign exchange rates and production volumes which impact key assumptions in cash flow forecasts and can give rise to impairment indicators. Management exercise judgement related to expected timing of future cash flows and key assumptions. The economic environment and volatility of long-term assumptions indicate that impairment could be a risk related to specific assets and cash generating units (CGUs) and can also impact the assessment of impairment of goodwill. Impairment indications could also arise from transactions in which the agreed consideration is below the carrying value of the asset or CGU. Certain plants are also sensitive to the uncertainty related to renewal of power contracts expiring within 1 to 5 years. Impairment charges of NOK 336 million were recognized in 2022, consisting of: • NOK 77 million in relation to the business area Hydro Aluminium Metal • NOK 258 million in relation to the business area Hydro Extrusions As at 31 December 2022, the Group has goodwill of NOK 5,557 million, Property, plant and equipment of NOK 62,656 million and other intangible assets of NOK 3,722 million.	Our audit procedures in this area included: • Assessing management's process and results for identification and classification of CGU's and assessing whether they were appropriate and in accordance with relevant accounting standards • Evaluating management's assessment of impairment indicators • Performing retrospective reviews of the accuracy of management's estimates in terms of timing of cash outflows and other assumptions such as long-term pricing where historical data is available • Evaluating and challenging the forecasted cash flows including timing of future cash flows applied in the models with reference to historical accuracy and approved business plans • When impairment is caused by a sales transaction, confirming the agreed consideration to the sales and purchase agreement, as well as re-calculating the impairment charge and relevant adjustments • Testing the sensitivity of movements in key assumptions • Evaluating, with assistance from our valuation specialists, key assumptions such as aluminium and alumina prices, inflation rates, energy and fuel prices, relevant foreign exchange rates and discount rates by reference to external sources and relevant benchmarks • Testing the mathematical accuracy of the models used to calculate value in use • Assessing the adequacy of the disclosures related to impairment.

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Provisions for environmental clean-up costs and asset retirement obligations

Refer to Note 1.1 Reporting entity, basis of preparation and significant accounting policies, and Note 4.1 Uncertain assets and liabilities.

The key audit matter	*How the matter was addressed in our audit*
The Group is involved in operations such as bauxite mining, alumina refining, primary aluminium production and extrusion activities. There is an inherent risk that these operations may generate significant obligations related to site restoration, reforestation and other remediation work. Such potential obligations are dependent on the jurisdictions in which the Group operates and changes in the relevant political and legislative environments. Management decisions to expand, curtail or terminate operations in specific locations can impact obligations as described above. Estimating and calculating such environmental obligations require significant management judgement. The risk of inaccurate estimates is increased due to the uncertainty of scope and timing of such obligations and the limited amount of historical data available. The Group has recognized provisions for environmental clean-up and asset retirement obligations of NOK 4,596 million as explained in note 4.1 Uncertain assets and liabilities.	Our audit procedures in this area included: • Assessing the estimated cost and timing of activities applied in the calculations by comparing management forecasts with prior year estimates. • Comparing management's assumptions to relevant market data to test the reasonableness of discount rates, inflation rates, foreign exchange rates and other key assumptions used in the calculations. • Assessing the accounting treatment for compliance with IFRS and consistency of application, in particular related to the extent to which obligations are capitalized or expensed and the amortization period for capitalized assets. • Testing, with assistance from our valuation specialists, the mathematical accuracy of the models used to calculate provisions and asset retirement obligations. • Assessing the adequacy of the disclosures pertaining to estimation uncertainty, provisions and contingent liabilities.

Other Information

The Board of Directors and the Managing Director (management) are responsible for the other information accompanying the financial statements. The other information comprises information in the annual report, but does not include the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information accompanying the financial statements. The purpose is to consider if there is material inconsistency between the other information accompanying the financial statements and the financial statements or our knowledge obtained in the audit, or whether the other information accompanying the financial statements otherwise appear to be materially misstated. We are required to report if there is a material misstatement in the other information accompanying the financial statements. We have nothing to report in this regard.

Based on our knowledge obtained in the audit, it is our opinion that the information presented in the annual report concerning the financial statements, required by the Norwegian Accounting Act sections 3-3a, 3-3b, 3-3c and 3-3d (the Board of Director's report, the statements on Corporate Governance and Environment and Social Responsibility and the report on payments to governments), and the going concern assumption is consistent with the financial statements and contains the information required by applicable legal requirements.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in

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accordance with simplified application of international accounting standards according to the Norwegian Accounting Act section 3-9, and for the preparation and true and fair view of the consolidated financial statements of the Group in accordance with International Financial Reporting Standards as adopted by the EU, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's and the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error. We design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's and the Group's internal control.

- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's and the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company and the Group to cease to continue as a going concern.

- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves a true and fair view.

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control

Hydro

that we identify during our audit.

We also provide the Board Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

Report on Compliance with Requirement on European Single Electronic Format (ESEF)

Opinion
As part of the audit of the financial statements of Norsk Hydro ASA we have performed an assurance engagement to obtain reasonable assurance about whether the financial statements included in the annual report, with the file name "549300N1SDN71ZZ8BO45-2022-12-31-nb", have been prepared, in all material respects, in compliance with the requirements of the Commission Delegated Regulation (EU) 2019/815 on the European Single Electronic Format (ESEF Regulation) and regulation pursuant to Section 5-5 of the Norwegian Securities Trading Act, which includes requirements related to the preparation of the annual report in XHTML format, and iXBRL tagging of the consolidated financial statements.

In our opinion, the financial statements, included in the annual report, have been prepared, in all material respects, in compliance with the ESEF regulation.

Management's Responsibilities
Management is responsible for the preparation of the annual report in compliance with the ESEF regulation. This responsibility comprises an adequate process and such internal control as management determines is necessary.

Auditor's Responsibilities
Our responsibility, based on audit evidence obtained, is to express an opinion on whether, in all material respects, the financial statements included in the annual report have been prepared in compliance with ESEF. We conduct our work in compliance with the International Standard for Assurance Engagements (ISAE) 3000 – "Assurance engagements other than audits or reviews of historical financial information". The standard requires us to plan and perform procedures to obtain reasonable assurance about whether the financial statements included in the annual report have been prepared in compliance with the ESEF Regulation.

As part of our work, we have performed procedures to obtain an understanding of the Company's processes for preparing the financial statements in compliance with the ESEF Regulation. We examine whether the financial statements are presented in XHTML-format. We evaluate the completeness and accuracy of the iXBRL tagging of the consolidated financial statements and assess management's use of judgement. Our procedures include reconciliation of the iXBRL tagged data with the audited financial statements in human-readable format. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Oslo, 13 February 2023
KPMG AS

Lars Inge Pettersen
State Authorised Public Accountant

Note: This translation from Norwegian has been prepared for information purposes only.

Appendices

Hydro

Alternative Performance Measures (APM)

Alternative performance measures, i.e. financial performance measures not within the applicable financial reporting framework, are used by Hydro to provide supplemental information, by excluding items that, in Hydro's view, does not give an indication of the periodic operating results or cash flows of Hydro, or should be assessed in a different context than its classification according to its nature. Financial APMs are intended to enhance comparability of the results and cash flows from period to period, and it is Hydro's experience that these are frequently used by analysts, investors and other parties. Management also uses these measures internally to drive performance in terms of long-term target setting and as basis for performance related pay. These measures are adjusted IFRS measures defined, calculated and used in a consistent and transparent manner over the years and across the company where relevant. Operational measures such as, but not limited to, volumes, prices per mt, production costs and improvement programs are not defined as financial APMs. To provide a better understanding of the company's underlying financial performance for the relevant period, Hydro focuses on adjusted EBITDA in the discussions on periodic underlying financial and operating results and liquidity from the business areas and the group, while adjusting effects to adjusted EBITDA, EBIT and net income (loss) are discussed separately. Financial APMs should not be considered as a substitute for measures of performance in accordance with the IFRS. Disclosures of APMs are subject to established internal control procedures.

Hydro's financial APMs

- EBIT: Earnings before financial items and tax.
- Adjusted EBIT: EBIT +/- identified adjusting items to EBIT as described below.
- EBITDA: EBIT + depreciation, amortization and impairments, net of investment grants.
- Adjusted EBITDA: EBITDA +/- identified adjusting items to EBITDA as described below.
- Adjusted net income (loss) from continuing operations: Net income (loss) from continuing operations +/- adjusting items to net income (loss) as described below.
- Adjusted earnings per share from continuing operations: Adjusted net income (loss) from continuing operations attributable to Hydro shareholders divided by weighted average of outstanding shares (ref.: note 7.6 to the consolidated financial statements).
- Investments: Additions to property, plant and equipment (capital expenditures) plus long-term securities, intangible assets, long-term advances and investments in equity accounted investments, including amounts recognized in business combinations for continuing operations.
- Net cash (debt): Short- and long-term interest-bearing debt adjusted for Hydro's liquidity positions.
- Adjusted net cash (debt): Net cash (debt) adjusted for liquidity positions regarded unavailable for servicing debt, pension obligation and other obligations which are considered debt-like in nature.
- Adjusted net cash (debt) to adjusted EBITDA ratio: Adjusted net cash (debt) / adjusted EBITDA
- (Adjusted) RoaCE: (Adjusted) RoACE is defined as (Adjusted) "Earnings after tax" divided by average "Capital employed". (Adjusted) "Earnings after tax" is defined as (adjusted) "Earnings before financial items and tax" less "Adjusted income tax expense". Since RoaCE represents the return to the capital providers before dividend and interest payments, adjusted income tax expense excludes the tax effects of items reported as "Finance income (expense), net" and in addition, for adjusted figures, the tax effect of adjusting items. "Capital employed" is defined as "Shareholders' Equity", including non-controlling interest plus long-term and short-term interest-bearing debt less "Cash and cash equivalents" and "Short-term investments".
- Capital expenditure (Capex): "Purchase of property, plant and equipment" plus "Purchase of other Long-term investments", adjusted for elements that are not considered cash effective.
- Cash effective change in net operating capital: Changes to "Trade and other receivables" plus/minus changes to "Inventories" plus/minus changes to "Trade and other payables" as reported in the statements of cash flows.
- Free cash flow: "Net cash provided by operating activities" less "Net cash used in investing activities", adjusted for "Purchases of short-term investments, "Sales of short-term investments" and net cash received or paid for short- and long-term collateral.

Adjusting items to EBITDA, EBIT, net income (loss) and earnings per share

Hydro has defined two categories of items which are adjusted to results in all business areas, equity accounted investments and at group level. One category is the timing effects, which are unrealized changes to the market value of certain derivatives. When realized, effects of changes in the market values since the inception of the instrument are included in adjusted EBITDA and adjusted EBIT. Changes in the market value of the trading portfolios are included in adjusted results. The other category includes material items which are not regarded as part of underlying business performance for the period, such as major rationalization charges and closure costs, effects of disposals of businesses and operating assets, major impairments of property, plant and equipment, as well as other major effects of a special nature, and realized effects of currency derivatives entered into for risk management purposes. Materiality is defined as items with a value above NOK 20 million. All adjusting items to results are reflecting a reversal of transactions recognized in the financial statements for the current period, with the exception of realized foreign exchange gain (loss). Part-owned entities have implemented similar adjustments.

- Unrealized derivative effects on LME related contracts include unrealized gains and losses on contracts measured at market value, which are used for operational hedging purposes related to future expected sales and purchase transactions, both fixed-price customers and supplier contracts and transactions at not yet determined market prices. Also includes elimination of changes in fair value of certain internal physical aluminium contracts.
- Unrealized derivative effects on power and raw material contracts include unrealized gains and losses on embedded derivatives in raw material and power contracts for Hydro's own use and for physical and financial power contracts used for managing price risks and volume changes. Unrealized derivative effects on certain power contracts in a business model with the combined aim to manage hydrological risk in own production, differences in power needs in existing and new business activities in Hydro as well as supporting development of new renewable energy projects are also adjusted for. Adjustments also comprise elimination of changes in fair value of embedded derivatives within certain internal power contracts.
- Significant rationalization charges and closure costs include costs related to specifically defined major projects, and not considered to reflect periodic performance in the individual plants or operations. Such costs involve termination benefits, dismantling of installations and buildings, clean-up activities that exceed legal liabilities, etc. Costs related to regular and continuous improvement initiatives are included in underlying results.
- Significant community contributions Brazil refers to the provision recognized in relation to the TAC and TC agreements with the Government of Parà and Ministèrio Pùblico made in 2018, including later cost adjustments and certain similar agreements.
- Other effects include insurance proceeds covering asset damage, legal settlements, etc. Insurance proceeds covering lost income in the same or a previous period are included in adjusted results.
- Pension includes recognition of pension plan amendments and related curtailments and settlements.
- Transaction related effects reflect the (gains) losses on divestment of businesses and individual assets, the net remeasurement (gains) losses related to previously owned shares in acquired businesses as well as inventory valuation expense related to acquisitions.
- Adjusted items in equity accounted investments reflects Hydro's share of adjusting items from adjusted net income in Qatalum and are based on Hydro's definitions, including both timing effects and material items not regarded as part of underlying business performance for the period.
- Impairment charges (PP&E and equity accounted investments) relate to significant write-downs of assets or groups of assets to estimated recoverable amounts in the event of an identified loss in value. Gains from reversal of impairment charges are also adjusted for.
- Depreciation relate to excess depreciation for assets with significantly reduced expected useful life related to a decision to close the plant or similar significant changes.
- Realized foreign exchange gain (loss) on risk management instruments represents such items as foreign currency derivatives entered into and managed to mitigate currency risk in the production margin, i.e. the difference between sales price for products such as aluminium or alumina versus the cost of raw materials and energy used in production. Realized embedded currency derivatives in certain power contracts in Norway denominated in Euro are also adjusted for. Such currency effects are included in currency gains and losses in finance expense in the income statement, and included in adjusted EBITDA and adjusted EBIT.
- Net foreign exchange (gain) loss: Realized and unrealized gains and losses on foreign currency denominated accounts receivable and payable, funding and deposits, embedded currency derivatives in certain power contracts and forward currency contracts purchasing and selling currencies that hedge net future cash flows from operations, sales contracts and operating capital, with the exception of the realized foreign currency exchange gain (loss) on risk management instruments mentioned above.
- Calculated income tax effect: In order to present adjusted net income on a basis comparable with our adjusted operating performance, the adjusted income taxes include adjustments for the expected taxable effects on adjusted items to income before tax.
- Other adjustments to net income from continuing operations include other major financial and tax related effects not regarded as part of the underlying business performance of the period.

Adjusting items to EBITDA and EBIT per operating segment and for Other and eliminations[1)]

NOK million	2022	2021
Unrealized derivative effects on raw material contracts	(40)	(141)
Community contributions Brazil[2)]	32	217
Other effects [3)]	162	(46)
Hydro Bauxite & Alumina	155	30
Unrealized derivative effects on LME related contracts	(2,990)	4,912
Unrealized derivative effects on power contracts[4)]	3,218	(2,763)
Significant rationalization charges and closure costs[5)]	46	263
Net foreign exchange (gain)/loss[6)]	(108)	(120)
Other effects[7)]	(69)	(232)
Hydro Aluminium Metal	97	2,060
Unrealized derivative effects on LME related contracts	(107)	42
Other effects[8)]	-	(46)
Hydro Metal Markets	(107)	(4)
Unrealized derivative effects on LME related contracts	59	122
Unrealized derivative effects on power contracts	3	(72)
Significant rationalization charges and closure costs[9)]	106	114
(Gains)/losses on divestments[10)]	(54)	(27)
Other effects[11)]	(76)	-
Hydro Extrusions	38	137
Unrealized derivative effects on power contracts	170	(107)
(Gains)/losses on divestments[12)]	(65)	(45)
Net foreign exchange (gain)/loss[6)]	11	21
Hydro Energy	116	(131)
Unrealized derivative effects on LME related contracts[13)]	36	13
(Gains)/losses on divestments[14)]	-	(231)
Net foreign exchange (gain)/loss[6)]	(221)	20
Other effects[15)]	15	66
Other and eliminations	(170)	(132)
Adjusting items to EBITDA	128	1,959
Impairment charges		
Hydro Aluminium Metal[16)]	77	276
Hydro Extrusions[17)]	258	150
Depreciation[18)]	-	513
Adjusting items to EBIT	464	2,899

1) Negative figures indicate reversal of a gain and positive figures indicate reversal of a loss.
2) Community contributions includes provisions for the TAC and TC agreements with the Government of Parà and Ministèrio Pùblico made in September 2018, including later adjustments for changes in cost estimates, and similar agreements.
3) Other effects in Hydro Bauxite & Alumina in 2022 includes derecognized engineering cost related to a project on hold. Other effects in Hydro Bauxite & Alumina in 2021 includes insurance compensation for property damage at Alunorte.
4) Unrealized derivative effects on power contracts includes the effect of settling some such contracts in Slovalco net through selling power in 2021 and thereby meeting the requirement for recognizing contracts in the same contract portfolio at fair value. The effects of consuming power under contracts recognized at fair value are included for 2022.
5) Rationalization and closure costs in Hydro Aluminium Metal in 2021 and a cost reduction in 2022 related to Aluchemie. Cost in 2022 related to curtailment cost in the Slovalco smelter.
6) Realized currency gains and losses from risk management contracts and embedded currency derivatives in physical power and raw material prices.
7) Other effect in Hydro Aluminium Metal in 2022 relates to insurance compensation for the power outage in Albras. Other effects in Hydro Aluminium Metal in 2021 excludes the recognized deferred tax asset in Qatalum after the end of the tax holiday period.
8) Other effects in Metal Markets in 2021 includes a compensation received.
9) Significant rationalization and closure costs include provisions for costs related to reduction of overcapacity, closures and environmental clean-up activities in Hydro Extrusions.
10) Divestments of Hydro Extrusions plants, including adjustments of sales price.
11) Other effects in Hydro Extrusions relates to Insurance compensation for cost incurred prior to Hydro's acquisition of the business affected.
12) Divestment gain in Hydro Energy in 2022 relates to the partial sale of a project company involved with a wind power project in Sweden, held by Hydro REIN. Divestment gain in Hydro Energy in 2021 relates to the lower level of influence in Kyoto Group, which is now traded at the multilateral trading facility Euronext Growth Market, Oslo, for which equity accounting has ended.
13) Unrealized derivative effects LME related contracts result from elimination of changes in the valuation of certain internal aluminium contracts.
14) Reversal of gain of sales of properties in Germany in 2021.
15) Other effects in 2022 and 2021 relates to environmental provision for closed sites in Germany.
16) Impairment charges in Hydro Aluminium Metal in 2022 and 2021 reflect write downs related to the Slovalco smelter.
17) Impairment charges in 2022 and 2021 in Hydro Extrusions include impairments of various individaul sites and assets.
18) Excess depreciation in 2021 related to the anode producer Aluchemie which was closed at the end of 2021.

Adjusted EBITDA

NOK million	2022	2021
EBIT	30,715	17,887
Depreciation, amortization and impairment	8,929	8,281
Investment grants	(108)	(117)
EBITDA	**39,536**	**26,050**
Adjusting items to EBITDA	128	1,959
Adjusted EBITDA	**39,664**	**28,010**

Adjusted earnings per share from continuing operations

NOK million	2022	2021
Net income (loss) from continuing operations	24,381	13,930
Adjusting items to net income (loss) from continuing operations [1) 2)]	(1,236)	976
Adjusted net income (loss) from continuing operations	23,145	14,905
Adjusted net income from continuing operations attributable to non-controlling interests	1,205	1,017
Adjusted net income from continuing operations attributable to Hydro shareholders	21,941	13,888
Number of shares	2,051	2,051
Adjusted earnings per share from continuing operations	10.70	6.77

1) See Items excluded from underlying net income (loss) in the section Financial results in Performance Review section
2) Adjusting items to net income (loss) consist of the Adjusting items to EBIT specified on the previous page, and realized and unrealized currency gains and losses. These items are net of calculated tax effects, for most items based on a 30 percent standardized tax rate.

Adjusted net cash (debt) and adjusted net cash (debt) to adjusted EBITDA ratio

Hydro's capital management measures are described in note 7.1 Capital management in the Financial statements, including reconciliations and comparable information

Adjusted Return on average Capital Employed (RoaCE)

Hydro uses adjusted RoaCE to measure the performance for the group as a whole and within its operating segments, both in absolute terms and comparatively from period to period. Management views this measure as providing additional understanding of the rate of return on investments over time in each of its capital intensive businesses and in the operating results of its business segments. RoaCE is calculated as (Adjusted) EBIT after tax divided by average Capital employed for the respective period. The definition of capital employed was amended during 2021 to be consistent with the amended definition of Net cash (debt), and excludes long-term collateral.

Capital employed for 2021 excludes Assets held for sale and Liabilities in disposal groups, as results from the divested Hydro Rolling business is separately reported as Income (loss) from discontinued operations.

Earnings after tax

	Reported		Underlying	
NOK million	**2022**	2021	**2022**	2021
EBIT	30,715	17,887	31,179	20,786
Adjusted Income tax expense[1]	(7,489)	(4,314)	(7,654)	(5,255)
Earnings after tax	**23,226**	**13,572**	**23,525**	**15,531**

Capital employed

NOK million	Dec 31 2022	Sep 30 2022	Jun 30 2022	Mar 31 2022	Dec 31 2021	Sep 30 2021	Jun 30 2021	Mar 31 2021
Current assets in continuing operations[2]	55,149	64,723	65,122	55,912	46,027	39,689	36,952	31,439
Property, plant and equipment	62,656	62,369	58,920	56,599	54,605	54,642	56,353	53,890
Other non-current assets[3]	46,728	51,007	46,876	45,932	42,250	42,144	41,951	39,749
Current liabilities in continuing operations[4]	(36,061)	(38,356)	(39,880)	(37,666)	(33,140)	(27,277)	(25,494)	(21,498)
Non-current liabilities[4]	(21,984)	(23,502)	(24,309)	(26,418)	(24,574)	(27,020)	(24,643)	(22,402)
Capital Employed	**106,488**	**116,241**	**106,728**	**94,360**	**85,167**	**82,177**	**85,119**	**81,178**

Return on average Capital Employed (RoaCE)[7]

	Reported		Adjusted	
	2022	2021	**2022**	2021
Hydro	21.9 %	16.3 %	22.2 %	18.6 %

1) Adjusted Income tax expense is based on reported and adjusted tax expense adjusted for tax on financial items.
2) Excluding cash and cash equivalents and short-term investments.
3) Excluding long-term collateral related to strategic and operational hedging activities.
4) Excluding interest-bearing debt.
5) Average Capital Employed measured over the last 4 quarters to reflect the return for the full year.

Capital expenditure (Capex)

Capital expenditure (Capex) Capex is a measure for the cash amount spent on investment activities related to property, plant and equipment and other long-term investments as reported in the consolidated statements of cash flows for the period. Hydro uses this measure to drive optimization of capital allocation. The values include continuing operations only.

NOK million	**2022**	2021
Purchase of property, plant and equipment	(9,604)	(6,020)
Purchase of other long-term investments	(1,971)	(911)
Sum	**(11,575)**	**(6,931)**
Investment grants received	35	49
Capital expenditure (continuing operations)	**(11,540)**	**(6,882)**

1) Adjusted for investment grants received

Cash effective change in net operating capital

This measure is used by Hydro to monitor and follow up on cash generation and to drive financial performance. Hydro primarily follows up net operating capital elements on a cash basis rather than a balance sheet value basis, as the latter are influenced by non-cash currency translation effects. The values include continuing operations only.

NOK million	**2022**	2021
Change in Trade and other receivables[1]	(980)	(6,675)
Change in Inventories[1]	(6,269)	(7,527)
Change in Trade and other payables[1]	(1,532)	5,566
Cash effective change in net operating capital (continuing operations)	**(8,781)**	**(8,636)**

1) See Consolidated statements of cash flows.

Free cash flow

Free cash flow is a measure of the net cash generation after investing activities. Hydro uses this measure to drive financial performance. Hydro has increased the use of financial derivatives for risk management purposes compared to previous periods. The definition of free cash flow was therefore amended in 2021 to exclude the impact from changes in collateral. In addition, an adjustment is made for the cash effect from net sales (purchases) of trading securities, as these are related to liquidity management activities and do not reflect the underlying cash generation from business activities. Hydro believes this is a better illustration of the underlying cash generation in the group. The values include continuing operations only.

NOK million	**2022**	2021
Net cash provided by operating activities[1]	29,393	10,680
Adjusted for changes in collateral[2]	(3,187)	4,582
Adjusted for Net (sales) purchases of trading securities[3]	(1,398)	1,441
Net cash used in investing activities[1]	(10,561)	(4,684)
Adjusted for Purchases of short-term investments[1]	1,250	3,000
Adjusted for Sales of short-term investments[1]	(1,500)	(4,500)
Free cash flow (continuing operations)	**13,997**	**10,519**

1) See Consolidated statements of cash flows.
2) Collateral provided as cash, mainly related to strategic and operational hedging activities (see Adjusted net debt APM).
3) Securities used for liquidity management purposes, available at short notice. Changes to these funds do not reflect the underlying cash generation from business activities.

Country-by-country report

Hydro's country by country report has been developed to comply with legal requirements as stated in the Norwegian Accounting Act §3-3d and the Norwegian Security Trading Act §5-5a, valid from 2014, and updated in 2017, and replaces our former reporting on payments to host governments according to the Extractive Industries Transparency Initiative (EITI). Our reporting includes, and goes beyond, the EITI requirements. According to the Norwegian Accounting Act, the country-by-country reporting should be on a project level, and payments should be reported per public authority. Following a thorough evaluation, we have defined "project" as legal entity in the report, and "public authority" as the three levels federal; state(s); and municipality(-ies).

The reporting requirement applies to Hydro as a Norwegian listed company with exploration and extractive activities. Currently, this includes Hydro's consolidated operations in Brazil, through exploration and extractive activities in Paragominas, in the state of Pará. On a voluntary basis, and in line with our EITI reporting since 2005, we also include the alumina refinery Alunorte. Alumina is refined from bauxite and is the commercial product from Hydro's Bauxite & Alumina business area.

Hydro's primary aluminium production facility Albras is also closely linked to the extraction of raw materials in Pará. In order to better illustrate the tax contribution from Hydro's aluminium value chain in Pará, Albras is included on a voluntary basis in the country-by-country report. In addition, Hydro voluntarily report on indirect tax contributions not covered by the requirements in the country by country report.

To comply with the Norwegian country-by-country regulation, Hydro is required to report on certain information at corporate level related to legal entities, where they are registered, number of employees, and interest paid to other legal entities in Hydro within another jurisdiction. It is also required to give a short description of each legal entity's activities, revenue, income before tax, tax accrued and paid in the reporting year, and accumulated earnings. For additional reporting in accordance with the GRI 207 Tax standard, please see Hydro's GRI index.

The Country-by-country report is approved by the board of directors and included in their responsibility statement.

Taxation

Global tax policy
Hydro is committed to sustainable value-creation for its stakeholders, and the communities where it operates. Hydro's global tax policy regulates the global framework for tax management and governance in the group, is updated yearly in response to regulatory changes and in dialogue with internal and external stakeholders. Most recent update in 2021 particularly considered sustainability focus, comments from Ministry of Trade, Industry and Fisheries (NFD), and a comparative study with peers. The policy was approved by Hydro Board of Directors in May 2022 and is published on Hydro.com. Hydro is committed to transparency and accuracy in its tax management and based on a principle to pay taxes where the economic value is generated.

In addition to this section, tax related disclosures are found in note S7 Current income tax to the Sustainability statements, and in the Risk section.

Taxation of hydropower production in Norway
Profits from Hydro's hydropower production in Norway are subject to ordinary income tax at 22 percent for the income year 2022. Revenue for ordinary income tax purposes is based on realized prices. Dams, tunnels, and power stations are, for tax purposes, depreciated on a linear basis over 67 years, and machinery and generators over 40 years. However, such fixed assets are depreciated over the concession period if that is shorter. Transmission and other electrical equipment are depreciated at a 5 percent declining balance.

A natural resource tax of NOK 13 per MWh is currently levied on water-generated electricity. The tax is fully deductible from the ordinary income tax.

In addition, a special resource rent tax, is imposed on hydropower production in Norway. For income year 2022 the effective tax rate was increased from 37 percent to 45 percent. All new investments and upgrade/maintenance cost can be expensed/excluded from the basis for the resource rent tax. The marginal tax rate for 2022 increased from 59 percent to 67 percent.

From 28. September 2022 a new High Price Contribution for hydropower related income for power prices above 0,7 NOK/KWh was introduced. The effect of this is limited for Hydro as the majority of our production is sold at contract prices below the threshold.

Taxation in Brazil
Payments to authorities per project and authority (exploration and extractive activities, alumina refining and aluminium production) in 2022 is presented in the first table below.

Other tax contributions to authorities in Brazil
The Brazilian tax system is complex and volatile. In addition to the direct taxes reported above on income, profit and production, Brazil has several indirect taxes levied at the federal and state levels, and other taxes levied at the municipal level.

For Hydro, there are three relevant indirect tax mechanisms not covered by the country-by-country requirements, i.e., ICMS and PIS/COFINS.

ICMS is a Brazilian indirect state tax on the sale of goods, freight and certain services. ICMS is intended a non-cumulative tax, which means that sales are generating ICMS debits with the seller, and purchases are generating ICMS credits with the buyer. However, as export transactions are exempt from ICMS and not generating ICMS debits, exporters accumulate ICMS credits that cannot be offset with any other taxes. As ICMS is an indirect tax, the amounts are reported as expenses in Hydro's financial statements rather than as income tax.

In the state of Pará, Hydro is subject to an ICMS deferral which aiming to prevent accumulation of ICMS credits, as well as to reduce net payable ICMS. Hydro's operations in Para generates ICMS tax revenue to the state mostly on local purchases of electricity (Albras), diesel and fuel oil, and on sale of goods to customers located outside the state.

In 2015, the state of Pará granted a renewal of the ICMS deferral until 2030 for Hydro Paragominas, Hydro Alunorte and Albras This deferral aims to prevent accumulation of ICMS credits as well as to reduce net payable ICMS. The ICMS deferral is conditional upon Hydro's fulfilment

of multiple obligations. All obligations are related to verticalization of the aluminium value chain in the state of Pará, contribution to development in the region and enabling sustainable growth in the state.

For more information about ICMS deferral, see risk review 11. Material tax change.

PIS and COFINS are two federal social contribution taxes charged on gross income, in most cases at a rate of 9.25 percent. Hydro entities in Brazil are charged under a non-cumulative system that resembles VAT. Like for ICMS, export transactions are exempted. As a result, Brazilian exporters, like Alunorte , accumulate credits that can be either reimbursed or offset against debts of other federal taxes.

In addition to the indirect taxes described above, Brazilian municipalities levy a property tax. The property tax, IPTU, is a tax levied on the ownership or possession of urban land and property located in the urban area within the municipality. IPTU is due yearly based on the value of the property, according to rates and conditions foreseen in each municipality's legislation.

The following table includes Hydro entities operating in the state of Pará.

Payments to authorities per project and authority (exploration and extractive activities, alumina refining and aluminium production) in 2022

Extractive related activities (all in Brazil)[1]	Taxes and fees[2] NOK million	Royalties NOK million	License fees[3] NOK million	Infrastructure, contractual[4] NOK million	Infrastructure, voluntary[4] NOK million	Investments NOK million	Revenue[5] NOK million	Production volume 1 000 mt	Total expenses[5] [6] NOK million
Mineracao Paragominas SA, total	**332**	**135**	**1**	**4**	**188**	**1,723**	**4,372**	**11,012**	**2,925**
Federal	289	13							
Pará State	43	40							
Paragominas municipality		81							
Norsk Hydro Brasil Ltda, total	**13**					**12**	**17**	**-**	**15**
Federal	13								
Rio de Janeiro State									
São Paulo Municipality									
Alunorte - Alumina do Norte do Brasil SA, total	**417**			**-**	**69**	**2,065**	**21,126**	**6,193**	**23,724**
Federal	417								
Pará State	-								
Barcarena Municipality									
Albras - Alumínio Brasileiro SA, total	**355**			**-**	**7**	**1,204**	**11,233**	**405**	**11,107**
Federal	355								
Pará State	-								
Barcarena Municipality									
Total[7]	**1,116**	**135**	**1**	**4**	**264**	**5,004**	**36,748**	**17,610**	**37,770**

1) In 2022, Hydro's extractive activities did not have the following types of payments to host authorities:
   - production entitlements
   - dividends
   - signature, findings and production bonuses
   - stocks, shares or other ownership rights
2) Taxes and fees (income, profit and production) except taxes and fees on consumption such as VAT, withholding taxes on behalf of employees, sales tax. Figures are not directly comparable to the further country by country report.
3) License, lease or access fees or other payments for licenses or commissions.
4) Payments on improved infrastructure, either contractual based on exploration or operational licenses, or voluntary is based on Hydro's reporting on social investments, please see note S9 Social responsibility to the social statements in Hydro's Annual Report.
5) Including power procurement and sales.
6) Costs at Alunorte include purchase of bauxite from Paragominas. Costs at Albras include purchase of alumina from Alunorte.
7) Only figures where a total is presented can be consolidated.

Other taxes paid to authorities in Brazil[1)]

Extractive related activities	ICMS NOK million	PIS NOK million	COFINS NOK million	IPTU NOK million	Total contribution NOK million
Mineracao Paragominas SA, total	**49**	**1**	**3**	**-**	**54**
Federal	-	1	3	-	4
Pará State	49	-	-	-	49
Paragominas municipality	-	-	-	-	-
					-
Norsk Hydro Brasil Ltda, total	**-**	**2**	**9**	**-**	**11**
Federal	-	2	9	-	11
Rio de Janeiro State	-	-	-	-	-
São Paulo Municipality	-	-	-	-	-
					-
Alunorte - Alumina do Norte do Brasil SA, total	**868**	**3**	**15**	**16**	**902**
Federal	-	3	15	-	18
Pará State	868	-	-	16	884
Barcarena Municipality	-	-	-	-	-
		-	-	-	-
Albras - Alumínio Brasileiro SA, total	**391**	**18**	**86**	**13**	**509**
Federal	-	18	86	-	104
Pará State	391	-	-	13	404
Barcarena Municipality	-	-	-	-	-
		-	-	-	-
Total	**1,309**	**24**	**113**	**29**	**1,475**

[1)] Tax off-sets are not included.

Further country by country information for all consolidated legal entities

The Norwegian country by country reporting requirement as stated in the Norwegian Accounting Act and the Country by Country Regulation also require reporting on certain information at corporate level related to legal entities, as included in the table below.

Hydro's subsidiaries have both external revenue derived from sale to Hydro's end customers, and internal revenue derived from sale to other Hydro entities. In the table below both revenue streams are included per legal entity, but in Hydro's consolidated financial statements all internal transactions have been eliminated to arrive at Hydro's revenue. The sum of the different items for Hydro's subsidiaries will therefore not add up to the respective consolidated figures.

In order to present a Grand Total in the country by country report that is comparable to Hydro's consolidated financial statements, we have included all group eliminations as a separate line. These include, but are not limited to, eliminations of internal revenue and cost, internal receivables and payables, distributed profit such as dividends within the group, goodwill and excess values not attributable to individual legal entities, accumulated profits allocated to non-controlling interests and all joint operations and joint ventures.

Assets and liabilities in subsidiaries that have been acquired have been remeasured to fair value in Hydro's financial statements. This value adjustment, often referred to as excess value, represents the difference between the fair value of the company as paid by Hydro, and the carrying value of assets and liabilities as recognized by the subsidiary at the time of purchase. This premium is not reflected in the subsidiaries local statutory reporting. Due to this, figures reported in Hydro's country by country report are not necessarily comparable to the entities' local statutory reporting. Acquired entities are included from the date of acquisition. As a result of rounding adjustments, the figures in one or more of the columns in the table below may not add up to the total of that column.

The information is included in the independent auditor's assurance report.

Further country by country information for all consolidated legal entities[13)]

Jurisdiction	Legal entity	Description of the entity's activity	Ownership 31. dec	Number of permanent employees[1)]	Number of temporary employees[1)]	Interest paid to Hydro legal entities in another jurisdiction, NOK million	Revenue, NOK million[2)]	Income before tax, NOK million[3)]	Income taxes, NOK million[4)]	Income taxes paid, NOK million[5)]	Retained earnings, NOK million[6)]
Argentina	Hydro Extrusion Argentina SA	Extrusion Production	100%	102	-	1,513	434,467	22,755	(10,531)	28,599	68,513
Total Argentina				**102**	**-**	**1,513**	**434,467**	**22,755**	**(10,531)**	**28,599**	**68,513**
Australia	Hydro Aluminium Australia Pty. Limited[7)]	Holding Company	100%	-	-	1,954	1,955,695	392,837	116,491	-	653,322
	Hydro Aluminium Kurri Kurri Pty. Limited	Real Estate	100%	5	-	2,032	2,073	102,318	(120,269)	-	(1,837,540)
Total Australia				**5**	**-**	**3,985**	**1,957,769**	**495,155**	**(3,778)**	**-**	**(1,184,217)**
Austria	Hydro Building Systems Austria GmbH	Sales and Marketing	100%	31	-	-	262,630	1,175	196	(192)	44,420
	Hydro Extrusion Nenzing GmbH	Extrusion Production	100%	476	11	-	3,074,392	237,930	59,262	-	428,212
	Hydro Holding Austria GmbH	Holding Company	100%	-	-	-	-	95,570	(542)	43,975	246,791
Total Austria				**507**	**11**	**-**	**3,337,022**	**334,674**	**58,916**	**43,783**	**719,423**
Bahrain	Hydro Building Systems Middle East WLL	Building Systems Production	100%	65	-	-	434,989	38,332	-	-	162,578
Total Bahrain				**65**	**-**	**-**	**434,989**	**38,332**	**-**	**-**	**162,578**
Belgium	Hydro Allease NV	Business Management	100%	-	-	-	503	(4,445)	(1,074)	2	181,009
	Hydro Aluminium Belgium BVBA	Business Management	100%	-	-	-	240	(34)	-	5	15
	Hydro Building Systems Belgium NV	Building Systems Production	100%	193	23	161	577,848	(18,321)	240	970	(250,961)
	Hydro Extrusion Lichtervelde NV	Extrusion Production	100%	227	-	-	2,627,787	199,567	54,321	8,524	493,015
	Hydro Extrusion Raeren S.A.	Extrusion Production	100%	215	13	-	1,248,742	63,283	21,492	19,640	127,093
	Norsk Hydro EU Sprl	Public Affairs	100%	2	1	-	6,339	125	66	64	1,166
	Hydro Extrusion Eupen SA	Dies Production	100%	46	1	26	61,349	(3,999)	106	-	(38,784)
Total Belgium				**683**	**38**	**188**	**4,522,809**	**236,177**	**75,152**	**29,205**	**512,558**
Brazil	ALBRAS - Alumínio Brasileiro SA	Primary Aluminium Production	51%	1,292	94	-	11,232,808	945,846	142,199	320,120	3,144,621
	ALUNORTE - Alumina do Norte do Brasil S.A.	Alumina Refinery	94%	2,187	170	-	21,125,787	(2,675,252)	766,040	631,880	(1,450,219)
	Ananke Alumina SA	Holding Company	100%	-	-	-	68,448	79,293	26,705	28,331	1,544,699
	Atlas Alumínio SA	Holding Company	100%	-	-	-	1,627,049	581,521	152,890	135,453	970,583
	Calypso Alumina SA[8)]	-	0%	-	-	-	-	(275)	0	(28)	11
	CAP - Companhia de Alumina do Pará SA	Planned Alumina Refinery	100%	-	-	-	-	(174,766)	61	127	(570,786)
	Hydro Rein Brasil Soluções Renováveis Ltda	Renewable Energy	100%	15	1	-	2,343	(33,775)	1	71	(40,958)
	Hydro Extrusion Brasil S.A.	Extrusion and Precision Tubing Production	100%	804	36	20,189	1,786,714	(270,995)	(53,393)	(24,607)	(501,703)
	Mineração Paragominas SA	Bauxite Mining	100%	1,504	251	-	4,371,990	1,597,367	287,027	139,672	2,100,454
	Norsk Hydro Brasil Ltda.	Holding Company	100%	426	29	-	17,489	621	13,952	2,272	(424,781)
	Norsk Hydro Energia Ltda.	Power Trading & Energy Services	100%	13	3	-	1,110,284	8,266	3,000	4,038	8,730
Total Brazil				**6,241**	**584**	**20,189**	**41,342,912**	**57,851**	**1,338,482**	**1,237,329**	**4,780,651**
Canada	Hydro Aluminium Canada & Co. Ltd.[9)]	Holding Company	100%	-	-	844	3,786,449	1,068,566	276,450	589,891	1,481,489
	Hydro Aluminium Canada Inc.	Holding Company	100%	-	-	-	-	(259)	(0)	(10)	32,950
	Hydro Extrusion Canada Inc.	Extrusion Production	100%	580	6	247	3,934,058	175,477	28,628	35,060	939,368
	Hydro REIN Energy Solutions Canada Ltd.	Renewable Energy	100%	-	-	-	-	-	-	-	-
Total Canada				**580**	**6**	**1,091**	**7,720,507**	**1,244,038**	**305,143**	**624,941**	**2,453,995**

Jurisdiction	Legal entity	Description of the entity's activity	Ownership 31. dec	Number of permanent employees[1)]	Number of temporary employees[1)]	Interest paid to Hydro legal entities in another jurisdiction, NOK million	Revenue, NOK million[2)]	Income before tax, NOK million[3)]	Income taxes, NOK million[4)]	Income taxes paid, NOK million[5)]	Retained earnings, NOK million[6)]
China & Hong Kong	Hydro Aluminium Beijing Ltd.	Sales and Marketing	100%	7	-	-	2,295,672	18,954	4,603	4,603	111,172
	Hydro Building Systems (Beijing) Co. Ltd.	Sales and Marketing	100%	20	-	-	95,229	(12,043)	1	-	(122,651)
	Hydro Extrusion (Shanghai) Co. Ltd	Extrusion Production	100%	-	-	-	3	1,228	0	-	1,465
	Hydro Aluminium Fabrication (Taicang) Ltd	Precision Tubing Production	100%	338	5	-	905,095	137,014	27,265	24,114	193,562
	Hydro Precision Tubing (Shanghai) Co. Ltd.	In Liquidation / Under termination	100%	-	-	-	10	29	(0)	383	29
	Hydro Precision Tubing (Suzhou) Co. Ltd.	Precision Tubing Production	100%	383	-	-	1,317,944	26,606	15,884	11,192	100,072
	Hycast Technology Shanghai Co., Ltd	Research & Development	100%	2	-	-	12,884	(586)	(148)	-	(632)
	Sapa Extrusion (Jiangyin) Co. Ltd.	Extrusion Production	100%	-	-	-	-	2,564	417	-	(28,699)
Total China & Hong Kong				**750**	**5**	**-**	**4,626,838**	**173,765**	**48,022**	**40,293**	**254,318**
Croatia	Hydro Building Systems Croatia d.o.o.	Building Systems Production	100%	12	-	3	-	382	45	-	1,055
Total Croatia				**12**	**-**	**3**	**-**	**382**	**45**	**-**	**1,055**
Czech Republic	Hydro Building Systems Czechia sro	Sales and Marketing	100%	7	-	-	-	287	82	62	2,409
Total Czech Republic				**7**	**-**	**-**	**-**	**287**	**82**	**62**	**2,409**
Denmark	Hydro Extrusion Denmark A/S	Extrusion Production	100%	306	-	4,300	2,037,793	45,943	7,964	-	357,730
	Hydro Holding Denmark A/S	Holding Company	100%	-	-	132	-	9,135	(1,021)	10,814	1,527,367
	Hydro Precision Tubing Tønder A/S	Precision Tubing Production	100%	473	22	1,760	1,752,014	(116,630)	(25,614)	616	613,636
Total Denmark				**779**	**22**	**6,193**	**3,789,806**	**(61,552)**	**(18,671)**	**11,430**	**2,498,733**
Estonia	Hydro Extrusion Baltics AS	Sales and Marketing	100%	14	-	12	182,536	5,122	801	850	19,836
Total Estonia				**14**	**-**	**12**	**182,536**	**5,122**	**801**	**850**	**19,836**
Finland	Hydro Extrusion Finland Oy	Sales and Marketing	100%	11	-	2	157,888	5,813	1,252	1,315	33,689
Total Finland				**11**	**-**	**2**	**157,888**	**5,813**	**1,252**	**1,315**	**33,689**
France	Extrusion Services S.a.r.l	Recycling	100%	48	-	-	1,049,990	167,131	44,731	-	302,901
	Hydro Building Systems France Sarl	Building Systems Production	100%	998	41	-	4,073,136	194,562	47,608	6,082	593,303
	Hydro Extrusion Albi SAS	Extrusion Production	100%	261	5	-	1,449,797	81,494	18,200	4,721	96,347
	Hydro Extrusion Lucé/Châteauroux SAS	Extrusion Production	100%	333	5	500	1,295,932	(11,436)	(3,087)	1,965	(76,606)
	Hydro Extrusion Puget SAS	Extrusion Production	100%	170	4	46	1,054,706	40,759	18	(2,806)	151,594
	Hydro Holding France SAS	Holding Company	100%	3	1	0	-	300,697	14,551	197,341	(415,381)
	Hydro Tool Center SAS	Tool and Spare Parts Services	100%	5	-	371	44,536	(141)	(78)	61	5,672
	Hydro Shared Services France	Shared Services	100%	9	-	0	13,442	963	181	63	3,907
Total France				**1,827**	**56**	**917**	**8,981,541**	**774,029**	**122,125**	**207,427**	**661,737**
Germany	Eugen Notter GmbH	Building Systems Production	100%	24	1	-	22,516	3	(349)	398	11,577
	Hydro Aluminium Deutschland GmbH	Holding Company	100%	77	1	-	11,189	310,237	(135,835)	4,187	2,774,235
	Hydro Aluminium Gießerei Rackwitz GmbH	Recycling	100%	69	7	-	1,816,845	301,912	(39)	(6)	68,080
	Hydro Aluminium High Purity GmbH	High-Purity Aluminium Production	100%	66	4	916	447,286	19,835	4,678	-	58,449
	Hydro Aluminium Recycling Deutschland GmbH	Recycling	100%	28	4	-	64,386	(3,375)	16	-	87,647
	Hydro Building Systems Coating GmbH	Building Systems Production	100%	98	3	-	90,213	497	219	5	28,190
	Hydro Building Systems Germany GmbH	Building Systems Production	100%	365	19	556	1,882,411	5,584	12,913	-	116,443
	Hydro Building Systems Extrusion GmbH	Building Systems Production	100%	108	6	-	925,415	15,332	(1,082)	-	724
	Hydro Extrusion Deutschland GmbH	Extrusion Production	100%	410	102	-	2,929,707	147,733	(1,820)	-	146,973
	Hydro Extrusion Offenburg GmbH	Extrusion Production	100%	261	1	-	1,188,799	59,893	(2,594)	-	97,021
	Hydro Holding Offenburg GmbH	Holding Company	100%	39	-	-	39,527	(14,057)	60,290	59,995	386,153
	Hydro REIN Energy Solutions Germany Gmbh	Renewable Energy	100%	-	-	-	-	186	57	-	128
	SEGN Standort-Entwicklungs-Gesellschaft Nabwerk mbH	Business Management	100%	-	-	-	-	(24)	(1)	-	(1)
	VAW-Innwerk Unterstützungs-Gesellschaft GmbH	Pension Fund	78%	-	-	-	-	(6)	2,721	-	207,645
Total Germany				**1,545**	**148**	**1,471**	**9,418,294**	**843,750**	**(60,823)**	**64,580**	**3,983,263**

Jurisdiction	Legal entity	Description of the entity's activity	Ownership 31. dec	Number of permanent employees[1)]	Number of temporary employees[1)]	Interest paid to Hydro legal entities in another jurisdiction, NOK million	Revenue, NOK million[2)]	Income before tax, NOK million[3)]	Income taxes, NOK million[4)]	Income taxes paid, NOK million[5)]	Retained earnings, NOK million[6)]
Greece	Hydro Building Systems A.E.	In Liquidation / Under termination	100%	-	-	-	-	-	-	-	(41,460)
Total Greece				**-**	**-**	**-**	**-**	**-**	**-**	**-**	**(41,460)**
Hungary	Hydro Extrusion Hungary Kft	Extrusion Production and Shared Services	100%	1,726	-	2,211	3,576,170	260,333	55,800	61,194	152,734
Total Hungary				**1,726**	**-**	**2,211**	**3,576,170**	**260,333**	**55,800**	**61,194**	**152,734**
India	Sapa Extrusion India Pvt. Ltd.	Shared Services and Building Systems	100%	234	-	-	111,300	64,292	653	653	(395,928)
Total India				**234**	**-**	**-**	**111,300**	**64,292**	**653**	**653**	**(395,928)**
Italy	Hydro Aluminium Metal Products S.r.l.	Sales and Marketing	100%	2	-	-	4,458	489	131	-	19,390
	Hydro Building Systems Atessa s.r.l.	Building Systems Production	100%	161	5	65	1,630,701	74,304	7,329	7,615	165,330
	Hydro Building Systems Italy S.P.A.	Building Systems Production	100%	160	10	-	1,305,465	98,748	4,817	7,585	(338,796)
	Hydro Extrusion Italy S.r.l.	Extrusion Production	100%	300	20	-	2,427,269	214,705	(2,566)	5,720	216,374
Total Italy				**623**	**35**	**65**	**5,367,894**	**388,246**	**9,712**	**20,919**	**62,298**
Japan	Hydro Aluminium Japan KK	Sales and Marketing	100%	4	-	-	216,194	16,634	5,827	5,445	73,363
Total Japan				**4**	**-**	**-**	**216,194**	**16,634**	**5,827**	**5,445**	**73,363**
Lithuania	Hydro Building Systems Lithuania UAB	Sales and Marketing	100%	10	-	-	-	-	-	-	-
	Hydro Extrusion Lithuania UAB	Extrusion Production	100%	210	1	-	150,810	1,810	(396)	447	111,849
Total Lithuania				**220**	**1**	**-**	**150,810**	**1,810**	**(396)**	**447**	**111,849**
Luxembourg	Hydro Aluminium Clervaux S.A.	Recycling	100%	50	9	-	2,617,687	444,627	119,090	120,405	478,384
Total Luxembourg				**50**	**9**	**-**	**2,617,687**	**444,627**	**119,090**	**120,405**	**478,384**
Mexico	Hydro Aluminium Metals Mexico S. de R.L	Sales and Marketing	100%	-	-	-	-	(103)	(30)	-	(910)
	Hydro Precision Tubing Monterrey S. de R.L. de C.V.	Precision Tubing Production	100%	162	1	-	134,219	14,210	(23,891)	11,861	98,196
	Hydro Precision Tubing Reynosa S. de R.L. de C.V.	Extrusion and Precision Tubing Production	100%	314	10	-	144,117	5,938	(2,385)	2,144	44,234
	Hydro Precision Tubing Services Monterrey S. de R.L. de C.V.[10)]	-	0%	-	-	-	19	(307)	(0)	(576)	16
Total Mexico				**476**	**11**	**-**	**278,355**	**19,738**	**(26,306)**	**13,430**	**141,537**
Netherlands	Hydro Albras B.V.	Holding Company	100%	-	-	-	-	(63)	(16)	-	412
	Hydro Aluminium Brasil Investment B.V.	Holding Company	100%	-	-	-	-	4,224	1,018	-	971,775
	Hydro Aluminium Investment B.V.	Holding Company	100%	-	-	-	-	47,029	4,750	4,731	(2,178)
	Hydro Aluminium Netherlands B.V.	Holding Company	100%	-	-	-	-	72,229	34	-	348,868
	Hydro Aluminium Pará B.V.	Holding Company	100%	-	-	-	-	(130)	(33)	-	429,480
	Hydro Aluminium Qatalum Holding B.V.	Holding Company	100%	-	-	-	-	1,221,732	(1,785)	-	1,484,535
	Hydro Alunorte B.V.	Holding Company	100%	-	-	-	-	(64)	(17)	-	(88)
	Hydro Building Systems Netherlands B.V.	Building Systems Production	100%	12	-	-	(4)	9,573	2,500	-	24,135
	Hydro CAP B.V.[11)]	-	100%	-	-	-	-	3	-	-	3
	Hydro Extrusion Drunen B.V.	Extrusion Production	100%	403	32	-	2,578,675	180,596	55,751	-	983,864
	Hydro Extrusion Holding Netherlands B.V.	Holding Company	100%	-	-	-	-	(2,754)	(714)	-	24,994
	Hydro Extrusion Hoogezand B.V.	Extrusion Production	100%	178	3	-	1,111,133	68,192	18,354	-	353,892
	Hydro Leaf B.V.	Holding Company	100%	-	-	-	-	-	-	-	-
	Hydro Paragominas B.V.	Holding Company	100%	-	-	-	-	(69)	(18)	-	(428)
	Hydro REIN Boa Sorte Holding B.V.	Holding Company	100%	-	-	-	-	(11,774)	-	-	(11,774)
	Hydro REIN Feijão Holding B.V	Renewable Energy	100%	-	-	-	-	(128,564)	424	-	(130,260)
	Hydro REIN Feijão Solar Holding B.V.	Holding Company	100%	-	-	-	-	(16)	-	-	(16)
	Hydro REIN Netherlands B.V.	Renewable Energy	100%	1	-	-	172	(1,117)	227	-	(2,028)
	Hydro REIN Irupé Holding B.V.	Renewable Energy	100%	-	-	234	-	(70)	21	-	(155)
	Norsk Hydro Holland B.V.	Holding Company	100%	6	-	-	14,797	1,844,668	(3,392)	49,143	15,578,643
Total Netherlands				**600**	**35**	**234**	**3,704,774**	**3,303,625**	**77,103**	**53,874**	**20,053,674**

Jurisdiction	Legal entity	Description of the entity's activity	Ownership 31. dec	Number of permanent employees[1]	Number of temporary employees[1]	Interest paid to Hydro legal entities in another jurisdiction, NOK million	Revenue, NOK million[2]	Income before tax, NOK million[3]	Income taxes, NOK million[4]	Income taxes paid, NOK million[5]	Retained earnings, NOK million[6]
Norway	Hycast AS	Research & Development	100%	61	2	-	472,114	24,088	5,894	1,967	177,192
	Hydro Aluminium AS	Primary Aluminium Production	100%	2,354	623	299,891	82,551,062	16,324,124	3,270,283	752,576	30,374,539
	Hydro Energi AS	Hydro Power Production	100%	295	13	-	11,407,074	6,395,693	1,679,692	889,526	10,316,301
	Hydro Energi Invest AS	Holding Company	100%	-	-	762	4,308	(62,297)	(11,009)	-	(12,269)
	Hydro Extruded Solutions AS	Holding Company	100%	49	2	668	-	1,310,366	119,163	1,550	744,696
	Hydro Extrusion Norway AS	Extrusion Production	100%	110	5	-	682,415	25,270	3,883	7,425	91,338
	Hydro HAVRAND AS	Hydrogen	100%	-	-	546	-	(90,932)	(20,000)	-	(21)
	Hydro Kapitalforvaltning AS	Holding Company	100%	-	-	-	12,087	393	86	85	657
	Hydro REIN AS	Renewable Energy	100%	-	-	21,511	300,760	189,275	61,159	16,266	302,315
	Hydro REIN Energy Solutions AS	Renewable Energy	100%	-	-	9	-	(28,319)	(6,230)	-	0
	Hydro REIN Invest AS	Renewable Energy	100%	-	-	180,496	40,798	(25,486)	(9,897)	-	38,349
	Hydro Rein Offshore Wind AS	Renewable Energy	100%	-	-	-	-	207	45	-	(0)
	Hydro Vigelands Brug AS	High-Purity Aluminium Production	100%	37	9	2,299	122,269	12,280	3,685	987	125,003
	Industriforsikring AS	Insurance	100%	-	-	-	154,220	78,934	20,261	19,611	697,016
	Norsk Hydro ASA	Parent Company	100%	405	14	-	195,423	5,120,805	224,506	193,217	19,506,853
	Svelgfos AS	Power Trading & Energy Services	100%	-	-	-	-	13	3	-	762
	Sør-Norge Aluminium AS	Primary Aluminium Production	100%	364	142	28,145	6,791,173	2,838,782	624,648	46,079	4,752,763
Total Norway				**3,675**	**810**	**534,327**	**102,733,704**	**32,113,197**	**5,966,172**	**1,929,288**	**67,115,496**
Oman	Hydro Building Systems Middle East (FZC) LLC	Building Systems Production	99%	-	-	-	55,861	18,679	-	-	129,991
Total Oman							**55,861**	**18,679**	**-**	**-**	**129,991**
Poland	Hydro Building Systems Poland Sp. z o.o.	Building Systems Production	100%	47	-	873	74,929	1,523	734	857	(5,786)
	Hydro Extrusion Poland Sp. z o.o.	Extrusion Production	100%	1,451	-	1,315	3,099,078	183,294	63,001	70,559	957,764
Total Poland				**1,498**	**-**	**2,188**	**3,174,007**	**184,817**	**63,735**	**71,416**	**951,977**
Portugal	Hydro Aluminium Extrusion Portugal HAEP S.A.	Extrusion Production	100%	105	34	-	735,137	48,292	15,957	5,835	111,205
	Hydro Building Systems Portugal (HBSPT) SA	Building Systems Production	100%	64	2	-	280,535	29,780	3,963	2,891	51,848
Total Portugal				**169**	**36**	**-**	**1,015,672**	**78,071**	**19,921**	**8,726**	**163,053**
Serbia	Hydro Building Systems Beograd d.o.o.	Sales and Marketing	100%	4	-	-	-	48	7	-	45
Total Serbia				**4**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Singapore	Hydro Aluminium Asia Pte. Ltd.	Trading	100%	16	-	-	12,437,707	82,841	9,059	10,110	429,394
	Hydro Holding Singapore Pte. Ltd.	Holding Company	100%	23	-	350	68,034	(1,366)	-	-	(489,112)
Total Singapore				**39**	**-**	**350**	**12,505,742**	**81,475**	**9,059**	**10,110**	**(59,719)**
Slovakia	Hydro Extrusion Slovakia a.s.	Extrusion Production	100%	432	2	-	1,183,325	47,723	10,073	15,399	43,337
	Slovalco a.s.	Recycling	55%	357	-	-	3,472,851	280,599	105,957	137,488	2,550,285
	ZSNP DA, s.r.o.	Transportation	55%	-	-	-	3,917	1,290	262	283	1,394
Total Slovakia				**789**	**2**	**-**	**4,660,093**	**329,611**	**116,293**	**153,169**	**2,595,015**
South Africa	Technal Systems South Africa (Pty) Ltd.	In Liquidation / Under termination	100%	-	-	-	-	(144)	1,535	-	(13,231)
Total South Africa				**-**	**-**	**-**	**-**	**(144)**	**1,535**	**-**	**(13,231)**
Spain	Hydro Aluminium Iberia S.A.U	Recycling	100%	58	8	-	1,979,690	296,993	64,841	92,762	664,371
	Hydro Building Systems Spain S.L.U.	Building Systems Production	100%	261	6	-	862,673	(5,200)	(3,558)	(1,680)	(12,228)
	Hydro Extruded Solutions Holding S.L.U.	Holding Company	100%	12	1	-	1,004	(8)	944	997	(699,500)
	Hydro Extrusion Spain S.A.U.	Extrusion Production	100%	342	16	-	1,989,272	118,658	(15,390)	(5,627)	720,695
	Hydro REIN Energy Solution Spain	Renewable Energy	100%	-	-	-	-	-	-	-	-
Total Spain				**673**	**31**	**-**	**4,832,639**	**410,443**	**46,838**	**86,453**	**673,338**

Jurisdiction	Legal entity	Description of the entity's activity	Ownership 31. dec	Number of permanent employees[1)]	Number of temporary employees[1)]	Interest paid to Hydro legal entities in another jurisdiction, NOK million	Revenue, NOK million[2)]	Income before tax, NOK million[3)]	Income taxes, NOK million[4)]	Income taxes paid, NOK million[5)]	Retained earnings, NOK million[6)]
Sweden	Hydro Building Systems Sweden AB	Building Systems Production	100%	122	4	17	886,567	73,070	1,469	756	9,199
	Hydro Extruded Solutions AB	Holding Company and R&D	100%	48	3	274	70,441	458,956	(10,691)	23,333	2,828,026
	Hydro Extrusion Sweden AB	Extrusion Production	100%	855	9	-	3,560,723	1,797	(12,011)	-	600,613
	Hydro Rein Energy Solutions Sweden AB	Renewable Energy	100%	-	-	-	-	(619)	(127)	-	(491)
	Hydro Extrusion Sweden Holding AB	Holding Company	100%	-	-	1	-	(1,409)	(284)	(10)	222,311
Total Sweden				**1,025**	**16**	**292**	**4,517,731**	**531,794**	**(21,644)**	**24,078**	**3,659,658**
Switzerland	Hydro Aluminium International SA	Sales and Marketing	100%	13	-	8,195	21,555,245	268,386	40,292	(17,982)	3,699
	Hydro Building Systems Switzerland AG	Sales and Marketing	100%	42	3	-	432,006	65,795	10,828	11,967	91,495
Total Switzerland				**55**	**3**	**8,195**	**21,987,251**	**334,181**	**51,120**	**(6,015)**	**95,195**
Turkey	Hydro Yapi Sistem Sanayi VE Ticaret AS	Sales and Marketing	100%	27	-	407	107,384	7,580	3,152	-	10,829
Total Turkey				**27**	**-**	**407**	**107,384**	**7,580**	**3,152**	**-**	**10,829**
Ukraine	Sapa Profiles UA	-	100%	-	-	-	-	-	-	-	-
Total Ukraine				**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
United Arab Emirates	Hydro Building Systems Middle East FZE	Sales and Marketing	100%	11	1	-	19,847	(67)	-	-	(51)
Total United Arab Emirates				**11**	**1**	**-**	**19,847**	**(67)**	**-**	**-**	**(51)**
United Kingdom	Hydro Aluminium Deeside Ltd.	Recycling	100%	55	3	-	1,607,112	264,066	50,197	-	405,340
	Hydro Building Systems UK Ltd.	Building Systems Production	100%	133	1	1,233	571,992	(36,749)	(8,431)	-	256,454
	Hydro Components UK Ltd.	Dormant	100%	-	-	-	-	-	-	-	-
	Hydro Aluminium UK Ltd.	Extrusion Production	100%	691	1	5,436	2,584,008	162,024	(2,423)	-	266,811
	Hydro Holdings UK Ltd.	Holding Company	100%	-	-	-	1,136	205	26	45,163	(370,128)
Total United Kingdom				**879**	**5**	**6,668**	**4,764,248**	**389,546**	**39,369**	**45,163**	**558,477**

Jurisdiction	Legal entity	Description of the entity's activity	Ownership 31. dec	Number of permanent employees[1)]	Number of temporary employees[1)]	Interest paid to Hydro legal entities in another jurisdiction, NOK million	Revenue, NOK million[2)]	Income before tax, NOK million[3)]	Income taxes, NOK million[4)]	Income taxes paid, NOK million[5)]	Retained earnings, NOK million[6)]
USA	EMC Ashtabula Inc	Dormant	100%	-	-	-	-	(6,694)	(425)	(44)	(2,759,896)
	EMC Metals Inc	Dormant	100%	-	-	-	287	(14,923)	(2,119)	-	936,675
	Hydro Aluminium Metals USA, LLC	Recycling and Sales	100%	159	-	-	10,348,246	337,462	(8,979)	-	(1,073,391)
	Hydro Building Systems North America LLC	Sales and Marketing	100%	2	-	-	51,692	7,892	(71)	-	(39,091)
	Hydro Extrusion Portland Inc.	Extrusion Production	100%	367	-	-	2,799,656	10,158	(6,877)	-	(251,287)
	Hydro Extrusion USA LLC	Extrusion Production	100%	5,360	38	-	32,516,268	1,235,141	(76,681)	1,390	599,976
	Hydro Holding North America Inc.	Holding Company	100%	-	-	59	-	429,527	425,350	396,911	3,371,336
	Hydro Precision Tubing Adrian Inc.[12)]	-	100%	-	-	-	-	(1,276)	(69)	307	51
	Hydro Precision Tubing Louisville Inc.	Dormant	100%	-	-	-	-	694	423	(0)	(241,555)
	Hydro Precision Tubing Monterrey Central LLC	Precision Tubing Production	100%	-	-	-	-	-	-	-	-
	Hydro Precision Tubing Monterrey LLC	Precision Tubing Production	100%	-	-	-	517,439	(5,189)	15,382	-	502,367
	Hydro Precision Tubing USA LLC	Precision Tubing Production	100%	221	4	-	1,820,689	(48,702)	23,950	-	(83,515)
Total USA				**6,109**	**42**	**59**	**48,054,277**	**1,944,090**	**369,882**	**398,564**	**961,671**
Total Eliminations, non-controlling interests, goodwill and excess values not attributable to specific legal entities							**(103,411,997)**	**(12,970,149)**	**(779,148)**	**19,027**	**(36,945,943)**
Total joint operations and joint ventures							**(17,883)**	**241,642**	**0**	**6,269**	**(5,140,873)**
Total Hydro including discontinued operations				**32,014**	**1,907**	**590,559**	**207,929,134**	**32,364,700**	**7,983,988**	**5,312,431**	**70,359,918**
Discontinued operations[8)]							**-**	**-**	**-**	**-**	**-**
Total Hydro from continuing operations							**207,929,134**	**32,364,700**	**7,983,988**	**5,312,431**	**70,359,918**

1) Number of employees is based on the legal entity each employee is employed by.
2) Revenue consists of external and internal revenue from sales of products and services, and realized and unrealized results from derivatives related to sale of products. Elimination of sale to other Hydro companies is presented on a combined basis in "Eliminations". Revenue in this report equals revenue in Hydro's consolidated financial statements payments include settlement of tax liabilities with tax credits generated from other payments to federal authorities.
3) For the composition of income before tax, please refer to consolidated income statements and related notes.
4) For a description and the composition of income taxes, please refer to consolidated income statements and related notes.
5) Income taxes paid represents the actual payments made during the year independent of which year the tax relates to. In some tax regimes including Brazil, tax payments include settlement of tax liabilities with tax credits generated from other payments to federal authorities.
6) Retained earnings consists of accumulated gains and losses, net of distributed profits from the point of view of the legal entity. Retained earnings existing in the companies at the time of Hydro's acquisition is deducted in "Eliminations". In addition, "Eliminations" consists of unrealized gains in transactions between Hydro companies.
7) Hydro Aluminium Australia Pty Ltd is used to report Hydro portion of operations for Tomago Aluminium Company Pty Limited, a joint operation
8) Calypso Alumina SA is merged into CAP - Companhia de Alumina do Pará SA in 2022.
9) Hydro Aluminium Canada & Co. Ltd. Is used to report Hydro portion of operations for Aluminerie Alouette Inc, a joint venture.
10) Hydro Precision Tubing Services Monterrey S. de R.L. de C.V. is merged into Hydro Precision Tubing Monterrey S. de R.L. de C.V. in 2022.
11) Hydro CAP B.V. is merged into Hydro Aluminium Pará B.V. in 2022.
12) Hydro Precision Tubing Adrian Inc. Is merged into Hydro Precision Tubing Louisville Inc. in 2022.
13) Extended table covering GRI 207 tax reporting requirement is published on www.hydro.com.

Entity descriptions

In the table above, each company has been given a short description of its main activities. Some of the entities can also have other activities as listed below.

Short description	Main activities
Alumina Refinery	Refining of bauxite to alumina. Hydro operates the Alunorte alumina refinery
Bauxite Mining	Mining of bauxite, the raw material for aluminium productions. Hydro has only one consolidated bauxite mine
Building Systems Production	Production of building systems where aluminium is used
Business Management	Coordination and organization of Hydro's business activities
Dies Production	Production of dies for extrusion of aluminium profiles
Dormant	Hydro operations without business activities in the reporting period
Extrusion Production	Includes one or more extrusion production lines and is normally also responsible for sales and marketing of its products. May also have R&D activities
High-Purity Aluminium Production	Production of aluminium of minimum 99.99 percent purity
Holding Company	Holding & Financing. Holding shares or other equity instruments. Administrative, management or support services
Hydro Power Production	Production and operation of hydro power
Hydrogen	Developing of hydrogen based on renewable energy
In Liquidation / Under termination	Operations in liquidation or under termination
Insurance	In-house (captive) insurance
Parent Company	A parent company is a company that has a controlling interest in another company
Pension Fund	Employee pension fund
Power Trading & Energy Services	Trading of power and energy services
Precision Tubing Production	Production of extruded aluminium tubes, micro-port aluminium tubes, and welded alumnium tubes
Primary Aluminium Production	Includes one or more primary aluminium plant(s), and may also include casting, anode production and/or R&D activities
Public Affairs	Hydro's Brussels office
Real Estate	Property management and development. Owner of land and infrastructure
Recycling	Recycling of post- and pre-consumor scrap
Renewable Energy	Planned and ongoing renewable energy productions
Research & Development	Research and development activities
Sales and Marketing	Sales, marketing and distribution offices
Shared Services	Administrative and other support services
Tool and Spare Parts Services	Provides tool and spare parts services, in addition to administrative and management support
Trading	Sales, marketing and distribution of casthouse aluminium products
Transportation	Transport of raw materials by railway train

Production capacity and volumes

Production capacity Hydro Energy

Power station area	Power plants		Hydro Equity Share (TWh)	Hydro Operated (TWh)	Ownership	Key characteristics
Telemark	**Tinn:** Frøystul Vemork Såheim Moflåt Mæl	**Notodden:** Svelgfoss **Vennesla:** Vigelandsfoss	3.7	3.9	100% ownership, except for Svelgfoss (70.2% ownership and 100% operator)	• Reservoir-based Hydropower, except Vigelandsfoss which is run-of-river • No reversion except for Frøystul (50%) 2044, Moflåt and Mæl 2049 • Total catchment area 4,094 km^2
Sogn	**Fortun:** Skagen Herva Fivlemyr	**Årdal:** Tyin Holsbru Mannsberg	3.2	3.2	100% ownership	• Reservoir-based Hydropower • Concession expiration Tyin 2051 and Fortun 2057 • Total catchment area 803 km^2
Røldal-Suldal	Suldal 1 Suldal 2 Røldal Novle Kvanndal Svandalsflona Vasstøl Middyr Midtlæger		0.8	3.3	Ownership through Lyse Kraft DA	• Reservoir-based Hydropower • No reversion following the Lyse Kraft DA transaction • Total catchment area 793 km^2 • Hydro owns 25.6% of Lyse Kraft DA
Stavanger	**Lyse plants:** Lysebotn 1 Lysebotn 2 Tjodan Førli Maudal Breiava Oltedal Oltesvik Hjelmeland Sviland Hetland Hauskje	Sira-Kvirna (7 plants) Ulla-Førre (4 plants)	1.6	2.6	25.6% ownership through Lyse Kraft DA	• Reservoir-based Hydropower • No reversion • Hydro operator of Lyse plants and Jørpeland Kraft (0,1 TWh) from 2021, after completing the Lyse Kraft DA transaction in December 2020 • Lyse Kraft DA holds part ownership in Ulla-Førre (18%)
Skafså	Åmdal Osen Skree Gausbu		0.1	-	33% ownership	• Hydropower • No reversion
Tonstad	Tonstad wind farm		-	0.7	No ownership	• Wind power • Operatorship, commercial handling and PPA-offtake from Hydro
Total			**9.4**	**13.7**		

Production capacity Hydro Aluminium Metal

Plant	Country	Employees (per Dec.31)	Electrolysis capacity (000 mt)[1)]	Casthouse capacity (000 mt)	Main products	Key characteristics
Karmøy	Norway	532	271	370	Extrusion ingot, wire rod	• Two prebake lines • R&D center • Technology Pilot fully ramped-up in 2018
Årdal	Norway	533	205	223	Sheet ingot, foundry alloys	• Two prebake lines • Technology and competence center • Substantial anode production
Sunndal	Norway	681	427	525	Extrusion ingot, foundry alloys	• Two prebake lines • R&D center metalurgy and casting • Largest plant in Western Europe
Høyanger	Norway	168	67	120	Sheet ingot	• One prebake line
Husnes	Norway	364	195	215	Extrusion ingot	• Two prebake lines
Slovalco (55.3%)	Slovakia	347 (100% basis)	175 (Closed Feb 2023)	250 (100% basis)	Extrusion ingot, foundry alloys	• Joint venture with Penta (Slovakia) • Electrolysis production curtailed to 5% in Aug 2022. Complete closure in Feb 2023 • Casthouse to remain operational
Tomago (12.4%)	Australia	989 (100% basis)	74	75	Extrusion ingot, standard ingot	• Joint venture with Rio Tinto Alcan and CSR • Long term power contract expiring in 2028 • Largest producer in Australia • Three prebake lines
Qatalum (50%)	Qatar	984 (100% basis)	325	340	Extrusion ingot, foundry alloys	• Joint venture with Qatar Petroleum • 40 year gas supply contract expiring in 2049 • Is a first quartile smelter on the global cost curve • Among the world's lowest cost smelters • Two prebake lines
Alouette (20%)	Canada	850 (100% basis)	128	150	Standard ingot	• Joint venture with Rio Tinto Alcan, AMAG and IQ/Marubeni • Long term power contract expiring end of 2029 • Is a first quartile smelter on the global cost curve • Largest producer in North America • Two prebake lines
Albras (51%)	Brazil	1292 (100% basis)	460 (100% basis)	460 (100% basis)	Standard ingot, foundry alloys, sale of liquid	• Joint venture with NAAC • Long term power contract expiring end of 2024 • Largest producer in South America • Four prebake lines

[1)] Production and casthouse capacity for part-owned companies represents our proportional share. Slovalco and Albras are fully consolidated in terms of volumes and financial results.

Primary aluminium and casthouse production (kmt)

		Primary aluminium production		Casthouse production	
	Location	**2022**	2021	**2022**	2021
Albras	Brazil	405	427	332	320
Karmøy	Norway	247	266	224	230
Årdal	Norway	203	201	223	218
Sunndal	Norway	426	423	455	459
Høyanger	Norway	67	66	98	95
Husnes	Norway	186	169	185	169
Slovalco	Slovakia	72	164	121	197
Tomago (12.4%)	Australia	73	73	72	73
Qatalum (50%)	Qatar	319	317	333	328
Alouette (20%)	Canada	126	126	126	126
Technology	Norway	13	12	-	-
Total production Primary Aluminium		**2,137**	**2,244**	**2,166**	**2,214**

Sustainability statements

Sustainability is an integrated part of Hydro's strategy to lift long-term profitability and positioning in the market. By reducing our footprint, improving relations with stakeholders and neighbors, managing impacts, increasing resource efficiency and developing new markets, Hydro will reduce risk and create new opportunities. We have quantified ambitions towards 2030 and 2050 that will improve our performance on climate, environment, and social responsibility.

Climate performance

Hydro's ambition is to be a net-zero company by 2050 or earlier, delivering net-zero products and enabling a net-zero society. In 2022, Hydro's total greenhouse gas (GHG) emissions were 6.5 percent lower than the 2018 climate strategy baseline, and we are still on track in to deliver on our target of total emission reductions of 10 percent by 2025. We recycled 321,000 tonnes of post-consumer aluminium scrap, enabling the production of 100 tonnes of CIRCAL with 100 percent post-consumer scrap, and 50,000 tonnes of Hydro CIRCAL based on aluminium made with a minimum of 75% recycled post-consumer aluminium scrap. In 2022, Hydro has also set reduction targets for scope 3 emissions towards 2030 – a 15 percent reduction in total emissions and a 30 percent reduction in scope 3 emissions per tonne aluminium delivered to market, both from a 2018 baseline.

Environmental performance

The goal of Hydro's environment strategy is to minimize impact across our operations by addressing environmental challenges. In 2022, we met our rehabilitation target for our mining site in Paragominas, Brazil and established a Global Procedure on biodiversity and ecosystem services management. We have a target to eliminate all recoverable waste generated by our operations, by 2040. In 2022, we recycled 71 percent of our waste and have started to develop specific roadmaps to eliminate the landfilling of the remaining recoverable waste. For bauxite tailings and residue, specifically, the Tailings Dry Backfill (TDB) methodology, implemented in 2021, has eliminated the need to build new tailings storage facilities in Paragominas. We continue R&D activities into bauxite residue reuse. In 2022, 66 percent of tailings generated at our mine were diverted to temporary storage for drying with the TDB method.

Social performance

We are working towards a transition to a low-carbon economy that also provide a just transition, where job creation and decent work is ensured, and aim to contribute to the development of local communities where we operate. In 2022, we have developed a framework for supporting a just transition and established a forum for Human Rights in Hydro. Solutions for increased traceability and transparency of sustainability data in the value chain has been piloted with some key customers during 2022. A roadmap for implementation across all business areas by 2025 is developed. We educated almost 25,000 people as part of our ambition to provide quality education and capacity building to 500,000 people by 2030, achieving 31 percent of the target on aggregate. Moreover, we contributed NOK 69 million in community investments, charitable donations and sponsorships around the world.

The total recordable injury rate was 2.4 per million hours worked in 2022, an improvement from 3.3 in 2021. The majority of injuries were classified as minor, with one life changing injuries and zero fatalities recorded during the year.

The diversity, inclusion and belonging strategy was further developed in 2022 and implementation is continuing in all business areas. Our gender balance increased improved by 2 percentage points, with 22 percent of the Hydro workforce comprising women by the end of 2022.

Sustainability reporting

These Sustainability statements include detailed performance indicators and our principles for measuring and reporting sustainability performance. The Sustainability statements should be read together with the Sustainability chapter, which presents Hydro's management of material climate, environmental and social issues. Our materiality assessment is presented in the section on Sustainability reporting the Hydro way, in the Governance chapter.

Key performance measures and sustainability targets

Environmental performance	**Ambitions and targets**	**2022**	2021	2020
Total greenhouse gas emissions by ownership equity (million tonnes CO2e)[1)]	10% reduction by 2025 against 2018 baseline[3)] and net-zero by 2050	11.03	11.46	10.64
Indirect Scope 3 GHG emissions by ownership equity (Million tonnes CO2e)[2)]	30% reduction per tonne aluminium by 2030 against 2018 baseline	14.41	15.39	20.21
Recycled post-consumer scrap (thousand tonnes)[4)]	620-770 thousand tonnes per year by 2027	321	335	104
Accumulated area disturbed by mining operations at Paragominas (hectares)	1:1 rehabilitation target of mined areas within two hydrological cycles	7,512	7,017	6,607
Accumulated area under rehabilitation (hectares)	1:1 rehabilitation target of mined areas within two hydrological cycles	2,905	2,646	2,486
Recycled waste (share of total waste generated)[5)]	Eliminate all recoverable waste by 2040	71%	74%	71%
Social performance				
Total recordable injuries (per million working hours)[6)]	Zero life-changing injuries	2.4	3.3	2.7
Number of fatal accidents	Zero fatal accidents	0	0	0
Persons empowered with skills and education [7)]	Provide quality education and capacity building to 500 thousand people by 2030	157	129	108
Share of women employees[8)]	25% share of women by 2025[8)]	22%	20%	19%
Share of women leaders[8)]	25% share of women leaders by 2025[8)]	19%	18%	-
Employee inclusion index	78% inclusion index score in 2023	76%	76%	-
Governance and compliance indicators				
Substantiated claims of corruption	Zero substantiated claims of corruption	0	0	1

1) Scope 1 and 2 GHG emissions. See note E1 for more information.
2) Comprises material upstream Scope 3 categories. See note E1.3 for more information.
3) Refer to the section on Climate change in the Sustainability chapter for information about our 2018 baseline.
4) Includes recycling in Hydro Extrusions from 2021.
5) Comprises waste diverted from disposal. See note E6 for more information.
6) Includes both employees and contractors. See note S5 for more information.
7) Presented as cummulative numbers in number of thousands
8) In permanent and temporary positions

Sustainability reporting

About the reporting

Principles for sustainability reporting

The purpose of Hydro's reporting is to provide stakeholders with a fair and balanced picture of relevant aspects, engagements, practices and results for 2022 at a corporate level. We believe that the reporting in total satisfies this purpose. Our reporting on sustainability is aligned with the main reporting principles of the GRI Standards and the requirements of the International Council on Mining and Metals (ICMM). The selection of elements reported is based on extensive dialogue with stakeholders. In addition, the reporting builds on processes that are part of our daily operations. Important stakeholders include authorities, investors and financial analysts, employees and their representatives, potential employees, customers, non-governmental organizations and local communities affected by major development projects or restructuring processes. Reporting is not necessarily the target of the dialogue process, but when relevant, we use the outcome to improve our reporting, see Stakeholder dialogue.

We have endeavored to provide information that is in accordance with the principles of sound reporting practice. The absence of generally accepted reporting standards and practices in certain areas may nevertheless make it difficult to compare results with reports compiled by other companies, without the availability of further data, analyzes and interpretations.

The information in the Governance and Sustainability chapters in the annual report have been approved by the Board of Directors, while the Environmental and social statements have been approved by the Corporate Management Board.

Reporting scope and limitations

The scope of the sustainability reporting in Hydro's Annual Report 2022, is Hydro's global organization for the period January 1 to December 31, 2022.Operations sold or demerged during the year have in general not been included. Health and safety data for all previously consolidated operations are, however, included in the historical data for the period the unit was owned by Hydro. Climate and environmental data (emissions, energy consumption etc.) for new operations or operations acquired during the reporting year are included for the year in full. Data from operations that have been closed down, are included for the part of the reporting period it was under operation unless otherwise stated. Minority-owned operations are not included in the reported data except from data based on ownership equity (certain greenhouse gas emissions data), certain qualitative information as well as additional data for 50/50-owned companies presented in see note E8 Environmental data for 50/50-owned companies and note S14 Social data for 50/50-owned companies.

Data have been prepared from individual reports in accordance with corporate procedures. Data compiled at each operational unit according to local management systems applicable at the respective operational units are typically based on process data systems, measurements, calculations and/or purchasing data. The data are then aggregated at corporate level, and is not intended to include detailed information that is primarily of significance for individual sites, processes, activities and products.

The reporting is based on input from many units and sources of data. Emphasis has been placed on ensuring that the information is neither incomplete nor misleading. However, the scope of the reporting, and varying certainty of data may result in some inherent uncertainties. Please see "Reporting principles" for the specific note to the environmental or social statements for more details.

Climate, environment, energy and resource data are reported through the corporate data reporting tool HERE on an annual basis covering all consolidated operational units (defined as Hydro’s ownership share exceeding 50 percent). Data reported to HERE should be based on specific environmental, energy and resource data reporting processes that have been established for management purposes at site, business unit, business area, and corporate level within Hydro. Data are reported on a 100 percent basis for all consolidated operational units if not otherwise stated.

Data reported in HERE are compiled at each operational unit according to local environmental management systems and typically based on process data, measurements, calculations and/or purchasing data. Climate and environmental performance data for December 2022 are estimated based on monthly average from the year to date, previous year data or planned production volumes.

Data relating to occupational health and safety have been prepared by individual reporting units in accordance with corporate procedures. This applies to all Hydro’s operations, including consolidated subsidiaries, if not otherwise stated. Such data are based on the corporate reporting system for incident reporting, IMS and Synergi. The units report incidents to the systems on a regular basis in accordance with a corporate procedure on HSE incidents and sick leave data. Employee data are reported based on Hydro’s SAP system.

Where applicable, we have indicated to which GRI Standards disclosure the different notes or parts of the notes are applicable. Please refer to our GRI Index for more information at: Hydro.com/gri.

Main reporting changes

Hydro’s Annual Report 2022 has been restructured so that the sustainability chapter corresponds to the material sustainability topics identified in the Materiality assessment. We have made changes to the reporting on E4.2 Water to be better aligned with ICMM requirements and GRI Standard 303 (2018). Information on Ethics and compliance has been moved from the Governance chapter to the Sustainability chapter. Other changes to the sustainability reporting are minor and described in the Materiality assessment.

Assurance principles and scope

We have requested our company auditor to review our sustainability reporting 2022 and provide limited assurance over the reporting in accordance with the international audit standard ISAE 3000 – Assurance Engagements other than Audits or Reviews of Historical Financial Information (revised), issued by the International Auditing and Assurance Standards Board (IAASB). The external auditor's limited assurance report is attached.

Environmental information

The table below Hydro's main quantitative indicators related to its climate and environmental performance. More detailed information is, when indicated, available in the notes to the performance indicators.

	Notes	% change 2021-22	**2022**	2021	2020	2019	2018	GRI Standards reference
Climate performance								
Scioe 1 GHG emissions from consolidated operations (million tonnes CO2e)	E1.1	(6%)	7.17	7.62	6.93	6.51	6.05	305-1
Scope 2 GHG emissions from consolidated operations (million tonnes CO2e)	E1.1	(8%)	1.57	1.71	1.28	1.44	1.47	305-2
Scope 1 GHG emissions from Hydro's ownership equity (million tonnes CO2e)	E1.2	(5%)	7.36	7.75	7.13	6.76	6.36	305-1
Scope 2 GHG emissions from Hydro's ownership equity (million tonnes CO2e)[1)]	E1.2	(1%)	3.67	3.71	3.51	3.81	3.85	305-2
Indirect (Scope 3) GHG emissions from consolidated operations (million tonnes CO2e)	E1.3	(3%)	27.92	28.84	-	-	31.47	305-3
GHG intensity - alumina refining (tonnes CO2e per tonnes alumina)	E1.5	0%	0.62	0.63	0.65	0.71	0.79	305-4
GHG intensity - electrolysis, based on ownership equity (tonnes CO2e per tonnes aluminium)	E1.5	(4%)	1.57	1.64	1.59	1.60	1.60	305-4
Environmental performance								
Total sulphur dioxide emissions (tonnes SO2)	E2.1	(23%)	21 216	27 519	22 332	22 871	16 275	305-7
Total nitrogen oxide emissions (tonnes Nox)	E2.1	(6%)	7 993	8 524	7 884	7 549	7 130	305-7
Accumulated area disturbed by mining activities (hectares)	E6.2	7%	7 512	7 017	6 607	6 153	5 819	
Accumulated area under rehabilitation by mining activiteis (hectares)	E6.2	10%	2 905	2 646	2 486	2 339	2 203	
Bauxite tailings generated (thousand tonnes)	E5.1	5%	4 455	4 239	3 345	2 871	2 116	G4-MM3
Bauxite residue generated (thousand tonnes)	E5.1	(2%)	5 270	5 384	4 827	3 871	3 191	G4-MM3
Total waste generated, excl. tailings and bauxite residue (thousand tonnes)	E5.2	(9%)	664	731	604	-	-	306-3
Total waste diverted from disposal (percentage of total waste generated)	E5.3	(3 pp)	71 %	74 %	71 %	-	-	306-4
Total freshwater withdrawals (million m3)	E4.2	(1%)	124.6	129.5	114.2	120.5	120.2	303-3
Total freshwater withdrawals in water stressed areas (million m3)	E4.2	(1%)	1.0	1.1	0.9	1.1	1.1	303-3
Recycled post-consumer scrap (thousand tonnes)	E4.3	(4%)	321	335	104	98	104	
Total recycled metal (thousand tonnes)	E4.3	(5%)	1 285	1 353	421	438	474	

[1)] Emissions from the gas fired power plant at Qatalum are reported as scope 2.

Social and governance information

The table below shows Hydro's main indicators related to safety and social performance. More information is, when indicated, available in the notes to the performance indicators.

	Notes	% change 2021-22	2022	2021	2020	2019	2018	GRI Standards reference
Employees								
Number of permanent employees	S1.1	2%	32,014	31,264	34,240	36,310	36,236	102-7 (2016)
Share of women	S1.1	1 pp	21%	20%	18%	18%	18%	
Number of temporary employees	S1.2	7%	1,917	1,799	1,929	1,647	1,680	102-8 (2016)
Women in management, levels 0-2	S4.1	2 pp	37%	35%	31%	32%	33%	405-1 (2016)
Non-Norwegians in management, levels 0-2	S4.1	(5 pp)	29%	34%	43%	37%	39%	405-1 (2016)
Full-time equivalents for contractor employees	S1	22%	16,900	13,900	11,800	10,500	9,000	102-8 (2016)
New employees	S1.3	13%	4,213	3,738	3,071	4,466	5,141[1)]	401-1 (2016)
Turnover	S1.3	2 pp	17%	15%	14%	13%	12%	401-1 (2016)
Hydro Monitor Employee Engagement Index	S3		76%		72%		84%[1)]	
Payroll (NOK million)	S1.1	15%	17,605	15,312	17,509	19,005	17,318	201-1 (2016)
Health and safety								
Sick leave	S5.1	0.3 pp	4.1%	3.8%	4.2%	3.7%	3.6%	403-2 (2018)
Total recordable injuries (TRI) rate (injuries per million working hours)	S5.1	(27%)	2.4	3.3	2.7	3.0	3.4	403-2 (2018)
TRI rate, permanent employees		(23%)	3.0	3.9	3.0	3.3	3.5	
TRI rate, contractors		(28%)	1.3	1.8	1.7	2.2	3.0	
Number of fatal accidents	S5.1	0	0	0	0	0	1	403-2 (2018)
Number of fatal accidents, permanent employees		0	0	0	0	0	1	
Number of fatal accidents, contractors		0	0	0	0	0[3)]	0	
High risk incidents	S5.2	(39%)	75	122	140	190	202	403-2 (2018)
Occupational illness rate	S5.3	0%	0.3	0.3	0.3	0.2	0.5	403-3 (2018)
Current income tax (NOK million)	S7	51%	6,891	4,565	2,105	1,512	2,724	
Research and Development								
R&D expenses (NOK million)	S8.1	27%	655	512	633	625	594	
R&D funds received (NOK million)	S8.1	(21%)	22	28	34	36	35	
Community investments and social programs								
Community investments, charitable donations and sponsorships	S9.1	25%	69	55	56	59	89	
Persons empowered with skills and education (thousands, per year)	S9.2	23%	25	21	60	28	24	
Compliance								
Cases reported through AlertLine	S10.1	59%	433	273	224	347	342	102-3 (2016)
Confirmed cases of corruption	S10.1	0%	0	0	1	2	1	205-3 (2016)
Significant human rights breaches	S10.3	0%	0	0	0	0	0	406-1/407-/408-1/409-1 (2016)
Relocation of people	S10.3	0%	0	0	0	0	0	G4-MM9
Training in business ethics Hydro[3)]	S10.4	120%	56,516	25,709	34,330	24,481	3,490	412-2/205-2 (2016)
Supplier audits	S10.5	308%	200	49	49	98	83	HDD-01
Potential and existing counter parties screened using RDC	S10.5	(7%)	6,500	7,000	8,000	18,172	13,000	414-1 (2016)

[1)] Excluding Extrusions.
[2)] Contractor fatality in 50/50 JV managed by Qatalum.
[3)] Times training modules was completed in class room and e-learning training on anti-corruption, code of conduct, data privacy, and sanctions and trade compliance, Diversity inlcusion belonging, Human rights management, Anti-Harassment, Non-Discrimination training.

Notes to the sustainability statements

Environmental information

Social and governance information

Note E1 - Greenhouse gas emissions

Reporting principles
GHG emissions have been reported based on the principles of the WRI/WBCSD GHG Protocol.

Direct GHG emissions are calculated based on anode consumption during the electrolysis process and use of fossil fuels. PFC (perfluorocarbon) emissions are calculated based on automatic process measurements. PFC emissions comprise the two greenhouse gases CF4 and C2F6 which are formed during anode effect situations in the aluminium electrolytic cells. Anode effect is mainly a result of production instability, e.g. in connection to power outages. The reported direct emissions are comparable to Scope 1 emissions as defined by the GHG protocol.

Indirect GHG emissions are calculated based on Hydro's consumption of electricity. Reported indirect emissions cover GHG emissions from purchased electricity and emissions from Hydro's ownership share in the gas-fired power plant at Qatalum. The reported indirect emissions are comparable to scope 2 emissions according to the GHG protocol. We report indirect emissions according to the location-based method in the revised GHG Protocol Scope 2 Guidance, based on emissions factors from the International Energy Agency (IEA). For our operations in Canada and the primary aluminum producer Albras in Brazil, indirect emissions reflect the regional grid mix. For Hydro's Annual Report 2022 we have updated the factors back to 2018, and historical figures have been updated accordingly. We have chosen not to report indirect emissions according to the market-based approach.

GHG emissions based on ownership equity are calculated based on our ownership share as per year end 2022. The reported emissions includes Hydro's share of emissions from all operations including non-consolidated operations where Hydro has a minority interest. The emissions are reported per segment, and by country.

Indirect (Scope 3) GHG emissions are reported for emissions related to purchased goods and services, fuel and energy related activities, upstream transportation and distribution, downstream transportation and distribution, and processing of sold products. The calculation and reporting of our Scope 3 emissions are based on the IAI Scope 3 Calculation Tool Guidance.

GHG intensity of alumina refining is calculated based on the total GHG emissions and production volumes at our Alunorte alumina refinery. The reported GHG intensity covers all alumina refining in Hydro.

GHG intensity of the electrolysis process is calculated based on greenhouse gas emissions and production volumes in Hydro's smelters, based on ownership equity. This is an operational target that excludes extraordinary emissions resulting from e.g. start-up of curtailed capacity. The methodology for calculation is site specific, and historical figures may be subject to change.

E1.1 Total greenhouse gas emissions in consolidated activities

Total direct and indirect (Scope 1 and Scope 2) GHG emissions in Hydro consolidated activities. The emissions are reported per segment and per country.

GRI reference: GRI Standards 305-1 (2016) and 305-2 (2016)

Greenhouse gas emissions - consolidated activities

Million tonnes CO2e	**2022**	2021	2020	2019	2018
Direct GHG emissions	7.17	7.62	6.93	6.51	6.05
Bauxite & Alumina	3.58	3.77	3.43	2.99	2.64
Primary aluminium production	2.95	3.20	2.89	2.85	2.72
Remelters (in Metal Markets)	0.13	0.13	0.11	0.12	0.12
Extruded solutions[1)]	0.50	0.52	0.49	0.55	0.56
Indirect GHG emissions	1.57	1.71	1.28	1.44	1.47
From electricity generation (mainly primary aluminium production)	1.57	1.71	1.28	1.44	1.47
Total GHG emissions	**8.73**	**9.33**	**8.21**	**7.95**	**7.52**

[1)] Extruded solutions has some remelters

Hydro's direct emissions decreased in 2022 compared to 2021. The emissions reductions in primary aluminium is primarily linked to the production stop at our Slovalco plant in 2022. The implementation of electric boilers for steam generation at Alunorte and process improvements resulted in improvements to specific emissions (ie. emissions per tonne product produced) compared to 2021, while the curtailments announced in the fourth quarter 2022 has resulted in less stable production and a consequent increased PFC emissions at the associated primary aluminium smelters.

Production at our alumina refinery Alunorte in Bauxite & Alumina was impacted by the embargo in 2018 and 2019, and returned to normal levels during 2020. To learn more about the embargo imposed on Alunorte in 2018, see Hydro's Annual Report 2018 and the section "The Alunorte situation".

Greenhouse gas emissions per country - consolidated activities

Million tonnes CO2e	**2022**	2021	2020	2019	2018
Brazil	**5.46**	**5.61**	**4.83**	**4.30**	**3.80**
Direct	4.44	4.64	4.23	3.73	3.29
Indirect	1.02	0.98	0.59	0.57	0.51
Norway	**2.04**	**2.12**	**1.95**	**2.00**	**1.93**
Direct	1.97	2.05	1.84	1.82	1.77
Indirect	0.07	0.07	0.11	0.18	0.16
Slovakia	**0.30**	**0.63**	**0.56**	**0.67**	**0.72**
Direct	0.14	0.30	0.28	0.31	0.32
Indirect	0.15	0.33	0.29	0.36	0.40
Other	**0.94**	**0.96**	**0.87**	**0.99**	**1.07**
Direct	0.61	0.63	0.58	0.65	0.67
Indirect	0.32	0.33	0.29	0.34	0.40
Total GHG emissions	**8.73**	**9.33**	**8.21**	**7.95**	**7.52**

E1.2 Total greenhouse gas emissions based on ownership equity

Total direct and indirect (Scope 1 and Scope 2) GHG emissions in Hydro, based on ownership equity. The emissions are reported per segment, and by country.

GRI reference: GRI Standards 305-1 (2016) and 305-2 (2016)

Greenhouse gas emissions - ownership equity

Million tonnes CO2e	**2022**	2021	2020	2019	2018
Direct GHG emissions	7.36	7.75	7.13	6.76	6.36
Bauxite & Alumina	3.29	3.45	3.15	2.74	2.42
Primary aluminium production	3.44	3.65	3.38	3.36	3.25
Remelters (mostly Metal Markets)	0.13	0.13	0.11	0.12	0.12
Extruded solutions[1)]	0.50	0.52	0.49	0.55	0.56
Indirect GHG emissions	3.67	3.71	3.51	3.81	3.85
Electricity generation (mainly primary aluminium production)	3.67	3.71	3.51	3.81	3.85
Total GHG emissions	**11.03**	**11.46**	**10.64**	**10.57**	**10.21**

[1)] Extruded solutions has some remelters

Greenhouse gas emissions per country - ownership equity

Million tonnes CO2e	**2022**	2021	2020	2019	2018
Australia	**0.82**	**0.82**	**0.85**	**0.89**	**0.91**
Direct	0.15	0.15	0.15	0.15	0.15
From electricity generation	0.67	0.67	0.71	0.74	0.77
Brazil	**4.34**	**4.45**	**3.89**	**3.44**	**3.04**
Direct	3.73	3.90	3.56	3.13	2.76
From electricity generation	0.61	0.55	0.32	0.31	0.28
Canada	**0.48**	**0.48**	**0.47**	**0.48**	**0.47**
Direct	0.26	0.26	0.25	0.25	0.25
From electricity generation	0.22	0.22	0.21	0.22	0.22
Norway	**2.04**	**2.11**	**1.95**	**2.00**	**1.93**
Direct	1.97	2.05	1.84	1.82	1.77
From electricity generation	0.07	0.06	0.11	0.18	0.16
Qatar[1)]	**2.29**	**2.29**	**2.28**	**2.37**	**2.34**
Direct	0.59	0.59	0.58	0.55	0.55
From electricity generation	1.70	1.70	1.70	1.82	1.79
Slovakia	**0.17**	**0.35**	**0.31**	**0.37**	**0.40**
Direct	0.08	0.17	0.15	0.17	0.18
From electricity generation	0.09	0.19	0.16	0.20	0.22
Other	**0.90**	**0.97**	**0.89**	**1.04**	**1.11**
Direct	0.58	0.64	0.60	0.69	0.70
From electricity generation	0.32	0.33	0.29	0.35	0.41
Total GHG emissions	**11.03**	**11.46**	**10.64**	**10.57**	**10.21**

[1)] Most electricity at Qatalum is generated by Qatalum's fully-owned gas power plant. 6.500 tonnes CO2e came from net purchased electricity from the national grid in 2020

E1.3 Indirect (Scope 3) GHG emissions

Hydro's indirect emissions from consolidated activities.

GRI reference: GRI Standards 305-3 (2016)

Scope 3 Greenhouse gas emissions

Million tonnes CO2e	**2022**	2021	2020	2019	2018
Upstream scope 3 emissions	**14.41**	15.39			20,21
Purchased goods and services	**13.12**	14.09			18,83
Fuel and energy related activities	**0.97**	0.98			1,03
Upstream transportation and distribution	**0.32**	0.32			0,36
Downstream scope 3 emissions	**13.51**	13.45			11.26
Downstream transportation and distribution	**0.23**	0.23			0.33
Processing of sold products	**13.28**	13.22			10.93
Total GHG emissions	**27.92**	28.84			31.47

Hydro's upstream Scope 3 emissions are dominated by emissions from cold metal and aluminium scrap provided from external suppliers. Hydro regards the carbon footprint of process scrap as equal to its metal origin, Hydro's Scope 3 upstream emissions are significant when including externally sourced metal. Industry players who do not take the inherent carbon footprint of process scrap input into account will report significantly lower Scope 3 emissions. Hydro believes that this method of accounting is inaccurate, as it accounts for process scrap being carbon neutral, when in reality the process scrap has the same inherent carbon footprint as its metal origin. Hydro believes that we need to focus on what drives real change towards the green transition and we need to exercise our role as a responsible supplier and customer to influence the right development. If Hydro were to regard process scrap as carbon neutral, Hydro's upstream Scope 3 emissions would be significantly lower. See the section on Increasing recycling of aluminium in the Climate Change chapter of the annual report for more information.

Hydro's downstream Scope 3 emissions are dominated by processing of sold alumina. As this processing happens at aluminium smelters outside of Hydro's control, our ability to influence these emissions are limited. Nevertheless, reporting of these emissions contributes in giving a holistic perspective on the total emissions of the value chain of our sold products.

Hydro's targets on scope 3 emissions only includes upstream scope 3 emissions, as downstream scope 3 emissions are beyond Hydro's control.

E1.4 Direct GHG emissions per GHG type in consolidated activities

Breakdown of reported direct GHG emissions, by greenhouse gas type

Direct GHG emissions per GHG type - consolidated activities

Million tonnes CO2e	**2022**	2021	2020	2019	2018
CO2	7.00	7.35	6.72	6.27	5.84
PFC	0.17	0.27	0.20	0.24	0.20
Other	-	-	-	-	-
Total GHG emissions	**7.17**	**7.62**	**6.93**	**6.51**	**6.05**

E1.5 GHG intensity

GHG intensity of our alumina refining at the Alunorte alumina refinery and GHG intensity of the electrolysis process from Hydro's smelters, based on ownership equity.

GRI Reference: GRI Standards 305-4 (2016)

GHG intensity - Alumina refining at Alunorte alumina refinery

	2022	2021	2020	2019	2018
mt CO2e per mt aluminium	0.62	0.63	0.65	0.71	0.79

GHG Intensity - Electrolysis, based on ownership equity

	2022	2021	2020	2019	2018
mt CO2e per mt aluminium	1.57	1.64	1.59	1.60	1.60

The implementation of electric boilers for steam generation at Alunorte and process improvements have resulted in an improvement in emissions per tonne alumina refined compared to 2022.

Slovalco is excluded from 2022 due to production curtailment. Albras was excluded from the 2019 measurements due to extraordinary emissions during the start-up of curtailed capacity.

Note E2 – Other emission related indicators

Reporting principles

Dust and particles include measured and estimated stack emissions and roof emissions from electrolysis. Other diffuse emissions are not included.

Fluorides cover emissions to air of gaseous and particulate fluorides from production of primary aluminium.

NMVOC (non-methane volatile organic compounds) emissions to air stem primarily from Extrusions.

PAH (poly-aromatic hydrocarbons) to air is primarily from anode production. Emissions to air are monitored according to PAH-16 US EPA and emissions to water are monitored according to PAH-16 US EPA.

Sulfur dioxide and nitrogen oxide to air are primarily from the use of coal as an energy source in Alunorte, Brazil. Another large contributor to Hydro's total sulfur dioxide to air is related to the aluminium electrolysis process where the majority of the total emissions come from Albras in Brazil and Slovalco in Slovakia. SO2 emissions from the Norwegian smelters are considerably lower due to different waste gas treatment techniques used at these plants.

Spills and leakages are reported when an incident results in a spill or leak, including significant spillages with short-term reversible damage. Spillages and leakages to the external environment (ground, water or air) are registered in Synergi and/or in IMS, our reporting tools for incidents regarding health, safety, security and environment. Spills and leakages reported in E2.2 comprise incidents that have resulted in emissions to the external environment that are categorized as severe or major, i.e. unintended and sustained spills and leakages. Spills and leakages are categorized as severe or major if the leakage is uncontained but the impact of the leakages is reversible, or where the leakage is uncontained and the impact is irreversible. A spillage or leakage can be reclassified according to changes in the actual consequence of the spillage or leakage, and historical figures are updated accordingly. Several reported incidents can be closely related and therefore classified as the same spillage.

Permit breaches are reported when an incident occurs that in any way relates to an environmental permit. This definition is in certain cases stricter than the legal definition, i.e. not all reported incidents are related to breach of legal criteria in an environmental permit. The reported cases are based on monthly monitoring and reported in Synergi and/or in IMS. Permit breaches reported in E2.3 comprise breaches that are classified as severe or major, which mean the incidents require regulator contact and/or have led to permit breaches with possible fine or suspension. The reported permit breaches may be related to spillages and leakages covered in E2.2. Several reported incidents can be related to the same permit and will be reported as one breach. Historical figures may be subject to change due to time lag in administrative procedures.

E2.1 Non-GHG emissions

Total reported non-GHG emissions in Hydro consolidated activities.

GRI reference: GRI Standards 305-6 (2016) and 305-7 (2016)

Non-GHG emissions

Metric tonnes	**2022**	2021	2020	2019	2018
Dust and particles	3,550	4,037	3,009	3,110	2,720
Fluorides to air	613	687	772	790	637
NM VOC	339	225	159	193	203
Nitrogen oxide	7,993	8,524	7,884	7,549	7,130
PAH to air[1)]	12	10	16	16	14
PAH to water[1)]	1	1	3	2	3
Sulphur dioxide (SO2)	21,216	27,519	22,332	22,871	16,275

[1)] Excluding PAH emissions from Albras

In 2022, the stop in production at Slovalco contributed to reductions in Hydro's overall emissions of sulphur dioxide, nitrogen oxide and fluorides to air. Additional improvements at Albras contributed to further reductions in fluorides to air. Lower heavy fuel oil consumption at Alunorte is the main driver for reduced nitrogen oxide emissions.

2021 data on dust and particles and sulphur dioxide are updated to adjust for an error in calculated emissions from Alunorte.

Hydro's emissions of dust and particles, nitrogen oxides and sulphur dioxide decreased significantly in 2018 due to the embargo at Alunorte, and curtailment at Albras and Paragominas. This is partly reversed in 2019 and 2020 due to lifting of the embargo and ramp-up of production.

In addition to non-GHG emissions reported, above, Hydro reports estimated emissions of ozone-depleting substances. Hydro uses ozone depleting substances in certain applications in its Brazilian operations, and to some extent also in Extrusions. In 2022, Hydro used in total 6.5 metric tonnes of such substances in its operations. The reported value corresponds to the purchased amount of such substances and can vary significantly according to the need of refilling existing cooling devices. In Brazil, such substances are registered and reported according to Brazilian legal requirements. In Hydro Extrusions, hydrochlorofluorocarbon (HCFC) accounts for around one third of ozone depleting substances.

Elemental mercury is emitted to air in the refining process at Alunorte. Through a mass balance approach, this is estimated to equate ca. 3 metric tonnes per year, at full production. See the section on Environment in the Sustainability chapter for information on our initiatives to reduce mercury emissions.

E2.2 Spillages and leakages

Total reported severe and major spills and leakages from Hydro consolidated activities.

GRI-reference: GRI Standards 306-3 (2016)

Spillages and leakages to the external environment

	2022	2021	2020	2019	2018
Spillages, leakages	1	-	5	1	7[1)]

[1)] The reported incidents mainly relate to leakages to air in Norway

E2.3 Permit breaches

Total reported severe and major permit breaches in Hydro consolidated activities.

Permit breaches

	2022	2021	2020	2019	2018
Permit breaches	3	2	11	1[1)]	23

[1)] Figures for 2019 are not comparable to previous years due to harmonization of definitions between Extrusions and the other business areas in Hydro.

Please also see note S10.2 Non-compliance cases.

Note E3 – Energy

Reporting principles
Energy consumption includes energy generated by Hydro operations as well as purchased energy. Energy consumption includes energy losses in hydroelectric plants. Other energy reported in note E3.1 includes heating, cooling and steam generated in Hydro operations as well as purchased steam and heat in the Extrusions business area.

Renewable energy consumption is estimated based on total energy consumption by energy carrier and data on country-specific energy mix in the electricity grid from the International Energy Agency (IEA). Electricity derived from biofuels, waste, hydro, geothermal, solar, wind and tide are considered renewable.

Energy intensity of the alumina refining at Alunorte is calculated based on total energy consumption at Alunorte divided by total alumina production.

Energy intensity in Hydro's consolidated smelters is calculated based on direct current consumption in the electrolysis process per kg aluminium.

E3.1 Energy consumption and energy production

Total energy consumption in Hydro's consolidated activities, reported by energy carrier, sector use and country of consumption.

GRI Reference: GRI Standards 302-1 (2016)

Energy consumption per energy carrier - consolidated activities[1)]

Petajoule (PJ)	**2022**	2021	2020	2019	2018
Coal	13.5	13.1	14.0	13.4	13.2
Coke	14.8	16.1	15.9	15.4	14.8
Electricity	98.6	102.1	97.8	95.7	88.0
Gasoline	0.0	0.0	0.0	0.0	0.1
Natural gas	12.2	12.4	11.9	13.1	13.6
Natural gas liquids	1.0	1.0	2.0	1.4	1.5
Oil	26.0	28.9	23.7	19.1	15.0
Other	5.9	5.9	5.0	4.6	3.5
Total energy consumption in PJ	**171.8**	**179.5**	**170.3**	**162.6**	**149.7**
Total energy consumption in TWh	**47.8**	**49.9**	**47.3**	**45.2**	**41.6**

1) With the sale of Hydro Rolling in 2021, we have excluded historical figures on energy consumption associated with the business area.

Energy consumption per sector - consolidated activities[1)]

Petajoule (PJ)	**2022**	2021	2020	2019	2018
Bauxite & Alumina	47.2	47.1	41.6	35.7	30.2
Electrolysis/Carbon/Casting	108.0	115.3	112.9	109.6	101.4
Remelters	13.9	14.2	13.2	14.7	15.3
Extruded Solutions	2.6	2.7	2.4	2.4	2.6
Other	0.3	0.3	0.3	0.2	0.2
Grand Total	**171.8**	**179.5**	**170.3**	**162.6**	**149.7**

1) With the sale of Hydro Rolling in 2021, we have excluded historical figures on energy consumption associated with the business area.

Energy consumption per country - consolidated activities

Petajoule (PJ)	**2022**	2021	2020	2019	2018
Brazil	78.8	79.9	71.9	61.7	54.0
Norway	71.8	71.3	72.5	71.5	66.0
Slovakia[1)]	5.5	12.0	11.1	12.8	12.5
Other[2)]	16.0	16.3	14.9	16.5	17.2
Total energy consumption	**171.8**	**179.5**	**170.3**	**162.6**	**149.7**

1) The energy consumption in Slovakia have decreased due to the termination of primary aluminium production at Slovalco
2) With the sale of Rolling, the energy consumption of Hydro's activities in Germany is no longer significant

The main contributor to reduced energy consumption in 2022 compared to 2021 was the stop in production at our aluminium production plant, Slovalco, in Slovakia.

Hydro's energy consumption was lower in 2018 due to the embargo at Alunorte and curtailment at Albras and Paragominas. Energy consumption increased in 2019 and 2020 with the lifting of the embargo and ramp-up of production.

Renewable energy consumption
According to our estimates, the share of renewable energy out of total energy consumption is about 41 percent in Hydro.

E3.2 Energy intensity

Energy intensity of the alumina refining at Alunorte and energy intensity in Hydro's consolidated smelters

GRI Reference: GRI Standards 302-3 (2016)

Energy intensity - Alumina refining

	2022	2021	2020	2019	2018
GJ per mt alumina	7.97	7.56	7.67	8.20	8.95

Energy intensity - Electrolysis process

	2022	2021	2020	2019	2018
MWh per mt aluminium	13.93	14.00	14.07	14.15	13.94

Note E4 – Other resource use

Reporting principles
Hydro's reporting on resource use covers major raw materials and inputs used in the alumina refining process and electrolysis process, beyond what is included in the energy consumption data, as well as data on water interaction, and use of recycled aluminium.

Alumina and *aluminium* fluoride are primarily used in the electrolysis process.

Lime, caustic soda (NaOH), *sulfuric acid* and *flocculants (thickener)* are primarily used in the alumina refining process. Flocculants are also used at our Bauxite mine at Paragominas.

Water is reported based on water withdrawals and water interactions. For disclosure on water withdrawals by country, we report separately on the three countries with the largest water withdrawal volumes and aggregate the rest under "Rest of the World". For disclosure on water interactions, across all of our operational assets and assets located in water-stressed areas, we have aligned with ICMM's minimum water reporting commitments, including their definitions of water quality (ICMM 2021. Water Reporting: Good practice guide, 2nd edition). From 2019, Hydro has used the WRI Aqueduct tool to analyze water withdrawal from water stressed areas, and historical data may not be comparable. Baseline water stress measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. Areas categorized as high and extremely high with regard to baseline water stress are included in the reporting under note E4.2.

Recycling is reported based on the amount of recycled aluminium scrap used in Hydro Aluminium Metal and Hydro Extrusions. Hydro uses a definition for recycling agreed on by the European Aluminium Association. The definition was implemented in Hydro in 2013. The definition divides recycled scrap in two: process scrap, which includes pre-consumer scrap from downstream casthouses, and post-consumer scrap. Reporting of recycling data is based on our production software and ERP system.

E4.1 Materials

Main raw materials used in the alumina refining process and electrolysis process in Hydro's consolidated activities.

GRI Reference: GRI Standards 301-1 (2016)

Materials

1,000 metric tonnes	**2022**	2021	2020	2019	2018
Alumina	3,113	3,323	3,032	2,954	2,858
Aluminium fluoride	28	32	32	31	28
Lime	43	45	45	39	35
Caustic soda	620	590	513	435	353
Sulphuric acid	20	22	22	21	29
Flocculants	6	6	4	4	3

E4.2 Water

Total water withdrawal by country and water interaction in Hydro consolidated activities.
GRI reference: GRI Standards 303-3, 303-4 and 303-5 (2018)

Total water withdrawal by country

million m³	**2022**	2021	2020	2019	2018
Norway	218.1	216.1	224.8	218.4	218.1
Brazil	62.6[1)]	67.1	54.5	58.7	57.8
United States	4.6	4.8	4.2	5.0	5.1
Rest of the world	4.0	4.6	3.9	5.1	5.6
Total water withdrawal	**289.3**	**292.7**	**287.5**	**287.2**	**286.6**

[1)] Includes 26,6 million m3 of rainwater that is treated and discharged. The figure varies with precipitation.

Total water interaction

Million m³	High quality	Low quality	**2022**	2021	2020	2019	2018
Number of locations			112	115	119	119	120
Water withdrawal, by source							
Surface water (e.g. river, stream, lake)[1)]	80.6	15.6	96.2	100.7	87.3	92.9	95.3
Surface water withdrawal	54.0	15.6	69.5	72.0	66.5	70.9	71.4
Rainwater capture	26.6	0.0	26.6	28.7	20.8	22.1	23.9
Ground water	1.2	11.2	12.4	12.3	12.0	11.2	12.0
Seawater	0.0	164.7	164.7	163.2	173.2	166.8	166.5
Third-party Supply (e.g. municipal)	4.2	11.9	16.0	16.5	14.9	16.4	12.9
Total Water withdrawal	**85.9**	**203.4**	**289.3**	**292.7**	**287.5**	**287.2**	**286.6**
Water discharges, by destination							
Surface water (e.g. river, stream, lake)	46.7	18.2	64.9	68.9	60.9	61.4	58.4
Ground water	-	-	-	-	-	-	-
Seawater	9.4	188.6	197.9	196.4	205.9	198.7	199.0
Third-party Supply (e.g. municipal)	1.0	14.6	15.5	16.6	14.5	16.6	16.7
Total Water discharges	**57.0**	**221.4**	**278.4**	**282.0**	**281.3**	**276.7**	**274.1**
Water consumption, by type							
Evaporation	0.8	3.0	3.9	1.1	0.9	1.6	1.1
Entrainment in product	-	-	-	-	-	-	-
Entrainment in waste	-	-	-	-	-	-	-
Process loss	-	-	-	-	-	0.1	-
Other	0.1	6.8	7.0	9.7	5.3	8.9	11.3
Total Water consumption	**1.0**	**9.9**	**10.9**	**10.8**	**6.2**	**10.6**	**12.5**
Water Reuse/Recycle							
Reuse/recycle	63.4	-	63.4	67.2	53.0	54.8	25.0
Total Water Reuse/Recycle	**63.4**	**-**	**63.4**	**67.2**	**53.0**	**54.8**	**25.0**

[1)] From 2021 we have updated the definition of surface water to include rainwater and have updated previous years' data to reflect this.

In 2022, 28 percent of Hydro's surface water withdrawals was rainwater, primarily captured at Alunorte and Paragominas.

Around 75 percent of Hydro's total water withdrawal occurs in Norway from fjords (sea water) and rivers (fresh water) that supply these fjords. These water sources are vast and are not significantly affected by Hydro's operations. All sea water withdrawal in Norway is used in fume treatment plants enabling the primary production smelters to clean dust, SO2 and fluoride emissions to air. Sea water absorbs the pollutants and mitigates the environmental impact from the production process.

Alunorte receives a large volume of water, entrained in the bauxite product that it receives from Paragominas, through the pipeline. In 2022, Alunorte received 11.7 million m3 of freshwater from Paragominas. Alunorte is reusing more than 42 percent of this water in the refining process.

In 2022, approximately 74 percent of Paragominas' water demand was met by recovery of water from the beneficiation process, and 11 percent from water captured in the reservoirs. These actions have all contributed to reducing operational dependency on new water withdrawals from the Parariquara river.

Withdrawal from water-stressed areas

Million m^3	High quality	Low quality	**2022**	2021	2020	2019	2018
Number of locations			36	36	37	36	36
Water withdrawal, by source							
Surface water (e.g. river, stream, lake)[1]	-	-	-	-	-	-	-
Surface water withdrawal	-	-	-	-	-	-	-
Rainwater capture	-	-	-	-	-	-	-
Ground water	0.1	-	0.1	0.1	0.1	0.1	0.1
Seawater	-	-	-	-	-	-	-
Third-party Supply (e.g. municipal)	0.7	0.2	0.9	0.9	0.8	0.9	1.0
Total Water withdrawal	**0.9**	**0.2**	**1.0**	**1.1**	**0.9**	**1.1**	**1.1**
Water discharges, by destination							
Surface water (e.g. river, stream, lake)	0.1	-	0.1	0.1	0.1	0.1	0.1
Ground water	-	-	-	-	-	-	-
Seawater	-	-	-	-	-	-	-
Third-party Supply (e.g. municipal)	0.1	0.5	0.6	0.7	0.6	0.7	0.7
Total water discharges in stressed areas	**0.2**	**0.5**	**0.7**	**0.8**	**0.7**	**0.8**	**0.8**
Water consumption, by type							
Evaporation	0.2	-	0.2	0.2	0.2	0.2	0.3
Entrainment in product	-	-	-	-	-	-	-
Entrainment in waste	-	-	-	-	-	-	-
Process loss	-	-	-	-	-	-	-
Other	-	0.1	0.1	-	-	-	-
Total water consumed in stressed areas	**0.2**	**0.1**	**0.3**	**0.3**	**0.2**	**0.3**	**0.3**
Water Reuse/Recycle							
Reuse/recycle	-	-	-	-	-	-	-
Total water Reused/Recycled	**-**	**-**	**-**	**-**	**-**	**-**	**-**

[1] From 2021 we have updated the definition of surface water to include rainwater and have updated previous years' data to reflect this.

In 2022, 32% of our operational assets were located in areas considered to have high or extremely high baseline water stress, representing less than 1% of Hydro's total freshwater withdrawals in 2022.

E4.3 Aluminium recycling

Recycled aluminium scrap used in Hydro Aluminium Metal and Hydro Extrusions.

Recycling[1]

1,000 metric tonnes	**2022**	2021	2020	2019	2018
Recycled post-consumer scrap	321	335	104	98	104
Recycled pre-consumer scrap	963	1018	317	340	371
Total recycled metal	**1 285**	**1 353**	**421**	**438**	**474**

[1] 2021 is the first year we have consolidated recycling data from Hydro Extrusions, making the 2021 results not directly comparable to previous years' data

We have adjusted historical data on recycling to exclude volumes processed by Rolling which was sold in 2021, which accounted for approximately 840,000 metric tonnes of pre-consumer and post-consumer scrap in 2020.

Note E5 – Waste

Reporting principles
Tailings from bauxite extraction consist of mineral rejects from the extraction process mixed with water.

Bauxite residue, is a by-product of the alumina refining process. The residue is washed with water to lower the alkalinity, and recovered caustic soda is recycled for use in the production process. Residue is dry-stacked as a claylike substance with a low moisture content.

Waste is measured and reported according to a harmonized categorization within Hydro, based on the common names of key waste streams relevant to our operations (e.g. bauxite residue, SPL, waste caustic soda). This facilitates aggregation of data at a group level and avoids the use of multiple waste codes for the same waste category. Operations maintain more detailed waste registries that align with local requirements and legislation.

Hazardous waste includes SPL from the electrolysis cells used in primary aluminium production. The production of SPL varies with the relining of smelter cells which is normally done every 4-7 years for established smelters. New plants will get a relining peak at the same interval after start-up. See also SPL figures on a five year rolling average in the Environment and social responsibility chapter. A significant amount of hazardous waste from the Extrusions business area is in the form of spent caustic resulting from the die cleaning process, with a large proportion of this being recycled.

Waste treatment includes both onsite and offsite treatment. In many cases waste is managed by a third party, which is required to adhere to the Hydro Supplier Code of Conduct. A non-compliance with or breach of the principles in Hydro's Supplier Code of Conduct, that is not corrected within a reasonable period, may lead to termination of the supplier contract. All Hydro locations are required to ensure safe transport of hazardous waste in accordance with global and local regulations and evaluate critical waste receivers and include these in a supplier development system. Tailings and bauxite residue are deposited in appropriately engineered and managed on-site landfills, and are not included in waste treatment figures reported in note E5.3.

E5.1 Tailings and bauxite residue

Tailings and bauxite residue generated from Hydro's operations.

GRI Reference: GRI Standards 303-4 (2018) and G4-MM3.

Tailings and bauxite residue

1,000 metric tonnes[1]	**2022**	2021	2020	2019	2018
Bauxite tailings	4 455	4 239	3 345	2 871	2 116
Bauxite tailings to Plateau	2 947				
Bauxite tailings to Valley	1 508				
Bauxite residue	5 270	5 384	4 827	3 871	3 191

[1] On a dry basis.

The tailings at Paragominas are stored in dedicated tailings facilities, where the particles settle. Paragominas is Hydro's only consolidated mine. In the Plateau tailings storage facility, the tailings undergo a drying cycle that can take approximately 30 or 60 days, during the dry and rainy season, respectively. After the drying process, the material has a minimum of 60 percent solid content and is then excavated and deposited back into the mined areas. This method is what Hydro refers to as "Tailings Dry Backfill". In 2022, 3.84 million cubic meter of dried material was reclaimed and returned to the mined areas.

There was a significant decrease in 2018 is due to the Alunorte embargo (bauxite residue) and the corresponding Paragominas curtailment (tailings). This is reversed from 2021 and onwards due to lifting of the embargo and ramp-up of production.

Impact Tailings Dry Backfill (TDB) from the Plateau Tailings Storage Facility

million Cubic meter (m3)	**2022**	2021	2020
Tailings stored at the start of reporting year	6.00	3.73	4.08
Tailings deposited during reporting year	3.07	3.67	2.66
Tailings excavated for TDB during reporting year	3.84	1.40	3.02
Tailings stored at the end of reporting year	5.22	6.00	3.73
Net change in tailing volume stored during reporting year	**-0.78**	**2.27**	**-0.36**

E5.2 Waste generated, by composition

Waste generated by Hydro's consolidated activities

GRI reference: GRI Standards 306-3, 306-4 and 306-5 (2020)

Waste by composition[1)]

1000 Metric tonnes	Waste diverted from disposal	Waste directed to disposal	2022	2021	2020	2019	2018
Anode butts	162	11	173	208	157		
Dross	93	-	93	111	86		
Fly & bottom ash	-	49	49	38	26		
SPL	41	29	70	73	50		
Spent caustic soda	29	2	32	33	29		
Other waste	144	102	247	267	256		
Total waste	**470**	**195**	**664**	**731**	**604**	**499**	**497**

1) Due to a reclassification of the system in 2020, we are not able to map the data before this time.

E5.3 Waste treatment

Waste generated by Hydro's consolidated activities, reported by waste category and treatment type

GRI-reference: GRI Standards 306-3 (2020).

Waste directed to disposal, by disposal operation

1000 metric tonnes	Onsite	Offsite	2022	2021	2020	2019	2018
Hazardous waste							
Incineration with energy recovery	0.37	17	17	16	13	17	18
Incineration without energy recovery	-	2	2	2	2	0.44	1
Landfilled	0.04	37	37	45	51	55	42
Other disposal operation	0.01	3	3	3	11	59	59
Total Hazardous waste	**0.42**	**59**	**60**	**66**	**78**	**132**	**119**
Non-Hazardous waste							
Incineration with energy recovery	0.056	44	44	41	37	17	13
Incineration without energy recovery	-	1	1	1	1	2	2
Landfilled	69	19	88	71	56	79	88
Other disposal operation	0.001	2	2	8	4	17	17
Total Non-Hazardous waste	**69**	**66**	**135**	**121**	**97**	**115**	**120**
Grand Total	**69**	**125**	**195**	**187**	**175**	**247**	**240**

Waste diverted from disposal, by recovery operation

1000 metric tonnes	Onsite	Offsite	2022	2021	2020	2019	2018
Hazardous waste							
Preparation for reuse	-	-	-	-	-	-	-
Recycling	31	125	156	178	142	96	94
Other recovery operation	-	0.1	0.1	-	-	-	-
Total Hazardous waste	**31**	**125**	**156**	**178**	**142**	**96**	**94**
Non-Hazardous waste							
Preparation for reuse	-	-	-	-	-	-	-
Recycling	98	216	314	366	287	156	163
Other recovery operation	-	0.1	0.1	-	-	-	-
Total Non-Hazardous waste	**98**	**216**	**314**	**366**	**287**	**156**	**163**
Grand Total	**129**	**340**	**470**	**544**	**429**	**252**	**257**

Note E6 – Biodiversity

Reporting principles
Overburden moved, total volume in metric tons, comes from Brazil, Paragmonias. This is the only mine within Hydro's consolidated operations.

Areas are measured using the ArcGIS Platform, and is based on year end data.

The rehabilitation data are reported to ANM (the Brazilian National Mining Agency) and SEMAS (the Secretary of State for Environment and Sustainability in Pará), as part of the clearing permit renewal process.

*Threatened species i*s classified using federal database updated by ICMBio researchers. The conservation status of species registered in the reference databases can change. As a result, the species list is updated and species added, removed and/or moved from one status to another.

Reported species are cumulative and represent all species observed within the premises of Hydro's mining activities in Paragominas, Brazil, since monitoring and registration started in 2003.

E6.1 Overburden moved

Total volume (in metric tons) of overburden moved in mine within consolidated operations.

GRI Reference: GRI Standards 303-4 (2018) and G4-MM3

Overburden moved

Million metric tonnes	**2022**	2021	2020	2019	2018
Overburden moved	82	79	67	45	48

The overburden volume increase in 2022 is considered within normal annual variation and the level of bauxite production in 2022. The increase from 2019 to 2020 is due to increased production following the lifting of the embargo and ram-up of the production levels.

Hydro uses strip mining in Paragominas, a technique that avoids the formation of an overburden stockpile. Thus, all overburden moved for mining purpose is used to reconstruct the topography of the strip previously mined, prior to rehabilitation of the mined areas. Part of the overburden (laterite) is also used for paving roads and for raising the heights of existing tailing dams and constructing new ones.

The sterile soil is untreated and has no dangerous properties. Leaching potential due to overburden removal is negligible. There is a water resource management program in place to mitigate silting from the plateau areas.

E6.2 Land use and rehabilitation

Land use and rehabilitation in Hydro's consolidated mining activities

GRI Reference: G4-MM3

In our mining operation, we strive to rehabilitate the total mined area that is available for rehabilitation, within two hydrological cycles. This is what we refer to as our 1:1 rehabilitation target.

The mining cycle is made up of several steps. When a given area of land is to be developed, the first step is clearing, when vegetation and soil are removed. The area is then classified as area cleared for future mining. After an area is mined, it is either classified as tailings dams and other mining infrastructure or area available for rehabilitation. All areas available for rehabilitation will be rehabilitated as soon as possible and subsequently classified as an ongoing rehabilitation area.

When tailings facilities are closed, they will become available for rehabilitation after settling for minimum five years. We will then get a significant increase in the tailings dam infrastructure available for rehabilitation. There may be additional movements between different statuses from year to year due to reclassification.

During 2022, we cleared 507 hectares (ha) of land and mined 411 ha. A total area of 259 ha underwent rehabilitation in 2022, and an area of 182 ha was released from the mining operations, to be rehabilitated within two hydrological cycles as part of Hydro's 1:1 rehabilitation target. This area must be completely rehabilitated by the end of 2024 in order to meet this target.

Of the 150 ha made available for rehabilitation in 2020, 100 percent was rehabilitated by end of 2022, and we met the 1:1 rehabilitation target. Of the 150 ha that were made available for rehabilitation in 2021, 89 percent was rehabilitated by the end of 2022 and the remaining 11 percent will be completed in 2023.

The clearing, mining and rehabilitation cycles are constantly ongoing and are not synchronized. Clearing and mining are at their peak in the dry season, whilst rehabilitation happens primarily in the wet season. The three cycles are also influenced by different drivers such as permits for the clearing cycle, land available for rehabilitation, and rainfall for the rehabilitation cycle. As a result, there is no direct link between the area cleared each year and the area mined or rehabilitated that same year (e.g. an area cleared in 2017 may be mined late 2018 and then rehabilitated in the 2019 wet season). Due in large part to this complexity, the figures presented above cannot be directly deducted from the figures in the land use and rehabilitation table below.

Land use and rehabilitation - Paragominas

Hectares given per point in time	2022	2021	2020	2019	2018
Total property area	**18 764**	**18 764**	**18 764**	**18 764**	**18 764**
Long-term infrastructure	236	202	193	193	193
Tailings storage facilities	2 450	2 472	2 472	2 472	2 472
Current mining operations	1 921	1 697	1 455	1 149	951
Area under ongoing rehabilitation	2 905	2 646	2 486	2 339	2 203
Legal reserves (ARL and PPA)	3 680	3 714	2 870	2 870	2 870
Remainder of property	7 572	8 033	9 287	9 741	10 075
Total affected area within property[1)]	**7 512**	**7 017**	**6 607**	**6 153**	**5 819**
Total pipeline easement track[2)]	489	489	489	489	489
Total transmission line track[2)]	1 893	1 893	1 893	1 893	1 893
Area cleared, in reporting year	507	427	459	348	397
Area mined, in reporting year	411	389	306	215	243
Area starting rehabilitation, in reporting year	259	167	152	136	331

1) Total impacted area within property = Long-term infrastructure + TSFs + Current mining operations + Area under ongoing rehabilitation
2) There is a spatial overlap between the easement tracks of the pipeline and transmission line of ca. 102 ha

The Hydro Paragominas property measures in total 18,764 hectares (ha), while the total land use at the end of 2022 was 7,512 ha, including 2,905 ha under ongoing rehabilitation.

The rehabilitation gap is a result of ongoing operations, i.e. areas set aside for infrastructure being reclassified, or missed/ failed/poor previous rehabilitation. By end of 2022, the total rehabilitation gap was 214 ha.

There are specific closure plan requirements for the Paragominas mine (rehabilitation of mine and tailings ponds). In addition, there is a similar requirement for the bauxite residue disposal areas at Alunorte.

E6.3 Threatened species

Threatened species registered within the influence area of Hydro's mining activities in consolidated activities.

GRI-reference: GRI Standards 304-4 (2016)

Threatened species registered within the influence area of Hydro's mining activities[1)]

	National/Federal list[2)]		Regional/State list[3)]		IUCN Red list[4)]	
	Fauna	Flora	Fauna	Flora	Fauna	Flora
Critically endangered	4	0	2	0	2	2
Endangered	6	5	10	1	1	6
Vulnerable	24	11	12	11	17	11
Near threatened	0	0	0	0	0	1
Least concern	0	0	0	0	10	7
Data deficient	0	0	0	0	4	0
Total according to each red list classification	**34**	**16**	**24**	**12**	**34**	**27**

1) Some species included in the overview are covered by more than one database and the numbers can therefore not be summed across the columns. In addition, each database is stand alone and they are therefore not comparable.
2) Federal Brazilian red list.
3) Pará state red list.
4) International Union for Conservation of Nature red list.

Some species included in the overview are covered by more than one database and the numbers can therefore not be summed across the columns. In addition, each database is stand alone and they are therefore not comparable.

As of yearend 2022, the revised accumulated number of threatened species observed within the premises of Hydro's mining activities in Paragominas, since 2003, is 84, of which 54 are fauna and 30 are flora. Six more species of flora were registered in 2022 compared to 2021. Ten species of fauna were not in the redlists anymore in 2022, and there was no occurrence of new species of fauna in 2022.

Note E7 – Production volumes

Reporting principles
Reported production volumes are based on total production volumes (100 percent basis) from Hydro's consolidated activities and does not include Hydro's share of production in minority-owned plants or joint ventures. For Alumina production this includes Alunorte, for primary aluminium this includes Hydro's primary aluminium plants in Norway, Slovalco in Slovakia and Albras in Brazil. The volumes are not directly comparable to the volumes reported in the financial statements.

Production volumes

1,000 metric tonnes	**2022**	2021	2020	2019	2018
Alumina production	6,193	6,305	5,457	4,487	3,712
Primary aluminium production	1,805	1,915	1,726	1,675	1,653
Hydro CIRCAL (sales volume)	50				
Hydro REDUXA (sales volume)	421				

Production volumes decreased in 2022, primarily due to curtailment of production at Slovalco. Production volumes increased significantly in in 2019, 2020 and 2021 compared to 2018, due to the embargo at Alunorte (alumina), and curtailment at Albras (primary aluminium) in 2018.

Note E8 – Environmental data for 50/50-owned companies

Hydro has an ownership share of 50 percent in Qatalum. As only operations owned more than 50 percent are included in most of the information in Hydro's environmental and social statements, we have chosen to disclose certain environmental information about this company and its performance. The reporting principles of each indicator might differ from the ones used by Hydro. For information about social data, see to the social statements.

Qatalum produces most of the electricity needed for its operations based on gas. Emissions from the electricity generation is included as scope 1 emissions below.

Environmental data for 50/50-owned companies

	Main product	Production, 1,000 metric tonnes	GHG emissions, scope 1, Million mt CO_2e	GHG emissions, scope 2, Million mt CO_2e	Total energy consumption, TWh	Fresh water used, Million m^3	Total waste disposed, metric tonnes	Total waste recycled, 1,000 metric tonnes
Qatalum	Aluminium Metal	638	4.71	0.08	9.64	0.75	6589	89%

[1] Recycling degree of total waste

Note S1 – Employees

Reporting principles
Permanent and temporary employees are based on data from Hydro's human resources SAP system. Data presented represent status at year end, December 31.

Payroll is based on Hydro's consolidated financial statements. Payroll, as provided in the table below, does not include pension costs.

Temporary employees include among others apprentices, but exclude contractor employees. Legal requirements and customs may vary from country to country, making direct comparison difficult. Agency workers that are engaged by Hydro for three months or longer are included in the numbers for temporary employees.

Number of full-time equivalents of contractor employees as included in the social statements is estimated based on the total hours worked by contractor employees (reported in Hydro's incident reporting system Synergi and IMS as basis for calculation of injury frequency) divided by 1,850 working hours per year. Contractor employees represented in total about 16,900 full-time equivalents during 2022. The majority relates to Hydro's Bauxite & Alumina activities.

Part-time employees include all persons being employed in positions that are not full-time (less than 100 percent).

The total employee turnover rate includes resignations, retirements and manning reductions of all permanent employees, but excludes closures and divestments.

Voluntary employee turnover rate includes permanent employees who voluntarily resigned in the reporting period.

For a very limited number of employees, we do not have gender information. These employee is included in the statistics as male.

S1.1 Permanent employees and payroll by region, gender and age

Total reported permanent employees in Hydro consolidated activities and significant location of operation.

GRI-reference: GRI Standards 2-7 (2021), 201-1 (2016) and 405-1 (2016). G4-EU15

Permanent employees by region, gender and payroll

	Number of employees[1]					Payroll (NOK million)[2] [3]				
	2022	2021	2020	2019	2018	**2022**	2021	2020	2019	2018
Norway	**3 672**	**3 493**	**4 048**	**4 103**	**4 050**	**3,799**	**3,654**	**3,632**	**3,684**	**3,591**
Women	23%	22%	21%	21%	21%					
Men	77 %	78%	79%	79%	79%					
Germany[4]	**1 543**	**1 460**	**4 615**	**4 967**	**4 909**	**1,074**	**805**	**3,577**	**4,307**	**3,265**
Women	21%	21%	13%	13%	12%					
Men	79%	79%	87%	87%	88%					
France	**1 823**	**1 790**	**1 818**	**1 894**	**1 883**	**916**	**951**	**917**	**939**	**954**
Women	18%	16%	16%	16%	16%					
Men	82%	84%	84%	84%	84%					
Hungary	**1 726**	**1 650**	**1 554**	**1 612**	**1 675**	**493**	**436**	**384**	**408**	**541**
Women	32%	31%	30%	29%	26%					
Men	68%	69%	70%	71%	74%					
Other Europe	**8 620**	**8 570**	**8 407**	**9 071**	**9 338**	**4,150**	**3,813**	**3,746**	**3,850**	**3,678**
Women	24%	23%	22%	22%	22%					
Men	76%	77%	78%	78%	78%					
Total Europe	**17 384**	**16 963**	**20 442**	**21 647**	**21 855**	**10,432**	**9,658**	**12,256**	**13,188**	**12,029**
Brazil	**6 241**	**6 182**	**6 070**	**6 108**	**5 658**	**1,541**	**1,140**	**1,059**	**1,273**	**1,158**
Women	17%	14%	13%	13%	13%					
Men	83%	86%	87%	87%	87%					
USA	**6 120**	**5 856**	**5 510**	**6 013**	**6 291**	**4,745**	**3,803**	**3,517**	**3,656**	**3,348**
Women	19%	18%	17%	16%	15%					
Men	81%	82%	83%	84%	85%					
Rest of the world	**2 269**	**2 263**	**2 218**	**2 542**	**2 432**	**886**	**711**	**677**	**889**	**783**
Women	21%	18%	19%	18%	18%					
Men	79%	82%	81%	82%	82%					
Total	**32 014**	**31 264**	**34 240**	**36 310**	**36 236**	**17,605**	**15,312**	**17,509**	**19,005**	**17,318**
Women	21%	20%	18%	18%	18%					
Men	79%	82%	82%	82%	83%					

[1] Number of employees is based on where the employee actually is stationed, and will in some cases differ from the Country-by-country report, which shows in which legal company she or he is employed.
[2] Joint operations (Alunorf and Aluchemie from 2016 to 2019) are excluded from the payroll figures in the table above. Those entities are included in Hydro's financial statements on a line-by-line basis. Please see note 3.1 to the consolidated financial statements for more information about joint operations.
[3] Payroll figures for Extrusions is only available from 2018.
[4] The demerge of Rolling in 2021 reduced number of permanent employees by approx. 4,000, with the majority of these being in Germany.

Age distribution permanent employees

	2022	2021	2020	2019	2018
Under 30	14%	12%	14%	15%	15%
30-49	53%	53%	52%	52%	52%
50 +	33%	35%	34%	33%	33%

S1.2 Employees by employment type and part-time employees

Total reported employees by employment type in Hydro consolidated activities and significant location of operation.

GRI Reference: GRI Standards 405-1 (2016), GRI 2-7 (2021) and G4-EU15 Equality and Anti-Discrimination Act.

Temporary employees by region and gender[1) 2)]

	2022	2021	2020	2019	2018
Norway	**813**	**752**			
Women	35%	34%	30%		
Men	65%	66%	70%		
Germany	**148**				
Women	26%				
Men	74%				
France	**56**				
Women	32%				
Men	68%				
Hungary [3)]	**-**				
Women	-				
Men	-				
Other Europe	**247**				
Women	24%				
Men	76%				
Total Europe	**1,264**				
	-				
Brazil	**586**	**461**			
Women	49%	44%	35%		
Men	51%	56%	65%		
USA	**44**	**76**			
Women	34%	14%	26%		
Men	66%	86%	74%		
Rest of the world	**23**				
Women	30%				
Men	70%				
Total	**1,917**	**1,799**	**1,929**	**1,647**	**1 680**
Women	37%	34%	32%	27%	27%
Men	63%	66%	68%	73%	73%

1) Number of employees is based on where the employee actually is stationed, and will in some cases differ from the Country-by-country report, which shows in which legal company she or he is employed.
2) The table contains additional information in 2022 compared to 2021 to statisfy the new GRI 2-7 standard.
3) In Hungary we do not have any employees on temporary contracts with Hydro.

For gender of permanent employees see note S1.1 Permanent employees by region, gender and age as well as payroll.

Full-time and part-time employees by region and gender

	Full-time employees		Part-time employees	
	2022	2021	2022	2021
Norway	**3 939**		**545**	
Women	23%		42%	
Men	77%		58%	
Germany	**1 504**		**187**	
Women	19%		47%	
Men	81%		53%	
France	**1 845**		**34**	
Women	18%		53%	
Men	82%		47%	
Hungary	**1 693**		**33**	
Women	31%		91%	
Men	69%		9%	
Other Europe	**8 606**		**265**	
Women	23%		49%	
Men	77%		51%	
Total Europe	**17 587**		**1 064**	
Brazil	**6 806**		**19**	
Women	20%		16%	
Men	80%		84%	
USA	**6 133**		**32**	
Women	19%		38%	
Men	81%		63%	
Rest of the world	**2 291**		**2**	
Women	21%		0%	
Men	79%		100%	
Total	**32 817**		**1 117**	
Women	21%		46%	
Men	79%		54%	

S1.3 New employees and turnover

New employees and turnover by employment type in Hydro consolidated activities and significant location of operation.

GRI references: GRI Standards 401-1 (2016) and G4-EU15

New employee hires by age group, gender and country

	2022				2021				2020
	Total	**Under 30**	**30-49**	**50+**	Total	Under 30	30-49	50+	Total
Norway	**279**	**76**	**177**	**26**	**131**	**42**	**73**	**16**	**83**
Women	32%	30%	32%	35%	23%	21%	23%	25%	23%
Men	68%	70%	68%	65%	77%	79%	77%	75%	77%
Germany	**123**	**31**	**69**	**23**	**115**	**42**	**59**	**14**	**110**
Women	28%	29%	25%	35%	25%	29%	22%	29%	19%
Men	72%	71%	75%	65%	75%	71%	78%	71%	81%
France	**115**	**27**	**74**	**14**					
Women	38%	11%	43%	64%					
Men	62%	89%	57%	36%					
Hungary	**248**	**68**	**145**	**35**					
Women	40%	31%	48%	29%					
Men	60%	69%	52%	71%					
Other Europe	**976**	**339**	**472**	**165**					
Women	27%	24%	32%	21%					
Men	73%	76%	68%	79%					
Total Europe	**1 741**	**541**	**937**	**263**					
Brazil	**508**	**204**	**274**	**30**	**539**	**175**	**336**	**28**	**428**
Women	49%	60%	45%	17%	22%	25%	22%	11%	18%
Men	51%	40%	55%	83%	78%	75%	78%	89%	82%
USA	**1 496**	**518**	**732**	**246**	**1 393**	**435**	**644**	**314**	**1 292**
Women	22%	16%	25%	27%	20%	20%	20%	21%	19%
Men	78%	84%	75%	73%	80%	80%	80%	79%	81%
Rest of the world	**468**	**166**	**280**	**22**	**1 560**	**475**	**858**	**227**	**1 158**
Women	25%	20%	29%	18%	29%	30%	29%	22%	26%
Men	75%	80%	71%	82%	71%	70%	71%	78%	74%
Total	**4 213**	**1 429**	**2 223**	**561**	**3 738**	**1 162**	**1 970**	**587**	**3 071**
Women	29%	26%	32%	26%	24%	25%	25%	22%	22%
Men	71%	74%	68%	74%	76%	75%	75%	78%	78%

Total employee turnover by age group, gender and country

	2022				2021			
	Total	**Under 30**	**30-49**	**50+**	Total	Under 30	30-49	50+
Norway	**6%**	**6%**	**5%**	**6%**	**3%**	**6%**	**5%**	**1%**
Women	5%	6%	7%	4%	4%	7%	6%	1%
Men	6%	6%	5%	6%	3%	6%	5%	1%
Germany	**7%**	**16%**	**7%**	**6%**	**7%**	**8%**	**8%**	**5%**
Women	9%	17%	8%	6%	8%	6%	10%	7%
Men	7%	15%	6%	5%	6%	9%	7%	5%
France	**6%**	**12%**	**6%**	**6%**				
Women	9%	28 %	8%	7%				
Men	6%	9%	5%	6%				
Hungary	**16%**	**36%**	**13%**	**14%**				
Women	17%	35%	15%	13%				
Men	15%	36%	12%	15%				
Other Europe	**14%**	**28%**	**13%**	**12%**				
Women	11%	23%	10%	9%				
Men	15%	30%	14%	12%				
Brazil	**9%**	**9%**	**8%**	**10%**	**9%**	**10%**	**9%**	**11%**
Women	9%	6%	10%	5%	10%	9%	10%	10%
Men	8 %	10%	8%	11%	9%	10%	8%	11%
United States	**41%**	**83%**	**42%**	**22%**	**37%**	**87%**	**43%**	**16%**
Women	47%	103%	48%	27%	42%	105%	47%	18%
Men	39%	80%	41%	21%	36%	8 %	42%	15%
Rest of the world	**29%**	**63%**	**26%**	**14%**	**12%**	**31%**	**13%**	**6%**
Women	19%	48%	13%	11%	13%	27%	14%	6%
Men	31%	67%	30%	14%	12%	33%	49%	6%
Total	**17%**	**36%**	**16%**	**12%**	**15%**	**35%**	**15%**	**8%**
Women	17%	32%	15%	12%	16%	31%	16%	8%
Men	18%	37%	16%	12%	15%	36%	15%	8%

In 2022, turnover increased in the U.S. in large part due to unprecedented labor market conditions. We continue our retention efforts to include increased hourly wages, new hire onboarding and mentoring, leadership / supervisor training, sponsored employee development and facilities improvements.

Voluntary employee turnover by age group, gender and country in 2022[1)]

	Total	Under 30	30-49	50+
Norway	**3%**	**5%**	**5%**	**1%**
Women	4%	5%	6%	0%
Men	3%	5%	5%	1%
Germany	**4%**	**11%**	**4%**	**1%**
Women	5%	13%	5%	2%
Men	3%	10%	4%	1%
France	**3%**	**8%**	**3%**	**1%**
Women	4%	17%	5%	1%
Men	3%	7%	3%	1%
Hungary	**10%**	**22%**	**9%**	**7%**
Women	12%	23%	10%	6%
Men	9%	21%	8%	7%
Other Europe	**7%**	**16%**	**8%**	**3%**
Women	7%	14%	7%	3%
Men	7%	17%	8%	3%
Brazil	**5%**	**5%**	**5%**	**5%**
Women	5%	3%	6%	2%
Men	4%	6%	4%	5%
United States	**25%**	**53%**	**27%**	**12%**
Women	30%	65%	33%	14%
Men	24%	51%	26%	12%
Rest of the world	**13%**	**34%**	**11%**	**5%**
Women	14%	32%	10%	8%
Men	13%	34%	12%	5%
Total	**10%**	**22%**	**10%**	**5%**
Women	11%	21%	11%	5%
Men	9%	23%	9%	5%

[1)] This is a new indicator, data from previous years is not accessible

S1.4 Total employees by Business Area

The below table provides information on the number and distribution of permanent and temporary employees across Hydro's business areas.

Total employees by Business Area

Total permanent and temporary employees	2022	Proportion (in percent)	2021
Hydro Bauxite & Alumina	4,415	13.0%	4,262
Hydro Aluminium Metal	5,995	17.7%	5,820
Hydro Extrusions	21,419	63.1%	21,133
Hydro Energy	399	1.2%	310
Group	297	0.9%	293
Global Business Services	1,406	4.1%	1,247
Total	**33,931**	**100.0%**	**33,065**

S1.5 Sick- and parental leave

Sick- and parental leave in Hydro consolidated activities and significant location of operation.

Sick leave

Sick leave in Hydro's global organization was 4.1 percent in 2022, compared to 3.8 percent in 2021. In Norway, sick leave was 5.8 percent in 2022 compared to 4.9 percent in 2021. Women in Norway had a sick leave rate of 7.1 percent, while men had 5.4 percent.

Parental leave

In 2022, men and women in Hydro Norway typically used the allocated numbers of parental leave in line with the national guidelines. Further details for Norway can be found in note S4.3.

In Brazil, the legal requirement is 120 days of maternity leave and five days of paternity leave. Since 2019, Hydro has offered 180 days of maternity leave and 10 days of paternity leave to all employees. In the U.S., there are no general legal rights for paid maternity and paternity leave. Hydro Extrusions North America offers four weeks of paid parental leave, in addition to six-eight weeks of maternity leave provided under its employee insurance. Hydro Precision Tubing in the U.S. offers six-eight weeks of paid maternity leave under its employee insurance program.

In 2022, Hydro conducted a mapping on our leave benefits in terms of maternity, paternity, adoption and sick leave in the 18 countries with the highest number of employees. The finding from this mapping is that Hydro are in line and competitive with local market practices. Further work related to the topic will be carried out in 2023 to review the opportunities linked to potential global policy in this area. In our employee engagement survey, we track perceptions of healthy balance between work and spare time, and found stress level as important indicators for a sustainable work environment.

S1.6 Training and development

Hydro provides all employees with access to courses, certificates and degree programs with world-renowned universities through edX and LInkedIn learning. The aim is to increase knowledge and skills, and strengthen the learning culture in the organization. Typical courses include leadership & production development and programming.

We do not have full overview of all training in Hydro since it is often administered at a local level. However, our employees completed almost 200,000 hours of courses, and the data can be broken down as follows:

Hours of training by age group, gender and country for 2022[1)]

	Total	Under 30	30-49	50+
Norway	**24,026**	**7,668**	**10,916**	**5,442**
Women	7,165	1,873	3,962	1,330
Men	16,861	5,795	6,954	4,112
Germany	**2,616**	**237**	**1,231**	**1,148**
Women	793	105	313	376
Men	1,822	132	918	773
France	**4,961**	**333**	**3,130**	**1,498**
Women	1,579	107	1,139	334
Men	3,382	226	1,991	1,164
Hungary	**3,162**	**451**	**2,442**	**270**
Women	1,341	295	986	60
Men	1,822	157	1,456	209
Other Europe	**18 405**	**3 315**	**10 477**	**4 613**
Women	4 687	716	3 172	799
Men	13 719	2 599	7 305	3 814
Total Europe	**53,169**	**12,004**	**28,194**	**12,971**
Brazil	**130,840**	**29,620**	**87,404**	**13,816**
Women	30,136	13,246	16,106	783
Men	100,704	16,375	71,298	13,032
United States	**4,492**	**494**	**2,284**	**1,714**
Women	1,319	204	661	454
Men	3,173	289	1,623	1,260
Rest of the world	**2,581**	**524**	**1,683**	**374**
Women	661	139	454	68
Men	1,920	385	1,229	305
Total	**191,081**	**42,642**	**119,566**	**28,874**
Women	47,680	16,684	26,792	4,204
Men	143,402	25,958	92,774	24,670

[1)] This is a new indicator, data from previous years is not accessible.

Note S2 – Remuneration

Reporting principles
Data on gender related salary differences is based on local salary systems.

S2.1 Gender related salary differences

GRI-reference: GRI Standards 405-2 (2016)

Gender related salary differences for employees in significant location of operation and countries where we have large presence.

All employees shall receive a total compensation that is competitive and aligned with local industry standard (but not market leading). The compensation should also be holistic, performance oriented, transparent, fair and objective. Salaries in the organization are reviewed on a regular basis. There are no significant gender-pay differentials for employees earning collective negotiated wages in Norway and Brazil. We have evaluated salary differences for all Hydro employees in Hungary and based on our overall figures we find no significant gender related salary differences.

We have investigated the salary conditions for all Hydro employees in the U.S., including at the remelters, extrusion plants and precision tubing facilities. Based on our initial analysis, on average there are no significant gender-related salary differences in Extrusion North America. Also, in Brazil we do not see any gender-pay differentials for employees earning collectively negotiated wages.

In addition, we have included a gender-related compensation analysis starting in 2022 in countries where we have large presence.

Median ratio of women base salary over men's base salary for 2022[1)]

Job level	Belgium	Denmark	France	Italy	Norway	Spain	Sweden	United Kingdom
Level 1		118%			100%			
Level 2	96%	100%	95%	95%	100%	88%	97%	89%
Level 3	104%		100%		106%	84%	96%	87%
Level 4-5	87%	86%	95%	110%	108%	86%	94%	93%
Level 6-7	106%		87%	88%	101%	88%	79%	80%
Level 8-9					94%			

[1)] The data is based on annual base salary for permanent employees. Levels with less than five employees are not reported.

S2.2 Annual total compensation ratio

GRI-reference: GRI Standards 2-21 (2021)

Last year, we started the process to obtain reliable data for calculating the median employee compensation per country, until this work is completed, we will present the ratio between the highest base salary and the median base salary for all permanent employees in Norway. This ratio equals 17.28. Additionally, we are currently in the process of conducting living wage gap analyses for our main operations and geographies, which we aim to finalize in 2023. This will contribute to a better understanding of median pay in all of our operations.

Please see our Remuneration report in the Appendices to the annual report for more information on highest paid salary.

S2.3 Standard entry level wage

GRI reference: GRI Standards 202-1 (2016)

Entry level wages have been checked for some significant locations of operation. In Brazil, entry level wages are controlled by the labor agreement. We looked into salary differences in 2022, and the ratio compared to national minimum wage in Albras was 1.25 and for both genders, 1.16 for both genders in Alunorte and 1.6 for women and 1.7 for men in Paragominas.

In Norway, the entry level wages are defined by tariff agreements. In the Norwegian operations, minimum entry wage for staff with certificates of apprenticeship is about 9 percent higher than the tariff minimum.

For Hydro Extrusions' significant location of operation, Hungary, we have reviewed entry level wage. The standard entry level wage ratio is 1.5 compared to the national minimum wage. In the USA, Hydro's most significant country of operations based on number of employees, the ratio of entry level wages across all sites to the federal minimum wage was 2.5, and are higher than applicable state level minimum wages at all sites.

Note S3 – Employee engagement

Reporting principles
Employee engagement Index (EEI) measures the extent to which employees are engaged and motivated to contribute to organizational success and are willing to apply discretionary effort to accomplishing tasks important to the achievement of organizational goals.

Psychosocial Risk Indicator (PRI) measures drivers of work-related stress which affects employee mental health and wellbeing.

Integrity Culture Index (ICI) measures the employee perception of Hydro's integrity culture.

The inclusion Index (II) measures perception of inclusion among Hydro employees. The index consists of eight questions related to diversity, equity, inclusion and belonging.

Hydro's *employee engagement survey* consists of EEI, PRI, ICI and II, and is normally carried out for all employees every second year.

Hydro Monitor

	2022	2020	2018[1]
Employee Engagement Index (EEI)	**76%**	**72%**	**84%**
Women	76%	70%	86%
Men	76%	72%	83%
Psycosocial Risk Index (PRI)	**76%**	**75%**	
Women	75%	73%	
Men	76%	75%	
Integrity Culture Index (ICI)	**78%**	**76%**	
Women	78%	75%	
Men	78%	76%	
Inclusion Index (II)	**76%**		
Women	75%		
Men	76%		
Response rate	**87%**	**89%**	**88%**

The long-term ambition is to be among the top 25 percent companies worldwide on EEI. Engagement has improved from 2020. In 2018, Extruded Solutions was not part of the survey, and the results are thus not directly comparable. Engagement has improved and is now on par with the industry benchmark.

The engagement survey is a tool to work with organizational development, therefore the most important part is that teams discuss the results, implement actions and follow-up results.

[1] 2018 results are note directly comparable to subsequent years since Hydro used another survey provid-er, and the survey did not include Hydro Extrusions.

Note S4 – Diversity in management

Reporting principles
Diversity data for the board of directors and Corporate Management Board (CMB) for Norsk Hydro ASA are counted per year end.

Diversity in management is reported for levels 0, 1, 2 and 3. Level refers to the CEO, level 1 refers to Corporate Management Board (CMB), level 2 refers to persons reporting to CMB, and level 3 refers to persons that report to level 2.

Senior management is defined as the management group at each site (site managers and those reporting to them) in addition to business area management teams.

Local is defined at country level for Norway and at state level for Brazil.

S4.1 Women and non-Norwegians in management

Share of women and non-Norwegians in management

GRI-reference: GRI Standards 405-1 (2016)

Diversity in management

	Women					Non-Norwegians				
	2022	2021	2020	2019	2018	**2022**	2021	2020	2019	2018
Board of directors (10 members)[1)]	36%	40%	40%	27%	33%	27%	30%	30%	27%	11%
Corporate Management Board	40%	44%	44%	40%	40%	10%	20%	10%	-	10%
Management, levels 0-2	37%	35%	31%	32%	33%	29%	34%	43%	37%	39%
Management, levels 0-3	35%	36%	32%	27%	25%	44%	41%	53%	60%	56%

[1)] With three women among the seven shareholder-elected members and one woman among the three employee representatives on the Board of Directors and one woman among the three employee representatives, Hydro complies with the Norwegian legal requirements on female representation. .

The Annual General Meeting resolved on May 10th 2022 to discontinue the Corporate Assembly. See the Corporate governance chapter for more information.

In addition to the groups above, we also monitor the gender distribution across additional staffing categories. In women leadership positions, where we monitor positions that have at least one person reporting directly to them, we have a target of 25 percent by 2025. In 2022, we achieved 19% of women in leadership positions, a 1 percentage point increase since 2021.

We also monitor women in white-collar, or staff positions. For this group the data include level 0, 1, 2, 3, 4 and 5 managers. We have set a target of 35% by 2025 in this category. In 2022, 29% of staff were women, a 1 percentage point decrease on 2021.

S4.2 Local representation in senior management

Local representation in senior management for significant sites of operation.

GRI reference: GRI Standards 202-2 (2016)

Local representation in senior management

Share of senior management hired from local community	**2022**	2021	2020	2019	2018
Norway					
Production sites in Norway	94%	88%	98%	97%	97%
Aluminium Metal management team	80%	80%	80%	77%	91%
Extrusions management team	43%	14%	29%	38%	
Brazil					
Paragominas, Pará	0%	15%	9%	9%	8%
Barcarena, Pará	9%	17%	22%	17%	13%
Bauxite & Alumina management team	9%	0%	0%	0%	0%

Of the eleven members of the Bauxite & Alumina management team in Brazil, ten are Brazilian citizens.

Hydro employs locals when necessary competence and capacity are available and normally uses expatriates only to secure employee development and the transfer of values and competence. Open positions in Hydro are normally posted at hydro.com and in local media. To secure competence transfer, it is important that there are also senior employees with experience from other units. This may also be the case at the blue-collar level, especially during start-up of new plants or equipment.

S4.3 Diversity and inclusion report for Norwegian subsidiaries

Reporting principles

This note provides quantitative information required by the Norwegian Equality and Anti-Discrimination Act (Likestillings- og diskrimineringsloven) for the following subsidiaries: Hydro Aluminium AS, Hycast AS, Sør-Norge Aluminium, Hydro Energi AS, Hydro Extruded Solutions AS, Hydro Extrusion Norway AS. For a description of our approach and work related to diversity and inclusion in Hydro, the activities being undertaken to identify and analyze risk of discrimination, see Our People chapter.

We reported last year on pay equality and involuntary part-time, and will report next year again in accordance have the Norwegian Equality and Anti-Discrimination Act.

Part-time employees normally work full time. The opportunity to work part time is considered a benefit for which a special application must be made. In 2021, we reviewed if there were any cases of involuntary part-time work in our Norwegian activities. The review confirmed that all employees working part time had applied for reduced working hours. See note S1.2 for more information.

Hydro Monitor results for Norwegian subsidaries for 2022

	Employee Engagement Index (EEI)	Psycosocial Risk Index (PRI)	Integrity Culture Index (ICI)	Inclusion Index
Norsk Hydro ASA[1)]	**74%**	**75%**	**75%**	**76%**
Women	75%	74%	77%	79%
Men	73%	74%	75%	75%
Hydro Aluminium AS	**71%**	**72%**	**72%**	**72%**
Women	76%	76%	77%	74%
Men	71%	73%	72%	71%
Hycast AS	**48%**	**58%**	**55%**	**81%**
Women	40%	48%	47%	81%
Men	49%	61%	57%	81%
Sør-Norge Aluminium	**73%**	**74%**	**74%**	**81%**
Women	72%	73%	71%	81%
Men	73%	74%	74%	81%
Hydro Energi AS	**80%**	**81%**	**86%**	**76%**
Women	83%	76%	83%	76%
Men	79%	82%	86%	76%
Hydro Extruded Solutions AS	**92%**	**92%**	**92%**	**76%**
Women	97%	96%	96%	75%
Men	90%	85%	85%	76%
Hydro Extrusion Norway AS	**63%**	**78%**	**71%**	**76%**
Women	62%	70%	63%	75%
Men	62%	81%	73%	76%

1) Includes all employess in Norway.

Summary statistics for Norwegian subsidaries in 2022

	Permanent employees	Temporary employees	Number of weeks of parental leave inweeks	Permanet employees in part time	Temporary employees on part time
Norsk Hydro ASA[1)]	**3 672**	**813**		**32**	**7**
Women	23%	35%	21.1	56%	43%
Men	77%	65%	12.1	44%	57%
Hydro Aluminium AS	**2 354**	**305**		**15**	**3**
Women	18%	24%	20.1	47%	
Men	82%	76%	12.2	53%	
Hycast AS	**61**	**2**	NA[2)]	**-**	**-**
Women	18%	0%			
Men	82%	100%			
Sør-Norge Aluminium	**363**	**141**		**3**	**-**
Women	30%	43%	34.6	33%	
Men	70%	57%	10.5	67%	
Hydro Energy AS	**294**	**12**		**2**	**1**
Women	29%	8%	28.2	0%	0%
Men	71%	92%	12.3	100%	100%
Hydro Extruded Solutions AS	**48**	**2**	NA[2)]	**-**	**1**
Women	23%	0%			0%
Men	77%	100%			100%
Hydro Extrusion Norway AS	**110**	**5**	NA[2)]	**1**	**-**
Women	23%	0%		100%	
Men	77%	100%		0%	

1) Includes all employess in Norway.
2) Data omitted due to limited sample size.

Note S5 – Health and Safety

Reporting principles
Employees are workers under direct supervision of Hydro. For the purpose of recording health and safety statistics, employees includ agency workers. Health and safety statistics for employees are included for the period they are employed by or otherwise in service for Hydro.

Contractors are workers who are under contract to execute work for Hydro, and who are under the direct supervision of the contractor, but who operate at Hydro premises under Hydro's indirect supervision. Contractors are included during the period they are employed by or otherwise in service for Hydro.

Total recordable injuries (TRI) is calculated as the sum of LTI + RWC + MTC. See definitions of the components further down. TRI rate is calculated per one million hours worked.

Lost time injury (LTI) is a personal injury at work leading to unfitness for work and absence beyond the day of the accident.

Restricted work case (RWC) is a personal injury at work that does not lead to absence beyond the day of the accident, because of alternative job assignment.

Medical treatment case (MTC) is treatment, other than first aid, administered by a physician or registered professional personnel under the standing orders of a physician.

Absenteeism for Hydro globally includes all absence due to injuries, work related and other illness, measured as number of hours lost due to sick leave as percent of number of hours worked plus number of hours lost due to sick leave.

Sick leave includes all absence due to illness, measured as number of days lost due to sick leave as percent of number of possible working days excluding holidays. There are challenges in ensuring consistent reporting practice on sick leave across the company due to legislative and cultural differences between countries.

High risk incidents include major accidents and incidents with major potential. High risk incidents (HRI) rate is calculated as the number of high risk incidents per million hours worked, employees and contractors combined.

Occupational illness rate measures occupational ill health. It is required as a minimum that all potential cases shall be reported. Actual occupational illnesses are defined by Hydro as illnesses that:
- have been confirmed by relevant authorities/insurance companies or doctors (depending on the national system)
- have led to any kind of permanent disability, disablement pension, loss of function and/or are a listed occupational disease

Standardized statistics, as defined above, are prepared and reported to management on a monthly basis based on data registered in Synergi and IMS, the reporting tools for incidents regarding health, safety, security and environment. Data covers all organizational units within Hydro, including sales offices and administrative functions.

S5.1 Total recordable injuries (TRI), Lost time injury (LTI) and sick leave

Total recordable injuries, lost-time injuries, fatal accidents and sick leave for employees and contractors in Hydro's consolidated activities.

GRI reference: GRI Standards 403-9 (2018)

Total recordable injuries, lost-time injuries, fatal accidents and sick leave[1)]

	2022	2021	2020	2019	2018
Total recordable injuries (TRI)	**227**	**296**	**224**	**278**	**301**
Employees	186	251	188	229	243
Contractors	41	45	36	49	58
Total recordable injuries rate (TRI)[2)]	**2.4**	**3.3**	**2.7**	**3.0**	**3.4**
Employees	3.0	3.9	3.0	3.3	3.5
Contractors	1.3	1.8	1.7	2.2	3.0
Lost-time injuries (LTI)	**115**	**155**	**119**	**119**	**147**
Employees	90	125	102	101	118
Contractors	25	30	17	18	29
Lost-time injuries rate (LTI)[3)]	**1.2**	**1.7**	**1.4**	**1.3**	**1.7**
Employees	1.4	1.9	1.6	1.5	1.7
Contractors	0.8	1.2	0.8	0.8	1.5
Total number of fatal accidents	**-**	**-**	**-**	**-**	**1**
Employees	-	-	-	-	1
Contractors	-	-	-	- [4)]	-
Sick leave, percent	**4.1%**	**3.8%**	**4.2%**	**3.7%**	**3.6%**
Sick leave, Norway	**5.8%**	**4.9%**	**4.5%**	**4.5%**	**4.0%**
Women	7.1%	5.7%	5.3%	5.7%	4.3%
Men	5.4%	4.7%	4.5%	4.2%	3.5%

1) The numbers include discontinued operations
2) Number of recordable injuries per million working hours
3) Number of lost-time injuries per million working hours
4) Contractor fatality in 50/50 JV managed by Qatalum

In 2022, there has been a strong focus on fatality prevention process and increased focus on visible leadership and onboarding programs. We also identify and share best practices more effectively through our HSE auditing process and use of digital tools, in addition to continuously improve our procedures, guidance documents, training and HSE tools.

Despite zero fatal accidents in 2022, we have sadly recorded one fatality in February 2023, when a contractor employee at minority-owned MRN lost his life in an accident involving a vehicle. At the time of publishing our annual report, the accident is under investigation by the police and MRN.

We have a fatality prevention protocols and associated lifesaving rules and behaviours across all business areas. The fatality prevention protocols, also known as the "critical seven", are:
- Energy Isolation (Lockout, Tagout and Verify, LOTO etc.)
- Fall Prevention (working at height, below floor level, falling objects etc.)
- Mobile Equipment (free moving vehicles such as forklift trucks, traffic management)
- Overhead Crane Safety (overhead travelling crane, mobile crane, tower crane etc.)
- Confined Space Entry (entering tanks, pits etc.)
- Molten Metal Safety (preventing explosion)
- Contractor Management (preventing injury during projects and other work to contractors and those providing contracted services)

Total recordable injuries (TRI) per region[1)]

	2022	2021	2020	2019	2018
Total recordable injuries (TRI) employees	**2.4**	**3.3**	**2.7**	**3.0**	**3.4**
Employees	3.0	3.9	3.0	3.3	3.5
Contractors	1.3	1.8	1.6	2.2	3.0
TRI Norway	**3.2**	**4.7**	**3.0**	**3.8**	**2.9**
Employees	2.1	3.6	2.7	3.1	2.3
Contractors	12.9	15.0	7.5	10.2	8.7
TRI Germany	**2.6**	**6.0**	**5.4**	**4.5**	**5.1**
Employees	2.8	5.8	5.5	4.3	5.3
Contractors[2)]	-	8.5	4.3	5.5	3.8
TRI Brazil	**1.0**	**1.7**	**1.5**	**1.3**	**1.8**
Employees	1.6	2.6	2.0	1.5	1.5
Contractors	0.7	1.2	1.2	1.2	2.0
TRI US	**4.5**	**5.8**	**4.0**	**5.8**	**5.8**
Employees	4.6	5.9	4.0	5.9	5.9
Contractors	2.0	1.9	2.6	7.2	7.0

1) Number of recordable injuries per million working hours. The numbers include discontinued operations.
2) The total contractor hours in Germany have reduced in 2022 due to the divestment of Hydro Rolling.

The 2022 total injury rate (TRI) of 2.4 is a strong improvement from 3.3 in 2021, and the lowest level ever reported in Hydro. The most dominant types of recordable injuries in 2022 were associated with ergonomics and falls. Injuries to fingers, hands and arms, representing 58 percent of all injuries with legs, knees, ankles and feet 25 percent, the upper body 6 percent and the head 11 percent. Hydro is not reporting these figures per gender as this can be in conflict with privacy protection consideration.

S5.2 High risk incidents (HRI)

High risk incidents (HRI) in Hydro's consolidated activities.

GRI reference: GRI Standards 403-9 (2018)

High risk incidents (HRI)

	2022	2021	2020	2019	2018
High risk incidents	75	122	140	190	202
HRI rate	0.80	1.36	1.66	2.08	2.27

Read more about the fatality prevention protocols under note S5.1 Total recordable injuries (TRI), Lost time injury (LTI) and sick leave.

S5.3 Occupational illness rate

Occupational illness rate in Hydro's consolidated activities.

GRI reference: GRI Standards 403-10 (2018)

Occupational illness rate

	2022[1)]	2021[1)]	2020	2019	2018
Occupational illness rate[2)]	0.3	0.3	0.3	0.2	0.5

1) 2022 and 2021 includes all Hydro sites, earlier years did not include Extrusions
2) Cases per million working hours. The numbers include discontinued operations.

Reporting of work-related ill-health cases has improved and will continue in 2023 through clarification of reporting requirements in the relevant procedure and guideline. Development is tracked through a corporate reporting tool.

The majority of ill-health cases reported for 2022 were related to exposure to noise (hearing threshold shifts), musculoskeletal disorders, and two occupational asthma cases. We use our proactive tool for work environment risk assessment (WERA) to identify health risk and implement risk reducing measures e.g. substitution of hazardous chemicals, noise reduction, personal protective equipment to avoid development of new occupational illness cases. Through the work we have reduced the frequency of occupational illness cases related to noise and pot room asthma.

S5.4 Wellness

Hydro cares about the health and wellbeing of our employees, and offers a variety of initiatives to promote physical and mental health.

The majority of Hydro's sites offer wellness initiatives, ranging from healthy eating, exercise opportunities, weight management, stop smoking campaigns and work-life balance management. Several sites have access to a social worker or counselor to address psychological health and safety, and health and wellness is also addressed at site Health and safety-day events.

The focus on Health and wellbeing has continued in 2022 with a stress management pilot including a more in-depth stress risk assessment. Following the pilot a number of tools were developed to support future stress risk assessments such as E-learning training aimed at general awareness and for leaders, management competency tool and guidelines. Celebration of the World Mental Health Day is an annual event as part of the DIB calendar.

Note S6 – Labor rights

The vast majority of operational sites within Hydro Aluminum Metal and Energy have established formal joint management-worker health and safety committees covering all employees. At certain sites, also contractor employees are included.

Hydro's major sites in Europe and Brazil are unionized. Extrusions has a major presence in North America, and about 60 percent of our US and Canadian employees are working at a unionized site. In total, we estimate that around 70 percent of all employees are unionized. Non-organized workers in Norway in general receive the same working conditions as the organized employees, negotiated on industry level. For the rest of Hydro, the working conditions of non-organized employees are based on company results, competitive analysis, inflation, individual performance, and negotiation. Learn more about dialogue with the employee representatives under Stakeholder dialogue.

In regions where unions are not allowed we are striving to establish alternative worker-management relations.

No strikes exceeding one week and no lock-outs took place in 2022.

Note S7 – Current income tax

Reporting principles
Current income tax is based on Hydro's financial statements.

Current income tax for Hydro's consolidated activities and significant locations of operation.

GRI reference: GRI Standards 201-4 (2016)

Current income tax

NOK Million	**2022**	2021	2020	2019	2018
Norway	3,678	1,990	709	665	1,770
Germany	(69)	81	12	38	81
France	130	161	112	36	56
Spain	62	44	21	(0)	26
The Netherlands	50	30	19	30	10
Slovakia	644	114	17	6	46
Sweden	(11)	57	89	23	48
Poland	54	57	48	40	32
Luxembourg	119	34	14	28	24
Denmark	0	30	36	11	22
Austria	62	55	33	39	39
Hungary	62	72	41	41	38
Belgium	60	14	5	7	10
Other EU	54	34	17	10	16
Total EU	**1,217**	**782**	**466**	**307**	**449**
Switzerland	14	6	9	8	22
Other Europe	49	8	-	-	-
Total Europe	**4,959**	**2,786**	**1,184**	**980**	**2,241**
USA	424	53	154	167	39
Canada	296	384	92	21	73
Brazil	1,145	1,238	540	291	312
Asia	69	80	36	37	52
Other	(1)	23	13	16	7
Total outside Europe	**1,933**	**1,779**	**835**	**532**	**483**
Total	**6,891**	**4,565**	**2,019**	**1,512**	**2,724**

Current income tax includes the joint operations Alunorf, Skafså Kraftverk, Tomago and Aluchemie. Those entities are included in Hydro's financial statements on a line-by-line basis. Please see note 3.1 Investments in joint arrangements and associates to the consolidated financial statements for more information about joint operations.

Hydro is subject to income taxes in the countries where we operate. The nominal tax rates typically vary between around 20 and 35 percent. The effective tax rates may differ from the nominal tax rates, among other things as a result of differences in depreciation rates and other tax deductions.

- The marginal tax rate for our power production in Norway is 59 percent.
- The general corporate income tax rate in Brazil is 34 percent. Hydro's bauxite, alumina and aluminium operations in Brazil have been granted income tax incentives encouraging investments in the northern provinces of Brazil, reducing the tax rate on operating income to between 20 and 34 percent up to 2017. No tax incentives have been valid or applicable for the years 2018, 2019 and 2020. In 2021, Hydro Paragominas has been granted renewal of a SUDAM income tax incentive for a 10-year period, reducing the tax rate on operating income to between 15,25 and 34 percent from 2020 to 2029. In addition, Hydro's operations in Brazil are subject to a number of significant indirect taxes.
- Hydro is present in some countries with at tax rate below 10 percent. In Switzerland, we have bauxite, alumina and aluminium sales activities, and aluminium sales activities in Singapore, both are taxed at rates of around 10 percent. In addition, Hungary has a tax rate of 9 percent.

Qatalum, a 50/50 joint venture with Qatar Petroleum, had a 10 year exemption from income taxes in Qatar, which expired in 2020. It has been Hydro's consistent position that the generally applicable tax rate, currently at 10 percent, should apply to Qatalum after the expiry of the tax holiday. However, the joint venture partners have not been able to agree on a common interpretation of the applicable tax law, and Qatalum filed its 2020 tax return applying a 35 percent tax rate on 30 June 2021. Hydro is pursuing alternative measures to protect its financial interest in this matter.

Hydro reports according to the Extractive Industries Transparency Initiative and Norwegian legal requirements, see Hydro's Country by country report. We also report on financial assistance from public organization related to R&D activities, see note S8 Financial assistance from governments.

Note S8 – Financial assistance from governments

Reporting principles
R&D expenses are collected through Hydro's financial reporting, see Hydro's financial statements note 10.2 Research and Development to the consolidated financial statement. R&D funding is gathered from Hydro's corporate technology office and our main R&D centers, located in Årdal (smelter technology) and Sunndal (alloys and casting) in Norway and Brazil (Bauxite & Alumina). The R&D centers in Hydro Extrusions are in Finspång, Sweden, and Detroit, USA. Funding received are actual income received from public research funds, e.g. The Research Council of Norway (Forskningsrådet) and Enova, through the year. See our section on collaborating with other parties for more information.

S8.1 Research & Development (R&D), consolidated activities

GRI reference: GRI Standards 201-4 (2016)

Research & Development

NOK million	**2022**	2021	2020	2019	2018
Research & Development expenses	655	512	633	625	594
Funding received[1)]	29	28	34	36	35

[1)] In addition comes funding to the Karmøy Technology Pilot of NOK 1.6 billion from 2015-2018. Hydro participates in collaborative projects carried out by other research organizations which receive public funding directly. Such funding is not included in the figures above.

See section on collaborating with other parties for more information and the financial note 5.2 and note 10.2.

Note S9 – Social responsibility

Reporting principles
Community investments includes monetary amounts and time spent and benefits to the company as well as to the communities. Outcomes for Hydro and the society are also included in the reporting requirements. All sites report annually on all community investments, charitable donations, sponsorship and other related initiatives.

Education refers to initiatives within the formal educational system, from elementary school to university. Examples of initiatives include training of teachers and external scholarships.

Capacity, or competence, building refer to all training and competence building outside formal educational systems. Examples include trainees and Hydro's supplier development program established in Brazil.

We have established a framework and methodology for counting the people impacted by our programs and initiatives to ensure consistency across the company.

S9.1 Community investments, charitable donations and sponsorships

Community investments

NOK million	**2022**	2021	2020	2019	2018
Community investments[1)]	49	30	42	50	29
Total community investments, charitable donations and sponsorships[1)]	**69**	**55**	**56**	**59**	**89**

[1)] In 2021 we included Hydro Extrusions in the reported numbers for the first time.

In addition to reported number in the table, Hydro finished three social centres and one technical school in Brazil in 2022. The total costs account for 228 million NOK, and is part of the agreement after the 2018 extreme rainfall and subsequent flooding in Bacarena. In particular, we spent close to 50 MNOK on a technical school in Barcarena. The increase in 2018 included NOK 35 million related to emergency relief following the same incident. It also includes around NOK 10 million to foodcards as part of the TAC agreement. See the section "The Alunorte situation" in Hydro's Annual Report 2018.

Figures reported for 2021 and 2022 include Extrusions while they exclude the divested businesses area, Rolling. Hence, historical figures are not comparable with the current year.

S9.2 Social responsibility target

Social responsibility

1,000 people reached	Accumulated	2022	2021	2020	2019	2018
Education and capacity building	157	25	21	60	28	24

All business areas are contributing in line with the original ambition setting of reaching 500,000 people. Data for the period before 2021 was in 2022 updated with 3000 people reached following re-assessments and re-calculations of our historical data. Note that the 2020 results were significantly higher due to one particular initiative in India, reaching close to 30,000 people.

Note S10 – Compliance

Reporting principles
Compliance data have mainly been collected from Group Internal Audit and Investigations' overview of alerts reported to line management, to supporting staff functions, and Hydro's AlertLine. In addition, compliance data has been obtained from quarterly compliance reporting by business areas, and a self-assessment filled in by each business area at year-end. Some information has also been collected through other sources including Hydro's Legal department and Procurement Network.

Significant non-compliance cases are defined as all material pending or threatened litigation and claims to which a consolidated Hydro company is party. Disputes for an amount in excess of MNOK 75 have been regarded material.

S10.1 Reported and confirmed cases of non-compliance

GRI reference: GRI Standards GRI 406-1 (2016) and 205-3 (2016)

Non-compliance cases are normally reported to line management and/or supporting staff functions including Group Compliance, Group Internal Audit and Investigations, Human Resources, Legal, HSE, Finance and Accounting. Non-compliances can also be reported through Hydro's AlertLine, which offers the possibility of anonymous reporting, unless otherwise prohibited by local law. Although separate reporting statistics have been kept for Extrusions (acquired 2017) and the rest of Hydro, the figures from 2018 are consolidated.

The number of dismissals due to breach of Hydro policy is limited to cases reported to Hydro's Internal Audit.

In 2022, Hydro received 8,612 notices in Canal Direto, the grievance channel designed for external stakeholders in Brazil. Out of the total, 1% were submitted anonymously. The majority of the entries, 99,01%, relate to information request ranging from supplier registration, contracts, human resources and inquiries about Food Cards distribution process, part of the Term of Adjusted Conduct (TAC) agreement with the Government of Pará and public attorney in relation to the Alunorte situation in 2018.

The majority of notices received were registered through our toll-free number (0800), while 2,25% came from email and 3,14% through Hydro website. A set of improvements were performed in Canal Direto along 2022: service extended for all operations in Brazil, including Rein and extruded products; the third-party service supplier team was trained on ways to improve service quality as well as on human rights related aspects.

Cases reported regarding breaches of Hydro policy

	2022	2021	2020	2019	2018
Number of cases reported through AlertLine (or similar)	**433**	**273**	**224**	**347**	**342**
Dismissals due to breaches of Hydro policy[1)]	17	5	4	20	14
Alleged cases of harassment	56	51	57	90	116
Alleged cases of discrimination	41	13	14	25	11
Alleged cases of discrimination and/or harassment	97	64	71	115	127
Confirmed cases of harassment	25	12	18	34	50
Confirmed cases of discrimination	10	4	5	7	1
Confirmed cases of discrimination and/or harassment	**35**	**16**	**23**	**0**	**0**
Alleged cases of corruption, fraud, corruption and/or conflict of interest	22	26	24	48	25
Confirmed cases of corruption	**0**	**0**	**1**	**2**	**1**
Confirmed cases of fraud	**2**	**2**	**4**	**4**	**0**
Confirmed cases of conflict of interest	**3**	**1**	**0**	**3**	**3**

1) Total number of dismissals due to breaches of Hydro policy of which Hydro's Internal Audit is informed

S10.2 Non-compliances with laws and regulations

In 2022, Hydro did not register any new non-compliances with laws and regulations that resulted in significant fines.

For information about a civil fine related to certain air and water environmental compliance issues in Hydro's casthouse The Dalles, Oregon, US, please see note E2.3 Permit breaches.

Regarding the previously reported case related to the alleged processing of unclean aluminium in The Dalles facility, civil matters were resolved by paying 765,000 USD in 2022. The criminal investigation was resolved executing a plea agreement in which Hydro admitted to a federal misdemeanour charge of "negligent endangerment" in violation of the Clean Air Act and agreed to pay a criminal fine of 550,000 USD, as well as restitution to any victims (to be determined later). A sentencing hearing in court is scheduled for January 2023.

After the Deferred Prosecution Agreement (DPA) between Hydro Extrusion USA, LLC and the United States Department of Justice (DOJ) expired earlier in 2022, the criminal court filing against Hydro was dismissed by a judge in October 2022.

No material incidents of non-compliance with regulations and voluntary codes concerning the impacts of our products and services on children's health and safety, were reported in 2022.

For more information about legal proceedings in Hydro please see the section Legal proceedings.

Legal claims related to Brazilian operations
The legal claims stated below are primarily cases related to Brazil and involves sensitive matters and/or has the potential to have a significant reputational impact on the Hydro group

The cases below are lawsuits filed after the 2018 Rainfall event by associations or public entities. For information related to the Alunorte situation, please see Hydro's Annual Report 2018.

March 16, 2018: CAINQUIAMA – Associação dos Caboclos, Indigenas e Quilombolas da Amazônia (an association with

an office in Barcarena) filed a lawsuit in the State Court in Belém against Norsk Hydro Brasil, Alunorte and the State of Pará, claiming that chemical waste was intentionally discharged and that the bauxite residue deposits in operation were subject to a fraudulent license granted by the State of Pará. Furthermore, the plaintiff alleged that the bauxite residue deposits (DRS 1 and 2) are located on an ecological reserve. With reference to these allegations the plaintiff requested the defendants to carry out medical examinations of allegedly impacted communities. The lawsuit is ongoing and awaiting a final decision in the lower Court.

March 27, 2018: A collective lawsuit was filed by IBS (Barcarena's Social and Environmental Institute) against Norsk Hydro Brasil, Albras, Alunorte, Imerys, Alubar, the Municipality of Barcarena and the State of Pará to seek remediation of the environment and compensation for material and moral damages.
The lawsuit is ongoing and awaiting a final decision in the lower Court.

April 3, 2018: The State of Pará filed a civil class action seeking to recover environmental damages allegedly caused by Alunorte, as well as indemnification for alleged material and moral damages. On December 12, 2018, Alunorte and the State of Pará entered into a settlement agreement to end the lawsuit with reference to the Term of Adjusted Conduct (TAC) and Term of Commitment (TC) signed on September 5, 2018. On October 14, 2019 the court issued a decision homologating the agreement and extinguishing the lawsuit. The decision was subject of appeal filed by ADECAM association (Association of Education, Culture, Protection and Defense of Consumers, Taxpayers and Environment of Brazil) and is pending a decision from the Court of Appeal.

April 5, 2018: The State and Federal Public Prosecutor's Offices (Ministerio Público) filed a lawsuit against Alunorte, Norsk Hydro Brasil and the State of Pará. As a preliminary injunction, the plaintiffs requested partial suspension of Alunorte's production activities (50 percent reduction) and prohibition of using the bauxite residue deposit DRS2 until the license to operate was obtained, and the company could demonstrate operational stability and efficiency. On April 30, 2018, the Federal Court partially granted the injunction, determining an embargo. The State of Pará and the State Public Prosecutor's Office were excluded from the lawsuit. On May 15, 2019 the Federal Court lifted the production embargo on Alunorte. On September 20, 2019 the Federal Court issued a decision homologating the agreement between Federal Public Prosecutors, Alunorte and Norsk Hydro Brasil to resume DRS2 installation and commissioning activities. The decision was subject of appeal filed by individuals and is pending a decision.

May 15, 2018: Another lawsuit was filed by CAINQUIAMA against Mineração Paragominas (MPSA), Albras, Norsk Hydro Brasil, Alunorte, INMETRO (National Institute of Metrology), BVQI -CERTIFICADORA LTDA; Federal Union of Brasil, National Department of Mineral Production ("DNPM"), in the Federal Court in Paragominas, alleging that MPSA's tailings contain hazardous substances. CAINQUIAMA also claimed that the bauxite residue have been illegally dumped in Alunorte's bauxite residue deposits (DRS1 and DRS2) and that these deposits are located in an ecological reserve requesting an injunction to stop the operation of MPSA. On July 18, 2018 the Federal Court denied the request for injunction. The lawsuit is ongoing and awaiting for final decision in the lower Court.

September 12, 2018: ADECAM filed a lawsuit in the Federal Court in Belém against Alunorte, Norsk Hydro Brasil, the Federal Union and Ibama (the Federal Environmental Agency) seeking compensation for alleged collective moral damages to the people of Pará, having the rainfall in February 2018 as the main ground for the claim. The association accuses the companies of pollution, including overflow and leakage of the bauxite residue deposits, discharge of contaminated effluents through clandestine/hidden pipes, in addition to what has already been claimed in other lawsuits involving the February incident. The lawsuit is ongoing and awaiting a final decision in the lower Court.

October 31, 2018: CAINQUIAMA filed a similar lawsuit as the one filed in March 16, 2018 against Mineração Paragominas (MPSA), Albras, Norsk Hydro Brasil, Alunorte, State of Pará, BVQI - Certificadora Ltda in the State Court of Belem, requesting the suspension of the operation of the companies. On June 17, 2019, the court issued a decision that denied the injunction request. The lawsuit is ongoing and awaiting a final decision in the lower Court.

On May 3rd, 2019: CAINQUIAMA filed a new lawsuit, with an injunction request, before the 5th Public Treasury Court of Belem against (i) the State of Pará; (ii) Norsk Hydro Brasil.; (iii) Mineração Paragominas; (iv) Alunorte. and (v) Albras. In short, the complaint states that the products used in Brazil in order to refine bauxite are more toxic than the ones used in Norway. Further, it argues that the amount of coal and heavy fuel oil consumed per year by Alunorte released into the atmosphere is harmful to the environment (as it can cause, e.g., acid rain and contamination of soil and water) and to humans (as it can cause respiratory illness and premature death). Lastly, it mentions that the ICMS tax benefit given to defendants must be lifted, because Alunorte has not changed the energy source from fuel oil to natural gas as agreed with the government through one of the commitments in the ICMS agreement. On June 10, 2019 the Court issued a decision that denied the injunction request. The lawsuit is ongoing and awaiting for final decision in the lower Court.

On August 1, 2019: About 100 Individuals from Abaetetuba and Barcarena (State of Pará) filed a lawsuit against Alunorte. The case relates to the 2018 rainfall incident and claims that Alunorte contaminated the environment, and due to this, the plaintiffs are not able to sustain their livelihoods as farmers and fishermen and are requesting material and moral compensation. Currently there are 102 lawsuits filed by several individuals with the same allegations and requests. All of the 102 are ongoing and awaiting a final decision in the lower Court.

On February 5, 2021, CAINQUIAMA and nine Brazilian individuals filed a lawsuit with the Rotterdam District Court, in the Netherlands, against Hydro's Dutch entities and Norsk Hydro ASA (Hydro) seeking compensation for alleged financial damages and personal injuries suffered as a result of Alunorte and Albras activities in the municipality of Barcarena. According to the plaintiffs, Hydro's Dutch entities and Hydro are part of Alunorte and Albras' corporate group and, therefore should be liable for the alleged environmental violations caused in the municipality of Barcarena throughout the years. The lawsuit is ongoing and a hearing about the merits of the lawsuit in the lower court is expected to take place during Q2 or Q3 2023 .

Bauxite & Alumina Labor cases

February 2017: The union at Paragominas filed in February 2017 a claim representing all employees, asking to be compensated for hours spent commuting back and forth from work. Following the labor law reform in November 2017, the obligation to compensate for commuting if the place of work is not served by regular public transportation or if the public transportation is not satisfactory to meet the demand, is not valid. Due to this change, the period in question is February to November 2017. The case was partially granted by the initial ruling and is currently being re-evaluated by the Court of Appeals. On June 30 2022, the Superior Court issued a decision reactivating all the cases that were suspended. The Supreme Court have ruled the applicability of commuting hours and all the cases related thereto had to be revisited by all Labor Courts. Therefore, on August 2nd 2022 the Labor Court of Appeals reviewed the decision and the case was totally dismissed. The labor Union filed an appeal against such decision and the case is now pending judgment.

April 2019: Mineração Paragominas ("MPSA") Employees Union filed a Collective Labor Lawsuit on behalf of all employees asking for additional salary differences related to night shift work for employees working on rotating shifts, as well as weekly rest payments for those working for seven consecutive days. The case was dismissed in the initial ruling. When re-ruling the case, the Labor Court of Appeals changed the decision and granted additional pay for night shift workers and dismissed the claim on weekly rest payment without analysis of its merits. Both parties appealed to the Superior Labor Court,. both parties field an interlocutory appeal to the Superior Labor Court of Appeals aiming to have their appeal accepted and ruled, both interlocutory appeals was denied and we filed a new one that is pending judgment.

Other cases

Following an overflow of storm water from the bauxite residue deposits at Alunorte in 2009, there are still legal issues pending. In 2012, more than 5,400 claims related to the overflow were filed in the local court. By the end of October 2022, a total of 5,397 cases were closed with favorable decision to Alunorte, and 57 cases are pending decision from the lower Court and/or Court of Appeals.

In respect of the alleged inappropriate disposal of waste in Ulianópolis Municipality, in September 2011, a civil class action was filed by the Municipality of Ulianópolis against Albras and Alunorte and several other companies. The case seeks remediation of environmental damage and condemnation by the companies and collective moral damages, considering their alleged contribution to environmental damages related to previous disposal of waste through Companhia Brasileira de Bauxita (CBB). Albras and Alunorte are parties in the class action, as both delivered waste to CBB prior to 2003. The class action was filed after an attempt from the Municipality of Ulianópolis together with the State Environmental Agency - Semas, to negotiate a settlement with all the companies involved. Albras and Alunorte did not agree to the terms of the proposed settlement as they had already removed their waste from the site. The lawsuit is ongoing and awaiting a final decision in the lower Court.

In 2017, CAINQUIAMA – Associação dos Cablocos, Indigenas e Quilombolas da Amazônia (an association with office in Barcarena), filed a lawsuit against Norsk Hydro Brasil, Alunorte and Albras, the State of Pará, Bureau Veritas Brasil and Inmetro. They claim part of the bauxite residue deposits for Alunorte (DRS1 and DRS2) was established on an area designated as an ecological reserve, and that they have suffered social and environmental damages. The lawsuit is ongoing and awaiting a final decision in the lower Court.

S10.3 Confirmed significant human rights breaches

Reporting principles
We define significant human rights breaches as either one or more confirmed cases of forced labor, child labor abuse, or confirmed breach of ILO 169 caused, contributed or linked to Hydro. We also include cases where a municipality/region/area of more than 100 people has been irreversibly impacted by confirmed cause, contribution or link to Hydro (e.g. spill, systematic pollution over time, involuntary relocation). The confirmed impact to people in the municipality/region/area is life-long and/or life-shortening.

Relocation of people may at times be necessary in connection with our operations. No voluntary or involuntary relocation of people with legal or prescriptive rights to their dwellings, took place in Hydro's operations in 2022. In Barcarena in Pará, Brazil, in an area surrounding Hydro's operations and regulated for industrial purposes, illegal logging and settlements have accelerated since 2016. We realize that we need to better understand the situation in collaboration with the relevant stakeholders, the municipality and civil organizations.

Hydro did not detect severe human rights impacts in our own operations in 2022.

Incidents of harassment and discrimination are reported separately from (other) human rights breaches in note S10.1 Reported and confirmed cases of non-compliance. Occupational health and safety incidents, including fatalities, can be found in note S5 Health and Safety.

S10.4 Compliance training

In Hydro, compliance awareness training is provided on a range of topics and consists of classroom-training, workshops, town hall meetings and various e-learning modules. In 2022, training was provided e.g. on the topics of anti-corruption, Hydro's code of Conduct, competition law, data privacy, trade sanctions, human rights, integrity and market regulations. Compliance training is mainly prepared and executed by Group Compliance and Group Legal, but other group functions also contribute.

The various compliance awareness and training modules were in total completed 56,516 times. The various compliance e-learning training modules were in total completed 41,160 times. Furthermore classroom training (virtual or face-to-face) was provided to 15,356 employees.

S10.5 Screening of business partners and supplier audits

As part of the integrity risk management process, approximately 6,500 of Hydro's potential or existing counter-parties were screened for human rights violations, corruption, money-laundering, politically exposed persons and violations relating to sanctions using the RDC integrity risk tool during 2022. This mostly relates to suppliers, but also some customers, agents and other business partners were included. New business partners related to most operations are screened before registered in our ERP system. Furthermore, operations in North America uses the denied parties risk tool MK Denial to screen suppliers against 16 official sanction lists multiple times a year. In 2022, approximately 14,000 customers and suppliers were screened in MK Denial.

All suppliers, customers and other business partners registered in our main accounting systems are screened on a weekly basis against recognized international sanction lists.

In total 200 supplier audits were conducted in 2022 in Hydro. Most of the supplier audits included topics related to health, safety, environment and social responsibility. Around 30 percent of the audits led to action plans, and by the end 2022, almost 100 percent of the corrective actions proposed by Hydro resulted in improved performance. All audits are risk based emphasizing topics relevant for the suppliers operations, e.g., quality, safety, environmental, human rights and governance.

Key social responsibility and HSE findings from the audits relate to lack of management systems, environmental awareness, compliance controls and emergency preparedness. A non-compliance with or breach of the principles in Hydro's Supplier Code of Conduct that is not able to be corrected within a reasonable period, may lead to termination of the supplier contract.

S10.6 Cyber security training

Hydro continue to emphasize security awareness for end-users, and provide e-learnings for all users with access to Hydro Academy. Guidelines are published in relevant channels for all users.

Hydro offers a mandatory cyber security training for all IT users in all business areas. A total number of approximately 11,000 employees participated in the training, which covered essential topics of cyber security.

Note S11 - Spending on local suppliers

Reporting principles
Local suppliers are defined as a supplier situated in the same country as the operational site. Selection of local partners and suppliers/contractors shall be based on competitive bidding to the extent feasible, and in compliance with competition laws and regulations as well as Hydro's requirements.

Most significant locations of operation for the business areas Bauxite & Alumina, Aluminum Metal and Hydro's project organization are considered to be Brazil, Norway and USA based on economic importance.

Spending on local suppliers
Spending on local suppliers vary from site to site depending on which goods and services are available. Local spend in our Brazilian Bauxite & Alumina operations was estimated to be 71 percent in 2022. Most of the raw materials used at the aluminum plants in Norway are imported, while electricity and services are sourced locally. In the Norwegian smelters local procurement mainly relates to maintenance services etc. and is about 31 percent in 2022. Hydro Extrusions has a local spend of about 48 percent in 2022, whereas Hydro Energy has 80 percent local spend.

Note S12 – Public affairs and lobbying

Reporting principles
Data on public affairs and lobbying is gathered from Hydro's Communication & Public Affairs department in Norway and Brazil, in addition to our office in Brussels that follows up EU affairs. These units cover all consolidated activities.

Public affairs and lobbying
In 2022, a total of 14 full-time equivalents (FTE) are dedicated to public affairs and lobbying. This includes seven FTEs in Brazil and four in the EU (Brussels office). In Norway three FTE are dedicated to public affairs and lobbying. Within the EU, lobbying activities are publicly reported through the EU Transparency Register. To get a full overview of all Hydro's memberships in different industry associations see Hydro.com.

According to our global directives, Hydro may not make financial contributions to political parties. We have no indications that such contributions took place in 2022.

Note S13 – Certifications

According to Hydro's policy, all operational sites shall comply with, but not necessarily be certified according to ISO 9001, ISO 14001 and ISO 45001. Certification according to these standards is a decentralized responsibility based on identified business needs.

Hydro's power plants in Norway have chosen not to be certified. However, they are fulfilling the requirements given in the mentioned standards. In addition, the power plants need to comply with the requirements given by the Norwegian Water Resource and Energy Directorate (NVE), i.e. concessions for operations as well as environmental, third person safety, security and emergency preparedness regulations. The table below shows the distribution of certification of the other operational sites in Hydro.

In addition to the mentioned ISO and ASI standards below, a number of sites are also certified according to different sector and customer specific standards. Examples of such certifications are the IATF 16949 for the automotive industry, and the Aluminium Stewardship Initiative.

Share of relevant operational sites certified

	ISO 9001 [1)]	ISO 14001	ISO 45001 [2)]	ASI
Eligible	93	92	92	92
Certified	82	84	67	61
Percentage certified	**88%**	**91%**	**73%**	**66%**

1) IATF 16949 is fully alligned with the structure and requirments of ISO 9001. IATF 16949 is required by customers that produce service parts or parts for car assembly. Hence, 4 sites have chosen to only get the IATF 16949.

2) OHSAS 18001 is discontinued and has been replaced by ISO 45001.

Of our sites delivering to the automotive industry, 88 percent are certified according to the IATF 16949. Hydro's most energy intensive sites and operations comply with the ISO 50001 Energy Management systems.

Note S14 – Social data for 50/50-owned companies

Reporting principles

Hydro has an ownership share of 50 percent in Qatalum. As only operations owned more than 50 percent are included in most of the information in Hydro's Environmental and social statements, we have chosen to disclose certain social information about this partly-owned company and its total performance. The reporting principles of each indicator might differ from the ones used by Hydro and in-between the companies. For information about environmental data, see note E8 to the environmental statements.

Social data for 50/50-owned companies

	Main product	Number of employees	Share of women	TRI,employees	TRI, contractors	LTI, employees	LTI, contractors	Fatal accidents
Qatalum	Aluminium Metal	1,064	3.2 %	0.6	3.0	-	2.0	-

Partnerships and commitments

Global Reporting Initiative and the GRI Standards

Hydro uses the GRI Standards for voluntary reporting of sustainable development. GRI collaborates with the United Nations Environment Program and UN Global Compact. Hydro has reported according to GRI since 2003.

We believe that our reporting is in accordance with GRI's reporting principles in all material respects as defined by the GRI Universal Standards (2021). Hydro's GRI Content Index 2022 can be found at Hydro.com/gri.

The sustainability reporting's adherence to the GRI Standards is subject to limited assurance by our external auditors, KPMG. The assurance, as outlined in the Independent Auditor's Assurance report, concludes that the report is presented, in all material respects, in accordance with the GRI Standards.

UN Global Compact Communication of progress

We support the principles of the UN Global Compact. Human rights, international labor standards, working against corruption and environmental considerations are fundamental to our approach to corporate responsibility.

Hydro has played an active role in the Global Compact since its formation. Our commitment is expressed by the Chair of the Board of directors and the CEO in their letter to stakeholders. Our Communication on progress (COP) in relation to the Compact's 10 principles is at the Advanced level and thus also reflects the Global Compact's 21 advanced criteria. The consistency of the information in Hydro's annual report 2022 with the information in the Hydro Communication on Progress 2022 has been reconciled by our auditors. See Hydro.com for more information.

UN Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) embrace a universal approach to the sustainable development agenda. They explicitly call on business to use creativity and innovation to address development challenges and recognize the need for governments to encourage sustainability reporting. Hydro has an impact on all of the 17 development goals, but some more than others. For an assessment of how Hydro's activities impacts each of the 17 SDGs, see the SDG Index.

United Nations (UN) Guiding Principles on Business and Human Rights

The United Nations (UN) Guiding Principles on Business and Human Rights (hereafter UNGPs) were endorsed by the UN Human Rights Council in June 2011. They have provided a clear, global understanding of governmental duties and corporate responsibilities for human rights. The UNGPs articulate that wherever and however a company operates, it must refrain from violating human rights. Companies are expected to be fully aware of their human rights impacts, take concrete steps to address them and implement measures to mitigate negative impacts in the future. Companies are also expected to communicate any impacts or risks of impacts, and mitigating actions. Hydro is committed to transparency, including through this annual report.

Hydro uses the GRI document “Linking G4 and the UN Guiding Principles” document as basis for how we report on our adherence with the UNGPs, and report on this in the GRI index 2021. This is also included in external auditor’s consistency check of Hydro’s GRI index 2021. We also report according to relevant laws that are based on the UNGPs, including the Norwegian Transparency Act 2021 (valid from 2022), the UK Modern Slavery Act 2015, and the Australia Modern Slavery Bill 2018. The most salient and prioritized human rights issues are reported the Human rights chapter.

Through Hydro’s human rights due diligence processes, we did not detect severe human rights impacts in 2021 and therefore have nothing to report for 2021 on the GRI B4 “Additional severe impacts”.

ICMM

Hydro is a member of the International Council on Mining and Metals and reports according to the ICMM requirements. That includes Hydro’s reporting in accordance with the GRI Standards, see the section about GRI above. The Environment and social responsibility 2021 reporting is prepared in line with the requirements found in the ICMM 10 principles and position statements. The complete Environment and social reporting is – according to the ICMM requirements – assured by our external auditor.

As part of our ICMM commitments, we disclose mineral development contracts granted or entered into from 1 January 2021 that we have signed with host governments, see hydro.com

ASI

The Aluminium Stewardship Initiative (ASI) is a global, multi-stakeholder, non-profit standards setting and certification organization. The ASI works toward responsible production, sourcing and stewardship of aluminium following an entire value chain approach.

Hydro is an active member of the Aluminium Stewardship Initiative. ASI’s mission is to recognize and collaboratively foster the responsible production, sourcing and stewardship of aluminium. We have been involved at all stages in the multi-stakeholder development of ASI standards to date. We have participated in developing ASI’s certification program. The third-party certification platform was launched in December 2017. Until publication of this report, 65 production sites have been certified according to the ASI Performance Standard, covering Hydro’s value chain from bauxite mining to finished products. Hydro has also certified several sites according to the Chain of Custody standard, and delivered the first ASI certified metal to a customer in July 2019.

Hydro reports in the GRI index 2021 on how we relate to ASI’s 11 principles and underlying criteria. This is also included in external auditor’s consistency check of Hydro’s GRI index 2021. For the full GRI index, see hydro.com/gri.

TCFD - Task Force on Climate-related Financial Disclosures

Hydro is a signatory to the TCFD recommendations. TCFD was formed by the Financial Stability Board in 2015. The recommendations were made public in June 2017. Hydro launched a new climate strategy in 2019 that takes into account scenario analysis. These include:

- New policies: similar to a 2°C scenario in line with the Paris agreement
- Current policies: similar to a 4°C scenario and in line with already adopted measures
- Physical risks: stress testing of physical risks under a 6°C scenario

The table below shows an overview of Hydro’s initial approach to the recommendations. All page references relate to Hydro’s Annual Report 2021.

Task Force on Climate-Related Financial Disclosures (TCFD) recommendations

Recommendation	Disclosure
Governance: Disclose the organization's governance around climate-related risks and opportunities	
a) Describe the board's oversight of climate-related risks and opportunities	• Board developments • Risk review • Strategic direction and key developments • Performance review
Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material	
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	• Risk review • Climate change
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	• Risk review • Climate change
c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	In 2018, Hydro concluded a review of its climate-related risks, including physical, technological, commercial, legal and reputational risk. The review forms the basis for scenario analyses and an update of the climate strategy. See Climate change chapter.
Risk management: Disclose how the organization identifies, assesses, and manages climate-related risks	
a) Describe the organization's processes for identifying and assessing climate-related risks	• Climate change
b) Describe the organization's processes for managing climate-related risks	• Environmental impact management • Climate change
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organizations' overall risk management	• Business planning and risk management
Metric and targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material	
a) Disclose the metrics used by the organization to assess climaterelated risks and opportunities in line with its strategy and risk management process	• Environmental impact management • Hydro's materiality analysis 2021 • Environmental statements • Note E1 to the environmental statements: Greenhouse gas emissions • Note E3 to the environmental statements: Energy • Note E4.2 to the environmental statements: Water • Note E4.3 to the environmental statements: Recycling • Note E6.2 to the environmental statements: Land use and rehabilitation
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	• Note E1 to the environmental statements
c) Describe the targets used by the organization to manage climaterelated risks and opportunities and performance against targets	• Climate change • Strategic direction and key developments • Environmental impact management

ICMM Performance Expectations

Through our membership in ICMM, we are committed to comply with ICMM's Performance Expectations. For 2022, we have made a self-assessment of our fulfillment of the performance expectations for Hydro Paragominas, Alunorte and Albras, all in Brazil, and Hydro's five fully-owned primary aluminium production plants, all in Norway.

All the operations are certified according to the ASI Performance and Chain of Custody standards. ICMM indicators that are aligned with ASI certified indicators are, according to the ICMM methodology, regarded as externally validated. Remaining indicators have been subject to a self-assessment. The self-assessments of the Brazilian sites have been reviewed by our external auditor KPMG as part of their limited assurance of Hydro's ESG reporting 2022, please see the external auditor's limited assurance report.

In accordance with ICMM requirements, we also need to prioritize the self-assessments of each operation for third party validation required from the financial year 2023 within a three year cycle. Our prioritization is risk based (industry and geography) and in the following order:

1. Bauxite and alumina production in Brazil (Paragominas and Alunorte)
2. Primary aluminium production in Brazil (Albras)
3. Primary aluminium production in Norway (Husnes, Høyanger, Karmøy, Sunndal, Årdal)

Site	Activity	Ownership share	ASI certified indicators	Self-assessed indicators			Total			Comments
			Fully met	Fully met	Partially met	Not applicable	Fully met	Partially met	Not applicable	
Paragominas	Bauxite mining	100%	23	12	1	2	35	1	2	Performance Expectation 6.3 is partially met: GISTM requirements are applicable to Paragominas, expected to be in conformance within the applicable deadlines.
Alunorte	Alumina refining	94%	23	12	1	2	35	1	2	Performance Expectation 6.3 is partially met: GISTM requirements are applicable to Alunorte, expected to be in conformance within the applicable deadlines.
Albras	Primary aluminium production	51%	23	9	2	4	32	2	4	Albras partially meets the performance expectation 6.2 and has a roadmap in place for full adherence including water management improvement. Performance Expectation 6.5 is partially met: The planned fuel switch project is aligned with the expectation. The project will reduce CO, CO_2 and SOx emissions. The project also provides control systems, easier to operate, less downtime, no need of compressed air – in thus also improved energy efficiency.
Husnes	Primary aluminium production	100%	23	11	0	4	34	0	4	
Høyanger	Primary aluminium production	100%	23	11	0	4	34	0	4	
Karmøy	Primary aluminium production	100%	23	11	0	4	34	0	4	
Sunndal	Primary aluminium production	100%	23	11	0	4	34	0	4	
Årdal	Primary aluminium production	100%	23	11	0	4	34	0	4	

SDG index

End poverty in all its forms everywhere

Target 1.2 1.4 1.5

See the Human rights, Our people and work environment and Responsible supply chain chapters for information about Hydro's initiatives to promote a living wage for workers in Hydro and in Hydro's value chain.

See the Local community value creation chapter for more information about Hydro's support for local initiatives that enable economic development, skills and job development.

See the Country-by-Country report in the Appendix for more information about Hydro's tax contributions in different jursdictions.

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target 2.4 2.5

See the Local community value creation chapter for more information about Hydro's support for local initiatives that enable economic development, skills and job development, including projects related to agriculture.

See the Environment chapter for information on Hydro's initiatives to minimize negative impact on nature and biodiversity.

Ensure healthy lives and promote wellbeing for all at all ages

Target 3.5 3.9

See the Our people and work environment chapter for information about Hydro's initiatives to promote mental health and wellbeing and to manage risks related to communicable diseases.

See the Environment and Closure planning and legacy assets chapter for more information about our initiatives to reduce pollution and contamination that could be a threat to public health.

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Target 4.4 4.6 4.7

See the Local community value creation chapter for more information about Hydro's support for local initiatives that enable learning and skills development, including our education and skills development targets.

See the Our people and work environment chapter for information about our people strategy and initiative to support learning and leadership development.

Achieve gender equality and empower all women and girls

Target 5.1 5.2 5.5

See the Our people and work environment chapter for information about our people startegy, including initiatives to promote diversity, inclusion and belonging, promoting gender equality and female leaders, and ending discrimination of all forms.

See the Human rights chapter for information about initiatives to safeguard human rights, including those related to equality and safety.

Ensure availability and sustainable management of water and sanitation for all

Target 6.3 6.4 6.5

See the Environment and Closure planning and legacy assets chapters for information about our initiatives to reduce pollution and contamination that could have a negative impact on waterways and watersources.

The Environment chapter also includes our water use statistics and a description of our stategy to promote responsible water use use and water use efficiency and initiatives to restore and protect rivers and waterways in our hydropower operations.

Ensure access to affordable, reliable, sustainable and modern energy for all

Target 7.2 7.3

See the Our business chapter for information about Hydro's renewable power production and new energy solutions.

See the Innovation and technology transition chapter for information about our initiatives and collaborations aiming to increase the use of renewable power as a share of total power consumption in our value chain.

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Target 8.3 8.4 8.5 8.6 8.7 8.8

See the Human rights, Our people and work environment and Responsible supply chain chapters for information about Hydro's initiatives to promote a living wage for workers in Hydro and in Hydro's value chain and to promote decent work and protection of human rights for all.

See the Our people and work environment chapter for information about Hydro's occupational health and safety initiatives.

The Local community value creation chapter contains information obout our initiatives to support local growith, learning opportunities and training.

The Country-by-Country report in in the appendix provides transparent reporting on our tax and value creation in different jurisdictions.

See the Climate change and Environment chapters for information on initiatives that contribute towards resource efficiency in production and decoupling of economic growth from environmental degradation.

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Target 9.4 9.5

The Climate change and Environment chapters provide information on Hydro's initiatives to make our industry more resource efficient and environmentally sound.

The Innovation and technology transition chapter describes our initiatives and collaborations aimed at enhancing reserach and developing more efficient and environmentally sound industrial processes.

Reduce inequality within and among countries

Target 10.1 10.2 10.3 10.4

See the Human rights, Our people and work environment and Responsible supply chain chapters for information about Hydro's initiatives to promote a living wage for workers in Hydro and in Hydro's value chain. The Local community value creation chapter also describes our contributions to socio-economic development.

The Our people and work environment chapter describes our work to promote inclusion, equal opportunity and equality, and to eliminate discrimination.

Make cities and human settlements inclusive, safe, resilient and sustainable

Target 11.5

The Our people and work environment chapter describes our work to promote resilience and prepare for emergencies and disasters.

The Closure planning and legacy assets chapter describe our work to prevent disasters and contribute to public safety, in particular in relation to the management of tailings produced by the mining process or the bauxite residue produced by the alumina refining process.

Ensure sustainable consumption and production patterns

Target 12.2 12.4 12.5 12.6 12.7

See the Climate change chapter for information about Hydro's initiatives to promote recycling and more circular solutions in our value chain.

See the Environment chapter for information about how we manage waste reduce emissions to air, water and soil, and aim to use of natural resources more efficiently.

The Responsible supply chain chapter describes our focus on sustainability in Hydro's procurement practices.

Refer to our Environment and Social performance in the annual report for information on how we integrate sustainability in our operations and for transparent disclosures on sustainability in our reporting.

Take urgent action to combat climate change and its impacts

Target 13.1 13.2 13.3

See the Climate change chapter for information about Hydro's strategy and initiatives to reduce greenhouse gas emissions and information on how we work to evaluate and address exposure to climate change related risks.

See the Innovation and technology transition chapter for information about our research and initiatives to develop technologies that enable greenhouse gas emissions reductions in our value chain.

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Target 14.1

See the Environment chapter for information about how we manage waste and work to reduce emissions to air, water and soil.

See the Closure planning and legacy assets chapter for information on how we manage the impact of our industrial legacy and assets on the ocean and other ecosystems.

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Target 15.1 15.2 15.5 15.9

See the Environment chapter for information about how we manage waste reduce emissions to air, water and soil, as well as information on our land and forest restoration initiatives and how we manage our impact on nature and biodiversity.

See the Closure planning and legacy assets chapter for information on how we manage the impact of our industrial legacy and assets on the land, water and related ecosystems.

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Target 16.1 16.2 16.3 16.5

See the Human rights, Our people and work environment and Responsible supply chain chapters for information about Hydro's initiatives to safeguard human rights and reduce risk of abuse, exploitation and discrimination in Hydro and in Hydro's value chain.

See the Ethics and compliance chapter for information about our commitment to ethical business practices, compliance with applicable laws and regulations, including anti-corruption.

Strengthen the means of implementation and revitalize the global partnership for sustainable development

Target 17.1 17.3 17.14 17.17

The Country-by-Country report in the appendix provides transparent reporting on our tax and value creation in different jurisdictions.

See the Local community value creation chapter for more information about Hydro's support for local initiatives that enable economic development, skills and job development.

See the Ethics and compliance chapter for information about our public affairs and lobbying efforts, including our positions on sustainability related topics such as carbon pricing and energy markets.

See the Innovation and technology transition chapter for information on our partnerships related to research and development of more sustainable industrial processes.

Hydro

Statement on EU taxonomy for sustainable economic activities

As a non-financial company Hydro reports on revenue (turnover), capital expenditure and operating expenses that are associated with Taxonomy-eligible and Taxonomy-aligned economic activities, in accordance with regulation EU (2020/852) and the supplementing delegated acts.

Read more about Hydro's sustainability ambitions, targets and performance in the Environmental and social responsibility chapter.

Identifying eligible activities

Of the activities currently eligible in the EU taxonomy, three apply to Hydro:

Manufacture of primary aluminium
The manufacture of primary aluminium in Hydro is an eligible and transitional activity according to the EU taxonomy. The technical screening criteria refer to the production of liquid aluminium through electrolysis of alumina.

Hydro's primary aluminium plants have reduction facilities with potlines and casthouses, where liquid and remelted aluminium is cast to form value-added products such as extrusion ingot, primary foundry alloys, sheet ingot and wire rod, in addition to standard ingot. When cast into these products, alloying metals and externally purchased cold metal is added. The amount of cold metal added varies with market circumstances and available casthouse capacity.

Hydro has five fully owned primary aluminium production facilities in Norway, aluminium production facilities operated by part-owned subsidiaries in Slovakia and Brazil, and part-ownership in facilities in Australia and Canada, all included in the scope of taxonomy. Hydro also has a part-ownership in a primary aluminium producer in Qatar, reported as a joint venture and thus outside the scope of Hydro's reporting.

To make a substantial contribution to climate change mitigation, primary aluminium production facilities must meet the technical screening criteria set out in the taxonomy. To be a Taxonomy-aligned activity, the manufacturing of primary aluminium must also comply with the criteria for determining whether that economic activity causes no significant harm to any of the other environmental objectives ("Do no significant harm (DNSH) criteria") for aluminium production, and Hydro must comply with the criteria for processes and outcomes related to human rights, bribery and corruption, taxation, and fair competition ("Minimum Safeguards").

Manufacture of secondary aluminium
The manufacture of secondary aluminium is an eligible and transitional activity according to the taxonomy. Process scrap and post-consumer scrap are purchased from third parties for recycling into extrusion ingot. Standard ingot and alloying metal are added to meet customer specifications. Hydro has a portfolio of stand-alone recyclers, in addition to recyclers located wall-to-wall alongside our extrusion plants.

All manufacturing of secondary aluminium is defined by the taxonomy as making a substantial contribution to climate change mitigation. To be a Taxonomy-aligned activity, the manufacture of secondary aluminium must also comply with the DNSH criteria for manufacture of aluminium, and Hydro must comply with the criteria for processes and outcomes related to human rights, bribery and corruption, taxation, and fair competition ("Minimum Safeguards").

Electricity generation from hydropower
Operation of facilities that generate electricity from hydropower is an eligible activity under the taxonomy. Hydro owns and operates 40 hydropower plants in Norway, with a combined installed capacity of 2.7 GW. The purpose of Hydro's hydropower assets is to secure a stable power supply to our primary aluminium plants located in Norway, which means the hydropower is mainly generated and used for internal consumption.

To make a substantial contribution to climate change mitigation, hydropower production must meet the technical screening criteria set out in the taxonomy. To be a Taxonomy-aligned activity, the hydropower production must also comply with the DNSH criteria for hydropower production, and Hydro must comply with the criteria for processes and outcomes related to human rights, bribery and corruption, taxation, and fair competition ("Minimum Safeguards").

End-use contribution from Hydro's activities
A range of the products we manufacture contribute to climate change mitigation as constituent parts of technologies, infrastructure and complex products needed in a low-carbon society. Examples are battery casings used in the manufacture of electric vehicles, window frames contributing to energy-efficient buildings, and aluminium frames for solar panels. The taxonomy does not provide clear guidance on how to define eligibility in the supply chain of taxonomy-eligible activities. Consequently, we have chosen to report for 2022 based on the taxonomy-eligible activities of primary and secondary aluminium production, rather than on end-use of the aluminium we produce.

Determining whether eligible activities are aligned with the Taxonomy criteria

Manufacture of primary aluminium and manufacture of secondary aluminium
Hydro's primary aluminium production that is based on renewable electricity meets the substantial contribution criteria for manufacture of aluminium, defined as smelters' energy efficiency below 15.5 MWh/t Al and carbon intensity for the electricity used below 100g CO_2e/kWh.

All aluminium remelting activity qualifies for substantial contribution under the taxonomy's manufacture of secondary aluminium activity.

Operations in Europe meet the DNSH criteria for all environmental objectives as long as they are within normal, lawful operations, comply with emission permits to air and water, have performed environmental impact assessments and taken necessary action required. Hydro's major production sites have performed a climate risk and vulnerability assessment.

For Hydro's operations outside of Europe it is more challenging to determine if the DNSH criteria are met as they reference EU law. Based on our assessment, the most challenging criteria to meet is the DNSH criteria for pollution prevention and control, which are linked to achievable emission levels associated with application of the best available techniques (BAT-AEL). Our primary smelters outside of Europe do not meet the emission ranges in EU Best Available Technique Reference (BREF) Documents, and remelters without a bag house filter do not meet criteria for

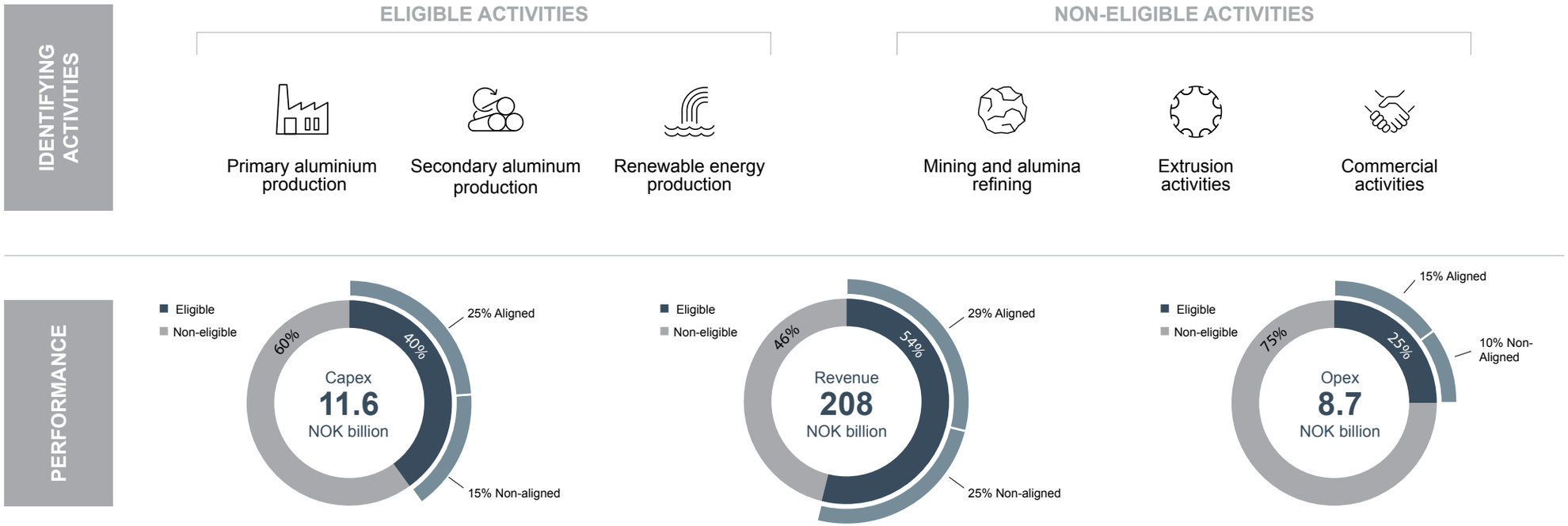
pollution prevention and control. The remaining DNSH criteria are met for our two remelters that operate with bag houses.

Electricity generation from hydropower
All of our hydropower operations are located in Norway. We have been working together with the Norwegian Energy Association ("Energi Norge") and other Norwegian hydropower producers to establish a guidance for interpreting and reporting on the Taxonomy criteria for electricity generation from hydropower in Norway.

Our analysis shows that all our hydropower stations that are connected to artificial reservoirs make a substantial contribution to climate change mitigation as the power density of the electricity generation facilities is above 5 W/m2. We have used guidance from the research institute SINTEF to estimate and document our assessments. In addition, we have one run-of-river hydropower facility that does not have an artificial reservoir, and therefore complies with the criteria for substantial contribution to climate change mitigation. Hydro's hydropower operations have been included in Hydro's climate risk and vulnerability assessment and comply with the DNSH criteria for climate change adaptation. Hydro believes that the hydropower activities comply with the DNSH criteria for sustainable use and protection of water and marine resources by complying with requirements from the local and regional implementation of EU's Water Framework Directive 2000/60/EC. The EU requirements are incorporated the concession and follow-up of permits for our existing hydropower operations. The DNSH criteria for protection and restoration of biodiversity and ecosystems are linked to EU's Environmental Impact Assessment Directive 2011/92/EU, which is implemented by Norwegian authorities. We believe we comply with the relevant requirements through our cooperation with Norwegian authorities for environmental impact assessments related to our hydropower operations.

Compliance with criteria for minimum safeguards
Hydro's activities are carried out in compliance with the minimum safeguards. Please refer to the following sections for information on Hydro's processes and outcomes related to minimum safeguards:

- Human rights, including workers rights, consumer rights and the rights of communities: Refer to the chapter on Human rights in our Annual report, and note S10.3 in our Appendix containing the Environmental and social statements for 2022.
- Bribery and corruption: Refer to the chapter on Ethics and compliance in our Annual report, and note S10.1 in our Appendix containing the Environmental and social statements for 2022.
- Taxation: Refer to our Country-by-country report, which also describes and links to our global tax policy, and note S7 on income tax in our Appendix containing the Environmental and social statements for 2022, and note 10.1 on income tax to our Consolidated financial statements.
- Fair competition: Refer to the chapter on Ethics and compliance in our Annual report, and note S10.1 on non-compliances and note S10.4 on compliance training in our Appendix containing the Environmental and social statements for 2022.



Measuring performance

Hydro's activities are linked to the boundaries of the reporting entity as defined by IFRS and described in the group financial statements, See Hydro's consolidation principles in note 1.1 Reporting entity, basis of presentation and significant accounting policies to the Financial statements.

In combination, these indicators are intended by the taxonomy to express the company's activities that qualify as environmentally sustainable.

Revenue (turnover)
Revenue represents Hydro's total revenue from contracts with customers as specified in note 5.1 Revenue from contracts with customers to the Financial statements. This amount excludes income (loss) from realized and unrealized changes in fair value of derivative instruments which is considered not eligible activities under the taxonomy.

Revenue associated with eligible activities comprises the following elements from external revenues:
- Revenue from sale of liquid metal
- Revenue from sale of casthouse products to customers
- The metal value of revenue from sale of extruded products
- Revenue from sale of electricity

Hydro's eligible activities are primary aluminium production, secondary aluminium production and production of electricity. The output from these activities is partly sold directly to customers, partly upgraded to more advanced products for sale to customers through further processes not described in the taxonomy, and partly consumed in the production process.

Revenue from sale of liquid metal is the direct output from the production of primary metal. No adjustments are made to the prices agreed with customers. The amount is limited as liquid metal cannot be stored or transported over longer distances.

Revenue from the sale of casthouse products to customers is the most directly associated commercial product resulting from aluminium production, whether primary or secondary. The majority of the value of a casthouse product results from its aluminium content, while most products also contain alloying material to achieve the intended properties for use.

Alloying material varies from less than 1% up to around 11%. The value of alloying materials is considered an integral part of the product and its value thus included in revenue from eligible activities. In production of casthouse products, in particular for recycling of post-consumer scrap, cold metal with a known purity is added to achieve the intended properties of the casthouse product. Purchased standard ingot is the primary source for this purpose. As this element is neither manufacture of primary nor secondary aluminium, the revenue is adjusted for the share of aluminium added on a tonnage basis. The eligible share of revenue from sale of casthouse products only covers the sale of aluminium produced by Hydro.

Metal purchased for resale, including metal produced by the joint venture Qatalum, is excluded.

The metal value of revenue from sale of extruded products is included to reflect the similar value as for casthouse products. The metal value is calculated the same way as for casthouse products, also excluding the value of added cold metal whether in recyclers set up close by the extrusion plants, or in the primary smelters and separate recycling facilities also supplying the extrusion plants.

The value of upgrading the products through such processes as extruding profiles for customers' application, further fabrication of those profiles, surface treatment and other processes that might apply is also excluded.

Revenue from sale of electricity consists of revenue from spot sales of daily excess production from Hydro's power plants in Norway above what is consumed in Hydro's own activities. To the extent Hydro sells power purchased from other producers, that revenue is excluded from the eligible share together with any revenue from power trading.

Capital expenditure
CapEx comprises additions to property, plant and equipment, represented by the gross amount of purchase, development or lease as specified in note 2.1 Property, plant and equipment to the Financial statements. It also includes the gross amount of purchase or development of intangible assets as specified in note 2.2 Intangible assets.

Any amount of gross additions to property, plant and equipment or intangibles resulting from business combinations is included in CapEx under this metric. Further, any lease capitalized is included with the addition (or reduction) required by IFRS.

Short-term leases and small asset leases as well as variable lease payments are not recognized as fixed assets and are thus not included in this indicator. Any goodwill recognized in a business combination is not included in the indicator. Further, financial investments, including capital injections in associated companies and joint ventures, are excluded from the metric.

Additions to property, plant and equipment and to intangible assets for eligible activities include both sustaining investments in existing plants engaged in eligible activities and expansions or new facilities within such activities.
As a starting point, entire plants including associated and supporting functions are included. However, several of our aluminium smelters have on-site production of anodes, an activity that is not described in the taxonomy. Where a smelter has an associated anode production facility, these are excluded from investments in a smelter. For extrusion plants, the eligible share of CapEx covers the recycling facilities as such including furnaces and casthouse equipment. Extrusion presses, other facilities and support facilities mainly serving the extrusion activities are fully excluded from eligible CapEx.

For future reporting of the aligned share of CapEx, the aligned share is intended to include sustaining and expansion investments in activities meeting the criteria for aligned activities, as well as investments in activities that are not aligned which form part of a plan to meet the criteria within a period of a maximum of ten years.

Investments in activities that are not aligned at the time of investment, and where the activities will not become aligned, are not included as aligned investments. Such investments include investments with the purpose of reducing the carbon footprint of our non-taxonomy-eligible activities, including our investments to replace heavy fuel oil with natural gas at the Alunorte alumina refinery. For more detail on non-eligible investments that contribute to reduced GHG emissions, refer to our chapters on Climate change and Innovation and technology transition.

Operating expenditure
OpEx comprises Hydro's total expenses from the specified functions and represent a sub-set of expenses presented in the consolidated financial statement, primarily in the line items Employee benefit expense and Other expenses. Operating expenditure is described as a share of the expenses included in the sub-total EBIT in the income statement. The regulation

requires us to report on expenses that represent direct non-capitalized costs that relate to the following functions:

- research and development
- building renovation measures
- short-term lease
- maintenance and repair, and any other direct expenditures relating to the day-to-day servicing of assets of property, plant and equipment that are necessary to ensure the continued and effective functioning of such assets.

Research and development costs cover projects that do not meet the specific criteria for capitalization as intangible assets. Expenses include such items as employee benefits, use of research facilities including operating expenses and depreciation of property, plant and equipment, and external services both for specific services to projects managed internally, for outsourced projects managed by external parties as well as financing of initiatives conducted jointly with other companies or industry associations.

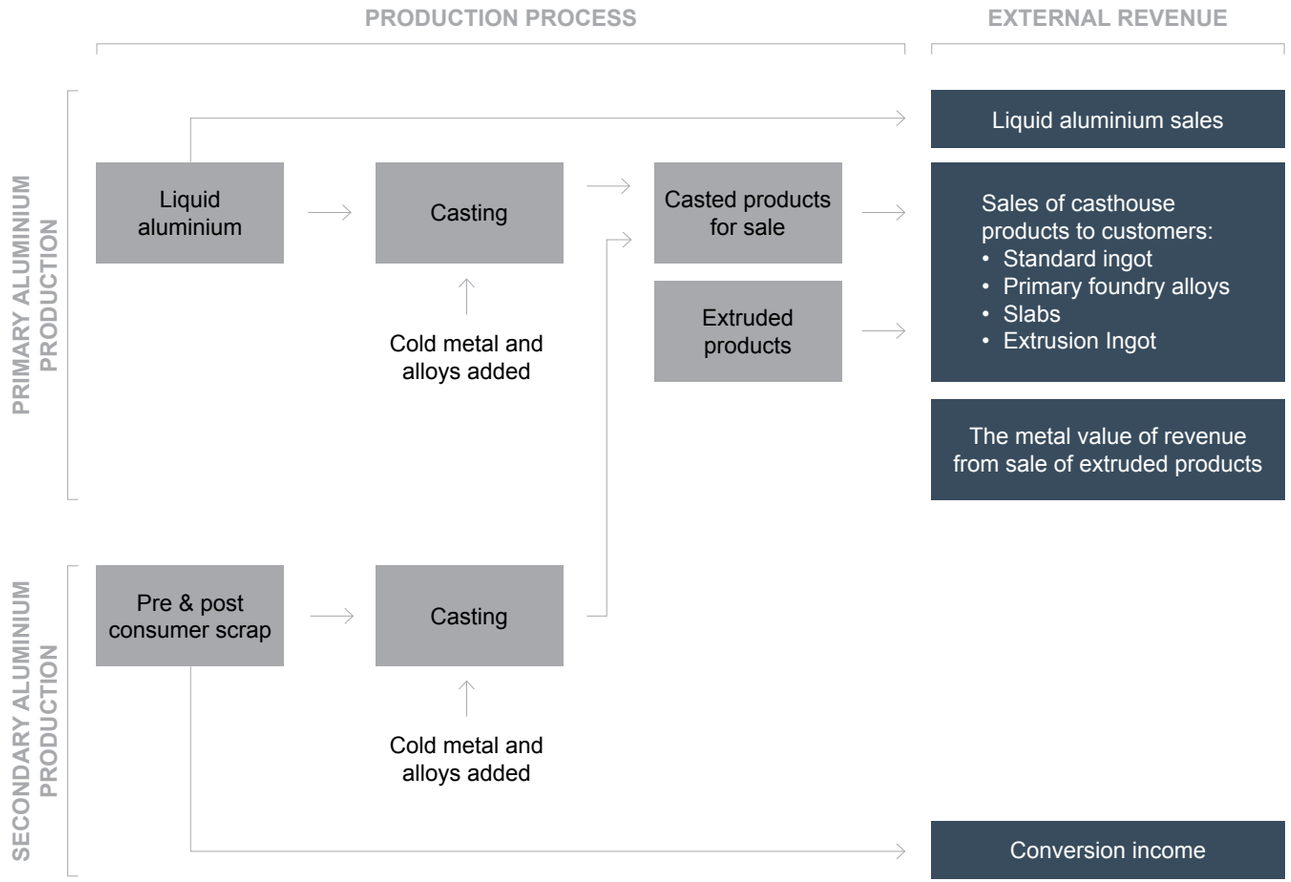
Building renovation measures are currently of limited relevance to Hydro, as there are no significant such projects ongoing.

Short-term leases and leases for low value assets are described in note 2.6 Leases to the consolidated financial statements.

Maintenance and repair expenses include Hydro's maintenance and repair cost not qualifying for capitalization as part of the relevant asset. The maintenance expenses are only partly captured in Hydro's financial reporting, as Hydro presents its operating expenses by nature of expenses and not by function. Repair and maintenance activities consist of employee expenses, consumables and spare parts, and various services. The total expenses related to these activities have been estimated based on management reporting in units and business areas, which is not necessarily fully consistent. Management considers the amounts to be a reasonable expression of such expenses in Hydro.

Hydro's total estimated expenses from the specified functions represent primarily the maintenance and day-to-day servicing costs for assets used in the eligible activities. In addition, research and development projects with the aim of improving production methods for primary and secondary aluminium are included as eligible activities.

Research and development activities aiming at improving mining methods, production methods for alumina and improved application of aluminium products, and which may have significant impact on reducing direct and indirect negative environmental impacts, is not included in eligile OpEx, as these processes are not currently covered in the taxonomy.



Proportion of turnover from products or services associated with Taxonomy-aligned economic activities

				Substantial contribution criteria						DNSH criteria ('Does Not Significantly Harm')										
Economic activities	NACE Code(s)	Absolute turnover	Proportion of turnover	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and eco-systems)	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and eco-systems)	Minimum safeguards	Taxonomy-aligned proportion of turnover, Year N	Taxonomy-aligned proportion of turnover, Year N-1	Category (enabling activity or)	Category '(transition-al activity)'
		MNOK	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Percent	Percent	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1 Environmentally sustainable activities (Taxonomy-aligned)																				
3.8 Manufacture of aluminium	C24.42 C24.53	56 604	27	100						Y	Y	Y	N/A	Y	Y	Y	27	29		T
4.5 Electricity generation from hydropower	D35.11	4 677	2	100						Y	Y	Y	N/A	N/A	Y	Y	2	2		
Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)		61 281	29														29	31		
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																				
3.8 Manufacture of aluminium	C24.42 C24.53	52 247	25																	
4.5 Electricity generation from hydropower	D35.11																			
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		52 247	25																	
Total (A.1 + A.2)		**113 529**	**55**																	
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
Turnover of Taxonomy-non-eligible activities (B)		94 400	45																	
Total (A + B)		**207 929**	**100**																	

Proportion of CapEx from products or services associated with Taxonomy-aligned economic activities

				Substantial contribution criteria						DNSH criteria ('Does Not Significantly Harm')										
Economic activities	NACE Code(s)	Absolute Capex	Proportion of Capex	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and eco-systems)	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and eco-systems)	Minimum safeguards	Taxonomy-aligned proportion of CapEx, Year N	Taxonomy-aligned proportion of CapEx, Year N-1	Category (enabling activity or)	Category '(transition-al activity)'
		MNOK	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Percent	Percent	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1 Environmentally sustainable activities (Taxonomy-aligned)																				
3.8 Manufacture of aluminium	C24.42 C24.53	2 764	24	100						Y	Y	Y	N/A	Y	Y	Y	24	26		T
4.5 Electricity generation from hydropower	D35.11	133	1	100						Y	Y	Y	N/A	N/A	Y	Y	1	2		
CapEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		2 898	25	100													25	28		
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																				
3.8 Manufacture of aluminium	C24.42 C24.53	1 770	15																	
4.5 Electricity generation from hydropower	D35.11																			
CapEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		1 770	15																	
Total (A.1 + A.2)		**4 668**	**40**																	
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
Capex of Taxonomy-non-eligible activities (B)		6 867	59																	
Total (A + B)		**11 604**	**100**																	

Proportion of OpEx from products or services associated with Taxonomy-aligned economic activities

				Substantial contribution criteria						DNSH criteria ('Does Not Significantly Harm')										
	NACE Code(s)	Absolute OpEx	Proportion of OpEx	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and eco-systems)	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and eco-systems)	Minimum safeguards	Taxonomy-aligned proportion of OpEx, Year N	Taxonomy-aligned proportion of OpEx, Year N-1	Category (enabling activity or)	Category '(transition-al activity)'
Economic activities		MNOK	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Percent	Percent	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1 Environmentally sustainable activities (Taxonomy-aligned)																				
3.8 Manufacture of aluminium	C24.42 C24.53	1 148	13	100						Y	Y	Y	N/A	Y	Y	Y	13	14		T
4.5 Electricity generation from hydropower	D35.11	134	2	100						Y	Y	Y	N/A	N/A	Y	Y	2	1		
OpEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		1 282	15	100													15	16		
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																				
3.8 Manufacture of aluminium	C24.42 C24.53	860	10																	
4.5 Electricity generation from hydropower	D35.11																			
OpEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		860	10																	
Total (A.1 + A.2)		**2 142**	**25**																	
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
OpEx of Taxonomy-non-eligible activities (B)		6 518	75																	
Total (A + B)		**8 698**	**100**																	

Independent auditors report

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Independent Auditor's Assurance Report to Norsk Hydro ASA

We have been engaged by the Corporate Management Board of Norsk Hydro ASA ('Hydro') to provide limited assurance in respect of the Environment, Social & Governance reporting (pages 51 to 52 Environment, Social & Governance reporting – The Hydro Way, 70 – 72 Integrity and Compliance, 73 – 110 Environment and social responsibility) and Environment and social statements (pages 195 to 235) sections in the Annual Report 2021 (hereafter Environment, Social & Governance report 2021) of Hydro. The scope excludes future events or the achievability of the objectives, targets and expectations of Hydro and information contained in webpages referred to in the Environment, Social & Governance report 2021 unless specified in this report.

Our Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

Based on the limited assurance procedures performed and the evidence obtained, as described below, nothing has come to our attention, to indicate that the Environment, Social & Governance report 2021 is not presented, in all material respects, in accordance with the GRI Standards; Core option and the applied reporting criteria as disclosed in the About the reporting section on page 195.

The Corporate Management Board's Responsibility

The Corporate Management Board is responsible for the preparation and presentation of the Environment, Social & Governance report 2021 in accordance with the GRI Standards; Core option and the reporting criteria as described in the About the reporting section on page 195 in the Environment, Social & Governance report statements. It is important to view the information in the Environment, Social & Governance report 2021 in the context of these criteria.

These responsibilities include establishing such internal controls as management determines are necessary to enable the preparation of the information in the Environment, Social & Governance report 2021 that are free from material misstatement, whether due to fraud or error.

Our Responsibility

Our responsibility is to provide a limited assurance conclusion on Hydro's preparation and presentation of the Environment, Social & Governance report 2021. We conducted our engagement in accordance with the International Standard for Assurance Engagements

Offices in:

Oslo, Alta, Arendal, Bergen, Bodø, Bryne, Drammen, Elverum, Finnsnes, Hamar, Haugesund, Knarvik, Kristiansand, Mo i Rana, Molde, Tromsø, Trondheim, Skien, Sandnessjøen, Stavanger, Stord, Straume, Tynset, Ulsteinvik, Sandefjord, Ålesund

(ISAE 3000 revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board.

ISAE 3000 revised requires that we plan and perform the engagement to obtain limited assurance about whether the information in the 'Environment, Social & Governance report 2021' is free from material misstatement.

The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Limited Assurance of the Environment, Social & Governance report 2021

The procedures selected depend on our understanding of the Environment, Social & Governance report and other engagement circumstances, and our consideration of areas where material misstatements are likely to arise. Our procedures for limited assurance on the Environment, Social & Governance report 2021 included:

- A risk analysis, including a media search, to identify relevant sustainability issues for Hydro in the reporting period;
- Interviews with senior management and relevant staff at corporate, business area and selected sites concerning sustainability strategy and policies for material issues, and the implementation of these across the business;
- Enquiries to management to gain an understanding of Hydro's processes for determining material issues for Hydro's key stakeholder groups;
- Interviews with relevant staff at corporate level responsible for providing the information, carrying out internal control procedures and consolidating the data in the Environment, Social & Governance report 2021;
- Site visits to two production sites to review the source data and the design and implementation of controls and validation procedures at local level;
- Reviewing relevant internal and external documentation, on a limited test basis, in order to determine the reliability of the Environment, Social & Governance report 2021;
- Reading the Environment, Social & Governance report 2021 to determine whether there are any material misstatements of fact or material inconsistencies based on our understanding obtained through our assurance engagement.

- Assessment of Hydro's reporting in relation to Subject Matters 1 to 4 as set out in ICMM Sustainable Development Framework: Assurance Procedure;
- Assessment of Hydro's self-declared commitment to the Aluminium Stewardship Initiative's 11 principles and underlying criteria;
- Assessment of the GRI index as provided on Hydro's webpages.
- Determination of the consistency of the sustainability information in the Hydro Communication on Progress 2021 with the information in the Environment, Social & Governance report 2021.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement, and consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Purpose of Our Report

In accordance with the terms of our engagement, this assurance report has been prepared for Norsk Hydro ASA for the purpose of assisting the Corporate Management Board in determining whether Hydro's Environment, Social & Governance report 2021 information is prepared and presented in accordance with the GRI Standards; Core option and the applied reporting criteria as disclosed in the About the reporting section on page 195, and for no other purpose or in any other context.

Oslo, 21 February 2022
KPMG AS

Monica Hansen
State Authorized Public Accountant

Torbjørn Westman
Sustainability Specialist

Fourth quarter 2022

Fourth quarter 2022

Hydro

Overview

Summary of financial and operating results and liquidity

Key financial information

NOK million, except per share data	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Revenue	44,075	46,433	(5)%	52,445	(16)%	207,929	149,654
Earnings before financial items, tax, depreciation and amortization (EBITDA)[2]	3,930	12,462	(68)%	9,828	(60)%	39,536	26,050
Adjustments to EBITDA[1]	3,254	(3,451)	>100%	(108)	>100%	128	1,959
Adjusted EBITDA[1]	7,184	9,011	(20)%	9,721	(26)%	39,664	28,010
Adjusted EBITDA							
Hydro Bauxite & Alumina	101	2,426	(96)%	633	(84)%	3,122	5,336
Hydro Aluminium Metal	4,756	4,676	2%	6,463	(26)%	22,963	13,500
Hydro Metal Markets	(91)	284	>(100)%	534	>(100)%	1,673	867
Hydro Extrusions	939	665	41%	1,385	(32)%	7,020	5,695
Hydro Energy	1,542	1,723	(11)%	321	>100%	4,926	3,790
Other and eliminations	(63)	(762)	92%	384	>(100)%	(39)	(1,178)
Adjusted EBITDA[1]	7,184	9,011	(20)%	9,721	(26)%	39,664	28,010
Earnings before financial items and tax (EBIT)[2]	1,405	10,086	(86)%	7,670	(82)%	30,715	17,887
Adjusted EBIT[1]	4,946	7,026	(30)%	7,611	(35)%	31,179	20,786
Net income (loss) from continuing operations	158	8,525	(98)%	6,676	(98)%	24,381	13,930
Adjusted net income (loss) from continuing operations[1]	2,371	5,810	(59)%	6,258	(62)%	23,145	14,905
Net income (loss) from discontinued operations[3]	36	4	>100%	-	-	36	12
Earnings per share from continuing operations	0.12	3.47	(96)%	3.34	(96)%	11.76	5.92
Adjusted earnings per share from continuing operations[1]	0.99	2.57	(61)%	2.91	(66)%	10.70	6.77
Financial data							
Investments[1] [2]	5,519	3,674	50%	3,924	41%	13,391	8,589
Net cash (debt)[1]	1,310	3,213	(59)%	(3,145)	>100%	1,310	3,213
Adjusted net cash (debt)[1]	(5,989)	(7,019)	15%	(7,806)	23%	(5,989)	(7,019)
Adjusted Return on average Capital Employed (RoaCE)[1]						22.2%	18.6%

[1] Alternative performance measures (APM) are described in the corresponding section in the back of the report.
[2] EBIT, EBITDA and investments per segment are specified in note 2 Operating segment information.
[3] Net income (loss) from discontinued operations includes results from Hydro's Rolling business up to divestment on June 1, 2021 and all prior periods.

Key developments fourth quarter 2022

Hydro's adjusted EBITDA for the fourth quarter of 2022 was NOK 7,184 million, compared with NOK 9,011 million for the same quarter last year, resulting in an Adjusted RoaCE of 22 percent for 2022. Lower all-in metal and alumina prices, and higher raw material costs were partly offset by positive currency effects and a gain from the sale of excess power.

Hydro experienced record results for the full year 2022, with an Adjusted EBITDA of NOK 39.7 billion. This is a 42 percent increase from 2021. Higher realized all-in metal and alumina prices, record high results in both Extrusions and Energy, and positive currency effects were offset by higher fixed and raw material costs upstream.

Health and safety is Hydro's top priority for both employees and the communities where Hydro operates. An injury free environment is the ultimate goal, and Hydro is continuously working to avoid incidents. The 2022 total recordable injury rate (TRI) was 2.4, which is a strong improvement from 3.3 in 2021, and the lowest TRI level ever reported in Hydro.

The war in Ukraine, energy crisis in Europe and high inflation continues to impact economic growth. Monetary policy tightening, combined with high energy prices and disruptions from China's zero-Covid policy, put downward pressure on global growth in the fourth quarter. Forecasts of GDP growth for 2023 have been adjusted upwards to around 3 percent as inflation concerns ease and macroeconomic environment improves in line with the reopening of the Chinese economy.

Nordic power prices are on average higher in the fourth quarter compared to the same period last year but declined significantly compared to the third quarter of 2022. Significant price area differences in the Nordic region have continued, however they were considerably lower compared to the third quarter. Adjusted EBITDA for Energy decreased compared to the same quarter last year, mainly due to loss on internal fixed price contract, lower production and lower gain on price area differences, partly offset by higher prices.

The average Platts alumina index (PAX) decreased in the fourth quarter of 2022 to USD 317 per mt, compared to USD 338 per mt in the third quarter 2022. Adjusted EBITDA for Bauxite & Alumina decreased significantly compared to the fourth quarter of 2021, mainly driven by lower alumina sales prices, and higher caustic and energy prices, partly offset by positive currency effects.

The three-month aluminium price increased in the fourth quarter of 2022, starting the quarter at USD 2,162 per mt and ending at USD 2,378 per mt. Uncertainty remains for certain aluminium production facilities as high global energy prices and volatile market conditions continue to put pressure on smelter margins. As a result, many producers in Europe and the US have curtailed parts of their production. For 2022, external sources are estimating a global deficit of primary aluminium of around 0.3 million mt, and a surplus of around 0.1 million mt for 2023.

Hydro is addressing the volatile market landscape, and completed the curtailment of 130 thousand tonnes of primary aluminium production at Hydro Husnes and Hydro Karmøy in response to reduced market demand for aluminium billets in Europe in the fourth quarter. Adjusted EBITDA for Aluminium Metal improved slightly in the fourth quarter of 2022, compared to the fourth quarter of 2021, mainly due to positive contribution from power sales and positive currency effects, partly offset by lower all-in metal prices, lower sales volumes, and higher raw material cost and fixed cost.

European demand for extrusions in the fourth quarter of 2022 is estimated to have decreased 16 percent, compared to the same quarter last year and 9 percent compared to the third quarter of 2022, partly driven by seasonality. North American extrusion demand is estimated to have decreased 8 percent during the fourth quarter of 2022 compared to the same quarter last year and 14 percent (decrease) compared to the third quarter of 2022. CRU estimates that the European and North American demand for extruded products will decrease 18 percent and 5 percent respectively for the first quarter of 2023. Adjusted EBITDA for Extrusions increased in the fourth quarter, compared to the same quarter last year, due to increased results from the recyclers driven by higher sales premiums. This was partly offset by lower sales volumes and higher fixed and variable costs.

Hydro continues to position the company to capture value from growing demand for greener and circular aluminium. Greener aluminium with a lower-carbon footprint is an important enabler for the green transition. The demand for aluminium towards 2030 in Hydro's main markets is set to grow at around 3 percent per year, and low-carbon aluminium demand is expected to outpace the rest of the market, with a current estimate of 20 percent compound annual growth rate (CAGR) from 2022 to 2030. External consultants expect low-carbon and recycled aluminium will make up a majority of the EU and American market in 2030.

Addressing the growing demand for greener aluminium, Hydro announced a new strategic partnership with Mercedes-Benz in the fourth quarter. In 2023, Hydro will deliver REDUXA 3.0 (defined as below 3.0 kg CO_2 / kg Al from mine to metal) to a range of Mercedes-Benz models, ultimately reducing the material carbon footprint.

Recycling is a key strategic growth area and an important enabler to strengthen Hydro's position in low-carbon aluminium. Hydro is well on track to deliver on the 2020 recycling ambition to double post-consumer scrap by 2025. The announced acquisition of the Polish recycler Alumetal is currently in Phase II with the European Commission. The provisional deadline for a Phase II decision is end of May 2023. At the Capital Markets Day in the fourth quarter, Hydro further increased the recycling EBITDA growth target towards 2025 by NOK 500 million, and an additional NOK 500 million by 2027, through lifting the ambition to recycle PCS by an additional 140 thousand tonnes, requiring an increased capital allocation towards recycling in the range of NOK 2-2.5 billion.

Extrusions is another important growth area and Hydro continues to position itself for future growth through key investments. In the fourth quarter, Hydro announced its acquisition of Hueck building systems and extrusion business. The acquisition will strengthen Hydro's presence in Germany and other European markets, and create a solid platform for further growth of the combined businesses. The transaction is expected to close in late first quarter.

In order to deliver on Hydro's 2025 strategy, a strong commitment to reduce costs and improved operational excellence within the asset base is critical. Hydro has delivered on the improvement program target for 2022, and at the company's Capital Markets Day, Hydro increased its improvement target for 2025 from the original target of NOK

8.5 billion to NOK 10 billion by 2025, and NOK 11 billion by 2027. Positive traction for greener products, improved product mix, higher margins and market share growth, support the 2025 commercial ambition of NOK 2.5 billion. Towards 2027, Hydro aims to further increase the commercial ambition by NOK 500 million up towards NOK 3 billion, with NOK 1.4 billion to be delivered in the coming years.

In the fourth quarter, Hydro continued to strengthen its sustainability position by launching new Scope 3 ambitions where the company aims to reduce upstream Scope 3 emissions per tonne aluminium delivered to the market by 30 percent. On total upstream Scope 3 emissions, Hydro aims to reduce emissions by 15 percent by 2030. The new Scope 3, 2030 targets, will mainly be achieved by lowering footprint of purchased metal.

The transition to a lower-carbon society also provides opportunities for Hydro's new energy areas. In the fourth quarter Hydro, Eviny and Zephyr announced a partnership to explore an onshore wind project located in the area between Høyanger and Sunnfjord. The renewable power will be used by existing industry and enable new industrial development in the region. In 2023, Hydro will rehabilitate an additional 100 hectares in its legal reserve, which comprises degraded land not impacted by Hydro operations, and aims to pilot new technology to reutilize bauxite residues in other industries.

In the fourth quarter, Hydro Havrand announced a 5 MW green hydrogen pilot project at Hydro's Høyanger smelter in Norway. Hydro Havrand is maturing the project, which is pending funding support from Enova.

Hydro's renewable energy company, Hydro Rein, is delivering on its portfolio strategy. The EBITDA contribution in 2026 from the four projects currently in construction is estimated to around NOK 400 – 450 million. In the fourth quarter Hydro Rein and Commerz Real entered into an agreement on forming a joint venture to acquire and develop two early phase solar projects in Jylland, Denmark. Construction is expected to commence in 2024, with production starting in early 2026, and the ambition is to grow the portfolio to 1 GW. The process to raise capital for Hydro Rein is still ongoing.

Capex for 2022 was NOK 11.5 billion. Capex for 2023, excluding mergers & acquisitions and Hydro Rein, is estimated to be NOK 13.6 billion. This includes a NOK 2.2 billion carry over from 2022, and NOK 1.7 billion in currency and inflation effects compared to 2022. For 2024-2026, the guidance is NOK 12.5 billion, reflecting currency and inflation, in addition to strengthened growth ambitions within Recycling and Extrusions. The long-term sustaining capex is estimated at NOK 7.0 billion.

In the fourth quarter, Hydro utilized its sustainable financing framework and EMTN program in the issuance of NOK 3 billion sustainability linked bonds, fixed and floating with 6 year tenor. This was the first sustainability linked bond issues in the Norwegian corporate investment grade market.

In light of Hydro's solid balance sheet and strong financials, the Board of Directors propose to distribute 61.6 percent of 2022 adjusted net income to its shareholders, as a combination of NOK 5.65 per share of cash dividends and NOK 2 billion of share buybacks. The final shareholder distribution for 2022 is subject to approval by the Annual General Meeting on May 10, 2023.

Hydro's existing share buyback program, initiated on September 23, 2022, covers purchase of up to 100,000,000 shares with a maximum value of NOK 2,000 million, inclusive of the proportional redemption of shares owned by the Norwegian State. As of February 6, 2023, Hydro has purchased 13,494,000 own shares and owns a total of 29,946,403 shares, corresponding to 1.45 percent of Hydro's share capital. The redemption and cancellation of shares held by the Norwegian state is subject for approval by Annual General Meeting on May 10, 2023.

Other Key financials

Compared to the third quarter, Hydro's adjusted EBITDA decreased from NOK 9,721 million to NOK 7,184 million in the fourth quarter 2022. Lower realized all-in metal and alumina prices were partly offset by increased production volumes from Energy. In addition, results for the third quarter 2022 were positively impacted by a revision of prior periods CO_2 compensation.

Adjusted EBITDA for the full year of 2022, increased compared to the same period last year. Higher realized all-in metal and alumina prices, record high results in both Extrusions and Energy and positive currency effects were offset by higher fixed and raw material costs upstream.

Net income from continuing operations amounted to NOK 158 million in the fourth quarter. In addition to the factors described above, net income from continuing operations included a net foreign exchange gain of NOK 356 million, a NOK 2,538 million unrealized loss on power and raw material contracts, and a NOK 486 million unrealized loss on LME related contracts.

Income tax expense amounted to NOK 1,519 million for the fourth quarter of 2022, about 91 percent of income before tax. The quarter was mainly impacted by the reassessment of recoverability of deferred tax assets resulting in a net charge of about NOK 1,400 million related to tax losses carried forward.

Hydro's net debt[1] declined from NOK 3.1 billion at the end of the third quarter to a net cash position of NOK 1.3 billion at the end of the fourth quarter. Net cash provided by operating activities of NOK 8.4 billion included an increase of NOK 1.5 billion in collateral requirements. Net cash used in investment activities, excluding short term investments, amounted to NOK 4.2 billion.

Adjusted net debt decreased from NOK 7.8 billion to NOK 6.0 billion, largely driven by turning the third quarter net debt position to a net cash position in fourth quarter, partly offset by increased collateral of 1.3 billion and a decrease in pension assets of 1.2 billion. The collateral requirements amounted to NOK 2.6 billion at the end of the quarter, mainly relating to strategic and operational hedging positions.

[1] Alternative performance measures (APMs) are described in the corresponding section in the back of the report.

Adjusting items to reported EBIT and net income

In addition to the factors discussed above, reported earnings before financial items and tax (EBIT) and net income include effects that are disclosed in the below table. Adjusting items to EBIT and adjusted net income (loss) are defined and described as part of the APM section in the back of this report.

Adjusting items to EBITDA, EBIT and net income[1)]

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Third quarter 2022	Year 2022	Year 2021
Unrealized derivative effects on LME related contracts	486	(744)	(1,241)	(3,003)	5,088
Unrealized derivative effects on power and raw material contracts	2,538	(2,744)	1,243	3,352	(3,083)
Significant rationalization charges and closure costs	155	68	-	152	377
Community contributions Brazil	32	15	-	32	217
Transaction related effects	(4)	(4)	(2)	(119)	(304)
Net foreign exchange (gain) loss	(130)	(17)	(106)	(318)	(79)
Other effects	177	(26)	(2)	32	(257)
Adjusting items to EBITDA[2)]	**3,254**	**(3,451)**	**(108)**	**128**	**1,959**
Impairment charges	286	283	49	335	426
Depreciation	-	108	-	-	513
Adjusting items to EBIT[2)]	**3,541**	**(3,060)**	**(59)**	**464**	**2,899**
Net foreign exchange (gain)/loss	(356)	(823)	(572)	(2,192)	(1,404)
Calculated income tax effect	(972)	1,168	213	492	(520)
Adjusting items to net income from continuing operations	**2,213**	**(2,715)**	**(418)**	**(1,236)**	**976**
Income (loss) tax rate	91%	21%	18%	25%	24%
Adjusted income (loss) tax rate	51%	15%	17%	24%	25%

1) Negative figures indicate reversal of a gain and positive figures indicate reversal of a loss.
2) The various effects are described in the APM section in the back of the report.

Key operational information

NOK million, except per share data	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Bauxite production (kmt)[1]	2,824	2,696	5%	2,814	-	11,012	10,926
Alumina production (kmt)	1,559	1,600	(3)%	1,579	(1)%	6,193	6,305
Realized alumina price (USD/mt)[2]	342	393	(13)%	364	(6)%	382	313
Primary aluminium production (kmt)	522	571	(9)%	543	(4)%	2,137	2,244
Realized aluminium price LME (USD/mt)	2,246	2,675	(16)%	2,497	(10)%	2,599	2,317
Realized USD/NOK exchange rate	10.16	8.63	18%	9.89	3%	9.52	8.55
Hydro Extrusions sales volumes to external market (kmt)	265	301	(12)%	301	(12)%	1,251	1,296
Power production (GWh)	2,002	2,136	(6)%	1,330	51%	7,664	9,055

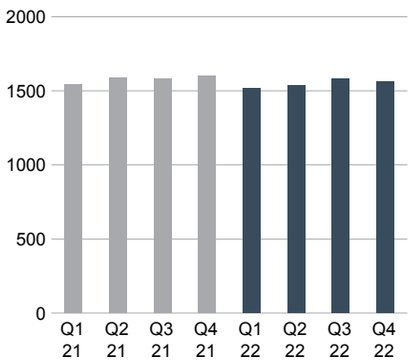
[1] Paragominas production on wet basis.
[2] Weighted average of own production and third party contracts. The majority of the alumina is sold linked to the alumina index with a one month delay.

Currency rates

	Fourth quarter 2022	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
USD/NOK Average exchange rate	10.19	8.72	17%	9.99	2%	9.62	8.60
USD/NOK Period end exchange rate	9.86	8.82	12%	10.86	(9)%	9.86	8.82
BRL/NOK Average exchange rate	1.94	1.56	24%	1.90	2%	1.86	1.60
BRL/NOK Period end exchange rate	1.86	1.58	18%	2.01	(7)%	1.86	1.58
USD/BRL Average exchange rate	5.26	5.58	(6)%	5.25	-	5.17	5.39
USD/BRL Period end exchange rate	5.29	5.57	(5)%	5.39	(2)%	5.29	5.57
EUR/NOK Average exchange rate	10.39	9.97	4%	10.06	3%	10.10	10.16
EUR/NOK Period end exchange rate	10.51	9.99	5%	10.58	(1)%	10.51	9.99

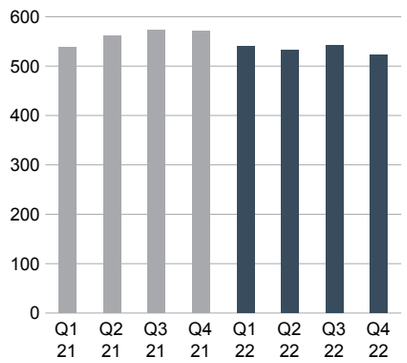
Alumina production

Kmt



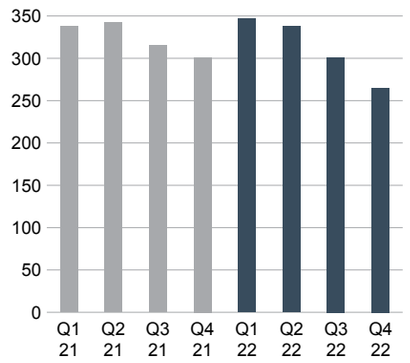
Primary aluminium production

Kmt



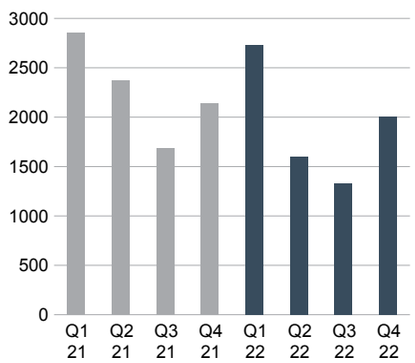
Hydro Extrusions sales

Kmt



Power production

GWh



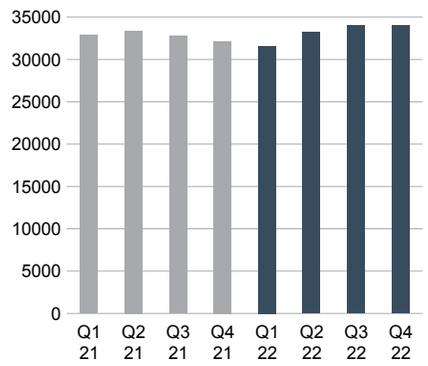
Market statistics[1)]

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Bauxite and alumina							
Average alumina price - Platts PAX FOB Australia (USD/t)	317	412	(23)%	338	(6)%	362	329
China bauxite import price (USD/mt CIF China)	61	52	18%	60	2%	59	48
Global production of alumina (kmt)	34,017	32,733	4%	33,737	1%	133,685	131,381
Global production of alumina (ex. China) (kmt)	14,219	14,788	(4)%	14,068	1%	57,263	59,086
Primary aluminium							
LME cash average (USD/mt)	2,335	2,760	(15)%	2,356	(1)%	2,706	2,473
LME three month average (USD/mt)	2,355	2,766	(15)%	2,359	-	2,716	2,482
Standard ingot premium (EU DP Cash)	273	326	(16)%	498	(45)%	466	272
Extrusion ingot premium (EU DP)	783	1,428	(45)%	1,142	(31)%	1,241	988
Chinese production of primary aluminium (kmt)	10,121	9,517	6%	10,300	(2)%	40,085	38,534
Chinese consumption of primary aluminium (kmt)	10,201	10,012	2%	10,514	(3)%	40,273	40,136
Global production of primary aluminium (ex. China) (kmt)	7,202	7,325	(2)%	7,299	(1)%	28,821	28,851
Global consumption of primary aluminum (ex. China) (kmt)	7,047	7,473	(6)%	7,051	-	28,956	28,831
Global production of primary aluminium (kmt)	17,322	16,843	3%	17,599	(2)%	68,907	67,385
Global consumption of primary aluminum (kmt)	17,247	17,485	(1)%	17,565	(2)%	69,229	68,968
Reported primary aluminium inventories (ex. China) (kmt)	2,105	2,565	(18)%	2,003	5%	2,105	2,565
Reported primary aluminium inventories (China) (kmt)	1,011	1,391	(27)%	1,153	(12)%	1,011	1,391
Extruded products							
Consumption extruded products - Europe (kmt)	734	871	(16)%	806	(9)%	3,638	3,764
Consumption extruded products - USA & Canada (kmt)	555	601	(8)%	647	(14)%	2,545	2,496
Energy							
Average southern Norway spot price (NO2) (NOK/MWh)	1,719	1,271	35%	3,519	(51)%	2,128	762
Average mid Norway spot price (NO3) (NOK/MWh)	941	424	>100%	316	>100%	428	420
Average nordic system spot price (NOK/MWh)	1,414	969	46%	1,757	(20)%	1,370	634

[1)] Industry statistics have been derived from analyst reports, trade associations and other public sources unless otherwise indicated. These statistics do not have any direct relationship to the reported figures of Norsk Hydro. Amounts presented in prior reports may have been restated based on updated information.

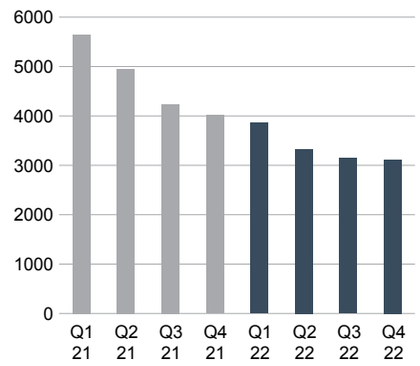
Production of alumina

Global kmt



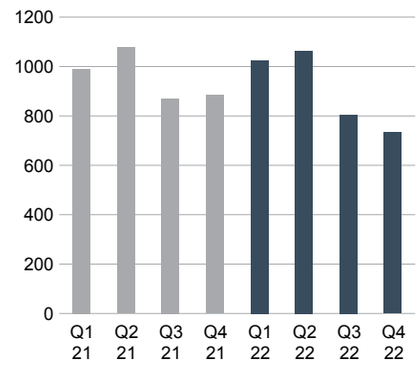
Aluminium inventories

Global kmt



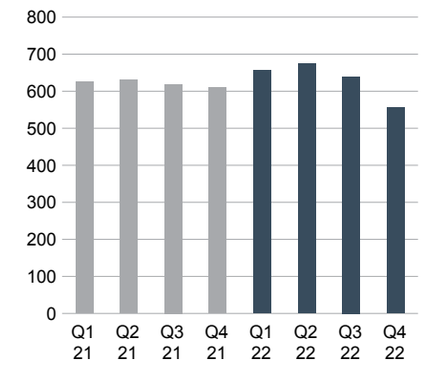
Extruded products Europe

Consumption kmt



Extruded products North America

Consumption kmt



Market developments and outlook

Global macroeconomic developments
The war in Ukraine, energy crisis in Europe and high inflation continues to impact economic growth. Monetary policy tightening combined with high energy prices and disruptions from China's zero-Covid policy put downward pressure on global growth and external sources have downgraded estimated global economic growth in 2022 to around 3 percent.

Forecasts of GDP growth for 2023 have been adjusted upwards to around 3 percent as inflation concerns ease and macroeconomic environment improves in line with the reopening of the Chinese economy. Uncertainty remains surrounding the pace of the fall in inflation, the continuing war in Ukraine, and the overall geopolitical situation.

Bauxite and alumina
The average Platts alumina index (PAX) decreased in the fourth quarter of 2022 to USD 317 per mt, compared to USD 338 per mt in the third quarter 2022.

The Platts alumina index (PAX) was stable around USD 315 per mt from the beginning of the quarter until early December, reflecting price levels of domestic alumina in China. PAX increased to USD 330 per mt at the end of the quarter driven by higher Chinese domestic alumina prices as refineries in China curtailed some capacity. Compared to the fourth quarter of 2021, the average Platts alumina index was 23 percent lower. Alumina prices have continued increasing during January 2023 due to a production curtailment in Australia, and is currently trading around USD 360 per mt.

In the fourth quarter, China imported 571kt of alumina, mostly from Australia and Indonesia. Alumina exports from China to Russia initiated in the second quarter 2022 continued, reaching a total of 184kt in the fourth quarter.

China imported 31 million mt of bauxite in the fourth quarter 2022, 19 percent higher than the same period a year ago driven by a 61 percent increase in imports from Guinea. Imports from Indonesia have declined 45 percent as the market adjusts to Indonesia's announced bauxite export ban starting in June 2023. Guinea, Australia, and Indonesia accounted for 98 percent of China's bauxite imports in the period.

The average Chinese bauxite import price was USD 61 per mt CIF in the fourth quarter of 2022, up from USD 52 per mt CIF in the fourth quarter 2021 mainly driven by higher oil prices and ocean freight rates.

Primary aluminium
The three-month aluminium price increased in the fourth quarter of 2022, starting the quarter at USD 2,162 per mt and ending at USD 2,378 per mt. The end of China's zero covid policy and re-opening of the economy led to higher demand expectations going forward into the new year. During January prices continued to increase trading around USD 2,600 per mt.

Uncertainty remains for certain aluminium production facilities as high global energy prices and volatile market conditions put pressure on smelter margins. As a result, many producers in Europe and the US have curtailed parts of their production.

European duty paid standard ingot premiums ended the fourth quarter at USD 260 per mt, down from USD 382 per mt at the end of the third quarter. The US Midwest premium remained fairly stable decreasing from USD 511 per mt at the beginning of the quarter to USD 490 per mt at the end of the quarter. During January European duty paid and US Midwest premiums increased trading around USD 290 per mt and USD 660 per mt respectively supported by increasing demand.

Shanghai Futures Exchange (SHFE) prices increased by USD 109 per mt ex. VAT during the quarter, ending at USD 2,376 per mt ex. VAT. Average for the quarter was down USD 50 per mt ex. VAT compared to the third quarter.

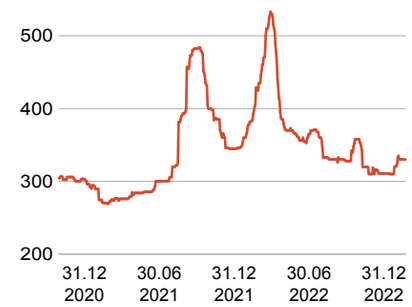
Global primary aluminium consumption was down 1 percent compared to the fourth quarter of 2021, driven by a decrease of 9 percent in Europe, partly offset by an increase of 2 percent in China.

For 2022 external sources[1] are estimating a global deficit of primary aluminium of around 0.3 million mt, and a surplus of around 0.1 million mt for 2023.

The European consumption of extrusion ingot and sheet

[1] CRU and WoodMac.

Platts PAX development
USD/mt



LME price (3 month aluminium)
USD/mt

ingot decreased in the fourth quarter of 2022 compared to the same period 2021 while consumption of primary foundry alloys increased the same period due to increased automotive demand.

Total global stocks at the end of the fourth quarter of 2022 were estimated to be 9.1 million mt, down 0.1 million mt compared to the third quarter and down 0.6 million mt compared to the fourth quarter 2021.

Extruded products
European demand for extrusions in the fourth quarter of 2022 is estimated to have decreased 16 percent compared to the same quarter last year and 9 percent compared to the third quarter of 2022, partly driven by seasonality. Demand for the industrial and the building & construction segments have continued to weaken into the fourth quarter while growth in automotive demand is improving as supply-chain issues are easing. Some sub-segments such as renewables is also showing robust growth.

Overall, extrusion demand is estimated to have decreased by 3 percent in 2022 compared to 2021.CRU estimates that the European demand for extruded products will decrease 18 percent in the first quarter of 2023 compared to the same quarter last year mainly driven by a weaker macro environment.

North American extrusion demand is estimated to have decreased 8 percent during the fourth quarter of 2022 compared to the same quarter last year, and decreasing 14 percent compared to the third quarter of 2022. Demand is moderating in the building & construction sector amid softening housing market indicators, while the automotive segments is improving as vehicle production is picking up.

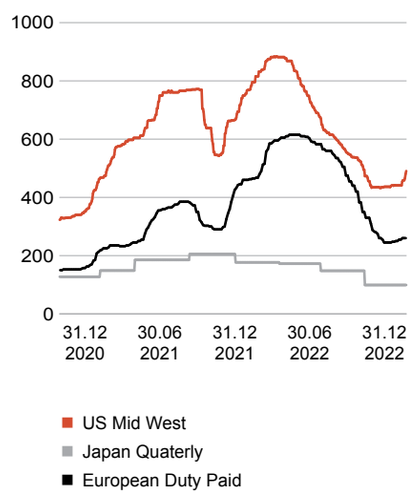
Overall, extrusion demand is estimated to have increased by 2 percent in 2022 compared to 2021. CRU estimates that the North American demand for extruded products will decrease 5 percent in the first quarter of 2023 compared to the same quarter last year.

Energy
Nordic power prices are on average higher in the fourth quarter compared to the same period last year but declined significantly compared to the third quarter of 2022. The decrease in power prices was due to increased water inflow, warm and windy weather, and lower continental power prices.

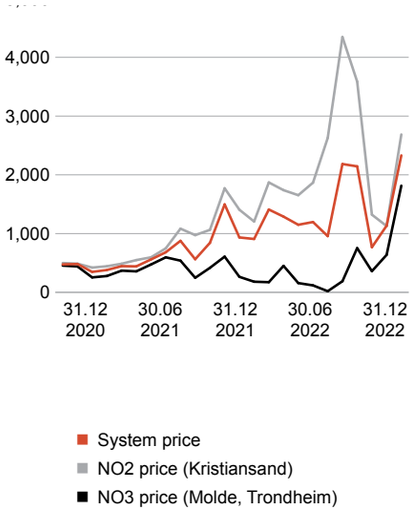
Significant price area differences in the Nordic region have continued through the fourth quarter however were considerably lower compared to the third quarter. This development was driven mainly by lower prices in Southern Norway but also higher prices in the Northern part of the Nordic market due to more normal hydrological conditions.

The Nordic hydrological balance ended the quarter around 13 TWh below normal, compared to around 11 TWh below normal at the end of the previous quarter and 17 TWh below normal at the end of the same quarter last year. Hydrology in Norway improved in the fourth quarter, but reservoir levels are still below normal. Total hydropower reservoirs were at 65 percent of full capacity at the end of the year, which is 3 percentage points below the normal level. In Southwestern Norway (NO2) the reservoirs were 63 percent full at the end of December, 10 percentage points below the normal level. The Norwegian transmission system operator, Statnett, no longer consider the energy security in Southern Norway as a concern during the winter.

Premiums
USD/mt



Energy spot price
NOK/MWh



Additional factors impacting Hydro

The accumulated LME hedge in Hydro as of December 31, 2022 amounted to 460 thousand tonnes for 2023, 440 thousand tonnes for 2024, and 100 thousand tonnes for 2025. This has been achieved using both commodity derivatives and currency derivatives. Parts of the raw material exposure is also hedged, using both fixed price physical contracts and financial derivatives.

The total USD/BRL hedge in place at Alunorte and Albras amounts to approximately USD 330 million for 2023 and USD 335 million for 2024.

Aluminium Metal has sold forward around 75 percent of its expected primary aluminium production for the first quarter of 2023 at a price level of around USD 2,240 per mt[1].

[1] Prices are fixed mainly one month prior to production. As a result, and due to the hedging of product inventories, Hydro's realized aluminium prices lag LME spot prices by around 1.5 to 2 months before taking into account the effects of the strategic hedges, which are included in both the realized price and volumes.

Business areas

Adjusted EBITDA

Alternative performance measures (APMs) are described in the corresponding section in the back of the report.

Hydro Bauxite & Alumina financial and operational information

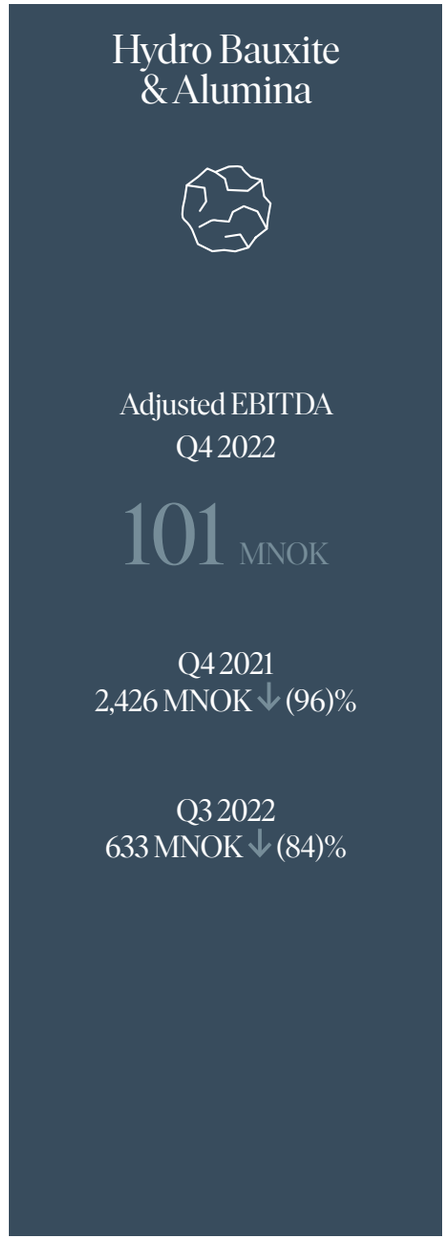
NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Earnings before financial items, tax, depreciation and amortization (EBITDA) (NOK million)	(446)	2,344	>(100)%	477	>(100)%	2,967	5,306
Adjusted EBITDA (NOK million)	101	2,426	(96)%	633	(84)%	3,122	5,336
Adjusted EBIT (NOK million)	(586)	1,913	>(100)%	10	>(100)%	626	3,318
Alumina production (kmt)	1,559	1,600	(3)%	1,579	(1)%	6,193	6,305
Sourced alumina (kmt)	593	765	(22)%	764	(22)%	2,856	3,006
Total alumina sales (kmt)	2,220	2,655	(16)%	2,344	(5)%	9,121	9,628
Realized alumina price (USD/mt) [1]	342	393	(13)%	364	(6)%	382	313
Bauxite production (kmt) [2]	2,824	2,696	5%	2,814	-	11,012	10,926
Sourced bauxite (kmt) [3]	1,861	1,427	30%	1,220	52%	5,611	5,677

[1] Weighted average of own production and third party contracts. The majority of the alumina is sold linked to the alumina index with a one month delay.
[2] Paragominas on wet basis.
[3] 40 percent MRN off take from Vale and 5 percent Hydro share on wet basis.

Adjusted EBITDA for Bauxite & Alumina decreased significantly compared to the fourth quarter of 2021 mainly driven by lower alumina sales prices and higher caustic and energy prices, partly offset by positive currency effects. In addition, the fourth quarter 2021 results included insurance compensation of NOK 498 million related to the decommissioned crane.

Compared to the third quarter of 2022 the adjusted EBITDA decreased mainly driven by lower alumina sales prices and higher raw material costs.

Adjusted EBITDA for the full year 2022 decreased compared to 2021 mainly due to higher caustic and energy prices, partly offset by increased alumina sales prices.



Hydro Aluminium Metal financial and operational information[1)]

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Earnings before financial items, tax, depreciation and amortization (EBITDA) (NOK million)	2,888	8,260	(65)%	6,736	(57)%	22,866	11,440
Adjusted EBITDA (NOK million)	4,756	4,676	2%	6,463	(26)%	22,963	13,500
Adjusted EBITDA including Qatalum 50% pro rata (NOK million)[2)]	5,256	5,264	-	7,016	(25)%	25,240	15,508
Adjusted EBIT (NOK million)	4,097	4,111	-	5,837	(30)%	20,467	11,225
Realized aluminium price LME (USD/mt)[3)]	2,246	2,675	(16)%	2,497	(10)%	2,599	2,317
Realized aluminium price LME (NOK/mt)[3)]	22,813	23,087	(1)%	24,706	(8)%	24,739	19,819
Realized premium above LME (USD/mt)[4)]	577	565	2%	801	(28)%	756	400
Realized premium above LME (NOK/mt)[4)]	5,857	4,873	20%	7,920	(26)%	7,197	3,420
Realized USD/NOK exchange rate	10.16	8.63	18%	9.89	3%	9.52	8.55
Primary aluminium production (kmt)	522	571	(9)%	543	(4)%	2,137	2,244
Casthouse production (kmt)	522	568	(8)%	547	(5)%	2,166	2,214
Total sales (kmt)	542	572	(5)%	533	2%	2,256	2,347

1) Operating and financial information includes Hydro's proportionate share of underlying income (loss), production and sales volumes in equity accounted investments. Realized prices, premiums and exchange rates include equity accounted investments.
2) Adjustment to illustrate Aluminium Metal adjusted EBITDA as if Qatalum were proportionally consolidated, in which Share of the profit (loss) in equity accounted investments is substituted with share of the company's EBITDA.
3) Realized aluminium prices lag the LME price developments by approximately 1.5 - 2 months. Includes pricing effects from LME strategic hedging program, which are included in both the realized price and volumes.
4) Average realized premium above LME for casthouse sales from Aluminium Metal.

Operational and financial information Qatalum (50%)

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Revenue (NOK million)	2,702	2,390	13%	2,494	8%	10,518	7,407
Adjusted EBITDA (NOK million)	700	1,099	(36)%	893	(22)%	3,826	3,283
Adjusted EBIT (NOK million)	352	825	(57)%	630	(44)%	2,617	2,192
Net income (loss) (NOK million)	200	511	(61)%	340	(41)%	1,548	1,507
Adjusted Net income (loss) (NOK million)	200	511	(61)%	340	(41)%	1,548	1,275
Primary aluminium production (kmt)	81	80	-	80	1%	319	317
Casthouse sales (kmt)	98	88	11%	76	29%	334	325

Adjusted EBITDA for Aluminium Metal improved slightly in the fourth quarter of 2022 compared to the fourth quarter of 2021 mainly due to positive contribution from power sales and positive currency effects, partly offset by lower all-in metal prices, lower sales volumes and higher raw material cost and fixed cost.

Compared to the third quarter of 2022, adjusted EBITDA for Aluminium Metal decreased due to lower all-in metal prices, higher fixed cost, partly offset by positive contribution from power sales. In addition, results for the third quarter 2022 were positively impacted by NOK 1.3 billion related to a revision of prior periods CO_2 compensation.

Adjusted EBITDA for the full year 2022 increased compared to 2021. Higher all-in metal prices, positive currency effects, positive contribution from power sales and higher CO_2 compensation were partly offset by increased raw material cost and higher fixed cost.

Hydro Aluminium Metal

Adjusted EBITDA
Q4 2022

4,756 MNOK

Q4 2021
4,676 MNOK ↑ 2%

Q3 2022
6,463 MNOK ↓ (26)%

Hydro Metal Markets financial and operational information

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Earnings before financial items, tax, depreciation and amortization (EBITDA) (NOK million)	(449)	540	>(100)%	339	>(100)%	1,780	872
Adjusted EBITDA Recycling (NOK million)	342	290	18%	401	(15)%	1,841	643
Adjusted EBITDA Commercial (NOK million)	(434)	(6)	>(100)%	133	>(100)%	(168)	225
Adjusted EBITDA Metal Markets (NOK million)	(91)	284	>(100)%	534	>(100)%	1,673	867
Currency effects	(252)	(78)	>(100)%	136	>(100)%	(35)	(85)
Inventory valuation effects	-	47	(99)%	-	>100%	85	(62)
Adjusted EBITDA excl. currency and inventory valuation effects	160	315	(49)%	398	(60)%	1,623	1,014
Adjusted EBIT (NOK million)	(134)	245	>(100)%	494	>(100)%	1,514	721
Recycling production (kmt)	115	144	(20)%	124	(8)%	548	572
Metal products sales excluding ingot trading (kmt) [1)]	614	681	(10)%	635	(3)%	2,691	2,833
Hereof external sales (kmt)	530	574	(8)%	536	(1)%	2,284	2,342

[1)] Includes external and internal sales from primary casthouse operations, recyclers and third party metal sources.

Adjusted EBITDA for Metal Markets decreased in the fourth quarter compared to the same quarter last year due to lower results from the sourcing and trading activities, and negative currency and inventory valuation effects, partly offset by increased results from the recyclers.

Compared to the third quarter of 2022, adjusted EBITDA for Metal Markets decreased due to negative currency effects, decreased results from the sourcing and trading activities, and lower results from the recyclers.

Adjusted EBITDA for the full year 2022 increased compared to 2021. Improved results from the recyclers, positive inventory valuation and currency effects were partly offset by decreased results from the sourcing and trading activities.

Hydro Metal Markets

Adjusted EBITDA
Q4 2022

(91) MNOK

Q4 2021
284 MNOK ↓ >(100)%

Q3 2022
534 MNOK ↓ (100)%

Hydro

Hydro Extrusions financial and operational information

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Earnings before financial items, tax, depreciation and amortization (EBITDA) (NOK million)	1,045	381	>100%	1,255	(17)%	6,982	5,558
Adjusted EBITDA (NOK million)	939	665	41%	1,385	(32)%	7,020	5,695
Adjusted EBIT (NOK million)	168	(122)	>100%	640	(74)%	3,995	3,217
Sales volumes to external markets (kmt)	265	301	(12)%	301	(12)%	1,251	1,296
Sales volumes to external markets (kmt) - Business units							
Extrusion Europe	106	130	(19)%	119	(11)%	520	550
Extrusion North America	112	120	(7)%	134	(16)%	529	534
Building Systems	18	22	(16)%	19	(6)%	85	85
Precision Tubing	28	29	(3)%	30	(5)%	117	127
Hydro Extrusions	265	301	(12)%	301	(12)%	1,251	1,296

Adjusted EBITDA for the fourth quarter increased compared to the same quarter last year. Increased results from the recyclers, driven by increased sales premiums were partly offset by lower sales volumes, and higher fixed and variable costs. In addition, results for the fourth quarter 2021 results were negatively impacted by non-recurring cost of NOK 332 million costs related to the scrapping of assets.

Compared to third quarter 2022 the adjusted EBITDA decreased due to seasonally lower sales volumes, higher fixed and variable costs and reduced demand.

Adjusted EBITDA for the full year of 2022 increased compared to 2021. Higher margins and increased results from the recyclers, driven by increased sales premiums, were partly offset by increased variable and fixed costs.

Hydro Extrusions

Adjusted EBITDA
Q4 2022

939 MNOK

Q4 2021
665 MNOK ↑ 41%

Q3 2022
1,385 MNOK ↓ (32)%

Hydro Energy financial and operational information

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Earnings before financial items, tax, depreciation and amortization (EBITDA) (NOK million)	926	1,774	(48)%	572	62%	4,810	3,921
Adjusted EBITDA (NOK million)	1,542	1,723	(11)%	321	>100%	4,926	3,790
Adjusted EBIT (NOK million)	1,493	1,674	(11)%	275	>100%	4,737	3,596
Power production (GWh)	2,002	2,136	(6)%	1,330	51%	7,664	9,055
External power sourcing (GWh)	3,139	2,841	10%	2,782	13%	11,568	10,356
Internal contract sales (GWh)	4,415	4,454	(1)%	4,666	(5)%	18,030	17,216
External contract sales (GWh)	214	219	(2)%	150	43%	841	831
Net spot sales/(purchase) (GWh)	511	305	67%	(703)	>100%	361	1,364

Adjusted EBITDA for Energy decreased compared to the same quarter last year, mainly due to loss on a 12-month internal fixed price contract entered in early October, lower production and lower gain on price area differences, partly offset by higher prices.

Compared to the previous quarter, the Adjusted EBITDA increased as a result of higher production and lower tax cost in the equity accounted investment company Lyse Kraft, partly offset by lower gain on price area differences and loss on an internal fixed price contract.

Adjusted EBITDA for the full year of 2022 increased compared to 2021, mainly driven by an increased gain from price area differences, partly offset by significantly lower production and a higher tax cost in the equity accounted investment company Lyse Kraft.

Hydro Energy

Adjusted EBITDA
Q4 2022

1,542 MNOK

Q4 2021
1,723 MNOK ↓ (11)%

Q3 2022
321 MNOK ↑ 100%

Other and eliminations

Financial information

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Earnings before financial items, tax, depreciation and amortization (EBITDA)	(34)	(837)	96%	449	>(100)%	132	(1,046)
Other	(338)	(226)	(50)%	(163)	>(100)%	(817)	(520)
Eliminations	276	(537)	>100%	548	(50)%	778	(659)
Adjusted EBITDA	(63)	(762)	92%	384	>(100)%	(39)	(1,178)

Other is mainly comprised of head office costs, and costs related to holding companies as well as earnings from Hydro's industrial insurance company.

Eliminations are comprised mainly of unrealized gains and losses on inventories purchased from group companies which fluctuate with product flows, volumes and margin developments throughout Hydro's value chain.

Finance

Finance income (expense)

NOK million	Fourth quarter 2022	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Interest income	241	92	>100%	188	28%	652	194
Dividends received and net gain (loss) on securities	27	12	>100%	(8)	>100%	(33)	69
Interest and other finance income	268	104	>100%	181	48%	619	263
Foreign currency exchange gain (loss)	356	823	(57)%	572	(38)%	2,192	1,404
Interest expense	(304)	(246)	(23)%	(269)	(13)%	(1,090)	(956)
Other, net	(49)	(37)	(34)%	12	>(100)%	(71)	(200)
Interest and other finance expense	(353)	(283)	(25)%	(257)	(37)%	(1,161)	(1,156)
Finance income (expense), net	**271**	**644**	**(58)%**	**496**	**(45)%**	**1,649**	**510**

For the fourth quarter, the net foreign exchange gain, mainly unrealized, of NOK 356 million primarily reflects a gain on EUR embedded energy derivatives on the back of the tightened EUR/NOK interest differential.

For the full year 2022, the net foreign exchange gain, mainly unrealized, of NOK 2,192 million primarily reflects a gain on EUR embedded energy derivatives and a gain from a stronger USD, positively impacting net USD assets.

Tax

Income tax expense amounted to NOK 1,519 million for the fourth quarter of 2022, about 91 percent of income before tax. The quarter was mainly impacted by the reassessment of recoverability of deferred tax assets resulting in a net charge of about NOK 1,400 million related to tax losses carried forward. The tax expense also includes positive effects of the legal restructuring of the associate Lyse Kraft DA, resulting in lower power surtax of about NOK 550 million.

Income tax expense amounted to NOK 7,984 million for 2022, about 25 percent of income before tax.

Interim financial statements

Condensed consolidated statements of income (unaudited)

NOK million, except per share data	**Fourth quarter 2022**	Fourth quarter 2021	Year 2022	Year 2021
Revenue	44,075	46,433	207,929	149,654
Share of the profit (loss) in equity accounted investments	131	473	1,337	1,340
Other income, net	1,051	942	4,406	2,219
Total revenue and income	45,256	47,848	213,672	153,212
Raw material and energy expense	28,857	24,804	129,373	88,843
Employee benefit expense	5,931	5,145	22,886	20,287
Depreciation and amortization expense	2,270	2,117	8,593	7,844
Impairment of non-current assets	286	294	336	437
Other expenses	6,507	5,402	21,769	17,914
Total expenses	43,851	37,762	182,957	135,325
Earnings before financial items and tax (EBIT)	1,405	10,086	30,715	17,887
Interest and other finance income	268	104	619	263
Foreign currency exchange gain (loss)	356	823	2,192	1,404
Interest and other finance expense	(353)	(283)	(1,161)	(1,156)
Finance income (expense), net	271	644	1,649	510
Income (loss) before tax	1,676	10,730	32,365	18,397
Income taxes	(1,519)	(2,205)	(7,984)	(4,467)
Income (loss) from continuing operations	158	8,525	24,381	13,930
Income (loss) from discontinued operations	36	4	36	12
Net income (loss)	194	8,529	24,417	13,942
Net income (loss) attributable to non-controlling interests	(93)	1,404	263	1,782
Net income (loss) attributable to Hydro shareholders	287	7,125	24,154	12,160
Basic and diluted earnings per share from continuing operations (in NOK)[1) 2)]	0.12	3.47	11.76	5.92
Basic and diluted earnings per share from discontinued operations (in NOK)[1)]	0.02	0	0.02	0.01
Basic and diluted earnings per share attributable to Hydro shareholders (in NOK) [1)]	0.14	3.47	11.78	5.93
Weighted average number of outstanding shares (million)	2,047	2,051	2,051	2,051

1) Basic earnings per share are computed using the weighted average number of ordinary shares outstanding. There were no significant diluting elements.
2) Calculated using Income (loss) from continuing operations less Net income (loss) attributable to non-controlling interests. There are no non-controlling interests in Income from discontinued

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Condensed consolidated statements of comprehensive income (unaudited)

NOK million, except per share data	**Fourth quarter 2022**	Fourth quarter 2021	Year 2022	Year 2021
Net income (loss)	194	8,529	24,417	13,942
Other comprehensive income				
Items that will not be reclassified to income statement:				
Remeasurement postemployment benefits, net of tax	(992)	257	784	2,376
Unrealized gain (loss) on securities, net of tax	(176)	(382)	40	(115)
Total	(1,167)	(126)	824	2,262
Items that will be reclassified to income statement:				
Currency translation differences, net of tax	(3,546)	(524)	8,428	(1,377)
Currency translation differences, net of tax, subsidiaries sold	(11)		(4)	(578)
Cash flow hedges, net of tax	94	(87)	624	(375)
Share of items that will be reclassified to income statement of equity accounted investments, net of tax	6	0	6	(137)
Total	(3,457)	(611)	9,054	(2,466)
Other comprehensive income	(4,624)	(737)	9,878	(204)
Total comprehensive income	**(4,431)**	**7,792**	**34,295**	**13,738**
Total comprehensive income attributable to non-controlling interests	(396)	1,310	1,252	1,564
Total comprehensive income attributable to Hydro shareholders	(4,034)	6,484	33,043	12,174

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Condensed balance sheets (unaudited)

NOK million, except per share data	December 31 2022	December 31 2021
Assets		
Cash and cash equivalents	29,805	22,923
Short-term investments	4,173	6,763
Trade and other receivables	23,988	20,579
Inventories	30,035	21,791
Other current financial assets	1,127	3,656
Total current assets	89,128	75,713
Property, plant and equipment	62,656	54,605
Intangible assets	9,280	8,725
Investments accounted for using the equity method	21,222	17,942
Prepaid pension	8,573	8,894
Other non-current assets	7,759	8,633
Total non-current assets	109,490	98,799
Total assets	**198,618**	**174,512**
Liabilities and equity		
Bank loans and other interest-bearing short-term debt	6,746	6,428
Trade and other payables	24,374	22,710
Other current liabilities	11,688	10,430
Total current liabilities	42,807	39,569
Long-term debt	26,029	21,989
Provisions	5,289	4,772
Pension liabilities	8,252	9,621
Deferred tax liabilities	4,796	3,665
Other non-current liabilities	3,648	6,516
Total non-current liabilities	48,013	46,563
Total liabilities	90,820	86,132
Equity attributable to Hydro shareholders	102,455	84,064
Non-controlling interests	5,343	4,316
Total equity	107,798	88,380
Total liabilities and equity	**198,618**	**174,512**
Total number of outstanding shares (million)	2,042	2,051

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Condensed consolidated statements of cash flows (unaudited)

NOK million, except per share data	**Fourth quarter 2022**	Fourth quarter 2021	Year 2022	Year 2021
Operating activities				
Net income (loss)	194	8,529	24,417	13,942
Loss (income) from discontinued operations	(36)	(4)	(36)	(12)
Depreciation, amortization and impairment	2,556	2,411	8,929	8,281
Other adjustments	5,697	(2,513)	(3,917)	(11,531)
Net cash provided by continuing operating activities	8,411	8,423	29,393	10,680
Investing activities				
Purchases of property, plant and equipment	(3,690)	(2,334)	(9,604)	(6,020)
Purchases of other long-term investments	(661)	(501)	(1,971)	(911)
Purchases of short-term investments	-	(1,000)	(1,250)	(3,000)
Proceeds from long-term investing activities	117	14	764	747
Proceeds from sales of short-term investments	-	1,000	1,500	4,500
Net cash used in continuing investing activities	(4,234)	(2,821)	(10,561)	(4,684)
Financing activities				
Loan proceeds	5,549	221	8,963	4,293
Loan repayments	(4,327)	(1,691)	(7,158)	(5,781)
Net increase (decrease) in other short-term debt	(231)	99	(241)	(107)
Repurchases of shares	(631)	-	(661)	-
Proceeds from shares issued	11	14	48	51
Dividends paid	(119)	(258)	(14,179)	(2,822)
Other cash transfers to non-controlling interests	(19)	-	(19)	-
Net cash provided by (used in) continuing financing activities	233	(1,615)	(13,247)	(4,366)
Foreign currency effects on cash	(455)	148	1,353	5
Net cash provided by (used in) discontinued operations	(2)	(4)	(56)	3,650
Net increase in cash and cash equivalents	3,953	4,131	6,882	5,285
Cash and cash equivalents at beginning of period	**25,852**	**18,792**	**22,923**	**17,638**
Cash and cash equivalents at end of period	**29,805**	**22,923**	**29,805**	**22,923**

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Condensed consolidated statements of changes in equity (unaudited)

NOK million	Share capital	Additional paid-in capital	Treasury shares	Retained earnings	Other components of equity	Equity attributable to Hydro shareholders	Non-controlling interests	Total equity
December 31, 2020	2,272	29,106	(662)	52,028	(8,464)	74,279	3,165	77,444
Changes in equity for 2021								
Treasury shares issued to employees		50	78			129		129
Items not reclassified to income statement in subsidiaries sold				(1,635)	1,635	-		-
Dividends				(2,564)		(2,564)	(368)	(2,932)
Acquisition of Non-controlling interest				123	(76)	47	(47)	-
Capital contribution in subsidiaries						-	2	2
Total comprehensive income for the period				12,160	14	12,174	1,564	13,738
December 31, 2021	2,272	29,156	(584)	60,112	(6,892)	84,065	4,316	88,380
Changes in equity for 2022								
Treasury shares issued to employees		61	36			97		97
Treasury shares acquired			(681)			(681)		(681)
Dividends				(14,060)		(14,060)	(215)	(14,275)
Acquisition of Non-controlling interest				154	(163)	(9)	9	-
Capital repayment in subsidiaries							(19)	(19)
Total comprehensive income for the period				24,154	8,889	33,043	1,252	34,295
December 31, 2022	**2,272**	**29,217**	**(1,229)**	**70,360**	**1,835**	**102,455**	**5,343**	**107,798**

The accompanying notes are an integral part of the condensed consolidated financial statements (unaudited).

Notes to the condensed consolidated financial statements

Note 1 Accounting policies

All reported figures in the financial statements are based on International Financial Reporting Standards (IFRS). Hydro's accounting principles are presented in Hydro's Financial Statements - 2022.

The condensed consolidated interim financial information should be read in conjunction with Hydro's Financial Statements - 2022 that are a part of Hydro's Annual Report - 2022.

As a result of rounding adjustments, the figures in one or more columns may not add up to the total of that column.

Note 2 Operating segment information

Hydro identifies its reportable segments and discloses segment information under IFRS 8 Operating Segments. This standard requires Hydro to identify its segments according to the organization and reporting structure used by management. See Hydro's Financial statements - 2022 note 1.4 Operating and geographic segment information for a description of Hydro's management model and segments, including a description of Hydro's segment measures and accounting principles used for segment reporting.

The following tables include information about Hydro's operating segments.

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Year 2022	Year 2021
Total revenue				
Hydro Bauxite & Alumina	7,986	8,713	33,951	27,699
Hydro Aluminium Metal	13,129	14,164	65,483	42,548
Hydro Metal Markets	18,222	19,715	90,968	65,061
Hydro Extrusions	19,819	18,509	91,176	70,296
Hydro Energy	3,037	3,477	12,614	10,149
Other and eliminations	(18,118)	(18,146)	(86,264)	(66,099)
Total	44,075	46,433	207,929	149,654
External revenue				
Hydro Bauxite & Alumina	5,091	5,471	21,649	17,088
Hydro Aluminium Metal	2,638	3,681	13,087	5,373
Hydro Metal Markets	15,132	16,993	76,821	54,165
Hydro Extrusions	19,881	18,505	90,892	69,883
Hydro Energy	1,324	1,780	5,467	3,257
Other and eliminations	9	2	13	(113)
Total	44,075	46,433	207,929	149,654

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Year 2022	Year 2021
Internal revenue				
Hydro Bauxite & Alumina	2,895	3,242	12,303	10,610
Hydro Aluminium Metal	10,491	10,484	52,396	37,175
Hydro Metal Markets	3,091	2,722	14,147	10,896
Hydro Extrusions	(62)	3	284	413
Hydro Energy	1,713	1,697	7,148	6,891
Other and eliminations	(18,126)	(18,148)	(86,278)	(65,986)
Total	-	-	-	-
Share of the profit (loss) in equity accounted investments				
Hydro Bauxite & Alumina	-	-	-	-
Hydro Aluminium Metal	200	513	1,549	1,509
Hydro Metal Markets	-	-	-	-
Hydro Extrusions	-	-	-	-
Hydro Energy	(81)	(25)	(180)	(104)
Other and eliminations	12	(15)	(32)	(65)
Total	131	473	1,337	1,340
Depreciation, amortization and impairment				
Hydro Bauxite & Alumina	687	514	2,496	2,018
Hydro Aluminium Metal	711	972	2,664	3,158
Hydro Metal Markets	44	41	161	149
Hydro Extrusions	1,036	804	3,297	2,649
Hydro Energy	48	49	190	194
Other and eliminations	30	31	121	113
Total	2,556	2,411	8,929	8,281
Earnings before financial items and tax (EBIT)[1)]				
Hydro Bauxite & Alumina	(1,133)	1,830	471	3,288
Hydro Aluminium Metal	2,200	7,311	20,292	8,376
Hydro Metal Markets	(492)	500	1,621	725
Hydro Extrusions	16	(412)	3,699	2,929
Hydro Energy	878	1,724	4,621	3,727
Other and eliminations	(63)	(868)	11	(1,158)
Total	1,405	10,086	30,715	17,887

[1)] Total segment EBIT is the same as Hydro group's total EBIT. Financial income and expense are not allocated to the segments. There are no reconciling items between segment EBIT to Hydro EBIT. Therefore, a separate reconciliation table is not presented.

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Year 2022	Year 2021
Earnings before financial items, tax, depreciation and amortization (EBITDA)				
Hydro Bauxite & Alumina	(446)	2,344	2,967	5,306
Hydro Aluminium Metal	2,888	8,260	22,866	11,440
Hydro Metal Markets	(449)	540	1,780	872
Hydro Extrusions	1,045	381	6,982	5,558
Hydro Energy	926	1,774	4,810	3,921
Other and eliminations	(34)	(837)	132	(1,046)
Total	3,930	12,462	39,536	26,050
Investments[1)]				
Hydro Bauxite & Alumina	1,813	918	3,799	2,338
Hydro Aluminium Metal	1,086	1,482	3,387	3,479
Hydro Metal Markets	453	105	969	214
Hydro Extrusions	1,475	820	3,223	1,763
Hydro Energy	671	291	1,920	692
Other and eliminations	22	57	92	104
Total	5,519	3,674	13,391	8,589

[1)] Additions to property, plant and equipment (capital expenditures) plus long-term securities, intangible assets, long-term advances and investments in equity accounted investments, including amounts recognized in business combinations. Investments in entities reported as assets held for sale are excluded.

NOK million	EBIT	Depreciation, amortization and impairment	Investment grants	EBITDA
EBIT - EBITDA Fourth quarter 2022				
Hydro Bauxite & Alumina	(1,133)	687	-	(446)
Hydro Aluminium Metal	2,200	711	(24)	2,888
Hydro Metal Markets	(492)	44	(2)	(449)
Hydro Extrusions	16	1,036	(6)	1,045
Hydro Energy	878	48	-	926
Other and eliminations	(63)	30	-	(34)
Total	1,405	2,556	(31)	3,930

NOK million	EBIT	Depreciation, amortization and impairment	Investment grants	EBITDA
EBIT - EBITDA 2022				
Hydro Bauxite & Alumina	471	2,496	-	2,967
Hydro Aluminium Metal	20,292	2,664	(91)	22,866
Hydro Metal Markets	1,621	161	(2)	1,780
Hydro Extrusions	3,699	3,297	(14)	6,982
Hydro Energy	4,621	190	(1)	4,810
Other and eliminations	11	121	-	132
Total	30,715	8,929	(108)	39,536

Alternative performance measures (APM)

Alternative performance measures, i.e. financial performance measures not within the applicable financial reporting framework, are used by Hydro to provide supplemental information, by adjusting for items that, in Hydro's view, does not give an indication of the periodic operating results or cash flows of Hydro, or should be assessed in a different context than its classification according to its nature. Financial APMs are intended to enhance comparability of the results and cash flows from period to period, and it is Hydro's experience that these are frequently used by analysts, investors and other parties. Management also uses these measures internally to drive performance in terms of long-term target setting and as basis for performance related pay. These measures are adjusted IFRS measures defined, calculated and used in a consistent and transparent manner over the years and across the company where relevant. Operational measures such as, but not limited to, volumes, prices per mt, production costs and improvement programs are not defined as financial APMs. To provide a better understanding of the company's underlying financial performance for the relevant period, Hydro focuses on adjusted EBITDA in the discussions on periodic adjusted financial and operating results and liquidity from the business areas and the group, while adjusting effects excluded to EBITDA, EBIT and net income (loss) are discussed separately. Financial APMs should not be considered as a substitute for measures of performance in accordance with IFRS. Disclosures of APMs are subject to established internal control procedures.

Hydro's financial APMs

- EBIT: Income (loss) before tax, financial income and expense.
- Adjusted EBIT: EBIT +/- identified adjusting items to EBIT as described below.
- EBITDA: EBIT + depreciation, amortization and impairments, net of investment grants.
- Adjusted EBITDA: EBITDA +/- identified adjusting items to EBITDA as described below.
- Adjusted net income (loss) from continuing operations: Net income (loss) from continuing operations +/- adjusting items to net income (loss) as described below.
- Adjusted earnings per share from continuing operations: Adjusted net income (loss) from continuing operations attributable to Hydro shareholders divided by weighted average number of outstanding shares (ref.: the interim financial statements).
- Investments: Additions to property, plant and equipment (capital expenditures) plus long-term securities, intangible assets, long-term advances and investments in equity accounted investments, including amounts recognized in business combinations for continuing operations.
- Net cash (debt): Short- and long-term interest-bearing debt and Hydro's liquidity positions
- Adjusted net cash (debt): Net cash (debt) adjusted for liquidity positions regarded unavailable for servicing debt, pension obligation and other obligations which are considered debt-like in nature.
- Adjusted RoaCE is defined as Adjusted Earnings after tax for the prior 12 months divided by average Capital employed for the four most recent quarters. Adjusted Earnings after tax is defined as adjusted EBIT less Adjusted income tax expense. Since RoaCE represents the return to the capital providers before dividend and interest payments, adjusted income tax expense excludes the tax effects of items reported as Finance income (expense), net and the tax effect of adjusting items. Capital employed is defined as Shareholders' Equity, including non-controlling interest plus long-term and short-term interest-bearing debt less Cash and cash equivalents and Short-term investments.
- Aluminium Metal specific adjustment to EBITDA:
- Qatalum 50% pro rata represent an adjustment to illustrate Hydro's share of EBITDA in Qatalum rather than Hydro's share of net income in Qatalum. The adjustment reflects the relevant elements of Qatalum's results as included in Hydro's income statement.
- Metal Markets specific adjustments to EBITDA:
- Currency effects include the effects of changes in currency rates on sales and purchase contracts denominated in foreign currencies (mainly US dollar and Euro for our European operations) and the effects of changes in currency rates on the fair valuation of derivative contracts (including LME futures) and inventories mainly translated into Norwegian kroner. Hydro manages its external currency exposure on a consolidated basis in order to take advantage of offsetting positions.
- Inventory valuation effects comprise hedging gains and losses relating to inventories. Increasing LME prices result in unrealized hedging losses, while the offsetting gains on physical inventories are not recognized until realized. In period of declining prices, unrealized hedging gains are offset by write-downs of physical inventories.

Adjusting items to EBITDA, EBIT, net income (loss) and earnings per share

Hydro has defined two categories of items which are adjusted to results in all business areas, equity accounted investments and at group level. One category is the timing effects, which are unrealized changes to the market value of certain derivatives. When realized, effects of changes in the market values since the inception are included in adjusted EBITDA and adjusted EBIT. Changes in the market value of trading portfolios are included in adjusted results. The other category includes material items which are not regarded as part of underlying business performance for the period, such as major rationalization charges and closure costs, effects of disposals of businesses and operating assets, major impairments of property, plant and equipment, as well as other major effects of a special nature, and realized effects of currency derivatives entered into for risk management purposes. Materiality is defined as items with a value above NOK 20 million. All adjusting items to results are reflecting a reversal of transactions or other effects recognized in the financial statements for the current period. Part-owned entities have implemented similar adjustments.

- Unrealized derivative effects on LME related contracts include unrealized gains and losses on contracts measured at market value, which are used for operational hedging purposes related to future expected sales and purchase transactions, both fixed-price customer and supplier contracts and transactions at not yet determined market prices. Also includes elimination of changes in fair value of certain internal physical aluminium contracts.
- Unrealized derivative effects on power and raw material contracts include unrealized gains and losses on embedded derivatives in raw material and power contracts for Hydro's own use and in physical and financial power contracts used for managing price risks and volume changes. Unrealized derivative effects on certain power contracts in a business model with the combined aim to manage hydrological risk in own power production, differences in power needs in existing and new business activities in Hydro as well as supporting development of new renewable energy projects are also adjusted for. Adjustments also comprise elimination of changes in fair value of embedded derivatives within certain internal power contracts.
- Significant rationalization charges and closure costs include costs related to specifically defined major projects, and not considered to reflect periodic performance in the individual plants or operations. Such costs involve termination benefits, dismantling of installations and buildings, clean-up activities that exceed legal liabilities, etc. Costs related to regular and continuous improvement initiatives are included in adjusted results.
- Significant community contributions Brazil refers to the provision recognized in relation to Alunorte's TAC and TC agreements with the Government of Parà and Ministèrio Pùblico made in September 2018, including later cost adjustments and certain similar agreements.
- Other effects include insurance proceeds covering asset damage, legal settlements, etc. Insurance proceeds covering lost income or expenses incurred in the same or a prior period are included in adjusted results.
- Pension includes recognition of pension plan amendments and related curtailments and settlements.
- Transaction related effects reflect the (gains) losses on divested of businesses and individual assets, the net remeasurement (gains) losses relating to previously owned shares in acquired business as well as inventory valuation expense related to acquisitions.
- Adjusting items in equity accounted investments reflects Hydro's share of items excluded from adjusted net income Qatalum and are based on Hydro's definitions, including both timing effects and material items not regarded as part of underlying business performance for the period.
- Impairment charges (PP&E, intangible assets and equity accounted investments) relate to significant write-downs of assets or groups of assets to estimated recoverable amounts in the event of an identified loss in value. Gains from reversal of impairment charges are also adjusted for.
- Realized foreign exchange gain (loss) on risk management instruments represents such items as foreign currency derivatives entered into and managed to mitigate currency risk in the production margin, i.e. the difference between sales price for products such as aluminium or alumina versus the cost of raw materials and energy used in production. Realized embedded currency derivatives in certain power contracts in Norway denominated in Euro are also adjusted for. Such currency effects are included in currency gains and losses in finance expense in the income statement, and included in adjusted EBITDA and adjusted EBIT.
- Net foreign exchange (gain) loss: Realized and unrealized gains and losses on foreign currency denominated accounts receivable and payable, funding and deposits, embedded currency derivatives and forward currency contracts purchasing and selling currencies that hedge net future cash flows from operations, sales contracts and operating capital, with the exceptions of the realized foreign currency exchange gain (loss) on risk management instruments mentioned above.
- Calculated income tax effect: In order to present adjusted net income from continuing operations on a basis comparable with our adjusted operating performance, the adjusted income taxes include adjustments for the expected taxable effects on adjusting items to income before tax.
- Other adjustments to net income from continuing operations include other major financial and tax related effects not regarded as part of the business performance of the period.

Adjusting items to EBITDA and EBIT per operating segment and for other and eliminations[1)]

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Third quarter 2022	Year 2022	Year 2021
Unrealized derivative effects on raw material contracts	353	113	157	(40)	(141)
Community contributions Brazil[2)]	32	15	-	32	217
Other effects[3)]	162	(46)	-	162	(46)
Hydro Bauxite & Alumina	547	82	157	155	30
Unrealized derivative effects on LME related contracts	207	(849)	(1,538)	(2,990)	4,912
Unrealized derivative effects on power contracts[4)]	1,638	(2,779)	1,291	3,218	(2,763)
Significant rationalization charges and closure costs[5)]	64	66	-	46	263
Net foreign exchange (gain)/loss[6)]	(40)	(23)	(26)	(108)	(120)
Other effects[7)]	-	-	-	(69)	(232)
Hydro Aluminium Metal	1,868	(3,585)	(273)	97	2,060
Unrealized derivative effects on LME related contracts	358	(210)	195	(107)	42
Other effects[8)]	-	(46)	-	-	(46)
Hydro Metal Markets	358	(256)	195	(107)	(4)
Unrealized derivative effects on LME related contracts	(126)	306	84	59	122
Unrealized derivative effects on power contracts	(67)	(20)	50	3	(72)
Significant rationalization charges and closure costs[9)]	91	2	-	106	114
(Gains)/losses on divestments[10)]	(4)	(4)	(2)	(54)	(27)
Other effects[11)]	-	-	(2)	(76)	-
Hydro Extrusions	(106)	283	130	38	137
Unrealized derivative effects on power contracts	615	(57)	(254)	170	(107)
(Gains)/losses on divestments[12)]	-	-	-	(65)	(45)
Net foreign exchange (gain)/loss[6)]	1	6	3	11	21
Hydro Energy	616	(51)	(251)	116	(131)
Unrealized derivative effects on LME related contracts[13)]	47	9	19	36	13
(Gains)/losses on divestments[14)]	-	-	-	-	(231)
Net foreign exchange (gain)/loss[6)]	(91)	0	(83)	(221)	20
Other effects[15)]	15	66	-	15	66
Other and eliminations	(29)	74	(65)	(170)	(132)
Adjusting items to EBITDA	**3,254**	**(3,451)**	**(108)**	**128**	**1,959**
Impairment charges					
Hydro Aluminium Metal [16)]	28	276	49	77	276
Hydro Extrusions[17)]	258	7	-	258	150
Depreciation[18)]	-	108	-	-	513
Adjusting items to EBIT	**3,541**	**(3,060)**	**(59)**	**464**	**2,899**

1) Negative figures indicate reversal of a gain and positive figures indicate reversal of a loss.
2) Community agreements includes provisions for the TAC and TC agreements with the Government of Parà and Ministèrio Pùblico made in September 2018, including later adjustments for changes in cost estimates, and similar agreements.
3) Other effects in Hydro Bauxite & Alumina in 2022 includes derecognized engineering cost related to a project on hold. Other effects in Hydro Bauxite & Alumina in 2021 includes insurance compensation for property damage at Alunorte.
4) Unrealized derivative effects on power contracts includes the effect of settling some such contracts in Slovalco net through selling power in 2021 and thereby meeting the requirement for recognizing contract in the same contract portfolio at fair value. The effects of consuming power under contracts recognized at fair value are included for 2022.
5) Rationalization and closure costs in Hydro Aluminium Metal in 2021 and the cost reduction in second quarter 2022 related to Aluchemie. Cost in fourth quarter 2022 related to curtailment cost in the Slovalco smelter.
6) Realized currency gains and losses from risk management contracts and embedded currency derivatives in physical power and raw material prices.
7) Other effect in Hydro Aluminium Metal in 2022 relates to insurance compensation for the power outage in Albras in the first quarter of 2022. Other effects in Hydro Aluminium Metal in 2021 excludes the recognized deferred tax asset in Qatalum after the end of the tax holiday period.
8) Other effects in Metal Markets in 2021 includes a compensation received
9) Significant rationalization and closure costs include provisions for costs related to reduction of overcapacity, closures and environmental clean-up activities in Hydro Extrusions.
10) Divestments of Hydro Extrusions plants, including adjustments of sales price.
11) Other effects in Hydro Extrusions relates to Insurance compensation for cost incurred prior to Hydro's acquisition of the business affected.
12) Divestment gain in Hydro Energy in 2022 relates to the partial sale of a project company involved with a wind power project in Sweden, held by Hydro REIN. Divestment gain in Hydro Energy in 2021 relates to the lower level of influence in Kyoto Group, which is now traded at the multilateral trading facility Euronext Growth Market, Oslo, for which equity accounting has ended.
13) Unrealized derivative effects LME related contracts result from elimination of changes in the valuation of certain internal aluminium contracts.
14) Reversal of gain of sales of property in Germany in 2021.
15) Other effects in 2022 and 2021 relates to environmental provision for closed sites in Germany.
16) Impairment charges in Hydro Aluminium Metal in 2022 and 2021 reflect write downs related to the Slovalco smelter.
17) Impairment charges in 2022 and 2021 in Hydro Extrusions include impairments of various individaul sites and assets.
18) Excess depreciation in 2021 related to the anode producer Aluchemie which was closed at the end of 2021.

Adjusted EBITDA

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Third quarter 2022	Year 2022	Year 2021
EBIT	1,405	10,086	7,670	30,715	17,887
Depreciation, amortization and impairment	2,556	2,411	2,185	8,929	8,281
Investment grants	(31)	(35)	(27)	(108)	(117)
EBITDA	3,930	12,462	9,828	39,536	26,050
Adjusting items to EBITDA	3,254	(3,451)	(108)	128	1,959
Adjusted EBITDA	**7,184**	**9,011**	**9,721**	**39,664**	**28,010**

Adjusted earnings per share from continuing operations

NOK million	**Fourth quarter 2022**	Fourth quarter 2021	Change prior year quarter	Third quarter 2022	Change prior quarter	Year 2022	Year 2021
Net income (loss) from continuing operations	158	8,525	(98)%	6,676	(98)%	24,381	13,930
Adjusting items to net income (loss) from continuing operations[1)]	2,213	(2,715)	>100%	(418)	>100%	(1,236)	976
Adjusted net income (loss) from continuing operations	2,371	5,810	(59)%	6,258	(62)%	23,145	14,905
Adjusted net income attributable to non-controlling interests from continuing operations	339	535	(37)%	295	15%	1,205	1,017
Adjusted net income from continuing operations attributable to Hydro shareholders	2,032	5,276	(61)%	5,964	(66)%	21,941	13,888
Number of shares	2,047	2,051	-	2,053	-	2,051	2,051
Adjusted earnings per share from continuing operations	**0.99**	**2.57**	**(61)%**	**2.91**	**(66)%**	**10.70**	**6.77**

1) Adjusting items to net income (loss) consist of the Adjusting items to EBIT specified on the previous page and Hydro's realized and unrealized foreign exchange gains and losses. These items are net of calculated tax effects, for most items based on a 30 percent standardized tax rate.

Adjusted net cash (debt)

NOK million	December 31, 2022	September 30, 2022	Change prior quarter	December 31, 2021	September 30, 2021	Change prior year quarter
Cash and cash equivalents	29,805	25,852	3,953	22,923	18,792	4,131
Short-term investments[1)]	4,173	2,511	1,663	6,763	7,020	(257)
Short-term debt	(6,746)	(11,085)	4,339	(6,428)	(4,186)	(2,242)
Long-term debt	(26,029)	(20,790)	(5,239)	(21,989)	(25,495)	3,506
Collateral for long-term liabilities	106	367	(261)	1,945	2,647	(703)
Net cash (debt)	1,310	(3,145)	4,454	3,213	(1,221)	4,435
Collateral for short-term and long-term liabilities[2)]	(2,563)	(1,243)	(1,319)	(5,304)	(6,305)	1,001
Cash and cash equiv. and short-term investm. in captive insurance company[3)]	(1,000)	(995)	(4)	(1,059)	(1,072)	13
Net pension asset (obligation) at fair value, net of expected income tax benefit[4)]	(270)	959	(1,228)	(774)	648	(1,422)
Short- and long-term provisions net of expected income tax benefit, and other liabilities[5)]	(3,466)	(3,381)	(85)	(3,096)	(2,570)	(526)
Adjusted net cash (debt)	**(5,989)**	**(7,806)**	**1,817**	**(7,019)**	**(10,520)**	**3,501**

1) Hydro's policy is that the maximum maturity for cash deposits is 12 months. Cash flows relating to bank time deposits with original maturities beyond three months are classified as investing activities and included in short-term investments on the balance sheet.
2) Collateral provided as cash, mainly related to strategic and operational hedging activities
3) Cash and cash equivalents and short-term investments in Hydro's captive insurance company Industriforsikring AS are assumed to not be available to service or repay future Hydro debt, and are therefore excluded from the measure Adjusted net debt.
4) The expected income tax liability related to the pension liability is NOK -591 million and NOK -330 million for December 2022 and September 2022, respectively.
5) Consists of Hydro's short and long-term provisions related to asset retirement obligations, net of an expected tax benefit estimated at 30 percent, and other non-current financial liabilities.

Adjusted Return on average Capital Employed (RoaCE)

Hydro uses adjusted RoaCE to measure the performance for the group as a whole and within its operating segments, both in absolute terms and comparatively from period to period. Management views this measure as providing additional understanding of the rate of return on investments over time in each of its capital intensive businesses and in the operating results of its business segments. RoaCE is calculated as adjusted EBIT after tax divided by average Capital employed for the respective period. The definition of capital employed was amended during 2021 to be consistent with the amended definition of Net cash (debt), and excludes long-term collateral.

Capital employed for 2021 excludes Assets held for sale and Liabilities in disposal groups, as results from the divested Hydro Rolling business is separately reported as Income (loss) from discontinued operations.

NOK million	**Reported 2022**	2021	Adjusted 2022	2021
EBIT	30,715	17,887	31,179	20,786
Adjusted Income tax expense[1)]	(7,489)	(4,314)	(7,654)	(5,255)
EBIT after tax	23,226	13,572	23,525	15,531

NOK million	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022	December, 31 2021	September 30, 2021	June 30, 2021	March 31, 2021
Current assets in continuing operations[2)]	55,149	64,723	65,122	55,912	46,027	39,689	36,952	31,439
Property, plant and equipment	62,656	62,369	58,920	56,599	54,605	54,642	56,353	53,890
Other non-current assets[3)]	46,728	51,007	46,876	45,932	42,250	42,144	41,951	39,749
Current liabilities in continuing operations[4)]	(36,061)	(38,356)	(39,880)	(37,666)	(33,140)	(27,277)	(25,494)	(21,498)
Non-current liabilities[4)]	(21,984)	(23,502)	(24,309)	(26,418)	(24,574)	(27,020)	(24,643)	(22,402)
Capital Employed	106,488	116,241	106,728	94,360	85,167	82,177	85,119	81,178

	Reported		Adjusted	
	2022	2021	**2022**	2021
Return on average Capital Employed (RoaCE)[5)]	21.9%	16.3%	22.2%	18.6%

1) Adjusted Income tax expense is based on reported and adjusted tax expense adjusted for tax on financial items.
2) Excluding cash and cash equivalents and short-term investments.
3) Excluding long-term collateral related to strategic and operational hedging activities.
4) Excluding interest-bearing debt.
5) Average Capital Employed measured over the last 4 quarters to reflect the return for the full year.

Cautionary note

Certain statements included in this announcement contain forward-looking information, including, without limitation, information relating to (a) forecasts, projections and estimates, (b) statements of Hydro management concerning plans, objectives and strategies, such as planned expansions, investments, divestments, curtailments or other projects, (c) targeted production volumes and costs, capacities or rates, start-up costs, cost reductions and profit objectives, (d) various expectations about future developments in Hydro's markets, particularly prices, supply and demand and competition, (e) results of operations, (f) margins, (g) growth rates, (h) risk management, and (i) qualified statements such as "expected", "scheduled", "targeted", "planned", "proposed", "intended" or similar.

Although we believe that the expectations reflected in such forward-looking statements are reasonable, these forward-looking statements are based on a number of assumptions and forecasts that, by their nature, involve risk and uncertainty. Various factors could cause our actual results to differ materially from those projected in a forward-looking statement or affect the extent to which a particular projection is realized. Factors that could cause these differences include, but are not limited to: our continued ability to reposition and restructure our upstream and downstream businesses; changes in availability and cost of energy and raw materials; global supply and demand for aluminium and aluminium products; world economic growth, including rates of inflation and industrial production; changes in the relative value of currencies and the value of commodity contracts; trends in Hydro's key markets and competition; and legislative, regulatory and political factors.

No assurance can be given that such expectations will prove to have been correct. Hydro disclaims any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Financial calendar 2023[1)]

April 28	First quarter results
May 10	Annual General Meeting
July 21	Second quarter results
October 24	Third quarter results

[1)] Hydro reserves the right to revise these dates.

See updated calendar on Hydro.com.

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Hydro is a leading industrial company committed to a sustainable future. Our purpose is to create more viable societies by developing natural resources into products and solutions in innovative and efficient ways.

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