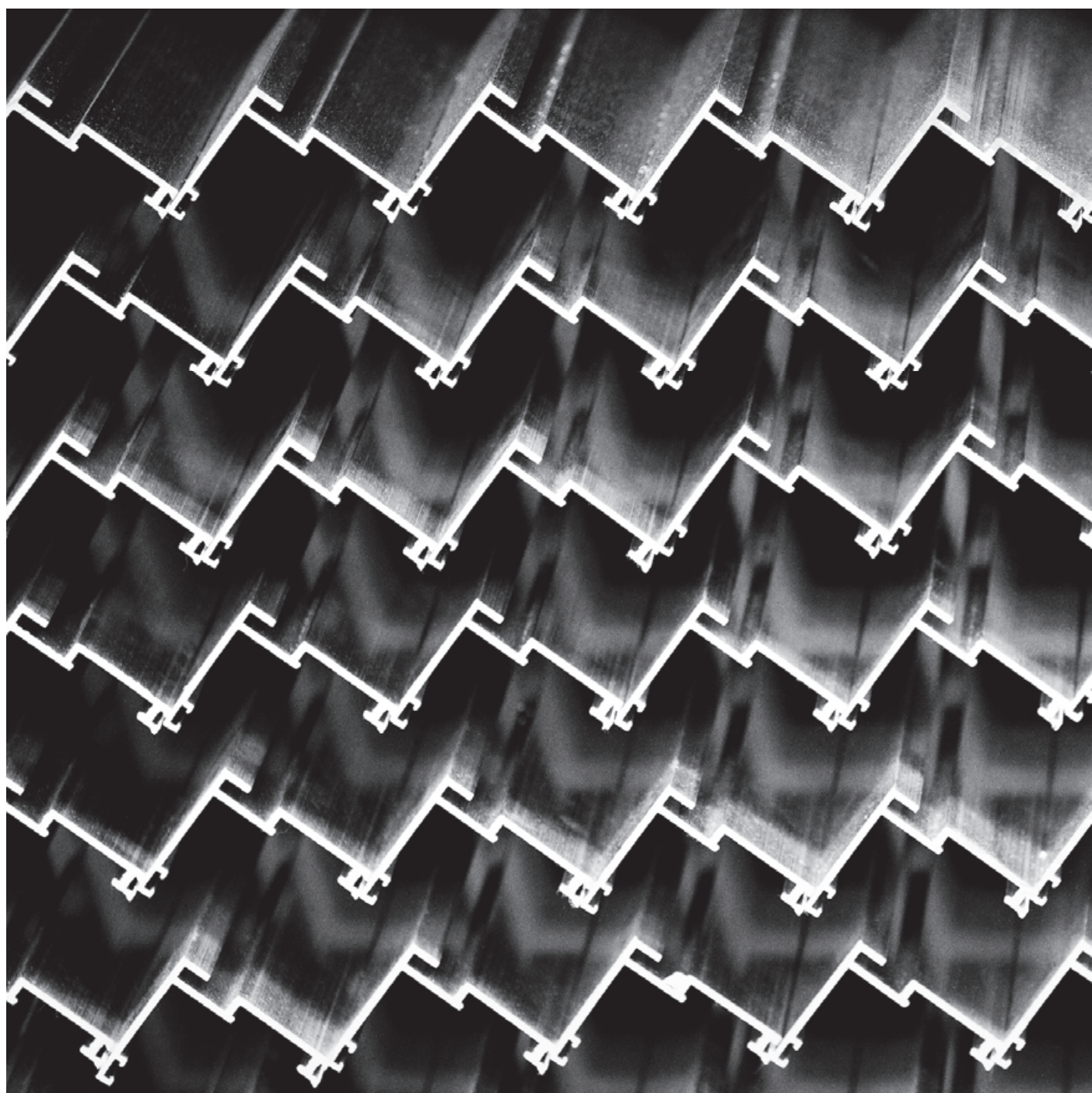




Financial statements and  
Board of Directors' report  
2018



## **Hydro's reporting 2018**

The enclosed Financial statements and Board of Directors' report, together with the accompanying notes, fulfills Hydro's Norwegian statutory requirements for annual reporting. The remainder of the Annual Report includes additional information about Hydro's business, viability performance, financial and operating performance, shareholder information and corporate governance.

The "Annual report - 2018" is available in PDF-format on our website [www.hydro.com/reporting2018](http://www.hydro.com/reporting2018) in English. The "Financial statements and Board of Directors' report - 2018" is also available in PDF-format as a separate document in both English and Norwegian. All parts of the reports can be downloaded and printed in PDF-format, together with additional, supplementary information. Paper copies of the reports can also be ordered on our website.

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

# Content

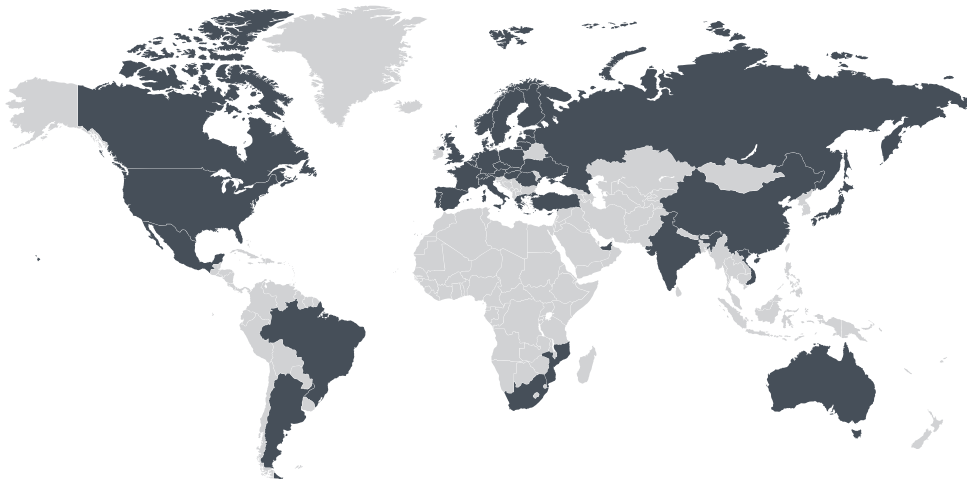
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# Year in brief

## 2018 Operating results impacted by reduced upstream volumes and higher raw material costs, partly offset by higher realized prices.

Hydro's underlying EBIT decreased to NOK 9,069 million from NOK 11,215 million for 2017. The decrease reflects negative effects relating to the production curtailment at Alunorte and increased raw material costs partly offset by a higher all-in metal price and alumina sales price as well as the positive contribution from the full consolidation of Extruded Solutions. Further, the result was positively impacted by strong Energy results and improved downstream margins and volumes.

Bauxite production in Paragominas amounted to 6.2 million mt for the year while alumina production from Alunorte was 3.7 million mt. Primary aluminium production was about 2.0 million mt and we delivered 2.6 million mt of casthouse products and liquid metal to internal and external customers. Downstream, we shipped roughly 1 million mt of rolled products to the market. Extruded Solutions business area delivered around 1.4 million mt. Our energy business produced around 10.7 TWh of hydroelectric power



■ Hydro present

Based in Norway, Hydro has 36,000 employees involved in activities in 40 countries.

# Key figures

Amounts in NOK million unless other unit indicated	2018	2017	2016
Revenue	159,377	109,220	81,953
<i>Underlying EBIT<sup>a)</sup></i>			
Bauxite & Alumina	2,282	3,704	1,227
Primary Metal	1,762	5,061	2,258
Metal Markets	686	544	510
Rolled Products	413	380	708
Extruded Solutions	2,390	284	
Energy	1,846	1,531	1,343
Other and eliminations	(310)	(289)	380
Total	9,069	11,215	6,425
Net Income	4,323	9,184	6,586
Underlying return on average capital employed (RoaCE), percent	6.5%	9.6%	5.1%
Investments	7,614	28,848	9,137
Total assets	161,855	163,273	130,793
Share price year-end, NOK	39.21	62.35	41.30
Dividend per share, NOK	1.25	1.75	1.25
Number of employees, year-end	36,236	34,625	12,911
Recordable injuries, per million hours worked <sup>b)</sup>	3.4	2.9	2.6
Greenhouse gas emissions, million tonnes CO <sub>2</sub> e <sup>c)</sup>	6.5	8.2	8.2

## a) Underlying EBIT

Reflecting negative effects relating to the production curtailment at Alunorte. Partly offset by positive contributions from the full consolidation of Extruded Solutions, Energy results and improved downstream margins and volumes.

## b) Safety performance

Hydro's safety performance weakened in 2018, and we experienced one fatal accident. The company's TRI<sup>1</sup> rate increased from 2.9 in 2017 to 3.4 in 2018 and did not meet the target of 3.0.

## c) Greenhouse gas emissions

Direct greenhouse gas emissions from Hydro's consolidated activities decreased in 2018 due to the embargo at Alunorte and curtailment at Albras and Paragominas.

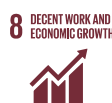
## Hydro and the UN Sustainable development goals

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. Of the 17, Hydro has chosen eight goals that are the most important to us, that are highlighted throughout the report.

### Improving our footprint



### Making a positive difference



### Driving innovation



# Lessons learned, building for the future

In our first year as a fully integrated and truly global aluminium company, we showed encouraging progress in designing, developing and delivering aluminium products and solutions worldwide. But 2018 was also heavily affected by the production embargo at our alumina refinery Alunorte in Brazil.

2018 was the year our new business area Extruded Solutions was financially and operationally fully integrated in our now 36,000-strong Hydro family. It has added competence, assets and customers in key downstream segments across all continents, in line with our ambition to become a better, bigger and greener company.

The Karmøy technology pilot has been ramped up to produce the world's most climate and energy-efficient primary aluminium, we have decided to upgrade the Husnes plant, delivered better results from remelters, secured future renewable power sourcing, invested in selective downstream projects such as extrusion capacity for the US automotive market and improved performance at the new automotive line in Germany.

At the same time, 2018 stands out as the most demanding year for me as president and CEO of Hydro. We have learned from the Alunorte situation – both with regards to our operational activities inside the fence of Alunorte, as well as how local communities surrounding our operations regard us as a neighbor. Through dialog with our local communities, we realize that we had not lived up to their expectations or our own ambitions. Hydro can only succeed as a company if the societies around us are viable.

## The Alunorte situation

The impact of the rainfall event in Barcarena, Brazil, in February 2018, has been thoroughly investigated through public agencies, professional reports from internal and independent third-party as well as public hearings. Environmental authorities have confirmed that there were no leaks or overflow from Alunorte's bauxite residue deposits.

However, we did recognize a need to strengthen the robustness of the plant, and we have increased water treatment capacity to prepare the plant for future climate and weather changes. Our clear ambition is to make Alunorte the benchmark in our industry, ensuring sustainable operations and social development in the communities around us.

Technical and social agreements with the authorities with clear commitments have been negotiated and concluded, and in addition we have promised to invest in social projects and

capacity building through the Sustainable Barcarena Initiative over the next 10 years.

We have concluded a broad climate risk and impact assessment of Hydro plants worldwide, as part of our measures to increase resilience toward future effects of climate change.

## Better, Bigger, Greener

The curtailment at Alunorte has weakened our financial results and progress of our improvement program. In addition, different tariffs and sanctions have influenced global markets and trade flows over the past year, also affecting our industry.

But as the metal of the future continues to find its way into new applications, demand growth remains firm and future prospects look promising.

More and more of our aluminium is used in automotive applications, light-weighting transportation and reducing carbon emissions in the user phase. Hydro has become one of the world's leading suppliers of building systems, including energy-efficient roofs, façades and windows solutions. We delivered our first physical metal in the series Hydro 4.0 and Hydro 75R, with a documented low-carbon footprint and record-high recycled content of post-consumer scrap. Our revised Hydro Way and visual identity have been well received internally and externally, boosted internal engagement and collaboration and given Hydro a unified face and voice toward our 30,000 customers worldwide.

We continue our efforts to solve equipment design issues that have delayed the ramp-up of the new Used Beverage Can (UBC) recycling line in Germany. We are also dealing with increased raw material costs and some reduced margins that are offsetting improvements, including restructuring costs at our two recently acquired extrusion plants in Brazil.

Aluminium is a key building block for the low-carbon, circular economy. A brand new fully-electric car ferry to service a 12.5-kilometre fjord crossing in western Norway can serve as an example of the potential for new solutions. Hydro has delivered the rolled and extruded aluminium

necessary to lightweight the ferry to enable its electric operations. And we have indirectly taken part in delivering the 3 MWh battery pack that powers the vessel through our 25 percent stake in Corvus Energy. I am convinced that the world will need – and soon will see – more of this kind of innovative and greener transport solutions, enabled by aluminium.

## Care, Courage, Collaboration

We marked our new chapter by modernizing our values. We are still the same purpose-driven company aiming to create a more viable society, and our contribution is to help engineer the future and lightweight our planet through innovative and sustainable aluminium products and solutions. We aspire to become better, bigger and greener through continuous improvement of existing operations, selective growth and expansion, and setting new standards within the global aluminium industry. And the values Care, Courage and Collaboration are our guidelines for the way we work to achieve it.

Our performance on safety in 2018 missed our targets. It was with great sorrow that I got the news that an employee of a contracting company died while working for Hydro, at Extruded Solutions in Hungary, in November 2018. At the same time, 77 of our sites were injury-free in 2018, demonstrating that half of all our production facilities don't just believe that zero is possible – they are doing it and leading the way.

The difference between injury free and a serious injury can often be measured in millimeters, or in milliseconds. We must improve our abilities by learning from all incidents, share our learning from our best practices and best-performing colleagues, focus on prevention of fatalities and serious injuries – and always strive to make our workplace safer.

Our employees are by far Hydro's most important asset, and I would like to extend my gratitude to all our 36,000 engaged employees for solving challenges and seizing opportunities and making Hydro perform and improve.

Being engaged in the entire aluminium value chain provides advantages that are unmatched by our global peers. By tracking each step along the way, we are able to document and be transparent about our sustainability practices. As part of taking responsibility, and to contribute to sustainable development, we have taken part in developing the standards of the Aluminium Stewardship Initiative. The first Hydro plants have already received certification, and we are on track with our plan to achieve certification along the entire aluminium value chain from mine to recycling in the coming months.

Hydro is a signatory to the UN Global Compact and the Task force on Climate-related Financial Disclosure (TCFD). Hydro was a co-founder of the World Business Council for Sustainable Development, and a member of the International Council on Mining and Metals (ICMM). Hydro became aluminium sector leader in 2018 on the Dow Jones Sustainability Indices and is included in the UN Global Compact 100 and the FTSE4Good list.

## Technology and sustainability

If the global climate challenge is our biggest challenge, technological advancement is our greatest opportunity.

We are pushing the laws of nature to achieve more energy-efficient electrolysis. We utilize digitalization, big data and artificial intelligence to optimize and automate processes. We tailor-make specific aluminium properties on the atomic level to innovate new products and solutions that reduces emissions in the user phase.

In short, by bringing to life the unique qualities of aluminium, we address both the greatest threat and opportunity of our time.



Svein Richard Brandtzæg  
CEO and President

# Board of Directors' report

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## Quick overview

Following the acquisition and ongoing successful integration of Extruded Solutions, Hydro remains committed to its strategy to improve and grow along the full aluminium value chain, underpinned by firm demand for the world's fastest growing base metal.

Hydro has strong positions throughout the value chain and an attractive asset base. This includes competitive positions in bauxite and alumina, hydropower production, and our smelter portfolio, European leader in rolling operations, strong position in recycling and a world leading position in extruded solutions. Through continuous improvement, restructuring efforts and selective investments in areas with positive market prospects, Hydro has improved its competitive position over recent years.

The continued production curtailment in Alunorte contributed to a challenging year for Hydro. Hydro has been in dialogue with all relevant authorities, at the local, regional and national level in Brazil. We continue to seek a common agreed solution to resume operations, using the new and modern deposit area and the state-of-the-art press filters. The timing of a full resumption of operations remains uncertain.

Mainly due to the situation in Alunorte, Hydro will not be able to deliver on its Better program with improvements of a total NOK 3.0 billion over a four-year period until end-2019. Much because of the same reason, Hydro has not been able to stay on course for several of its mid-term goals.



# Strategic direction and key developments

## Navigating challenging times, maintaining long-term focus

Following the acquisition and ongoing successful integration of Extruded Solutions, Hydro remains committed to its strategy to improve and grow along the full aluminum value chain, underpinned by firm demand for the world's fastest growing base metal. The continued production curtailment in Alunorte contributed to a challenging year for Hydro. The process to restore normal production at Alunorte is ongoing but the timing of a solution remains uncertain. The Alunorte situation is described in further detail later in this section.

## Strong position in an industry with growing demand

Hydro has strong positions throughout the value chain and an attractive asset base.

This includes:

- First quartile cost position for the integrated Alunorte refinery and Paragominas bauxite mine, long-term access to key raw materials for aluminium production
- 10TWh hydropower production in Norway at competitive production cost, secure and stable energy source for aluminium production
- Low second-quartile cost position for primary smelter portfolio, technological leadership through Karmøy technology pilot and more than 80 percent share of value-added metal products
- European leader in rolling operations, increasing exposure to high-margin market segments including automotive
- World's largest extruded solutions provider, market leader in North America and Europe
- Strong and growing position in recycling, both post-consumer and process scrap

Hydro has improved its competitive position over recent years, through continuous improvement, restructuring efforts and selective investments in areas with positive market prospects.

Growth in aluminium demand remains firm, growing in line with GDP development. Aluminium demand is driven both by a general increase in consumption and the increasing substitution to aluminium from other materials. Aluminium products are important in all phases of economic development due to the diversified nature of applications such as capital investment in infrastructure and housing as well as consumer goods such as packaging, transportation, electrical and technical applications and household goods.

Substitution effects are driving demand primarily in the transportation sector, driven by the need to improve fuel efficiency and reduce energy use through lighter cars, trains and trucks. Additionally, aluminium is key to zero-energy buildings, solar applications and packaging that preserves food and demands less energy to transport. Around 70 percent of Hydro's primary production is based on renewable energy which, together with the use-phase benefits of aluminium and the recyclability of the metal,

combine to reduce the carbon footprint of products and solutions.

Hydro is focusing on improving productivity and output for the upstream portfolio through de-bottlenecking, digitalization and automation. The Karmøy technology pilot is now operating at full capacity. Although still in a qualification phase, the Karmøy Technology Pilot is producing the world's most climate and energy-efficient primary aluminium. The pilot plant is verifying a broad range of technical innovations that will provide spin-off effects to Hydro's smelter portfolio, helping to increase efficiency and reduce the climate footprint of Hydro's production of primary aluminium.

We apply new technology and have developed processes to combine clean scrap with post-consumer scrap, and we are investing in existing remelters to increase our post-consumer scrap capacity. Hydro's low carbon 75R billet has a guaranteed minimum postconsumer scrap content of 75 percent.

Extruded Solutions will continue to pursue its value over volume strategy and consider investments and acquisitions to strengthen its position in specific segments or markets. Rolled Products will continue to focus on high-margin market segments with the ramp-up of its Automotive line 3 (AL3), while it has initiated a restructuring of its less profitable foil business. Energy's ambition is to continually increase Hydro's share of captive power from renewable sources, and further explore opportunities within our existing concession areas in Norway. Our ongoing Fit4Future program, aims at step-change improvements to lift staff value creation and lower costs.

In Norway, about two-thirds of our normal annual hydropower production is subject to concessions granted at the time the waterfall rights were acquired. Such power plants operate under concession terms of the Norwegian state reversion, with individual concessions expiring in two main parts around 2022 and 2050. Hydro is working on different restructuring alternatives within the regulatory framework to secure future access to physical power and maintain value beyond 2022.

Climate, health, safety, security and environment (HSE), corporate social responsibility (CSR), and complying with laws, regulations, and Hydro's steering documents, is fundamental to Hydro's way of working and are considered key elements of the company's license to operate. Hydro is on track to becoming carbon-neutral from a life-cycle perspective by 2020. Hydro has been involved at all stages in the multi-stakeholder development of the Aluminium Stewardship Initiative's (ASI) standards and certified its first extrusion plant in 2018 and first rolling mill during the first quarter of 2019. Several other plants, representing the complete value chain, are under certification.

## Creating value by becoming Better, Bigger and Greener

Hydro's strategic business approach aims to add value to our customers, shareholders and society. This approach is reflected in Hydro's mid-term strategic goals reflecting the company's aspiration to become Better, Bigger, Greener.

Hydro will become Better by raising performance and

improving our customer offering. This will be achieved by extending Hydro's leadership in advanced technology and product innovation, creating value through raw materials access, customer collaboration and our integrated model, continual improvements and continuing to benchmark performance and ensuring attractive returns over the cycle.

To become Bigger, Hydro will aim to expand the use of aluminium and strengthen Hydro's platform for growth. This will be achieved by the promotion of Hydro and aluminium through value-adding products and solutions for our customers. We aim to be the preferred and trusted partner, and the most trusted voice of the aluminium industry. Hydro pursues selective growth from raw materials to products, solutions and recycling.

Hydro believes that leading the transition towards sustainable solutions will make the company Greener, in addition to improving the company's ability to create shareholder value while making a positive difference wherever it operates. Hydro advocates aluminium as a building block for the low-carbon circular economy, continue to reduce its environmental footprint from own production and solutions, and to make a positive difference by strengthening local communities and our business partners.

### 2018 Developments

The production curtailment at Alunorte posed a continuous challenge throughout the year and impacted a large part of operations and performance. The Alunorte situation is described in further detail later in this section.

Hydro's underlying EBIT for the year 2018 was NOK 9.1 billion, down from NOK 11.2 billion in the previous year. The decrease reflects negative effects relating to the production curtailment at Alunorte and increased raw material costs, partly offset by a higher all-in metal price and alumina sales price as well as the positive contribution from the full consolidation of Extruded Solutions. Further, the result was positively impacted by strong Energy results and improved downstream margins and volumes.

Despite the Alunorte situation, we shall continue to focus on our continuous improvement efforts and the pursuit of our strategic goals.

We see many examples of strong performance throughout the company, such as the successful construction and ramp-up of the Karmøy technology pilot in Norway, Extruded Solutions continued to build on its strategy of value over volume while Energy entered into several long term power purchase contracts with wind power producers in Norway and Sweden. Further, the integration of Extruded Solutions is on track to deliver NOK 200 million in synergies, with more than NOK 100 million realized in 2018. In addition, good progress has been made with product qualification on the new automotive line in Germany.

However, mainly due to the situation in Alunorte, Hydro will not be able to deliver on its *Better* program with improvements of a total NOK 3.0 billion over a four-year period ending 2019. The accumulated achieved improvement at the end of 2018 is negative NOK 0.6 billion, implying a

negative development of NOK 2.4 billion in 2018. Hydro's ability to reach the program's target depends on when the Alunorte situation will be solved. Primarily for the same reason, Hydro has not been able to stay on course for several of its mid-term goals.

Hydro's safety performance weakened in 2018, and we experienced one fatal accident. The company's TRI<sup>1</sup> rate increased from 2.9 in 2017 to 3.4 in 2018 and did not meet the 2018 target of below 3.0. Even though the high-risk incidents rate improved, the development is concerning. All business areas are active in identifying safety risks, and our performance indicator, the risk KPI, remains an important leading indicator helping monitor and manage processes and tasks with high inherent risks.

Primary Metal is utilizing technology and innovation to differentiate in the highly competitive environment of primary aluminium production. The 75,000 mt technology pilot at Karmøy started production in January 2018 and reached full production in June 2018, marking the start of verifying the world's most climate- and energy-efficient smelter technology with spin-off effects for Hydro's existing smelter portfolio.

Hydro has made a final build decision to invest NOK 1.4 billion at the aluminium plant in Husnes, Norway, to upgrade and start-up the plant's second production line, which was shut down in 2009. Hydro will introduce new technology elements from the Karmøy technology pilot that will give better performance at the plant. The line is expected to begin operations in the first half of 2020.

Recycling is an important element supporting Hydro's ambition to become carbon-neutral by 2020. During 2018 the company continued developing and investing in recycling capacity and solutions including expanding the Azuqueca remelter, upgrading the Lucé remelter, and increasing production of the low carbon 75R billet.

Rolled Products has ramped up Automotive line 3 (AL3) and has made good progress with the product qualifications. The used beverage can (UBC) recycling line has encountered further delays during the ramp-up and as a result are targeting full production by the end of 2019. Further, Rolled Products experienced increasing costs and weakening demand in some of the product segments and initiated a restructuring of its foil business.

Extruded Solutions continued its strategy of increasing the share of value-added sales, and a simplification and collaboration drive for continued improvement. On April 2, 2018 the acquisition of Arconic's two extrusion plants in Brazil was completed, strengthening Hydro's downstream position in Brazil and creating a solid platform for further growth. Extruded Solutions has made an investment decision to build a new extrusion press in Cressona, the press will have high-performance capabilities primarily targeted to meet the needs of the growing automotive market in North America. Building Systems are offering our first window systems made from Hydro's 75R recycled aluminium.

<sup>1</sup> Total recordable injuries per million hours worked, includes employees and contractors

Hydro Extrusion Portland, Inc. (formerly Sapa Profiles, Inc.) (SPI), a Portland, Oregon-based indirect subsidiary of Hydro Extruded Solutions AS (formerly Sapa AS) (Hydro) is under investigation by the United States Department of Justice (DOJ) Civil and Criminal Divisions regarding certain aluminum extrusions that SPI manufactured from 1996 to 2015, including extrusions that were delivered to a supplier to NASA. In early March 2019, the parties reached an agreement in principle, requiring Hydro to pay an amount of around NOK 400 million to resolve the investigations. As part of the share purchase agreement between Hydro and Orkla ASA, the parties have agreed that Orkla ASA shall indemnify Hydro for 50 percent of any liability in relation to DOJ's investigations.

Securing long-term competitive power sourcing is of critical importance to sustain the viability of Hydro's smelter portfolio. In 2018, Hydro entered into four contracts for long-term renewable power sourcing. Total energy contracted between 2021 and 2030 is 2.2 TWh annually and these contracts will contribute to strengthen Hydro's renewable power base in Norway.

Following the production embargo at the Alunorte refinery, the World ex-China alumina market fell into deficit in 2018. The shortfall was balanced by Chinese alumina exports, which was unprecedented, as China has historically been an importer of alumina. Demand for bauxite imports into China continued to grow, driven by an increase in alumina production by coastal refineries reliant on imported bauxite, as well as tightness of the domestic bauxite market. The increased demand was largely met by the continued strong growth in imports from Guinea, along with moderate growth from Australian mines.

Global demand growth for primary aluminium in 2018 reflected positive macroeconomic developments. Global supply development throughout the year fell somewhat short of expectations, resulting in an overall market deficit. Primary production growth in China was close to flat year-on-year in 2018, reflecting environmental and supply-side reforms resulting in cutbacks of illegal capacity. Towards end of year, there have been curtailments and announcements of significant capacity closures of Chinese smelters due to deteriorating competitiveness. Strong demand continued across all downstream segments in line with macro development. Due to substitution into aluminium in transportation and electrical in particular, demand growth in these sectors was higher than for other more GDP driven segments. 2018 was also influenced by continued market uncertainty driven by the US administration imposing import tariffs on aluminium, Rusal sanctions and the Alunorte situation.

### **The Alunorte situation**

In February 2018 the region of Barcarena in northern Brazil suffered from flooding following two days of extreme rainfall. The areas flooded included Hydro's Alunorte alumina refinery. Brazilian authorities and local communities were concerned that flooding might have led to harmful spills into the surrounding areas. The authorities ordered several measures against Alunorte while reviewing the situation. The measures restricted the production at the refinery to 50 percent of its capacity. Consequently, Alunorte's primary bauxite source Paragominas and Hydro's part-owned

subsidiary Albras aluminium plant, both in the state of Pará, reduced their production by 50 percent.

More than 90 investigations and inspections were conducted by the relevant authorities, including the environmental agency in the state of Pará, Semas, and the federal environmental agency, Ibama. Semas and Ibama have both confirmed that there was no overflow from Alunorte's bauxite residue deposits. Reports concluded there was no indication or evidence of contamination to nearby local communities, nor any significant or lasting environmental impact to nearby rivers from Alunorte as a result of the extreme rainfall.

In addition to the production restriction at Alunorte, an embargo was enforced by the authorities on the press filters and on the new bauxite residue deposit area (DRS2) which were under commissioning. Using DRS2 in combination with new state-of-the-art press filters is the only viable long-term solution for Alunorte to dispose bauxite residue. The current bauxite residue deposit area (DRS1), has an estimated remaining capacity of around 12-18 months based on volume of bauxite residue processed by the press filters. Subject to further geotechnical verifications, the DRS1 remaining capacity might be extended beyond this horizon. The timing depends on both actual production volumes from Alunorte and DRS1's final regulated capacity.

In October 2018 the embargo previously imposed by Ibama on DRS2 and the press filters was suspended. On January 15, 2019 Semas issued a technical opinion confirming that Alunorte can operate safely at its installed capacity in respect of effluent treatment.

At the time of authorising this report, the production embargoes on Alunorte as well as the embargoes on DRS2 by the Federal Court, both civil and criminal, remain in force. The timing with regards to when the embargoes may be lifted remains uncertain. Once the embargoes are lifted, it is expected to take around 2 months to reach 75-85 percent of Alunorte's nameplate production capacity. The timing of a return to full production capacity at Alunorte depends on the commissioning process of DRS2 and the press filters.

On September 5, 2018, Alunorte signed two agreements with the government of Pará and Ministerio Público representing an important step towards resuming normal operations. The agreements regulate certain technical improvements, audits, fines, studies as well as additional investments related to the social development of communities in Barcarena. The combined investments, costs and fines are estimated at BRL 360 million (around NOK 750 million). See note 35 to the consolidated financial statements for more information.

In response to the flooding in the area, Alunorte has expanded its voluntary social measures for communities close to the refinery. Alunorte continues to support the communities with immediate needs for water supply and health services and has committed to contribute to long-term improvements. To support broad collaboration for social change in Barcarena, Alunorte has committed BRL 100 million (around NOK 200 million) over 10 years in local community investments through the Sustainable Barcarena Initiative. The initiative is establishing an independent organization, bringing stakeholders together to discuss, prioritize and decide on critical issues in Barcarena, reduce

conflict level, and strengthen the ability of local actors to drive social change and development in Barcarena.

Hydro has initiated several investments related to the wastewater handling and treatment systems at Alunorte, totaling 675 MBRL (around NOK 1.5 billion). These aim at increasing the wastewater treatment capacity by 50 percent and the water reservoir capacity by 350 percent as well as strengthening the infrastructure related to the water management system and enhancing robustness and flexibility of the system.

Hydro is in dialogue with all relevant authorities, at the local, regional and national level in Brazil. We continue to seek a common agreed solution to resume operations, using the new and modern deposit area and the state-of-the-art press filters.

Following Vale's Brumadinho accident in Brazil in January 2019, we are reviewing our tailings management system to ensure we can continue to operate safely. The tailings dams at Paragominas are built using mainly downstream elevation which provide high structural integrity and safety. At one dam, however, there is one section using centerline elevation. This section is part of the top elevation which is one meter high. The material stored in our dams is also of a much higher final solids content (55-60 percent). Hydro is closely monitoring and analyzing the impact on the industry, including potential regulatory, political and societal implications on the back of the Brumadinho incident. Safe operations in compliance with regulatory requirements is crucial for Hydro. The Paragominas dams are stable and regularly monitored and audited by external experts. The dams meet all parameters of current environmental and mining legislation.

Hydro is also a 5 percent shareholder in Mineração Rio do Norte (MRN), where the tailings disposal process is designed to allow tailings to achieve a final solids content similar to that of Paragominas. MRN is the operator of the mine and is responsible for the management of its tailings system. Hydro works with MRN and the other shareholders through the board of directors and relevant technical committees to require the safe operation of MRN's tailings ponds in accordance with applicable laws and standards.

### **Priorities for 2019**

Going forward, Hydro aims to strengthen performance, drive value creation and strengthen its relative industry position. Priorities in 2019 include:

*Strengthen performance within health, safety, security and environment (HSE), corporate social responsibility (CSR) and compliance*

Our approach to improve our occupational health, safety and security performance will continue in 2019, including by deploying a fatality prevention program across all business areas, as well as identify and share best practices more effectively. The enhanced compliance system of Hydro, including financial and non-financial compliance, was initiated in 2018. From 2019 an integrity index will be embedded in Hydro's employee engagement survey. Our prioritized areas for CSR will be further developed in 2019: To contribute to long-term societal development through quality education; decent work and economic growth; and

promotion of peaceful and inclusive societies.

### *Resolving the Alunorte situation*

At the time of authorising this report, both the production embargo on Alunorte as well as the embargoes on DRS2 by the Federal Court remain in force. The situation at Alunorte impacts large parts of our operations, our key stakeholders and our financial performance. Several steps have been taken to lay a platform that will facilitate bringing Alunorte back to normal operations, however the timing of a full resumption of operations remains uncertain. Resolving the situation is a key priority for 2019.

### *Continued successful integration of Extruded Solutions*

A successful integration of Extruded Solutions and its 22,000 employees into Hydro's operating model has been priority for 2018 and will continue in 2019. Further synergy potentials are being developed, including innovation, research and development. Given Hydro's long value chain, spanning both upstream and downstream from bauxite extraction to products, solutions and recycling, the operating model offers a high degree of flexibility. This ensures that the business areas can be managed according to the specific business drivers and challenges of each area.

### *Strengthen relative industry position through continuous improvement, innovation and sustainability*

During 2019, Hydro will continue with its improvement drive. Bauxite & Alumina will continue its work on developing the technical concept for the replacement of part of the fuel oil consumption at the Alunorte alumina refinery to more climate and cost efficient natural gas. Harvesting spin-off effects from the technology pilot at Karmøy is expected to contribute further to reducing energy costs and lowering greenhouse gas emissions. Hydro will continue to implement digital solutions to improve our profitability, commercial edge, safety and CO2 footprint. The uncertainty related to the Alunorte situation and the timing of the lift of the embargo will impact improvement potentials in the upstream operations. We will continue to lift staff value creation and lower costs with our ongoing Fit4Future program.

### *Continue shifting portfolio towards high-margin segments for leading customers*

Our ambition is to increase margins and profitability through high-grading our product portfolio and differentiation through innovation, quality and customer orientation. Extruded Solutions will continue to build on the value-over-volume strategy aiming on delivering a minimum 10 percent average underlying EBIT growth over the next 3 years.

### *Maintain financial strength and flexibility, and provide attractive returns over the business cycle*

Hydro aims to provide its shareholders with competitive returns compared to alternative investments in peer companies by lifting the operating cash flow generation potential in all of its business areas. The company will continue to focus on securing its financial position through exercising strong capital discipline while maintaining a sustainable level of capital expenditures to safeguard its operating portfolio. Offering a dividend of 40 percent of reported net income over the cycle, with NOK 1.25 per share considered a floor, and preserving Hydro's investment grade credit rating continue to be key priorities.

## Hydro's mid-term strategic goals

	Ambitions	Target	Timeframe	2018 progress	Status
<b>Better</b>	Improve safety performance, strive for injury free environment	TRI<2 <sup>1)</sup>	2020	3.4 <sup>2)</sup>	●
	Realize ongoing improvement efforts Better	BNOK 3.0	2019	BNOK (0.6)	●
	Secure new competitive sourcing contracts in Norway post 2020	4-6 TWh	2020	4.8 TWh, completed <sup>3)</sup>	●
	Lift bauxite production at Paragominas	11.0 mill mt/year	2018	6.2 mill mt/year	●
	Lift alumina production at Alunorte	7.0 mill mt/year	2021	3.7 mill mt/year	●
	Shift alumina sales to PAX-based pricing	>85% PAX <sup>4)</sup>	2020	75-80% PAX <sup>5)</sup>	●
	Extend technology lead with Karmøy technology pilot	Start production	2H 2017	29-Jan-18	●
	Extend technology lead with Karmøy technology pilot	Full ramp-up	Q2 2018	27-Jun-18	●
<b>Bigger</b>	Realize technology-driven smelter capacity creep	200,000 mt/yr	2025	35,000 mt/yr	●
	Increase nominal automotive Body-in-White capacity	200,000 mt/year	2017 <sup>6)</sup>	Ramping up, qualifications ongoing	●
	Complete ramp-up of UBC recycling line	>40,000 mt/year	2017 <sup>6)</sup>	Delayed to Q4 2019	●
<b>Greener</b>	Become carbon-neutral from a life-cycle perspective	Zero	2020	On track	●
	Increase recycling of post-consumer scrap	>250,000 mt/yr <sup>7)</sup>	2020	161,000 mt/yr	●
	Deliver on reforestation ambition	1:1	Continuous	On track <sup>8)</sup>	●

1) TRI, total recordable injuries per million hours worked, includes own employees and contractors

2) The safety development in 2018 includes one fatality

3) 2.2 TWh power sourcing in 2018

4) Based on annual sourced volumes of 2.3 million mt/yr

5) Based on sourcing volume of ~ 3.5 million mt for 2018

6) 2017 target not met

7) While we based on a commercial evaluation see that the recycling target originally set for 250,000 mt/year of post-consumer scrap by 2020 will not be met, we continue to develop recycling capacity that can be used for post-consumer scrap as well as for process scrap.

8) 1:1 rehabilitation of areas available for rehabilitation within two hydrological seasons after release. Revised definition of target takes into account the nature of the mining cycle and the time lag necessary to ensure quality rehabilitation to restore biodiversity

Green light: Ambition on track and on target; Amber light: Ambition behind plan, but on target; Red light: Ambition might not meet the medium-term target

## Investor information

Hydro's share price closed at NOK 39.21 at the end of 2018. The return ex. dividend for 2018 was negative with NOK 23.1, or negative 37 percent.

Hydro's Board of Directors proposes to pay a dividend of NOK 1.25 per share for 2018, for approval by the Annual

General Meeting on May 7, 2019, taking into account a demanding year for the company and the volatility in the aluminium industry. This is down from NOK 1.75 per share paid out for 2017. The proposed payment represents a 60 percent pay-out ratio of reported net income for the year and demonstrates the company's commitment to provide a competitive cash return to shareholders. Hydro has a dividend policy of 40 percent payout ratio of reported net income over the cycle with NOK 1.25 per share considered as a floor.

# Financial results

## Underlying financial and operating results

<b>Key financial information</b>	<b>Year</b>	<b>Year</b>
NOK million, except per share data	<b>2018</b>	2017
Revenue	<b>159,377</b>	109,220
Earnings before financial items and tax (EBIT)	<b>8,522</b>	12,189
Items excluded from underlying EBIT <sup>1)</sup>	<b>547</b>	(974)
Underlying EBIT <sup>1)</sup>	<b>9,069</b>	11,215
<i>Underlying EBIT :</i>		
Bauxite & Alumina	<b>2,282</b>	3,704
Primary Metal	<b>1,762</b>	5,061
Metal Markets	<b>686</b>	544
Rolled Products	<b>413</b>	380
Extruded Solutions <sup>2)</sup>	<b>2,390</b>	284
Energy	<b>1,846</b>	1,531
Other and eliminations <sup>2)</sup>	<b>(310)</b>	(289)
Underlying EBIT <sup>1)</sup>	<b>9,069</b>	11,215
Earnings before financial items, tax, depreciation and amortization (EBITDA) <sup>3)</sup>	<b>15,796</b>	18,344
Underlying EBITDA <sup>1)</sup>	<b>16,344</b>	17,369
Net income (loss)	<b>4,323</b>	9,184
Underlying net income (loss) <sup>1)</sup>	<b>5,819</b>	8,396
Earnings per share	<b>2.08</b>	4.30
Underlying earnings per share <sup>1)</sup>	<b>2.75</b>	3.95
<i>Financial data:</i>		
Investments <sup>1)3)</sup>	<b>7,614</b>	28,848
Net cash (debt) <sup>1)</sup>	<b>(8,653)</b>	(4,118)
Adjusted net cash (debt) <sup>1)</sup>	<b>(23,127)</b>	(17,968)
Underlying Return on average Capital Employed (RoaCE) <sup>1)</sup>	<b>6.5 %</b>	9.6 %
<b>Key Operational information</b>		
	<b>Year</b>	<b>Year</b>
	<b>2018</b>	2017
Bauxite production (kmt) <sup>4)</sup>	<b>6,214</b>	11,435
Alumina production (kmt)	<b>3,712</b>	6,397
Realized alumina price (USD/mt) <sup>5)</sup>	<b>429</b>	326
Primary aluminium production (kmt)	<b>1,993</b>	2,094
Realized aluminium price LME (USD/mt)	<b>2,140</b>	1,915
Realized USD/NOK exchange rate	<b>8.08</b>	8.30
Rolled Products sales volumes to external market (kmt)	<b>951</b>	940
Extruded Solutions sales volumes to external market (kmt) <sup>6)</sup>	<b>1,396</b>	845
Power production (GWh)	<b>10,693</b>	10,835

1) Alternative performance measures (APMs) are described in the appendices to the Board of Directors' report.

2) Other and eliminations includes Hydro's 50 percent share of underlying net income from Sapa until end of third quarter 2017. Extruded Solutions was fully consolidated from October 2, 2017.

3) EBITDA and investments per segment are specified in Note 7: Operating and geographic segment information in the consolidated financial statements.

4) Paragominas production, on wet basis.

5) 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.

6) Hydro's 50 percent share of Sapa sales volumes until end of third quarter 2017 and 100 percent of Extruded Solutions sales volumes from the beginning of the fourth quarter 2017.

Hydro's underlying EBIT decreased to NOK 9,069 million from NOK 11,215 million for 2017. The decrease reflects negative effects relating to the production curtailment at Alunorte and increased raw material costs partly offset by a higher all-in metal price and alumina sales price as well as the positive contribution from the full consolidation of Extruded Solutions. Further, the result was positively impacted by strong Energy results and improved downstream margins and volumes.

### Liquidity, financial position, investments

Hydro manages its liquidity at corporate level, ensuring sufficient funds to cover group operational requirements.

Hydro's net cash (debt) changed from net debt of NOK 4.1 billion at the end of 2017 to a net debt position of NOK 8.7 billion at the end of 2018. Net cash provided by operating activities of NOK 7.0 billion was not sufficient to cover net cash used in invest activities of NOK 7.2 billion and dividend payments to Norsk Hydro shareholders of NOK 3.6 billion.

Hydro's adjusted net cash (debt) to equity ratio was 32 percent, well below its targeted maximum ratio of 55

percent. Our funds from operations to adjusted net cash (debt) ratio was 46 percent, above the targeted minimum of 40 percent over the business cycle. See note 39 to the consolidated financial statements for information on Hydro's capital management measures.

Norsk Hydro ASA has a USD 1.7 billion revolving multi-currency credit facility with a syndicate of international banks, maturing in November 2020. The facility was undrawn per year-end 2018. The facility will continue to serve primarily as a back-up for unforeseen funding requirements. See note 39 to the consolidated financial statements for additional information.

### 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. Items excluded from underlying EBIT and underlying net income (loss) are defined and described as part of the APM section in the back of this report.

Items excluded from underlying EBIT and net income <sup>1)</sup>	Year	Year
NOK million	2018	2017
Unrealized derivative effects on LME related contracts	39	220
Unrealized derivative effects on power and raw material contracts	(260)	246
Metal effect, Rolled Products	(73)	(419)
Significant rationalization charges and closure costs <sup>2)</sup>	79	210
Alunorte agreements - provision <sup>3)</sup>	519	-
Other effects <sup>4)</sup>	203	212
Pension <sup>5)</sup>	40	-
Transaction related effects (Sapa) <sup>6)</sup>	-	(1,463)
Items excluded in equity accounted investments (Sapa) <sup>7)</sup>	-	19
Items excluded from underlying EBIT	<b>547</b>	<b>(974)</b>
Net foreign exchange (gain)/loss	<b>1,303</b>	875
Calculated income tax effect	<b>(355)</b>	(564)
Other adjustments to net income <sup>8)</sup>	-	(125)
Items excluded from underlying net income	<b>1,495</b>	<b>(788)</b>
Income (loss) tax rate	<b>33%</b>	17%
Underlying income (loss) tax rate	<b>30%</b>	24%

1) Negative figures indicate reversal of a gain and positive figures indicate reversal of a loss.

2) Significant rationalization charges and closure costs include in 2018 rationalization costs in Rolled Products of NOK 39 million and closure costs in Extruded Solutions of NOK 40 million. Environmental liabilities in Kurri Kurri of NOK 181 million and rationalization costs in Extruded Solutions of NOK 29 million were included in 2017.

3) Alunorte agreements - provision refers to the provision recognized in relation to the TAC and TC agreements with the Government of Pará and Ministério Público made on September 5, 2018.

4) Other effects include in 2018 a charge of NOK 80 million due to adjustments to the value of certain assets in relation to the Sapa acquisition, a legal agreement of NOK 157 million related to Sapa Profiles Inc. (SPI) that has been under investigation (see note 35 to the Financial statements) and a gain of NOK 34 million due to remeasurement of environmental liabilities related to closed business in Germany. In addition to a gain of NOK 33 million related to the remeasurement of environmental liabilities in 2017, a charge of NOK 245 million related to a customs case in Germany was included in 2017.

5) Pension includes a charge of NOK 40 million due to remeasurement of all UK schemes with Guaranteed Minimum Pensions (GMP) required to be adjusted to equalize pension benefits for gender. The remeasurement is based on the accrued pension benefits in the period between 1990 and 1997.

6) Transaction related effects include the revaluation gain of NOK 2,171 million of Hydro's pre-transactional 50 percent interest in Sapa, as well as the fair value allocated to inventory of finished goods and to the backlog of contractual deliveries as of closure, sold during 2017, reflecting an expense of NOK 707 million.

7) Items excluded in equity accounted investments (Sapa) for the year 2017 include unrealized derivative gains, rationalization charges and net foreign exchange gains.

8) Other adjustments to net income include reduction in tax expense and related interest income of NOK 125 million in total following a closed tax case in September 2017.

# Market developments and outlook

On March 8, 2018 the US administration announced a 10 percent tariff on aluminium imports to the US, effective from March 23. Argentina and Australia are exempted from the 10 percent tariff, although Argentina will be covered by a quota. On September 30, 2018 the US, Canada and Mexico came to an agreement on a revised trade deal, called the United States Mexico Canada Agreement (USMCA), replacing the 1994 NAFTA agreement. The USMCA is expected to be ratified during 2019 and does not address the 10 percent tariff on imported aluminium.

On April 6, 2018 the US Department of Treasury's Office of Foreign Assets Control (OFAC) issued a sanctions list that included Russian individuals and companies including the Russian aluminium company Rusal, controlled by Oleg Deripaska. On December 19, 2018 OFAC submitted a notification to the US Congress of its intention to remove Rusal from the sanctions list. Despite attempts to postpone the deadline further, OFAC deleted Rusal from the sanctions list as of January 27, 2019 meaning that the sanctions directed towards the company are now lifted.

## Upstream market developments

The Platts alumina price index started 2018 at USD 389 per mt, and was volatile throughout the year, with a low of USD 357 per mt, a high of USD 710 per mt, ending the year at USD 408 per mt. Prices averaged USD 474 per mt for 2018, an increase of 34 percent compared to 2017. Prices as a percentage of LME averaged 22.5 percent for the year, compared to 17.8 percent for 2017. Spot prices at the end of 2018 represented 22.1 percent of LME.

Following the production embargo at the Alunorte refinery, the World ex-China alumina market was in deficit in 2018. The shortfall was balanced by Chinese alumina net exports of 0.95 million mt, with 0.51 million mt of imports offset by 1.46 million mt of exports. China has traditionally been an importer of alumina, with a 2017 total of 2.9 million mt of imports.

Bauxite imports into China continued to grow, with a 2018 total of 82.7 million mt, 20 percent higher than the 68.8 million mt imported in 2017. The increase was driven largely by the continued surge in imports from Guinea, which totalled 38.3 million mt for the year, compared to 27.6 million mt in 2017, and up from 11.9 million mt in 2016. Australia continued as a major supplier of bauxite to China, with a 2018 total of 29.8 mt compared to 25.5 million mt in 2017. Indonesia returned as an important source of bauxite imports with a total of 7.5 million mt in 2018, compared to just 1.3 million mt in 2017. Imports from Brazil continued to decrease, with a 2018 total of 1.6 million mt, compared to 3.3 million mt in 2017.

According to Chinese import statistics, the monthly average delivered China bauxite price was relatively stable in 2018, ranging between USD 52 and 55 per mt. Prices averaged USD 53 per mt for the year, an increase of 4 percent compared to 2017.

Three-month LME prices started the year around USD 2,250 per mt and experienced periods of high volatility during the year. The prices declined during the first quarter and were trading below USD 2,000 in early April. Following the announcement of US sanctions against UC Rusal in early April, prices fluctuated with several hundred dollars, up to levels above USD 2,500 and back down below USD 2,300 within just a couple of weeks. Markets normalised during the latter part of the second quarter, resulting in more stable prices. In line with increased macroeconomic uncertainty, prices experienced a declining trend in the second half of 2018. At the end of the fourth quarter, prices had declined by around USD 400 per mt over the year, ending 2018 at around USD 1,850 per mt. Prices averaged USD 2,210 per mt in the first half of 2018 and declined to an average of USD 2,023 per mt in the second half of the year.

North American and European standard ingot and product premiums started the year at USD 209 per mt and at USD 162 per mt respectively. The premiums increased sharply towards the end of the first quarter, reflecting main events such as the imposition of a 10 percent import tariff in the US as well as sanctions against UC Rusal. North American premium reached a peak of USD 490 per mt in late April, largely reflecting the cost of the 10 percent tariff, while European premium increased to USD 250 per mt in the same period. Premiums in both regions had a declining trend throughout the rest of the year, ending the year at USD 419 in North America and USD 115 in Europe. The decline was influenced by falling LME prices, exports of semi-finished products from China and increased availability of secondary aluminium especially in the North American market. Average North American standard ingot premiums increased USD 220 per mt compared to 2017, while corresponding standard ingot premiums in Europe increased about USD 15 per mt.

Global primary aluminium consumption increased by 3 percent to 65.7 million mt in 2018. Global supply increased by 0.5 percent to 63.8 million mt resulting in large global deficit of around 1.6 million mt. For 2019, global primary aluminium demand is expected to increase by 2-3 percent, resulting in a global deficit market also in 2019.

Demand for primary aluminium outside China increased by around 2.1 percent in 2018, while corresponding production increased by 1.4 percent. Overall, demand outside China exceeded production by around 2.1 million mt in 2018. Demand for primary aluminium outside China is expected to grow by around 1-3 percent in 2019. Corresponding production is expected to be up 3-4 percent, reducing the deficit in the world outside China in 2019.

Demand for primary metal in China increased around 4 percent to 35.9 million mt in 2018. Chinese production growth was close to zero in 2018, resulting in only a small surplus for the year. The historically low Chinese production growth was a result of closures of illegal capacity in 2017, in addition to slower-than-expected ramp ups of new projects as a result of low margins during the year. Chinese primary production growth is expected to increase by 2-4 percent in 2019. This is well below historical average, a result of the direction set out by Chinese authorities to reduce overcapacity within primary aluminium. Primary demand is estimated to increase by around 2-4 percent, resulting in a small surplus in 2019.



LME stocks increased slightly in 2018, from 1.1 million mt at the end of 2017 to 1.3 million mt at the end of 2018. The increase occurred mainly in the fourth quarter, driven by backwardation attracting metal to LME warehouses. Total inventories, including unreported inventories are estimated to have declined throughout 2018. The total stock level is estimated to be around 11.0 million mt at the end of 2018.

Demand for extrusion ingot, foundry alloys and sheet ingot in Europe increased in 2018 compared to the previous year. The consumption of wire rod in the European market went up moderately in 2018 compared to 2017. Consumption of extrusion ingot has been strong in the US also in 2018, while the demand for primary foundry remained stable compared to 2017. In Asia (excluding China), the market for extrusion ingot and primary foundry alloys continued to show moderate growth during 2018.

### Downstream market developments

Motor vehicle production in Europe declined as manufacturers reduced the pace of output in response to a backlog in certifying vehicles' carbon dioxide emission as part of the new Worldwide Harmonized Light Vehicles Test Procedure (WLTP), introduced by the European Union in 2017, effective September 2018.

The European market for flat rolled products increased by around 2.9 percent in 2018. Demand growth was stronger in the first half of the year, which was driven by automotive and general engineering.

The European extrusion market experienced another year of growth of around 2 percent in 2018, driven by continued recovery in building and construction sector and positive developments in the industrial markets. North American market has also experienced a strong extrusion demand, driven by positive developments in transportation sector, as well as building and construction markets. Despite the slow-down in automotive segment both in Europe and North America, extruders continue to benefit from material substitution trends.

### Energy market developments

In 2018, Nordic electricity prices increased compared to the previous year, primarily due to weaker hydrological balance both in the Nordic and Continental areas and also higher marginal cost for coal and gas power plants. An important price driver during the year was the carbon price which increased substantially ahead of the introduction of the Market Stability Reserve (MSR) from January 2019. The Nordic power prices were particularly strong during the summer and early autumn due to dry weather, low nuclear power availability and high continental power prices.

In Brazil, power prices varied significantly during the year. During the wet season at the start of the year, a temporary oversupply in the North region drove prices to low levels, while price increased again during the summer, in periods to the defined maximum level as decided by the market regulators. However, heavy rainfall in October and November improved the hydrological balance and lead to decreasing prices towards the end of the year.

## Risk review

Hydro has developed and implemented an enterprise risk management model, approved by the Board of Directors. In accordance with this model, risk factors that are relevant for Hydro's business are continuously identified, analyzed, addressed and monitored. Risk management is an integral part of our business activities, and the business areas consequently have the main responsibility for managing risks arising from their business activities. Hydro's corporate staffs establish and develop policies and procedures for managing risk, and coordinate an annual overall enterprise risk assessment. Major risks are followed up, on an ongoing basis, as part of our internal performance review structure.

Risk management in Hydro is based on the principle that risk evaluation and mitigation is an integral part of all business activities. A core strategy to reduce the risks related to weak economic and unfavorable market developments is the continual improvement of our competitive and cost position as well as maintaining a solid financial position and strong creditworthiness. Hydro's integrated value chain plays a key role in mitigating risk as the earnings volatility in upstream aluminium is typically higher, whereas downstream and Energy businesses generate more stable earnings over time.

Below is a description of some of the principle risks identified that may affect our business operations, reputation, financial condition, results of operations and, ultimately affect our share price. Some of the mentioned risks might have a positive business impact or represent a business opportunity, whereas the focus in the description below is on downside risk. There may be additional risks unknown to Hydro at the date of this report and risks, currently considered to be immaterial, which could become material. All of the information in this report should be carefully considered by investors, in particular, the risks described in this section.

### Changes in the regulatory framework or political environment in which Hydro operates could have a material adverse effect on the company

Hydro needs competitive and predictable framework conditions. Hydro is subject to a broad range of laws and regulations in the legal jurisdictions in which we operate. These laws and regulations impose stringent standards and requirements and potential liabilities regarding accidents and injuries, the construction and operation of our plants and facilities, payment of taxes, 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. Changes in such laws and regulations, or changes in the way these laws and regulations are interpreted or enforced, may impact our operational licenses, and have a significant negative financial effect for Hydro. There is a risk that new taxes or tariffs are introduced, or the current tax or tariff levels will be increased in the future.

Hydro's operations include extracting and refining bauxite resources and utilizing water resources for the generation of power. Such activities have increasingly been subject to local

and regional tax regimes which are separate from, and in addition to, national tax regimes such as corporate income tax.

**Hydro is exposed to a risk of unfavorable macro-economic development, including risk of prolonged periods of low aluminium and alumina prices and oversupply in the global aluminium market, in addition to changes in global trade policy framework**

The aluminium industry is pro-cyclical with demand for products closely linked to economic development. This results in significant volatility in the market prices for aluminium products in periods of macroeconomic uncertainty or recession. Macroeconomic development also drives changes in currency values, which have a significant effect on Hydro's cost and competitive position. Aluminium products are traded globally. Development in global trade flows, trade framework, tariffs and anti-dumping legislation are therefore of importance.

**Hydro could be negatively affected by material CSR incidents, investigations, legal proceedings, or major non-compliance with laws and regulations**

Hydro could be negatively affected by criminal or civil proceedings or investigations related to, but not limited to product liability, environment, health and safety, alleged anti-competitive or corrupt practices or commercial disputes. Violation of applicable laws and regulations could result in substantial fines or penalties, costs of corrective work, the suspension or shutdown of our operations and substantial damage to the company's reputation.

In addition, Hydro is exposed to actual or perceived failures to behave in a socially responsible manner and to manage social impacts, particularly related to human rights breaches. Such failures could result in significant, negative publicity and potential serious harm to Hydro's reputation. Reactions by key stakeholders and communities in which Hydro operates could also interfere or interrupt the operations of our business.

**Our business is exposed to competition from China, which could have a significant negative impact on market prices and demand for our products**

China is the world's largest consumer and producer of aluminium, with more than half of the global production capacity. As a result, changes and developments in aluminium supply and demand in China have a significant impact on global market fundamentals.

**Hydro may fail to realize sufficient value in the execution and implementation of major projects or business acquisitions**

Hydro makes significant capital investments and acquisitions as part of its business development and may not be able to realize the benefits expected from such transactions and projects. Major projects and acquisitions are subject to significant risk, and uncertainty in making the investment evaluation, project execution and subsequent operations. Acquisitions may also contain significant unidentified risks and liabilities, which could have a material adverse effect on our profits and financial position.

**Hydro could be adversely affected by disruptions or major incidents in our operations and may not be able to maintain sufficient insurance to cover all risks related to its operations**

Hydro's business is subject to a number of risks and hazards which could result in disruptions to operations, damage to properties and production facilities, personal injury or death, environmental damages, monetary losses and possible legal liability. Some of our operations are located in close proximity to sizable communities. Major accidents could result in substantial claims, fines or significant damage to Hydro's reputation. Breakdown of equipment, power failures or other events leading to production interruptions in our plants could have a material adverse effect on our financial results and cash flows.

**Hydro is exposed to the threat of cyber-attacks which may disrupt its business operations, and result in reputational harm and other negative consequences**

Hydro's IS/IT infrastructure is a critical element in all parts of our operations, ranging from process control systems at production sites, central personnel databases to systems for external financial reporting. Cyber-crime is increasing globally, and Hydro is exposed to threats to the integrity, availability and confidentiality of our systems. Threats may include attempts to access information, computer viruses, denial of service and other digital security breaches.

**Hydro may be unable to achieve or maintain the operational targets necessary to secure the competitiveness of our business**

Hydro operates in a highly competitive market where operational excellence in all parts of the value chain is required to reach and maintain a competitive position. This includes each step of the business process from the sourcing of raw materials, to physical operations of each plant, and the commercial optimization of the product portfolio. Failure to create an environment and competence which enables the organization to continuously achieve stretched operational targets will reduce the competitiveness of our business and result in the failure to meet our long-term financial targets.

**Occupational health and safety, and security risks**

Hydro is exposed to occupational health and safety risks and incidents with the potential of causing severe damages to individuals, assets and reputation.

**Climate change and environmental risks**

Hydro is exposed to physical climate related risks, transition risks (risks related to the transition to a low-carbon economy) and environmental risks that could have a material adverse effect on the company, our facilities, performance and the external environment. In addition to such environmental incidents, there are risks related to the effects of known and unknown historical and current emissions to air, water and soil. These may have legal, financial and reputational consequences and require mitigating actions.

**Financial position**

Our main strategy for mitigating risk related to volatility in cash flow is to maintain a strong balance sheet. Specific key financial ratio levels over the business cycle are targeted, reflecting a solid financial position and investment grade credit rating. These include an Adjusted net cash (debt) to equity ratio below 55 percent and a ratio of Funds from operations to Adjusted net cash (debt) above a level of 40

percent. Maintaining investment grade credit rating secures access to capital markets at attractive terms and gives other important benefits.

Hydro's liquidity position at the end of 2018, with a cash position of NOK 6.0 billion, is considered solid. Hydro also has a credit facility of USD 1.7 billion which expires in November 2020. The facility was undrawn per year-end 2018. Hydro continues to focus on cash generation and credit risk throughout the organization.

### Key financial exposures

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

Hydro's main risk management strategy for upstream operations is to accept exposure to price and exchange rate movements, while at the same time focusing on reducing the average cost position of production assets. In certain circumstances, derivatives may be used to hedge certain revenue and cost exposures.

Downstream and other margin-based operations are to a certain extent hedged to protect processing and manufacturing margins against price fluctuations. An operational hedging system has been established to protect commercial contracts from aluminium price fluctuations.

To mitigate the impact of exchange rate fluctuations, long-term debt is mainly maintained in currencies reflecting underlying exposures and cash generation, while considering attractiveness in main financial markets. Hydro may also use foreign currency swaps and forward currency contracts to reduce effects of fluctuations in the US dollar and other exchange rates.

The table below shows sensitivities regarding aluminium prices and foreign currency fluctuations for 2018. The table illustrates the sensitivity of earnings, before tax, to changes in these factors and is provided to supplement the sensitivity analysis required by IFRS, included in note 13 to the Consolidated Financial Statements. These sensitivities do not consider revaluation effects of derivative instruments, which may influence earnings.

### Sensitivities with 100% production

#### Commodity price sensitivity +10%

NOK Million	UEBIT
<b>Hydro Group</b>	
Aluminium	3,900

#### Currency sensitivities +10%

NOK Million	USD	BRL	EUR
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#### Sustainable effect

EBIT	3,960	(1,060)	(250)
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#### One-off reevaluation effect

Financial items	20	700	(2,460)
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Annual sensitivities based on LME USD 2 040 per mt, USDNOK 8.40, BRLNOK 2.20, EURNOK 9.60.

### Sensitivities with 50% production\*

#### Commodity price sensitivity +10%

NOK Million	UEBIT
<b>Hydro Group</b>	
Aluminium	3,500

#### Currency sensitivities +10%

NOK Million	USD	BRL	EUR
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#### Sustainable effect

EBIT	2,690	(1,060)	(240)
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#### One-off reevaluation effect

Financial items	20	700	(2,460)
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\*Simplified sensitivities based on full year 50% curtailment of Alunorte, Albras and Paragominas

Annual sensitivities based on LME USD 2 040 per mt, USDNOK 8.40, BRLNOK 2.20, EURNOK 9.60.

# Compliance, controls and procedures

Hydro's Code of Conduct requires adherence with laws and regulations as well as internal directives and procedures. It is systematically implemented and followed up through our compliance system. The compliance system is based on four pillars: prevention, detection, reporting and responding. In addition to financial compliance, priority areas are HSE, anti-corruption, competition law and data privacy (see the section Society).

Hydro follows the Norwegian Code of Practice on Corporate Governance of October 2018. Details on Hydro's compliance with the code are in the section Norwegian Code of Practice on Corporate Governance, in the appendices to this report.

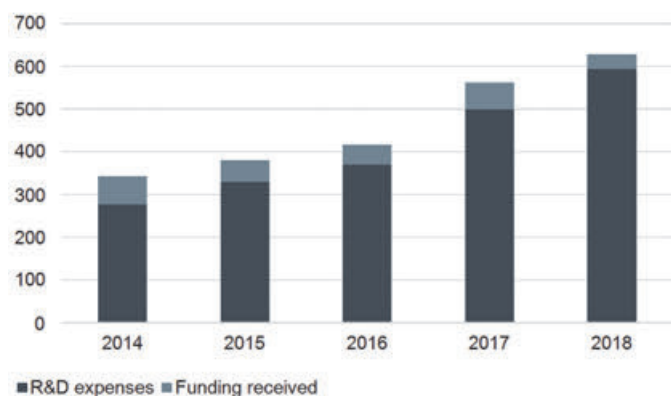
The Board Audit Committee carries out a control function and arranges for the board to deal with the company's financial and extra-financial reporting.

# Research and development

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, Bonn in Germany (Rolled Products), and Finspång in Sweden and Detroit in the USA (both Extruded Solutions). A significant research and development department for Bauxite & Alumina has been built up in Alunorte in Barcarena, Brazil.

## R&D Expenses

NOK million



Received funding in 2018 accumulated to NOK 35 million. In addition comes NOK 311 million related to Enova's support to the Karmøy Technology Pilot.

Our R&D efforts are concentrated on:

- Making products that promote the use of aluminium and sustainable development
- Developing the world's best electrolysis technology

- Using R&D and technology to ensure optimal operations in existing assets, including cost and HSE
- Developing recycling technology
- Increasing the share of value-added products and tailored solutions for the customer
- Utilizing the opportunities of Industry 4.0 to improve process stability, productivity, cost and safety



Hydro's Technology Board consists of the members of Hydro's Corporate Management Board. The group meets every quarter to understand and discuss innovations in the business areas, including their value to the company. Innovations include the changes achieved through our continuous improvement work on all organizational levels. Business areas are responsible for their own technology development and for the execution of their respective technology strategies. A corporate technology office shall ensure a holistic and long-term approach to Hydro's technology strategy and agenda. Hydro's Chief Technology Officer (CTO), reports directly to the CEO, to strengthen technology leadership. The CTO leads an internal R&D network with representatives from the business areas and supports the Hydro Technology Board in developing overall research and technology priorities and strategies.

A major advantage for Hydro from an innovation perspective is our broad knowledge and control of the entire value chain from bauxite mining, alumina refining, electrolysis of primary aluminium and alloy technology to finished products and recycling.

Our aluminium plants in Sunndal (Norway) and Qatalum (Qatar) utilize HAL 300 technology. Hydro developed this technology, which features energy consumption of around 13.5 kWh/kg compared to a global industry average of about 14 kWh/kg.

Our 75,000-metric-ton-per-year technology pilot, with the aim of full-scale industrial testing of our proprietary HAL4e technology, started production at Karmøy, Norway, in January 2018 and reached full production in June 2018. The total cost of the project was NOK 4.3 billion. Enova, a Norwegian public enterprise supporting new energy and climate-related technology, contributed NOK 1.6 billion toward the total cost. Although still in a qualification phase, the Karmøy Technology Pilot is producing the world's most climate and energy-efficient primary aluminium. The Pilot also targets spin-off effects for Hydro's existing smelter portfolio.

Bauxite residue (also known as red mud) is a challenge in our industry due to its alkalinity and large volumes. Hydro participates in international collaboration projects investigating possibilities to use bauxite residue as a resource. An important example is together with the Norwegian University of Technology and Science (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 together with other aluminium companies through the International Aluminium

Institute to solve this industry challenge. In addition, we are investing in R&D to reduce the total alkalinity of the bauxite residue.

An important part of Hydro's overall technology strategy is that our researchers cooperate closely with operators and experts in optimizing operations in existing plants. The competence base in Hydro's technology environments is on a very high level and in core areas it is world-class. In recent years we have emphasized utilizing this competence in operational improvements.

The growing use of aluminium in the automotive industry is being driven by emissions regulations and passenger safety requirements. Aluminium is well-suited for all cars, from petrol-powered automobiles to fully electric vehicles and vehicles which use hydrogen fuel cell technology. Hydro is a large supplier to the automotive industry. Customers include major producers in Europe, North America and Asia.

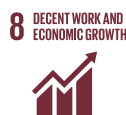
## Society

As a global aluminium company with mining interests, ensuring responsible conduct in relation to society at large is important throughout Hydro's activities. We have to consider our impact on society, spanning from construction to divestment and closure activity, as well as the exposure to corruption and human rights violations, both within our own operations, the communities we are part of, and in the supply chain.

Our compliance system shall ensure that all persons acting on behalf of Hydro comply with applicable laws and regulations and with the requirements adopted by Hydro.

Some of the measures we pursue to ensure integrity and responsible behavior include:

- Zero tolerance of corruption in the private and public sector
- Ongoing human rights due diligence, including audits of joint ventures and suppliers
- Continuous stakeholder engagement linked to existing operations and new projects



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. It requires adherence with laws and regulations as well as internal steering documents and is systematically implemented and followed up through our compliance system.

Our compliance system is based on a clear governance structure defining roles and responsibilities with regard to

compliance and all compliance-related activities undertaken throughout the company.

The management of compliance risks, including risks related to corruption and human rights violations, are integrated in our business planning, enterprise risk management and follow-up process, including relevant risk-mitigating actions and key performance indicators. The status of progress of actions as well as any non-compliance matters is addressed in the quarterly performance review meetings that each business area has with the CEO, and an annual compliance report is submitted to the board of directors. The head of corporate compliance reports to the board of directors through the board audit committee at her own discretion. She meets with the board of directors periodically and participates in all board audit committee meetings.

Hydro's corporate social responsibility (CSR) is built on the basis of making a positive difference by strengthening our business partners and the local communities where we operate. To do this, we target the fundamental drivers of long-term development. In line with stakeholder expectations and needs, and through strong partnerships, we aim to:

- Contribute to quality education in our communities
- Promote decent work throughout the value and supply chain
- Foster economic growth in our communities
- Strengthen local communities and institutions through capacity building on human rights and good governance

We are committed to building a culture of trust where employees are comfortable to ask questions, seek guidance, raise concerns, and report suspected violations. Normally, concerns and complaints should be raised with the employee's superior. However, if the employee is uncomfortable with that, he or she may raise the issue with Human Resources, HSE, a union/safety representative, Compliance, Legal or Internal Audit. The employee can also use Hydro's whistle-blower channel, AlertLine, where concerns can be reported anonymously. All employees and on-site contractors can use the AlertLine in their own language at all times via tollfree phone numbers, Hydro's intranet or through a dedicated address on the Internet. In certain countries, e.g. Spain, there are legal restrictions on such reporting lines. In 2018, 342 reports were filed through Hydro's AlertLine compared to 302 in 2017 including in Sapa before the acquisition on 2 October. All cases were investigated. In total 14 persons were dismissed as a result of breaches of Hydro policy in 2018. The number is limited to cases reported to Hydro's Internal Audit. This includes one person related to a case of confirmed corruption.

The head of internal audit reports to the company's board of directors through the board audit committee. Every quarter she informs the board audit committee and periodically the corporate management board about matters reported through the AlertLine. Hydro's internal audit has resources both in Norway and Brazil.

We recognize that our activities impact the societies in which we operate, and we have a long tradition of conducting dialogues with the relevant parties affected by our activities. These include unions, works councils, customers, suppliers,

business partners, local authorities and non-governmental organizations. We have established contact with local authorities and representatives for our neighbors, including dialogue with traditional Quilombola groups in Brazil.

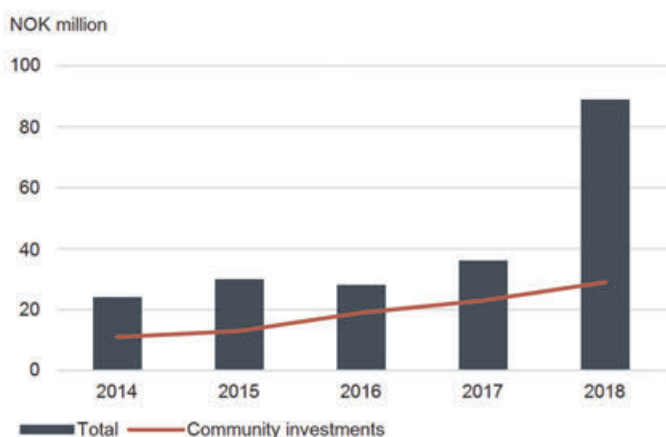
Grievance mechanisms are important to protect the rights of individuals and groups affected by our operations. At many sites, such mechanisms are available to all local stakeholders. Channels for submitting grievances may vary depending on local needs. In Brazil, the system has several channels, including a phone number, email and dedicated, specially trained field workers.

Hydro has significant operations in Barcarena, Brazil, including the Alunorte alumina refinery and Albras aluminium plant. Local social conditions are challenging with high levels of unemployment and general poverty. For more information, please see the section "The Alunorte situation" earlier in this report.

In 2017, the Danish Institute for Human Rights (DIHR) performed a comprehensive mapping of Hydro's human rights risks (excluding Extruded Solutions). The mapping covered all countries in which Hydro operates, excluding Extruded Solutions. The report is publicly available. A full human rights due diligence for the Alunorte refinery and the Paragominas mine is planned performed in 2019.

In 2018, we launched the strategic target to contribute to quality education and capacity building for 500,000 people in our communities and for business partners from 2018 until end of 2030.

### Community investments, charitable donations and sponsorships



Around 35 million NOK relates to emergency relief following the extreme rainfall and subsequent flooding of Barcarena in 2018. Around 10 million NOK relates to food cards as part of the TAC agreement.

Extruded Solutions has a wide range of sponsorships and support programs based on local needs. These activities are not yet included in Hydro's reporting.

Hydro is concerned about fundamental labor rights, such as freedom of association, minimum wage requirements and the regulation of working hours. We support the principle of freedom of association and collective bargaining, and have a long tradition of maintaining a good dialogue with employee

organizations. All major sites in Europe and Brazil are unionized. Extruded Solutions has a major presence in the USA, and about 60 percent of our US employees are working at unionized sites. All business areas have a forum for dialogue between the management and union representatives. Hydro's Global Framework Agreement was last updated in 2016 and has been extended till the end of 2019.

Hydro's supplier requirements regarding corporate responsibility are, as stated in our global directives and procedures, an integral part of all stages of the procurement process. The requirements cover issues related to environment, human rights, anti-corruption and working conditions including work environment. Extruded Solutions has implemented the Integrity Risk Management process for a majority of its suppliers in 2018. Regular sanctions screening will start in 2019.

Hydro is committed to the protection of people, environment, physical assets and data & information anticipating and preparing for potentially adverse incidents with crisis potential in order to maintain business and operational continuity.

Hydro has been included in the Dow Jones Sustainability Indices each year since the index series started in 1999. We are also listed on the corresponding UK index FTSE4Good, and the UN Global Compact 100 stock index.

Hydro support the principles underlying the Universal Declaration of Human Rights, the UN Global Compact and ILO's eight core conventions. We are a member of the International Council on Mining and Metals (ICMM) and are committed to following their principles and position statements. We are also a member of the Aluminium Stewardship Initiative, a multi-stakeholder process to set standards to improve environmental, social and governance performance across the aluminium value chain.

Hydro uses the GRI Standards for voluntary reporting of sustainable development. We support the Extractive Industries Transparency Initiative (EITI) and comply with the Norwegian legal requirements on country-by-country reporting, and we prepare a modern slavery transparency statement according to UK and Australian legislation, see the appendices to this report.

In addition, we follow the Oslo Børs guidance on the reporting of corporate responsibility.

## Environment

The most important environmental effects of Hydro's activities relate to climate change, biodiversity, recycling and water and waste management. The main resource inputs are bauxite, energy, water and land use.



Hydro's climate strategy is an integral part of its overall business strategy, aiming at driving improvements and development within the company. Consequences to the climate strategy is also a criterion for all significant

investment decisions. The strategy includes reducing the environmental impact of our operations as well as taking advantage of business opportunities by enabling our customers to do the same. While some production plants or products might have a higher carbon footprint than others, the overall company balance (the difference between emissions and benefits) should be zero or negative by 2020.

Hydro's prognosis for GHG emissions from 2017 showed an increase towards 2020 as a result of expected increase in production of alumina and primary aluminium from 2018 and onwards. The current reduced production at Alunorte from February 2018 has significantly reduced Hydro's GHG emissions in 2018, resulting in Hydro being carbon neutral in 2018 if considering scope 1 and scope 2 emissions only. If considering scope 3 emissions from purchased alumina due to the supply deficit, Hydro is not carbon neutral in 2018. Hydro is, however, still on track towards being carbon neutral in a life-cycle perspective in 2020. This will be achieved by:

- Increased production of primary aluminium in Norway, which is based on hydropower
- Increased recycling
- Increased deliveries to the automotive sector

Carbon neutrality in 2020 will, however, require that we succeed in increasing our Norwegian capacity according to plan, and that we are able to increase our recycling of post-consumer scrap. With the increase of GHG emissions from Extruded Solutions, it is uncertain whether their share of post-consumer scrap is sufficient to compensate. Our carbon neutrality is also sensitive to our penetration into the automotive market. The planned fuel switch project at Alunorte is not included in the forecast by 2020 and will, if realized, further improve Hydro's carbon balance.

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. Hydro is a signatory to the Task Force on Climate-Related Financial Disclosures (TCFD).

Hydro's environmental strategy also prioritize the following areas:

- Ecosystems and biodiversity
- Water stewardship
- Waste and efficient resource use
- Product stewardship

A new environment strategy, including legacy management, is under development.



Although originally set as a target for 2017, the 1:1 land rehabilitation target in our mining areas continues to apply as it provides a solid driver for rehabilitation. It has, however, become a rolling target, aiming for a 1:1

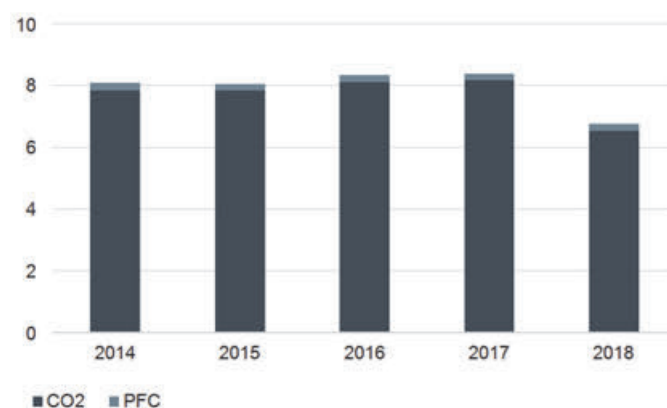
rehabilitation of areas available for rehabilitation over two hydrological seasons after release. This revised definition takes into account the nature of the mining and rehabilitation cycles, and the time lag necessary to ensure quality rehabilitation to restore biodiversity. It also takes into

account that land periodically needs to be set aside for temporary infrastructure in order to safely operate the mine. Of the 151 hectares made available for rehabilitation in 2017, 88 percent was rehabilitated in 2018. The remaining 12 percent will be completed in 2019 in order to meet the 1:1 rehabilitation target.

We cooperate with academic institutions to increase our knowledge and secure a science-based approach. This includes the formation of the Biodiversity Research Consortium Brazil-Norway (BRC) in 2013.

#### Direct greenhouse gas emissions from Hydro's consolidated activities

Million mt CO<sub>2</sub>e

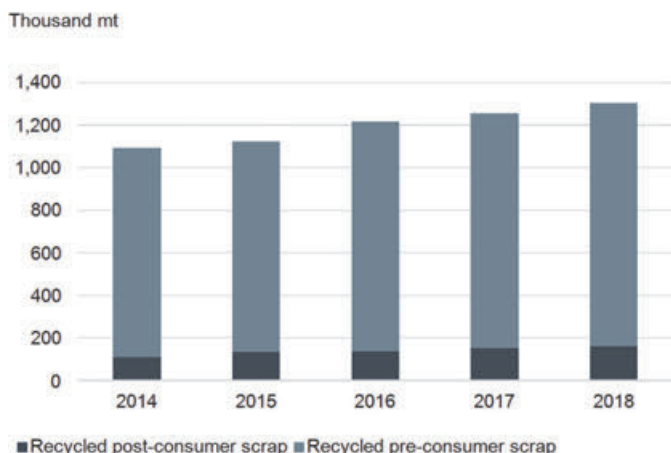


Emissions in 2018 decreased due to the embargo at Alunorte, and curtailment at Albras and Paragominas.

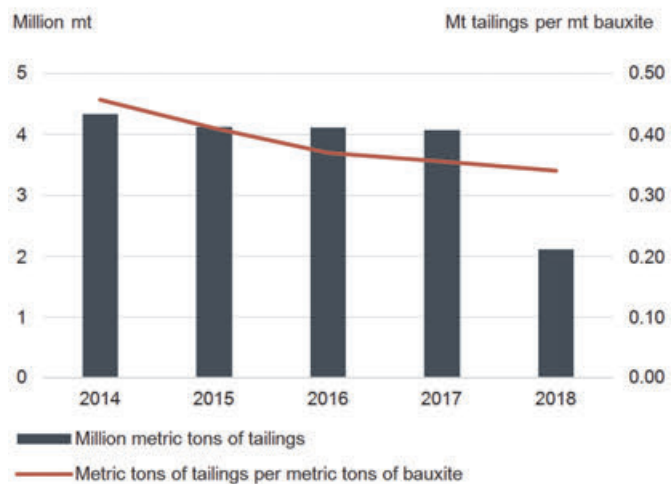
In addition to land use and biodiversity, the main environmental issues in bauxite extraction and alumina refining include waste disposal and greenhouse gas emissions. Waste production includes significant amounts of mineral rejects (tailings) from the bauxite extraction process and bauxite residue, also known as red mud, from the alumina refining process. Tailings are stored in settling ponds. Separated water is clarified and reused in the process.

In Paragominas, a new tailings system was completed in 2017. The new tailings dams are situated on a plateau where mining has been finalized. The old tailings system is constructed in a shallow valley. When tailings dams are closed, they need to settle for at least five years before being available for rehabilitation.

### Recycling

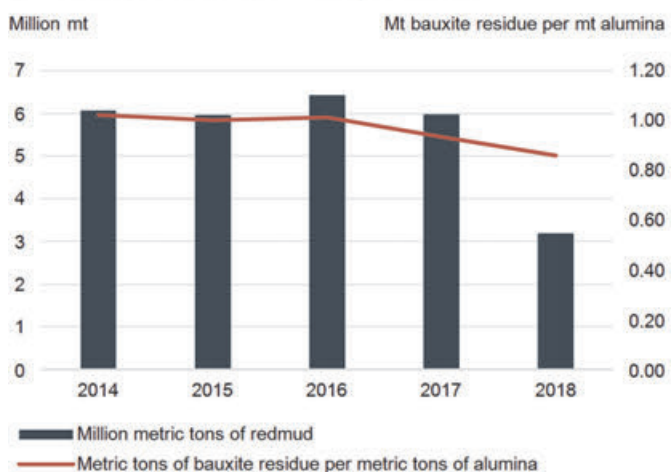


### Tailings from bauxite production



Tailings production decreased significantly in 2018 due to the Paragominas curtailment.

### Bauxite residue from alumina production



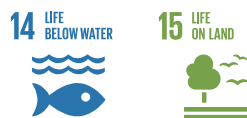
Bauxite residue production decreased significantly in 2018 due to the Alunorte embargo.

Bauxite residue is a by-product of the alumina refining process. Its disposal is challenging due to large volumes and the alkaline nature of the liquid component of the residue. 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 residue storage at steeper slopes, reducing the disposal area requirements. This reduces the relative environmental footprint. The new bauxite residue deposit area at Alunorte includes more advanced press filters. These are capable of reducing the residue moisture content to 22 percent, down from 36 percent achieved with the previous drum filters technology.

The dams and deposits are frequently inspected by Hydro and Brazilian authorities, and are also subject to inspection by e.g. Norwegian Geotechnical Institute (NGI) and Geomecnica. The last NGI visit to Paragominas and Alunorte took place in 2016 and resulted in an action plan to secure the long-term viability of the tailings dams and bauxite residue storage areas. Following Vale's Brumadinho accident in Brazil in January 2019, we are reviewing our tailings management system to ensure we can continue to operate safely. The tailings dams at Paragominas are built using mainly downstream elevation which provide high structural integrity and safety. At one dam, however, there is one section using centerline elevation. This section is part of the top elevation which is one meter high. The material stored in our dams is also of a much higher final solids content (55-60 percent). Hydro is closely monitoring and analyzing the impact on the industry, including potential regulatory, political and societal implications on the back of the Brumadinho incident. Safe operations in compliance with regulatory requirements is crucial for Hydro. The Paragominas dams are stable and regularly monitored and audited by external experts. The dams meet all parameters of current environmental and mining legislation.

For information related to the Alunorte situation, please see the dedicated section earlier in this report.

Spent potlining (SPL) from electrolytic cells used in primary aluminium production is defined as hazardous waste. We are actively trying to find alternative use of SPL from our operations.

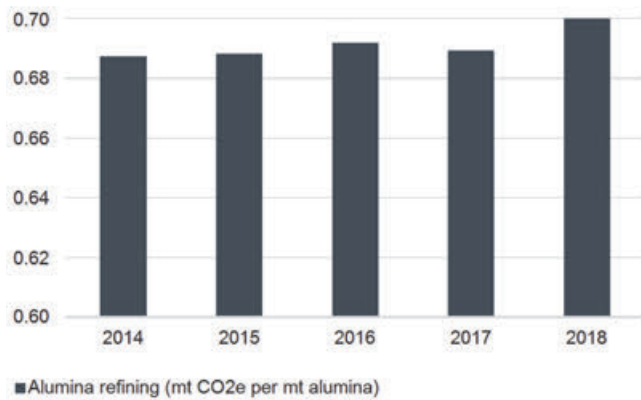


Hydro uses the WBCSD global water tool to perform an annual review of water withdrawal from water-stressed areas. The mapping of Hydro's sites in 2018 showed that 0,3 percent of our overall fresh-water input came from water-stressed areas, with regard to annual renewable water supply (according to the definition used by WBCSD). Qatalum in Qatar relies on public water supply produced by desalination. Seawater is used for wet cooling towers at the power plant as well as for wet scrubbers at the potline fume treatment plants.



**GHG emission intensity - alumina refining**

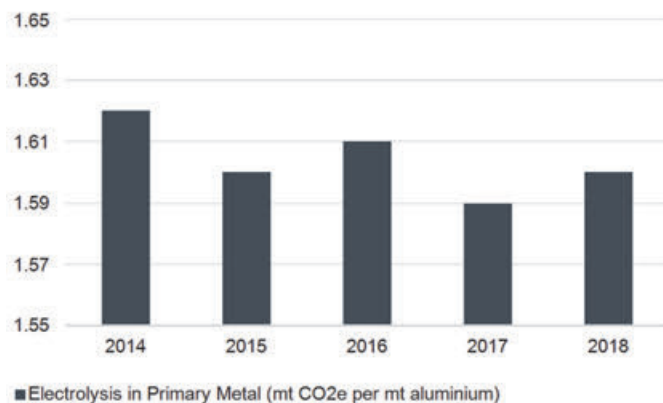
Mt CO2e per mt aluminium



Includes greenhouse gas (GHG) emissions from alumina refining.

**GHG emission intensity - electrolysis**

Mt CO2e per mt aluminium



Greenhouse gas (GHG) emissions from the electrolysis process from Hydro's smelters, excluding Neuss in Germany

In 2017, Hydro developed a basic water risk analysis tool, covering water use and discharge, to be applied across key operations. Preliminary findings supported the results of the WBCSD global water tool - operating in water-stressed areas is not a material risk for Hydro's key operations. Instead, the more material risks are linked to the management of excess water and the quality of the external bodies into which Hydro discharges process water. The previous water-related target, to reduce water use in water-stressed areas, has thus been set aside.

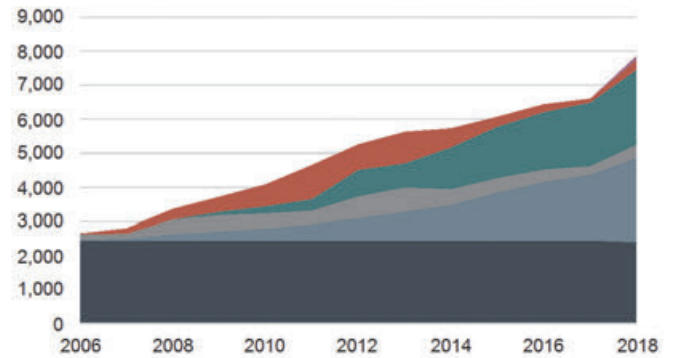
Following a mass balance of mercury at Alunorte in Brazil, which was concluded in 2017, Hydro decided to install four mercury condensers on the digester lines. The first condenser was installed in 2018 as a pilot and, based on the technical performance, the remaining three will be installed and commissioned in 2020.

Engagement with customers and other stakeholders on the environmental impact of our processes and products is an important element of our product stewardship. We perform

life-cycle assessments for all major product groups to identify improvement potential. We also assess other aspects such as energy and material consumption, toxicity and recyclability.

**Land use and rehabilitation - Paragominas**

Hectares



■ Mined area available for rehabilitation ■ Reforestation gap  
 ■ Ongoing rehabilitation areas ■ Area cleared for future mining  
 ■ Tailings dam and other mining infrastructure ■ Permanent infrastructure

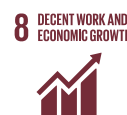
The emerging reforestation gap is due to infrastructure areas made available in 2018 for rehabilitation, as well as failed areas of historical rehabilitation.

# People

Hydro shall be a leading company in our industry in the area of occupational health and safety. This will be achieved through the consistent implementation of the management system; committed and visible leadership, and full engagement of all employees.

The negative development in safety performance was concerning in 2018 with total recordable injuries increasing and a fatality at our Extrusion facility in Hungary. The fatality was thoroughly investigated with corrective actions taken locally and lessons learned communicated and acted upon across all operational sites.

Nearly half of the reported injuries in 2018 were related to hands, about 20 percent legs, about 15 percent related to the face, eyes and head and 10 percent arms and shoulders.

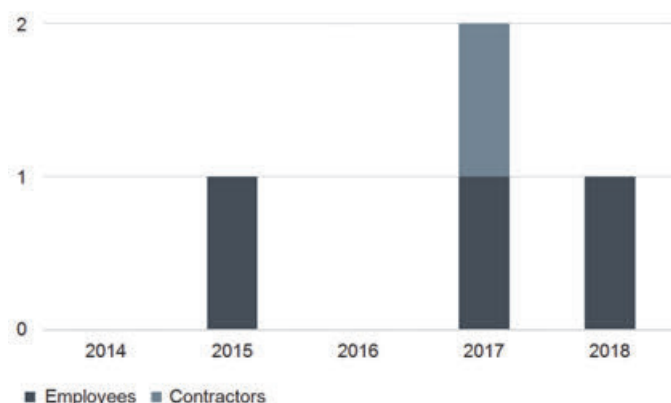


All business areas are active in identifying risks and the risk KPI remains an important leading indicator helping monitor and manage processes and tasks with high inherent risks.

Existing health and wellbeing programs are being expanded including physical and psychosocial risk assessments. The Hydro Monitor will be further developed to provide feedback to our HSE initiatives.

### Fatal accidents

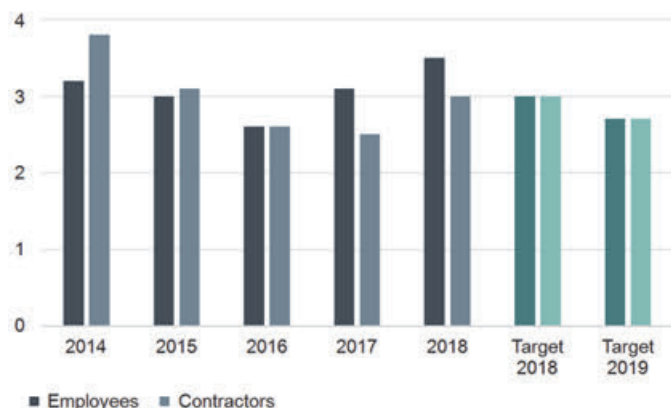
Number



Hydro experienced one fatal accident in 2018.

### Total recordable injuries

Per million hours worked



The occupational illness rate in 2018 was 0.5 cases per million hours worked, compared to 0.3 in 2017, excluding Extruded Solutions. Most of the cases related to occupational illness relates to noise. We do not yet have comparable data for Extruded Solutions.

Sick leave in Hydro's global organization was 3.6 percent in 2018, compared to 3.4 percent in 2017. In Norway, sick leave was unchanged from 2017 at 4.0 percent, and women had a sick leave of 4.3 percent and men 3.5 percent.

Hydro had 36,236 permanent employees at the end of 2018, an increase from 34,625 in 2017. The number of temporary employees was 1,680 compared to 1,646 the year before. Contractor employees represented about 10,500 full-time equivalents during 2018, up from about 9,000 in 2017. The large majority of employees are concentrated in the USA, Brazil, Germany and Norway. Extruded Solutions has a greater extent of seasonal variations than the other business areas in Hydro. This is solved in different ways in different

parts of the organization and may include the use of agency workers. We still do not have the full overview of the extent of such use.

In 2018, Hydro continued the work for successful integration of Extruded Solutions through the two initiatives established in 2017: New Chapter, aiming to create a common platform and identity for Hydro's 36,000 employees. We have renewed the company's value platform the Hydro Way and the visual profile including the new logo. In addition, the strategic direction Better, Bigger, Greener and stakeholder positioning strategy have been renewed. The Fit4Future initiative aims at step-change improvements to lift staff value creation and lower costs, divided into three main focus areas: strategic fit, differentiation and simplification. Extruded Solutions has also started implementation of Hydro's common process for people performance and development, My Way, and Hydro Academy, a platform for learning and development.

In order to deliver on our strategic goals and remain competitive, Hydro needs leaders and specialists with the right competence. This means that Hydro is dedicated to attracting, developing and retaining competence to ensure our future success. After an update of Hydro's people strategy in 2016, we continued to reinforce some existing processes and implement some new. We initiated the development of a global framework for competence management. This work will continue in 2019.

Hydro's global employee engagement survey Hydro Monitor is normally run every second year. The latest survey took place in 2018 and reached the top 10 percent according to the IBM External Norm on the Employee Engagement Index. The survey did not include the business area Extruded Solutions, that will be included in Hydro Monitor 2019. Maintaining employee engagement is a key priority going forward. All units have action plans based on their results.

Hydro's common process for people performance and development, My Way, includes an appraisal dialogue, individual development plan and follow up, as well as talent planning and succession management. In 2018, all employees<sup>2</sup> except those who work in manufacturing operations in Extruded Solutions were invited to take part and 96 percent participated compared to a target of 87 percent. While some plants have paper-based appraisal dialogues also for employees who work in manufacturing roles, we will not be able to roll out My Way throughout the entire company until 2021 at the earliest, when a new system will be available to all employees.

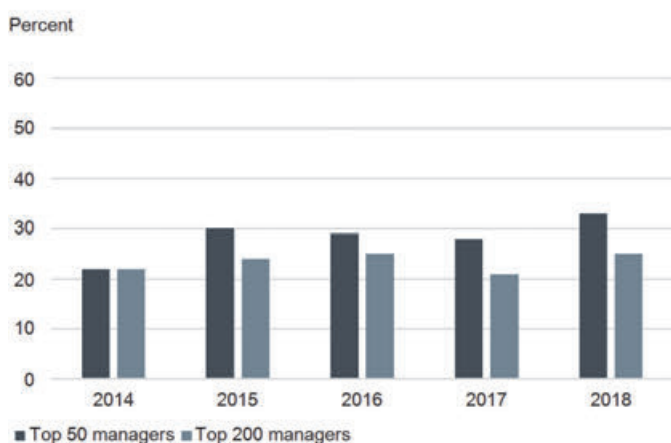
In order to have a healthy pipeline of leaders with the required breadth of experience, we strive to rotate employees early in their careers so that they gain skills from different parts of the organization. Through the succession and career part of My Way, we work with the leadership and specialist pipeline and identify required development needs.

Hydro's organization around the world represents significant diversity in education, experience, gender, age and cultural background. We see this diversity as a source of competitive advantage, as it encourages innovation, learning and better

<sup>2</sup> Excluding employees on leave and those being employed after the main part of My Way is performed

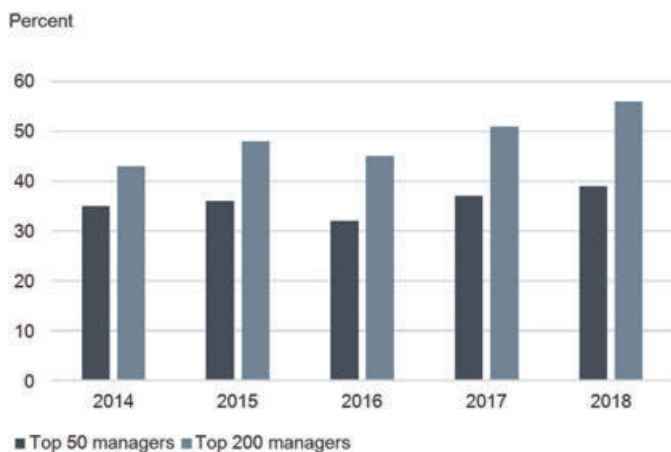
customer understanding. Through diversity and inclusion, we want all employees to know they are valued for their differences and that they contribute to the success of our business strategy. In 2018, 18 percent of Hydro's employees were women, up from 17 percent in 2017. The share of women was 40 percent in Hydro's Corporate Management Board in 2018. With three women among the six shareholder-elected members on the Board of Directors, Hydro complies with the Norwegian legal requirements on female representation. In 2018, we updated the ambition to increase diversity and accommodate an inclusive work environment. The new ambition is better suited to our business needs with an integrated Extruded Solutions.

### Share of women leaders



The total share of women at all levels in Hydro was 18 percent in 2018.

### Share of non-Norwegian leaders



We are continually 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 disabled people. Paragominas employed 4.9 percent disabled people by the end of 2018, and Alunorte were at 4.7 percent at the end of 2018, while the level at Albras was 3.5 percent. Just as important as achieving the legal requirements, Alunorte, Paragominas and Norsk Hydro Brasil are working on the career development of employees with disabilities.

Restructuring and continuous improvement are essential elements of our business operations. Our aim is to involve

employees in such processes at an early stage in order to achieve the best results for individuals and the company.

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 is no significant gender-pay differentials for employees earning collective negotiated wages in Norway, Germany and Brazil. Following the integration of Extruded Solutions, the USA and Hungary have become significant countries of operations for Hydro. For 2018, we have looked into the salary differences for all Hydro employees in Hungary and based on overall figures we find no significant gender related salary differences. We have also looked into the salary conditions for all Hydro employees in the USA. Based on our initial analysis, on average there are no significant gender related salary differences.

The annual bonus of Hydro executives shall reflect achievements in relation to pre-defined financial targets and achievements of operational and organizational key performance indicators (KPIs). Targets relating to safety, environment, corporate social responsibility, compliance and leadership expectations constitute a substantial part of the annual bonus plan. Please see note 8 and 9 to the consolidated financial statements for more information.

## Board developments

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 HSE, climate change and CSR. The board of directors is closely following the market and macro-economic developments relevant for the aluminium industry.

Highest on the board's agenda in 2018 was the situation for Hydro's operations in Brazil related to the 50 percent production embargo on Alunorte. The situation has been addressed in all board meetings since the rainfall event in February 2018, and several extraordinary meetings have been held to address critical matters. The board had an HSE deep-dive with focus on fatality prevention, as well as an operational deep-dive into Extruded Solutions. The board conducted site visits at the Holmestrand and Magnor plants.

The Board of Directors conducts an annual self-assessment of its work, competence and cooperation with management and a separate assessment of the chairperson. Also the board audit committee performs a self-assessment. The reviews are facilitated by the corporate advisory firm Lintstock. The main conclusions of all assessments were submitted to the nomination committee, which in turn assessed the board's composition and competence.

The Board of Directors held 18 meetings in 2018 with an attendance of 92 percent. The compensation committee held six meetings and the audit committee ten meetings.

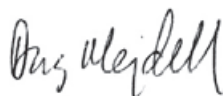
## Net income and dividend – Norsk Hydro ASA

Norsk Hydro ASA (the parent company) had a net income of NOK 1,015 million in 2018 compared with net loss of NOK 183 million in 2017. The result reflects increased dividends from subsidiaries in 2018 compared to 2017 and net foreign exchange gains in 2018 compared with net foreign exchange losses in 2017.

For 2018, Hydro's Board of Directors proposes a dividend of NOK 1.25 per share reflecting Hydro's robust financial situation, taking into account a demanding year for the company and the volatility in the aluminium industry. The proposed payment represents a 60 percent pay-out ratio of reported net income for the year and demonstrates the company's commitment to provide a competitive cash return to shareholders. Hydro has a dividend policy of 40 percent payout ratio of reported net income over the cycle with NOK 1.25 per share considered as a floor.

According to section 3-3 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, March 12, 2019



Dag Mejdell  
Chair



Irene Rummelhoff  
Deputy chair



Arve Baade  
Board member



Finn Jebsen  
Board member



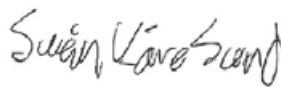
Liselott Kilaas  
Board member



Sten Roar Martinsen  
Board member



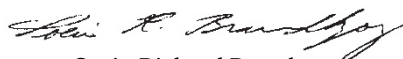
Thomas Schulz  
Board member



Svein Kåre Sund  
Board member



Marianne Wiinholt  
Board member



Svein Richard Brandtzæg  
President and CEO

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# Consolidated financial statements

## Consolidated income statements

Amounts in NOK million (except per share amounts). Years ended December 31	Notes	2018	2017
Revenue	7, 15	<b>159,377</b>	109,220
Share of the profit (loss) in equity accounted investments	7, 32	<b>765</b>	1,527
Other income, net	16	<b>772</b>	2,947
<b>Total revenue and income</b>		<b>160,913</b>	113,693
Raw material and energy expense	17	<b>102,523</b>	69,848
Employee benefit expense	18	<b>23,176</b>	13,285
Depreciation, amortization and impairment	19, 20	<b>7,369</b>	6,162
Other	21, 22	<b>19,324</b>	12,209
<b>Total expenses</b>		<b>152,391</b>	101,504
<b>Earnings before financial items and tax</b>	7	<b>8,522</b>	12,189
Finance income	23	<b>255</b>	481
Finance expense	23	<b>(2,315)</b>	(1,596)
<b>Finance income (expense), net</b>		<b>(2,060)</b>	(1,114)
<b>Income before tax</b>		<b>6,462</b>	11,075
Income taxes	24	<b>(2,139)</b>	(1,891)
<b>Net income</b>		<b>4,323</b>	9,184
Net income attributable to non-controlling interests		<b>67</b>	401
<b>Net income attributable to Hydro shareholders</b>		<b>4,256</b>	8,783
<b>Basic and diluted earnings per share attributable to Hydro shareholders</b>	38	<b>2.08</b>	4.30

*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	2018	2017
Net income		4,323	9,184
<b>Other comprehensive income</b>			
<b>Items that will not be reclassified to income statement</b>			
Remeasurement postemployment benefits, net of tax	38	(718)	761
Share of remeasurement postemployment benefits of equity accounted investments, net of tax	38	-	(2)
Unrealized gain (loss) on securities, net of tax	38	394	(255)
Total		(324)	504
<b>Items that will be reclassified to income statement</b>			
Currency translation differences, net of tax	38	(2,031)	(1,387)
Cash flow hedges, net of tax	38	(14)	174
Share of other comprehensive income that will be reclassified to income statement of equity accounted investments, net of tax	38	72	(736)
Total		(1,973)	(1,949)
Other comprehensive income		(2,296)	(1,444)
Total comprehensive income		2,027	7,740
Total comprehensive income attributable to non-controlling interests		(273)	103
Total comprehensive income attributable to Hydro shareholders		2,300	7,637

The accompanying notes are an integral part of the consolidated financial statements.

## Consolidated balance sheets

Amounts in NOK million, December 31	Notes	2018	2017 Restated
<b>Assets</b>			
Cash and cash equivalents		5,995	11,828
Short-term investments	25	975	1,311
Trade and other receivables	26	20,743	19,983
Inventories	27	26,483	20,711
Other current financial assets	13	801	798
<b>Total current assets</b>		<b>54,997</b>	<b>54,631</b>
Property, plant and equipment	29	71,299	72,933
Intangible assets	30, 31	11,443	12,712
Investments accounted for using the equity method	32	11,570	11,221
Other non-current assets	13, 28	5,720	4,410
Prepaid pension	37	5,162	5,750
Deferred tax assets	24	1,664	1,617
<b>Total non-current assets</b>		<b>106,858</b>	<b>108,643</b>
<b>Total assets</b>	<b>7</b>	<b>161,855</b>	<b>163,273</b>
<b>Liabilities and equity</b>			
Bank loans and other interest-bearing short-term debt	34	8,543	8,245
Trade and other payables	33	20,381	19,571
Provisions	35	3,281	2,296
Taxes payable		2,266	2,570
Other current financial liabilities	13	515	655
<b>Total current liabilities</b>		<b>34,987</b>	<b>33,337</b>
Long-term debt	34	7,080	9,012
Provisions	35	5,588	5,828
Pension liabilities	37	15,648	15,118
Other non-current financial liabilities	13	2,429	2,041
Other liabilities		2,318	2,228
Deferred tax liabilities	24	3,037	3,501
<b>Total non-current liabilities</b>		<b>36,098</b>	<b>37,728</b>
<b>Total liabilities</b>		<b>71,086</b>	<b>71,064</b>
Share capital	38	2,272	2,272
Additional paid-in capital	38	29,126	29,097
Treasury shares	38	(756)	(810)
Retained earnings		57,127	56,452
Other components of equity	38	(1,936)	20
<b>Equity attributable to Hydro shareholders</b>		<b>85,833</b>	<b>87,032</b>
Non-controlling interests		4,936	5,178
<b>Total equity</b>		<b>90,769</b>	<b>92,209</b>
<b>Total liabilities and equity</b>		<b>161,855</b>	<b>163,273</b>

The accompanying notes are an integral part of the consolidated financial statements.



## Consolidated statements of cash flows

Amounts in NOK million. Years ended December 31	Notes	2018	2017
<b>Operating activities</b>			
Net income		4,323	9,184
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation, amortization and impairment	19, 20	7,369	6,162
Share of profit in equity accounted investments		(765)	(1,527)
Dividends received from equity accounted investments	32	1,219	2,247
Deferred taxes		(585)	(685)
Loss (gain) on sale of non-current assets		188	(2,046)
Net foreign exchange loss	23	1,303	875
Net sales of trading securities		187	57
Capitalized interest	23	(1)	(76)
Changes in assets and liabilities that provided (used) cash:			
Trade and other receivables		(1,412)	(554)
Inventories		(5,599)	(1,518)
Trade and other payables		675	1,013
Commodity derivatives		(415)	322
Other items		538	893
Net cash provided by operating activities	42	7,025	14,347
<b>Investing activities</b>			
Purchases of property, plant and equipment		(7,219)	(7,296)
Purchases of other long-term investments		(389)	(11,190)
Purchases of short-term investments		-	(5,094)
Proceeds from sales of property, plant and equipment		80	57
Investment grants received		333	636
Proceeds from sales of other long-term investments		(1)	49
Proceeds from sales of short-term investments		-	8,402
Net cash used in investing activities		(7,196)	(14,436)
<b>Financing activities</b>			
Loan proceeds		7,057	15,271
Principal repayments		(5,984)	(10,917)
Net increase (decrease) in other short-term debt		(2,934)	2,515
Proceeds from shares issued		47	40
Dividends paid		(3,622)	(3,069)
Net cash provided by (used in) financing activities		(5,436)	3,840
Foreign currency effects on cash			
		(226)	40
Net increase (decrease) in cash and cash equivalents		(5,833)	3,791
Cash and cash equivalents at beginning of year		11,828	8,037
Cash and cash equivalents at end of year		5,995	11,828

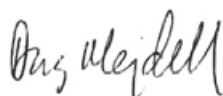
The accompanying notes are an integral part of the consolidated statements.

## 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 shareholders	Non-controlling interests	Total equity
December 31, 2016		2,272	29,070	(870)	50,210	1,224	81,906	5,733	87,640
Treasury shares issued to employees	38		27	60			87		87
Dividends	40				(2,556)		(2,556)	(702)	(3,258)
Capital contribution in subsidiaries								3	3
Items not reclassified to income statement in subsidiaries divested	38				(3)	3	-	40	40
Total comprehensive income for the year					8,783	(1,147)	7,637	103	7,740
December 31, 2017		2,272	29,097	(810)	56,435	80	87,074	5,178	92,252
Effect of change in accounting principle					17	(60)	(43)	-	(43)
January 1, 2018		2,272	29,097	(810)	56,452	20	87,032	5,178	92,209
Treasury shares issued to employees	38		29	53			83		83
Dividends	40				(3,581)		(3,581)	(106)	(3,687)
Capital contribution in subsidiaries								138	138
Total comprehensive income for the year					4,256	(1,956)	2,300	(273)	2,027
December 31, 2018		2,272	29,126	(756)	57,127	(1,936)	85,833	4,936	90,769

The accompanying notes are an integral part of the consolidated statements.

Oslo, March 12, 2019



Dag Mejdell  
Chair



Irene Rummelhoff  
Deputy chair



Arve Baade  
Board member



Finn Jebsen  
Board member



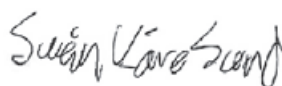
Liselott Kilaas  
Board member



Sten Roar Martinsen  
Board member



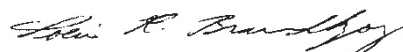
Thomas Schulz  
Board member



Svein Kåre Sund  
Board member



Marianne Wiinholt  
Board member



Svein Richard Brandtzaeg  
President and CEO

# Notes to the consolidated financial statements

## Note 1 - Reporting entity and basis of presentation

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 36,000 people in more than 40 countries. Hydro is a global supplier of aluminium with operations throughout the industry value chain. Operations include power production, bauxite extraction, alumina refining, aluminium smelting, remelting and recycling, rolling activities, and extruded solutions. The Board of Directors and the President and CEO authorized these financial statements for issue on March 12, 2019. Hydro is listed on the Oslo stock exchange, Oslo Børs.

### **Basis of presentation**

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. See note 5 Critical accounting judgment and key sources of estimation uncertainty.

Presentation and classification of items in the financial statements is consistent for the periods presented except certain effects of implementation of new accounting standards where implementation regulation allows or requires implementation as of the beginning of the year of transition. Such effects are described in note 3 Changes of accounting principles and new pronouncements.

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.

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.

## Note 2 - Significant accounting policies

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, 2018. Hydro also provides the disclosure as specified under the Norwegian Accounting Act (Regnskapsloven).

The following description of accounting principles applies to Hydro's 2018 financial reporting, including all comparative figures, except where the implementation provisions in IFRS 15 Revenue from Contracts with Customers specifies that the new accounting principles are applied from January 1, 2018. See note 1 Reporting entity and basis of presentation, note 3 Changes in accounting principles and new pronouncements, note 4 Measurement of fair value, and note 5 Critical accounting judgment and key sources of estimation uncertainty for additional information related to the presentation, classification and measurement of Hydro's financial reporting.

### **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 all subsidiaries. Subsidiaries are included from the date control commences until the date control ceases.

Intercompany transactions and balances have been eliminated. Profits and losses 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.

### **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 given, 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. 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, 2018. 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.

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), or as the non-controlling interests' proportion of the fair value of the acquiree (full goodwill method). Non-controlling interests are subsequently adjusted for changes in equity of the subsidiary after the acquisition date.

### **Transactions between non-controlling shareholders and the group**

Sales and purchases of share 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 change of recognized assets, liabilities or goodwill is recognized as a result of such transactions.

### **Investments in associates and joint ventures**

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.

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.

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.

### **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.

**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.

**Revenue recognition**

Hydro implemented IFRS 15 Revenue from Contracts with Customers as of January 1, 2018. The new standard is implemented retrospectively with the cumulative effect of initially applying this standard recognized directly to equity at implementation. As such, IFRS 15 applies to the results reported for 2018 only, while the amounts for 2017 follows the principles in IAS 18 Revenue. The transition is further described in note 3 Changes in accounting principles and new pronouncements.

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. 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.

For products which are not made to the customer's specification, revenue is recognized at delivery to the customer. For products made to customer specifications and orders, we have assessed whether revenue from those contracts should be recognized over time or at a point in time. We have assessed whether Hydro has an enforceable right to payment for performance completed to date, including a reasonable margin, throughout the production period. Our conclusion is that for close to all contracts we do not have enforceable right to payment as described in IFRS 15, and thus recognition at a point in time is appropriate.

A performance obligation is satisfied when or as the customer obtains control with the goods or services delivered. For some contracts, mainly where products are delivered to the customer's site as consignment stock, control is concluded to pass to the customer at an earlier time than transfer of risk and rewards as assessed under IAS 18.

Sale of electricity continues to be recognized as electricity is delivered to customers through the relevant grid.

Under IAS 18, applied for the 2017 income statement, revenue from sales of products, including products sold in international commodity markets, was recognized upon transfer of ownership, which generally occurs on delivery. For multiple delivery contracts, revenue was allocated to deliveries in line with contract terms, normally either fixed price per unit or a combination of fixed elements and price references to observable market prices. Sales terms providing transportation and related services for sold goods after transfer of ownership to the customer (CIF and similar incoterms) were considered one, combined, delivery to the customer. Revenue, including the service element, was recognized at transfer of ownership of the goods, and remaining costs accrued for. Any rebates or incentive allowances were deferred and recognized in income upon the realization or at the closing of the rebate period. In arrangements where Hydro acted as an agent, such as commission sales, the net commission fee was recognized as revenue.

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.

**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.

**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, investments in subsidiaries, associates or joint ventures as well as government grants, insurance compensation, rental revenue and revenue from utilities.

**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.

**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 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.

*Leased assets*

Leases which transfer to Hydro substantially all the risks and benefits incidental to ownership of the leased item are identified using the guidance in IAS 17 Leases and IFRIC 4 Determining whether an Arrangement contains a lease. Such arrangements are capitalized as finance leases and included under Property, plant and equipment at the fair value of the leased asset, or, if lower, the present value of the minimum lease payments as of the later of date of inception of the lease or getting access to the services of the asset. The assets are depreciated over the shorter of the estimated useful life of the asset or the lease term. The liability is included in Long-term debt and amortized by the amount of the lease payment less the effective interest expense. All other leases are classified as operating leases with lease payments recognized as an expense over the term of the lease.

**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. Fair value is estimated as the present value of costs relating to dismantlement or removal of buildings or other assets, and/or the restoration or rehabilitation of industrial or mining sites. 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 costs are 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 is recognized when identified. The increase or reduction to the liability is recognized as an increase or reduction of the value of the asset. 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.

**Intangible assets**

Intangible assets acquired individually or as a group are recognized at fair value 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<sub>2</sub> 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 at least annually. Actual CO<sub>2</sub> emissions which exceed the level covered by emission rights are recognized as a liability. Sale of emission rights are recognized at the time of sale at the transaction price. CO<sub>2</sub> 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.

### *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. 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.

### **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.

### **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. Exploration cost for undeveloped mining areas are assessed for impairment under IFRS 6 Exploration for and Evaluation of Mineral Resources. Intangible assets with indefinite useful life are tested for impairment at least annually.

### **Provisions**

Provisions are recognized when Hydro has a present obligation (legal or constructive) as a result of a past event, it is probable (more likely than not) that Hydro 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 as the present value of the cash flows estimated to settle the obligation. Uncertain outcomes are measured as the expected value of reasonably possible outcomes. See also the accounting policy discussion for Asset retirement obligations.

### **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 employee notification. Costs related to such activities are classified as restructuring costs if the exit or disposal materially change the scope of Hydro's business.

### **Contingent liabilities and assets**

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. Major contingent liabilities are disclosed in the financial statements unless the possibility of an outflow of economic resources is remote. Contingent assets are not recognized in the financial statements.

### **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.

### **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.

### **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.

Starting from January 1, 2018, 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 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, however, we have not identified portfolios where there is a mix of receivables that are held to collect contractual cash flows and receivables that are regularly sold requiring us to measure the receivable at FVOCI.

#### *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 costs, with the exception of instruments where cash flows are not contractually fixed 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, with the exception for loans to associates and joint ventures, which are included in Investments accounted for using the equity method.

#### *Equity instruments*

Hydro's portfolio of trading securities is measured at FVTPL, and included in Short-term investments. Other equity investments 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 purpose, 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.

These investments were classified as available-for-sale in 2017.

### **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 or when Hydro is legally released from the primary responsibility for the liability.

### **Derivative instruments**

Derivative instruments are marked-to-market with the resulting gain or loss reflected in the income statement, 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 contains restrictions for use.

Derivative commodity instruments are marked-to-market with their fair value recorded in the balance sheet as either assets or liabilities. Adjustments for 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.

### **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.

### **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 and post-employment 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.

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.

**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 has elected to present 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 the main 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 classification as finance income thus better reflects the way such investments are managed.

**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 is included in cash flows from operating activities. Dividends paid is included in cash flows from financing activities.

**Segment information**

Hydro identifies its reportable segments and discloses segment information under IFRS 8 Operating Segments.

## Note 3 - Changes in accounting principles and new pronouncements

**Changes in accounting principles**

Hydro implemented IFRS 9 and IFRS 15 as of January 1, 2018.

**IFRS 15 Revenue from Contracts with Customers**

Hydro implemented IFRS 15 as of January 1, 2018. The new standard is implemented retrospectively with the cumulative effect of initially applying this standard recognized directly to equity at implementation.

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.

Some contracts for sale of goods 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. This represents recognition at a later time than under the previous regulations. There were no significant transport contracts under performance as of the time of transition. Some construction type contracts where revenue was recognized over time using IAS 11 Accounting for Construction Contracts in previous years, do not qualify for recognition over time under IFRS 15. For some contracts, mainly where products are delivered to the customer's site as consignment stock, control is concluded to pass to the customer at an earlier time than transfer of risk and rewards as assessed under IAS 18 Revenue. The effect of earlier and later recognition is included in the table below.

**IFRS 9 Financial Instruments**

IFRS 9 is applied retrospectively. Some transitional effects were recognized in the opening equity at transition, i.e. January 1, 2018 as required or allowed by the standard. IFRS 9 did not lead to any significant changes in timing of recognition or how to measure assets or liabilities and related income and expense. Hydro has classified the portfolio of equity investments that are not part of trading portfolios, which was held at transition, as instruments at fair value through Other Comprehensive Income (FVOCI). All changes in the fair value of those instruments, including an ultimate gain or loss at divestment of the instrument, will be recognized in OCI. Recognized changes to fair value of such investments of NOK 239 million, after tax, will not be recycled in future periods. There will be some changes to presentation and disclosures, however, the impact for Hydro's portfolio of instruments at transition is minor. Some additional risk management strategies related to commodity price

exposure will qualify for hedge accounting, however, Hydro has decided not to apply hedge accounting for any additional risk management activities utilized as of the end of 2017. For one cash flow hedge program for a previous investment project which is deferred in the hedging reserve in equity and reclassified to income over the depreciation period of the asset, the remaining hedging reserve of NOK 60 million was reclassified to reduce the carrying value of the asset and related deferred tax as a basis adjustment.

Change of accounting principles, amounts in NOK million	IFRS 15		IFRS 9	Effect of change in accounting principles
	Earlier recognition	Later recognition		
Current assets	26	8		34
Property, plant and equipment			(87)	(87)
Total assets	26	8	(87)	(54)
Current liabilities		11		11
Deferred tax liabilities	6	(1)	(27)	(22)
Equity attributable to Hydro shareholders	20	(2)	(60)	(43)
Total liabilities and equity	26	8	(87)	(54)

### New pronouncements

As of the date of authorization of these financial statements, the IASB has issued IFRS 16 Leases; effective date January 1, 2019, which will be relevant for Hydro. IFRS 16 is endorsed by the EU.

Hydro has decided to implement IFRS 16 retrospectively with the cumulative effect of initially applying the standard recognized at the date of implementation, i.e. January 1, 2019. Further, Hydro will utilize the practical expedient available for measuring leased assets currently accounted for as operating leases at an amount equal to the lease liability, adjusted for any prepaid or accrued lease payments, for close to all lease contracts. Leased assets with a remaining lease period of less than 12 months at transition will be excluded from lease accounting. Further, leases of assets of a low value (small asset leases), mainly such items as PCs, office equipment and similar, will be excluded from lease accounting. When measuring leases, Hydro will include fixed lease payments for extension periods reasonably certain to be used. As a practical expedient, non-lease components will not be separated from lease contracts for most asset classes. For transportation assets, such as vessels used for transportation of material, the operating cost is a significant non-lease component, and will be excluded from lease accounting.

The implementation of IFRS 16 impacts items currently accounted for as operating leases. Hydro does not expect any changes related to finance leases. The implementation of IFRS 16 is expected to increase Hydro's carrying value of property, plant and equipment by about NOK 3.1 billion, of which about NOK 1.6 billion relates to land and buildings, while the remainder relates to various types of machinery and equipment. The implementation of IFRS 16 will also lead to a shift of periodic cost of about NOK 0.7 billion from Other operating expenses mainly to depreciation and amortization expense, partly to interest expense. Quality assurance of the implementation effect, including completeness of contracts, assumptions for renewal and purchase options, as well as testing of the measurement tools, is still ongoing. Variable lease payments, including service elements related to leases which are fully variable amounts, will be recognized as operating expenses in the periods incurred.

In addition, the IASB has issued IFRIC 23 Uncertainty over Income Tax Treatment; effective date January 1, 2019. The interpretation clarifies how to assess tax positions when there is uncertainty about what the correct understanding of tax laws and regulations is. IFRIC 23 is not expected to have any impact for Hydro at the time of transition.

## Note 4 - Measurement of fair value

Hydro measures certain assets and liabilities at fair value for the purpose of recognition or disclosure, see note 2 Significant accounting policies. Recurring fair value measurement is used primarily for 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 degrees objectively observable. Certain items are valued on the basis of quoted prices in active markets for identical assets or liabilities, others are valued on the basis of inputs that are derived from observable prices, 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.

### 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.

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 listed shares is based on quoted market prices as of the balance sheet date. 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.

#### *Debt instruments*

Fair value for listed instruments is based on quoted market prices as of the balance sheet date. Fair value for other 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.

#### *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 periods to achieve the most relevant forward curve. 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 Electricity Nordic, 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 and in the income statement. Forward curves are established as described above under Derivatives.

## Note 5 - Critical accounting judgment and key sources of estimation uncertainty

The application of accounting policies requires that management makes estimates and judgments in determining certain revenues, expenses, assets, and liabilities. The following accounting policies represent areas that are considered critical, involving a significant degree of judgment and complexity.

### **Impairment of non-current assets**

IAS 36 requires that Hydro assess conditions that could cause an asset or a Cash Generating Unit (CGU) to become impaired and to test recoverability of potentially impaired assets. These conditions include internal and external factors such as Hydro's market capitalization, significant changes in Hydro's planned use of the assets or a significant adverse change in the expected prices, sales volumes or raw material cost. 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.

In accordance with IAS 36, goodwill and certain intangible assets are reviewed at least annually for impairment. Other assets are tested for impairment if a loss in value is indicated. When a 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. 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 its present condition, excluding potential exploitation of improvement or expansion potential.

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 and our best estimate of long-term development in commodity prices, currency rates, discount rates and other relevant information. A detailed forecast is developed for a period of three to five years with projections thereafter. 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. For further information about impairment tests, see note 20 Impairment of non-current assets.

### **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 assessment of possible impairment of assets and/or goodwill in future periods.

### **Contingent assets and liabilities, uncertain assets and liabilities**

Liabilities that are uncertain in timing or amount are recognized when a liability arises from a past event and an outflow of cash or other resources is probable and can be reasonably estimated. Contingent liabilities are possible obligations where a future event will determine whether Hydro will be required to make a payment to settle the liability, or where the size of the payment cannot be determined reliably. Material contingent liabilities are disclosed unless a future payment is considered remote. 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.

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.

### *Environmental liabilities and asset retirement obligations*

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, a generally lower acceptance of contamination in communities over time, as well as changes in remediation methods and requirements, contributes 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. A discussion of Hydro's significant provisions for environmental and other liabilities is included in note 35 Provisions. Significant contingent obligations are discussed in note 36 Contingent liabilities and contingent assets.

### *Taxes*

Hydro calculates income tax expense based on reported income in the different legal entities. Deferred income tax expense is calculated based on the differences between the carrying value of assets and liabilities for financial reporting purposes and their respective tax basis that are considered temporary in nature. 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.

Indirect tax regimes are complex in many jurisdictions and cross-border. Basis for such taxes may differ from actual transaction prices. In some jurisdictions, including Brazil, significant credit amounts are generated for use against future indirect and/or income tax payments. 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. 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.

### **Financial instruments**

Certain commodity contracts are deemed to be financial instruments under IFRS 9 or to contain embedded derivatives which are required to be recognized at fair value, with subsequent changes in fair value impacting the income statement. Determining

whether contracts qualify as financial instruments at fair value involves evaluation of markets, Hydro's use of those instruments and historic or planned use of physically delivered products under such contracts. 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 market places. 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.

#### **Employee retirement plans**

Hydro provides both defined benefit employee retirement plans and defined contribution plans. A significant but decreasing share is defined benefit plans. Measurement of pension cost and obligations under such plans requires numerous assumptions and estimates that can have a significant impact on the recognized pension cost and obligation, such as discount rates, turnover rate and mortality, as well as future pension increases and salary levels.

## **Note 6 - Significant subsidiaries and changes to the consolidated group**

#### **Acquisition of Sapa**

On July 10, 2017, Hydro entered into a contract to acquire 50 percent of the shares in Sapa AS, which was a joint venture owned 50 percent by Hydro and 50 percent by Orkla, a listed company in Norway. Following completion of the transaction on October 2, 2017, Hydro owns 100 percent of the parent company Hydro Extruded Solutions AS. Hydro's acquisition of Sapa AS in October 2017 resulted in a significant increase in the number of subsidiaries and plants.

Hydro paid a cash consideration of NOK 11,860 million for the 50 percent shares acquired on October 2, 2017, with certain post-closing adjustments made during December 2017 resulting in an additional payment of NOK 46 million for the shares in January 2018, in total NOK 11,906 million. The pricing was based on an agreed enterprise value of NOK 27 billion for 100 percent of Sapa on a cash and debt free basis, adjusted for certain items such as level of working capital and investments made during 2017. The fair value of Hydro's previously held 50 percent interest in Sapa was measured, using significant unobservable (level 3) input, at NOK 8,906 million, resulting in a total value of Sapa's net assets of NOK 20,813 million. A remeasurement gain of NOK 2,171 million, including certain items previously recognized in Other Comprehensive Income of NOK 751 million, was recognized in Other income, net, in 2017.

Significant parts of the process of identifying the fair value of assets acquired and liabilities assumed was performed in 2017 and completed during 2018. The provisionally estimated fair value of assets and liabilities of Sapa as well as the final amounts are included in the table below. Adjustments primarily relate to completed valuation of land and some buildings. The value of deferred tax and goodwill have been updated following adjustments to valuation of other items. The changes did not result in significant changes to depreciation or amortization; the prior period has thus not been restated.

Sapa had uncertain and contingent liabilities related to historic environmental issues and an investigation by the United States Department of Justice for which Hydro is entitled to indemnity from the seller. An agreement in principle was reached with the US Department of Justice in March 2019, see note 35 Provisions. The indemnification asset recognized as of December 31, 2018 thus increased by about NOK 160 million from what was recognized as part of the acquisition.

The acquisition resulted in recognition of goodwill in the transaction amounting to NOK 3,580 million, including goodwill recognized in Sapa prior to the acquisition. Significant contributors to the goodwill are synergies in the transaction, the assembled and skilled workforce in the organization as well as the time value of deferred tax liabilities recognized at nominal amounts as required by IFRS. Goodwill is allocated to groups of CGUs benefiting from shared resources such as brands, technology and other intangible assets. These groups of CGUs are managed and reviewed on a combined basis by Business Area management. For the allocation of goodwill and impairment testing, see note 20 Impairment of non-current assets.

**Acquired assets and liabilities**

Amounts in NOK million	2017 estimate	Adjustments	Final
Cash and cash equivalents	892	-	892
Accounts receivables	8,775	(12)	8,763
Inventories	6,469	-	6,469
Other current assets	233	12	245
<b>Total current assets</b>	<b>16,369</b>	<b>-</b>	<b>16,369</b>
Property, plant and equipment	14,052	922	14,974
Intangible assets	2,897	(130)	2,767
Goodwill	4,119	(539)	3,580
Other non-current assets	1,969	(16)	1,953
<b>Total non-current assets</b>	<b>23,037</b>	<b>236</b>	<b>23,273</b>
<b>Total assets acquired</b>	<b>39,405</b>	<b>236</b>	<b>39,642</b>
Bank loans and other interest-bearing short-term debt	3,556	-	3,556
Other current liabilities	10,081	-	10,081
<b>Total current liabilities</b>	<b>13,637</b>	<b>-</b>	<b>13,637</b>
Long-term debt	64	-	64
Deferred tax liabilities	2,486	287	2,773
Other non-current liabilities	2,365	(51)	2,314
<b>Total non-current liabilities</b>	<b>4,915</b>	<b>236</b>	<b>5,152</b>
<b>Net assets acquired</b>	<b>20,853</b>	<b>-</b>	<b>20,853</b>
Non-controlling interests	40	-	40
<b>Net assets acquired by Hydro</b>	<b>20,813</b>	<b>-</b>	<b>20,813</b>

The results from January to September 2017 for Sapa were reported as result from the 50 percent owned joint venture accounted for under the equity method, no results from the acquired businesses were included in Hydro's consolidated income statement as results from the Group's controlled business as of September 30, 2017.

Hydro has not made any significant acquisitions or divestments during 2018. For one acquisition of an extrusion unit in Brazil, the initial accounting for the business combination is incomplete.

**Subsidiaries with significant non-controlling interests**

The Hydro group consists of about 200 companies in about 40 countries. Most subsidiaries, including the large operating units in Norway and Germany, are 100 percent owned, directly or indirectly, by Norsk Hydro ASA. 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 Primary 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 2,721 million as of December 31, 2018 and NOK 2,824 million as of December 31, 2017. 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 indirect 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 Slovak smelter Slovalco a.s, which is part of Primary Metal. The non-controlling owner has significant influence on certain decisions in the entity, including operational and investment budgets. The non-controlling interests in Slovalco amounted to NOK 1,182 million as of December

31, 2018 and NOK 1,036 million as of December 31, 2017. 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 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 about 92 percent of the shares in the Brazilian alumina refinery Alumina do Norte do Brasil S.A. (Alunorte), which is part of Bauxite & Alumina. The non-controlling owners have limited influence on the operational decisions. The non-controlling interests in Alunorte amounted to NOK 859 million as of December 31, 2018 and NOK 1,167 million as of December 31, 2017. 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 aluminium prices at the London Metal Exchange, with a minimum price based on production cost plus a margin, and a fixed maximum price.

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.

Amounts in NOK million	Albras	
	2018	2017
Internal revenue	<b>3,090</b>	3,963
External revenue	<b>4,171</b>	3,839
Earnings before financial items and tax	<b>344</b>	975
Net income	<b>200</b>	635
Other comprehensive income	<b>35</b>	(18)
Total comprehensive income	<b>236</b>	618
Net cash flows from operating activities	<b>942</b>	786
Net cash flows from investing activities	<b>(361)</b>	(420)
Net cash flows from financing activities	<b>(407)</b>	(381)
Cash and cash equivalents	<b>334</b>	160
Other current assets	<b>1,925</b>	2,442
Non-current assets	<b>4,383</b>	5,018
Current liabilities	<b>(637)</b>	(1,362)
Non-current liabilities	<b>(453)</b>	(497)
Equity attributable to Hydro	<b>(2,830)</b>	(2,937)
Equity attributable to non-controlling interests	<b>(2,721)</b>	(2,824)
Share of net income attributable to non-controlling interest	<b>104</b>	312
Dividends paid to non-controlling interests	<b>66</b>	307

## Note 7 - 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 six business areas Bauxite & Alumina, Primary Metal, Metal Markets, Rolled Products, Extruded Solutions, and Energy.



Bauxite & Alumina activities includes bauxite mining activities, production of alumina and related commercial activities, primarily the sale of alumina.

Primary Metal includes primary aluminium production, remelting and casting activities. The main products are comprised of extrusion ingots, foundry alloys, sheet ingot and standard ingot.

Metal Markets includes all sales activities relating to products from our primary metal plants and operational responsibility for Hydro's stand-alone remelters as well as physical and financial metal trading activities.

Rolled Products includes Hydro's rolling mills and the dedicated primary metal plant in Neuss, Germany. The main products are comprised of aluminium foil, strip, sheet, and lithographic plate for application in such sectors as packaging, automotive and transport industries, building and general engineering, as well as for offset printing plates.

Extruded Solutions delivers products within extrusion profiles, building systems and precision tubing, and is present in more than 40 countries. Hydro acquired control with the business as of October 2017, see note 6 Significant subsidiaries and changes to the consolidated group. The previous 50 percent ownership in the business as the joint venture Sapa is also reported as part of the segment now named Extruded Solutions.

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.

Other consist of Hydro's captive insurance company Industriforsikring, its industry parks, internal service providers, and certain other activities.

### **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, including amortization and impairment of excess values in equity accounted investments. Hydro's definition of EBITDA may be different from other companies.

Because Hydro manages long-term debt and taxes on a group basis, 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 contracts as executory contracts. Certain other internal contracts may contain lease arrangements that qualify as a finance lease. However, the segment reporting reflects the responsibility allocated by Hydro's management for those assets. Costs related to certain pension schemes covering more than one segment are allocated to the operating segments based either on the premium charged or the estimated service cost. Any difference between these charges and pension expenses measured in accordance with IFRS, as well as pension assets and liabilities are included in Other and eliminations.

The following tables include information about Hydro's operating segments.

Amounts in NOK million	External revenue		Internal revenue		Share of the profit (loss) in equity accounted investments	
	2018	2017	2018	2017	2018	2017
Bauxite & Alumina	14,396	15,188	14,152	10,234	-	-
Primary Metal	7,829	7,578	31,605	28,888	722	745
Metal Markets	42,502	44,264	11,735	6,341	-	-
Rolled Products	26,940	25,538	15	178	-	-
Extruded Solutions <sup>1)</sup>	64,023	14,083	61	70	53	812
Energy	3,673	2,550	5,007	5,155	(35)	(7)
Other and eliminations	14	18	(62,576)	(50,865)	24	(24)
<b>Total</b>	<b>159,377</b>	<b>109,220</b>	<b>-</b>	<b>-</b>	<b>765</b>	<b>1,527</b>

Amounts in NOK million	Depreciation, amortization and impairment		Earnings before financial items and tax (EBIT) <sup>2)</sup>		EBITDA	
	2018	2017	2018	2017	2018	2017
Bauxite & Alumina	2,095	2,486	1,763	3,704	3,858	6,190
Primary Metal	2,253	2,026	2,123	4,729	4,267	6,747
Metal Markets	101	95	886	485	986	579
Rolled Products	927	860	336	512	1,263	1,372
Extruded Solutions <sup>1)</sup>	1,723	444	1,774	2,522	3,498	2,966
Energy	239	223	1,853	1,531	2,107	1,757
Other and eliminations	30	28	(214)	(1,295)	(183)	(1,268)
<b>Total</b>	<b>7,369</b>	<b>6,162</b>	<b>8,522</b>	<b>12,189</b>	<b>15,796</b>	<b>18,344</b>

Amounts in NOK million	Non-current assets		Total assets <sup>3)</sup>		Investments <sup>4)</sup>	
	2018	2017	2018	2017	2018	2017
Bauxite & Alumina	31,683	33,876	39,450	41,075	963	1,634
Primary Metal	31,106	30,740	44,448	42,863	2,724	3,537
Metal Markets	1,414	1,292	9,844	7,810	165	143
Rolled Products	9,233	9,094	20,057	19,513	1,047	997
Extruded Solutions <sup>1)</sup>	26,518	26,174	43,630	41,971	2,390	22,137
Energy	5,671	5,654	6,990	6,677	280	361
Other and eliminations	1,232	1,821	(2,564)	3,364	45	39
<b>Total</b>	<b>106,858</b>	<b>108,643</b>	<b>161,855</b>	<b>163,273</b>	<b>7,614</b>	<b>28,848</b>

- 1) The extruded solutions segment includes the business acquired as a 100 percent owned subsidiary in fourth quarter 2017. For the previous periods, the segment includes the same business reported as 50 percent owned joint venture, reported using the equity method. See note 6 Significant subsidiaries and changes to the consolidated group for further information.
- 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. In 2018, investments were reduced with certain indirect tax charges in Brazil not completely deducted and claimed at the time of investment. A review of deductibility resulted in reduction of asset costs for Bauxite & Alumina and Primary Metal of NOK 635 million and NOK 145 million, respectively.

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 <sup>1)</sup>	
	2018	2017	2018	2017	2018	2017
Norway	<b>4,424</b>	3,094	<b>22,612</b>	22,412	<b>2,667</b>	2,722
Germany	<b>21,428</b>	15,354	<b>10,875</b>	11,511	<b>539</b>	3,171
France	<b>8,604</b>	4,102	<b>2,733</b>	2,690	<b>230</b>	2,601
United Kingdom	<b>7,933</b>	3,932	<b>1,344</b>	1,295	<b>134</b>	654
Poland	<b>6,577</b>	4,618	<b>725</b>	543	<b>280</b>	476
Spain	<b>6,017</b>	4,656	<b>824</b>	732	<b>175</b>	578
Italy	<b>5,802</b>	4,422	<b>505</b>	362	<b>138</b>	317
The Netherlands	<b>3,666</b>	2,687	<b>1,377</b>	1,319	<b>174</b>	677
Austria	<b>3,117</b>	2,324	<b>397</b>	298	<b>129</b>	291
Sweden	<b>2,477</b>	1,545	<b>821</b>	805	<b>135</b>	808
Belgium	<b>2,200</b>	1,394	<b>1,531</b>	1,370	<b>425</b>	1,188
Czech Republic	<b>1,992</b>	1,134	-	-	-	-
Denmark	<b>1,761</b>	1,933	<b>830</b>	900	<b>10</b>	900
Portugal	<b>1,258</b>	883	<b>133</b>	172	<b>(22)</b>	173
Hungary	<b>1,159</b>	1,061	<b>1,110</b>	1,329	<b>(109)</b>	1,324
Slovakia	<b>831</b>	721	<b>1,519</b>	1,230	<b>148</b>	288
Other	<b>3,106</b>	2,051	<b>233</b>	212	<b>49</b>	55
<b>Total EU</b>	<b>77,927</b>	52,818	<b>24,958</b>	24,768	<b>2,435</b>	13,502
Switzerland	<b>4,840</b>	5,031	<b>79</b>	157	-	1
Turkey	<b>2,222</b>	1,827	<b>2</b>	2	-	2
Other Europe	<b>1,670</b>	906	-	-	-	-
<b>Total Europe</b>	<b>91,083</b>	63,675	<b>47,651</b>	47,340	<b>5,102</b>	16,227
USA	<b>31,899</b>	13,225	<b>9,131</b>	8,885	<b>665</b>	8,244
Canada	<b>3,125</b>	742	<b>2,107</b>	2,071	<b>343</b>	409
Brazil	<b>7,700</b>	5,484	<b>34,518</b>	37,172	<b>1,411</b>	2,551
Mexico	<b>2,208</b>	1,023	<b>242</b>	222	<b>8</b>	195
Other America	<b>961</b>	653	<b>97</b>	104	<b>31</b>	108
Japan	<b>3,551</b>	4,277	<b>3</b>	2	-	-
Singapore	<b>3,303</b>	4,586	<b>2</b>	2	-	2
Qatar	<b>2,543</b>	1,957	<b>11,276</b>	10,930	-	-
China	<b>2,266</b>	2,321	<b>660</b>	743	<b>(29)</b>	714
South Korea	<b>1,833</b>	2,135	-	-	-	-
India	<b>1,441</b>	1,248	<b>220</b>	232	<b>29</b>	123
Malaysia	<b>1,087</b>	832	-	-	-	-
Thailand	<b>894</b>	838	-	-	-	-
Taiwan	<b>881</b>	986	-	-	-	-
Bahrain	<b>401</b>	441	<b>243</b>	240	-	220
Other Asia	<b>2,498</b>	3,218	<b>47</b>	44	<b>2</b>	11
Australia and New Zealand	<b>821</b>	767	<b>661</b>	656	<b>52</b>	45
Africa	<b>881</b>	810	-	-	-	-
<b>Total outside Europe</b>	<b>68,294</b>	45,544	<b>59,207</b>	61,303	<b>2,512</b>	12,621
<b>Total</b>	<b>159,377</b>	109,220	<b>106,858</b>	108,643	<b>7,614</b>	28,848

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. In 2018, investments were reduced with certain indirect tax charges in Brazil not completely deducted and claimed at the time of investment. A review of deductibility resulted in reduction of asset costs for Bauxite & Alumina and Primary Metal of NOK 635 million and NOK 145 million, respectively.

## Note 8 - Board of Directors' statement on executive management remuneration

### Board of Directors' statement on executive management remuneration

The statement on the remuneration of the company's Chief Executive Officer (CEO) and other members of the Corporate Management Board has been prepared in accordance with the provisions of the Norwegian Public Limited Companies Act, the Norwegian Accounting Act and the Norwegian Code of Practice for Corporate Governance.

### Guidelines for executive management remuneration

Hydro's guidelines for the remuneration of the company's CEO and other members of the Corporate Management Board reflect Hydro's global human resources policy, whereby *"Hydro shall offer its employees an overall compensation package that is competitive and in line with generally accepted industry standards in the country in question. Where appropriate this package should, in addition to the base salary, comprise a performance-based incentive, which combined, should reflect individual performance."*

### Process for determination of remuneration

The Board of Directors has appointed a separate compensation committee. The committee currently includes the board chair, deputy chair and one employee-elected board member. The CEO normally participates in the committee's meetings unless the committee is considering issues regarding the CEO. Other representatives of senior management may attend meetings if requested to do so.

The committee functions as an advisory body to the Board of Directors and the CEO, and is primarily responsible for:

- Making recommendations to the Board of Directors based on the committee's evaluation of the principles and systems underlying the remuneration of the CEO and other members of the Corporate Management Board.
- Making recommendations to the Board of Directors based on the committee's evaluation of the overall remuneration of the CEO, including the annual basis for bonus payments and bonus payments actually made.
- Assisting the CEO by consulting on the remuneration of the other members of the Corporate Management Board.
- Advising the Board of Directors and the CEO in remuneration matters which the committee finds to be of material or principal importance for Hydro.
- Overseeing the company's process for succession planning.

The following statement regarding the remuneration of members of the Corporate Management Board will be presented for an indicative vote to the annual general meeting to be held in May 2019, with the exception on the share based Long Term Incentive, which will be presented for a binding vote. The Board of Directors proposes that the principles set forth below shall apply for 2019 and up until the annual general meeting in 2020.

### Key principles for determination of remuneration in the coming financial year

The remuneration of members of the Corporate Management Board shall reflect at all times the responsibility of the CEO and the other members of the Corporate Management Board for the management of Hydro, taking into account the complexity and breadth of the company's operations, as well as the growth and sustainability of the company. The total remuneration will be rooted in the company's objective of being competitive, but not a remuneration leader, within the relevant labor markets, while at the same time reflecting Hydro's international focus and presence.

Hydro attaches importance to transparency and to ensuring that remuneration arrangements are developed and implemented in accordance with principles for good corporate governance.

The total remuneration of the CEO and other members of the Corporate Management Board consists of a fixed compensation, performance-based bonus, share-based long-term incentive plan, employee share plan, pension and insurance arrangements and, in certain cases, a severance pay arrangement. The Board of Directors will continue to ensure moderation in executive management remuneration.

### Fixed compensation

The fixed compensation provided to members of the Corporate Management Board includes a base salary (which is the main element of remuneration) and benefits in kind such as a company car or car allowance, a telephone, newspapers and other similar benefits. The base salaries of individual members of the Corporate Management Board are evaluated annually in light of the complexity and responsibility of the relevant employee's role and his or her contribution, qualifications and experience, together with conditions in the labor market and general salary trends.

### Variable compensation

The company has two plans for variable compensation for members of the Corporate Management Board: a bonus plan and a share-based long-term incentive (LTI) plan. Both plans are evaluated and determined annually by the Board of Directors. Payments under both plans are dependent on Hydro achieving positive underlying earnings before interest and tax (EBIT) for the previous financial year. Payments are not taken into account when determining the basis for pensionable salary.

### *Annual bonus*

The maximum potential payment under the plan is 50 percent of annual base salary for the CEO and 40 percent of annual base salary for other members of the Corporate Management Board.

The annual bonus parameters are established on the basis of overall achievement of the following elements, where (a) and (b) are established in the annual business-planning process with the aim of having parameters that are ambitious and balanced, and objective and measurable, and which reflect the varied nature of Hydro's operations.

(a) Targets related to the company's consolidated underlying EBIT for the CEO and executive vice presidents responsible for the company's staff areas. Executive vice presidents responsible for the company's business areas will have a two-part EBIT target, where 50 percent relates to the company's consolidated, underlying EBIT and 50 percent to their respective business area's underlying EBIT.

(b) Strategic, operational, financial and organizational goals; "key performance indicators" (KPIs). Depending on the business area, these goals can include

- productivity and improvements including optimizing of production and margins
- resource allocation and availability
- cost reduction and control
- investment projects
- technology
- quality control
- environment and climate
- safety and the work environment
- corporate social responsibility
- compliance
- customer relations
- organizational development.

(c) Contributions to the company's development, as well as compliance with and promotion of Hydro's core values (The Hydro Way) and achievement of individual targets.

(d) The Board of Directors' overall, discretionary assessment of the CEO. The CEO's overall, discretionary assessment of other members of the Corporate Management Board.

The combined weighting of (a) and (b) is 60 percent, while (c) and (d) combined are weighted 40 percent.

### *Long-term incentive (LTI)*

The maximum potential payment under the LTI plan is 30 percent of annual base salary (the same for the CEO and other members of the Corporate Management Board). Payment is determined on the basis of overall achievement of the following elements:

(a) Average of the past three years' return on capital employed, measured against the company's internal return target.

(b) The Company's total shareholder return (TSR) measured against a weighted average of TSR for comparable companies.

With effect from 2019, the return element in (b) has been changed from return on capital employed to TSR.

Recipients of LTI payments are required to invest the net payment amount (after tax) in Hydro shares with a lock-in period of three years. Any holder of such shares who voluntarily terminates their employment during such a three-year period must pay to the company an amount equal to the after-tax value of the relevant shares at or around the last day of employment.

The company does not offer options or other similar arrangements.

### **Other share-based compensation**

The CEO and other members of the Corporate Management Board appointed on Norwegian employment terms are eligible to participate in Hydro's discounted employee share purchase plan on the same terms as all other eligible employees (as described in Note 18 Employee remuneration).

### **Pensions**

#### *Company pension plans*

Hydro has two pension plans in Norway: defined benefit (closed to new members in 2010) and defined contribution. As of January 1, 2019, 695 employees in Norway, including the CEO and two members of the Corporate Management Board, are members of the defined benefit plan. Other employees in Norway, including seven members of the Corporate Management Board, are members of the defined contribution plan.

The defined contribution plan stipulates a contribution to the plan of amounts equal to 6 percent of salary between 0 and 7.1G (G = the Norwegian National Insurance basic amount) and 20 percent of salary between 7.1G and 12G. The defined benefit plan implies a pension right of approximately 65 percent of pensionable salary subject to full service period (minimum 30 years). A compensation plan has been established for employees who have been transferred from the defined benefit plan to the defined contribution plan and for whom a deficit in pension capital resulting from the transfer has been estimated.

Hydro Extruded Solutions AS (formerly Sapa AS) has its own defined contribution pension plan with other contribution rates. This plan covers all of this company's employees appointed on Norwegian employment terms.

#### *12G plan*

Hydro closed the 12G plan funded through operations for earning pension on the portion of any salary exceeding 12G effective December 31, 2016. Employees with a salary above 12G on that date, including the CEO and six other members of the Corporate Management Board, remain in the plan.

For employees with a defined contribution plan, the 12G plan stipulates that an amount equivalent to 20 percent of the portion of salary exceeding 12G is allocated as a vested (pension) right. For employees with a defined benefit plan, the 12G plan stipulates that the portion of salary exceeding 12G is included in the final salary that forms the basis for calculating pension. New employees after December 31, 2016, including new members of the Corporate Management Board (recruited internally or externally), have not been included in the 12G plan. As of January 1, 2019, the Corporate Management Board has three members who came from Sapa AS (now Hydro Extruded Solutions AS). These members earned pension on the portion of salary above 12G in Sapa, and an agreement has been entered into with each of them regarding an annual cash amount to be paid as compensation for the loss of such earnings.

Hydro Extruded Solutions AS has its own plan funded through operations for earning pension on the portion of any salary exceeding 12G.

#### *Early retirement plans*

The company's early retirement plans are closed to new members. Employees who were included in the plans at the time of closing, including members of the Corporate Management Board, are still covered by the plans (see below).

The CEO and two members of the Corporate Management Board have the right to retire with pension after the age of 62. In the case of the CEO, the Board may request him to retire. From the age of 62, the pension will make up 60 percent of pensionable salary. From the age of 65, the entitlement is 65 percent of pensionable salary up until the age of 67. Four other members of the Corporate Management Board have the same right to retire at the age of 65.

The pensionable salaries of the CEO and the two abovementioned members of the Corporate Management Board have been capped. Following the adjustment of the National Insurance Scheme's basic amount, they are capped as of 1 January, 2019 at NOK 7 584 498 and 4 652 660, respectively. These caps currently have no real effect as pensionable income is below these levels.

#### *Age limit*

The upper age limit for employment with Hydro in Norway is 70 years.

#### **Insurance**

The CEO and other members of the Corporate Management Board are covered by insurance arrangements applicable to Hydro employees with the rank of vice president or higher.

#### **Termination agreement**

##### *Severance pay*

In the event the CEO's employment is terminated unilaterally by Hydro, the CEO has a contractual right to severance pay for 12 months, but not beyond the age of 62.

Two members of the Corporate Management Board have a similar arrangement as the CEO, i.e. right to severance pay for 12 months, but without the limitation of 62 years. Other members of the Corporate Management Board have a right to severance pay for six months.

None of the Corporate Management Board's employment contracts give the right to severance pay if the employee has initiated the termination of employment.

##### *Loss of severance pay*

The CEO's severance pay is forfeited if there are grounds for summary dismissal. For other members of the Corporate Management Board, severance pay is forfeited in the event of gross breach of duty and/or other material breaches.

#### *Reduction of severance pay*

The CEO and five members of the Corporate Management Board will have their severance pay reduced in whole or in part by other income. The other four members of the Corporate Management Board have contracts that include clauses stating that other income will not reduce severance pay.

#### *Notice period*

All members of the Corporate Management Board have a six-month notice period.

#### *General*

The company has no specific guidelines for severance packages, but when recruiting to corporate management in recent times, it has followed a practice whereby the total of salary during the notice period and severance pay shall not exceed 12 months' salary.

#### **Members of the Corporate Management Board outside Norway**

For members of the Corporate Management Board outside Norway, base salary and other employment conditions are determined in accordance with Hydro's global human resources policy and local industry standards and accords generally with the remuneration principles applicable to the other members of the Corporate Management Board.

Silvio Porto resigned as head of Hydro's business area Bauxite & Alumina on March 5, 2018. He was temporarily replaced by Hydro's CFO, Eivind Kallevik, until John Thuestad took over as new head of Bauxite & Alumina on June 1, 2018. Kallevik and Thuestad are covered by the preceding sections of this statement. Thuestad also has a retention bonus related to the position in Bauxite & Alumina.

#### **Key principles for determining compensation during the previous financial year**

The compensation of the CEO and the other members of the Corporate Management Board for financial year 2018 was based on the guidelines presented at the annual general meeting in 2018.

In September 2018, the Board of Directors decided to adjust the CEO's base salary from NOK 6 391 000 to NOK 6 710 000 with effect from January 1, 2018, to reflect the expanded scope of the business following the acquisition of Sapa in October 2017.

Bonus and LTI payments to the Corporate Management Board for 2017 were determined and paid in 2018. Bonuses for 2018 were determined and paid in March 2019, while LTI for 2018 will first be determined and paid during the first half of 2019. All bonus and LTI payments are determined according to the principles stated above. See also Note 9 – Management remuneration.

## **Note 9 - Management remuneration**

Corporate management board members' salaries and other benefits, number of LTI-shares allocated, as well as Hydro share ownership as of December 31, 2018 and 2017 are presented in the table below. Amounts presented for individuals appointed to, or stepping down from, a position in the Corporate Management Board from or to another position in Hydro, includes fixed compensation for the whole year. Unless otherwise stated, Hydro did not have any loans to or guarantees made on behalf of any of the corporate management board members in 2018 and 2017.

Name	Base salary <sup>(1), 2)</sup>	Maximum bonus potential <sup>(1), 2)</sup>	Salary paid <sup>(1), 3)</sup>	Other benefits paid <sup>(1), 3)</sup>	Compensation pension paid <sup>(1), 3)</sup>	Bonus earned <sup>(1), 3)</sup>	Long-term incentive (LTI) earned <sup>(1), 3)</sup>	Pension benefits <sup>(1), 4)</sup>	LTI-shares allocated <sup>5)</sup>	Hydro share ownership <sup>5)</sup>
<b>2018</b>										
Svein Richard Brandtzæg	6,710	3,355	6,807	267	-	1,707	593	5,836	12,207	244,125
Eivind Kallevik <sup>6)</sup>	3,506	1,402	4,369	270	48	729	310	888	6,494	57,472
John Thuestad <sup>7)</sup>	6,087	1,166	7,025	542	298	793	251	374	-	20,443
Hilde Aasheim	3,433	1,373	3,547	219	-	787	304	2,434	6,359	89,089
Kjetil Ebbesberg	3,991	1,561	4,112	636	150	733	322	940	5,826	54,126
Egil Hogna <sup>8)</sup>	5,416	2,166	9,094	275	1,084	1,411	479	(58)	2,508	42,951
Arvid Moss	3,194	1,278	3,255	252	-	912	283	2,979	5,917	153,563
Anne-Lene Midseim <sup>9)</sup>	2,554	1,022	2,615	563	110	531	226	759	4,731	26,395
Inger Sethov <sup>9)</sup>	2,341	936	2,419	566	146	487	207	725	4,336	23,963
Katarina Nilsson <sup>9) 10)</sup>	2,680	1,072	3,291	769	236	591	237	135	1,242	1,685
Silvio Porto <sup>11)</sup>	3,291	483	1,874	516	-	411	-	111	8,869	-
<b>2017</b>										
Svein Richard Brandtzæg	6,391	3,196	6,643	482	-	2,364	1,248	3,619	20,351	231,475
Eivind Kallevik	3,400	1,360	3,287	276	47	1,040	664	1,624	8,222	50,535
Silvio Porto <sup>11)</sup>	3,645	5,823	3,722	1,102	-	4,031	712	234	-	-
Hilde Aasheim	3,329	1,332	3,439	218	-	1,017	650	2,361	8,833	82,287
Kjetil Ebbesberg	3,955	1,515	3,955	708	146	695	688	1,224	8,715	47,857
Egil Hogna <sup>8)</sup>	5,253	525	2,595	69	265	401	256	134	-	20,000
Arvid Moss	3,098	1,239	3,164	275	-	881	605	2,745	8,222	147,203
Anne-Lene Midseim	2,477	991	2,552	162	107	758	484	933	6,571	21,221
Inger Sethov	2,270	908	2,338	268	142	694	443	891	6,012	19,184
Katarina Nilsson <sup>10)</sup>	2,600	260	1,207	140	58	179	127	33	-	-
Hanne Simensen <sup>12)</sup>	2,477	743	2,572	264	95	550	363	913	6,571	19,646

1) Amounts in NOK thousand. Amounts paid by subsidiaries outside Norway have been translated to NOK at average rates for each year.

2) Annual base salary per December 31, or per the date of stepping down from the Corporate Management Board. Maximum bonus potential is for the year presented, and for the period as corporate management board member.

3) Salary is the amount paid to the individual during the year presented, and includes vacation pay. Other benefits is the total of all other cash and non-cash related benefits received by the individual during the year presented and includes such items as the taxable portion of insurance premiums, car and mileage allowances and electronic communication items. For most individuals, compensation pension is the amount paid to compensate for future pension shortfall estimated at the time of transition from Hydro's defined benefit pension plans to the defined contribution plan in line with an arrangement applicable to all affected employees in Norway. For John Thuestad, Egil Hogna and Katarina Nilsson, compensation pension is the amount paid to compensate for lower pension benefits in Hydro compared to those of former employer Sapa AS (now Hydro Extruded Solutions AS). Bonus is the amount earned in the year presented, including vacation pay, based on performance achieved as corporate management board member. The LTI plan benefit reflects gross (pre-tax) amounts earned in the year presented, and results in LTI shares allocated in the following year. For 2018, the LTI benefits reported represent estimates. For 2017, the LTI benefits reported have been updated with final numbers. For corporate management board members on net salary employment contracts, benefits have been converted to estimated gross (pre-tax) amounts.

4) Pension benefits include the estimated change in the value of defined pension benefits, and reflects both the effect of earning an additional year's pension benefit and the adjustment to present value of previously earned pension rights (interest element). It is calculated as the increase in the Defined Benefit Obligations (DBO) calculated with stable assumptions. Pension benefits also include contributions to defined contribution plans.

5) Hydro share ownership is the number of shares held directly by the corporate management board member and any shares held by close family members and controlled entities. Hydro share ownership is as of December 31, or per the date of stepping down from the Corporate Management Board.

6) From March 5 until June 1, 2018, Eivind Kallevik was appointed interim EVP and Head of Bauxite & Alumina business area, for which he received an extra remuneration of NOK 750 thousand that is included in column Salary paid in the table above. During this period, Kallevik remained in his position as CFO.

7) John Thuestad became member of the Corporate Management Board as of June 1, 2018. From this date, Thuestad has a retention agreement that vests progressively over a 60-month period. Thuestad earned an estimated NOK 739 thousand under this agreement in 2018. Thuestad also had a retention agreement from 2017, as former member of Sapa's corporate management team, that vested after 6 months in April 2018. Thuestad earned NOK 873 thousand under this agreement in 2018. These amounts are included in column Salary paid in the table above.

8) Egil Hogna became member of the Corporate Management Board as of October 2, 2017. From this date, and as former member of Sapa's corporate management team, Hogna had a retention agreement that vested after 12 months. Hogna earned NOK 3,940 thousand and NOK 1,313 thousand under this agreement in 2018 and 2017, respectively. These amounts are included in column Salary paid in the table above.

9) For work regarding the Alunorte situation in Brazil, Anne-Lene Midseim, Inger Sethov and Katarina Nilsson received an extra compensation of NOK 300 thousand, NOK 300 thousand and NOK 200 thousand, respectively. These amounts are included in column Other benefits paid in the table above.

10) Katarina Nilsson became member of the Corporate Management Board as of October 2, 2017. From this date, and as former member of Sapa's corporate management team, Nilsson had a retention agreement that vested after 6 months. Nilsson earned NOK 494 thousand and NOK 546 thousand under this agreement in 2018 and 2017, respectively. These amounts are included in column Salary paid in the table above. Katarina Nilsson stepped down from the Corporate Management Board as of January 7, 2019.

11) Silvio Porto stepped down from the Corporate Management Board as of March 5, 2019, and left Hydro as of July 31, 2019. In addition to the benefits included in the table above, Porto received certain benefits at termination, including statutory benefits, amounting to NOK 1,649 thousand. Porto was not required to make any payments to Hydro for non-vested LTI shares at termination of employment. In addition to the performance related pay arrangement for all members of the Corporate Management Board, Porto had a cash-paid long-term incentive which was payable over three years with payments partly dependent on salary levels and business results in the following two years, included in bonus. The reported bonus amounts are final, and prior year estimate has been updated.

12) Hanne Simensen stepped down from the Corporate Management Board as of October 2, 2017. Under the long-term incentive for 2017 settled in 2018, Simensen received 3,548 shares.



## Note 10 - Board of Directors and Corporate Assembly

### Board of Directors' remuneration and share ownership

Total board fees and individual board member fees for 2018 and 2017, and outstanding loans and board member share ownership as of December 31, 2018 and 2017, are presented in the tables below.

#### Board of Directors' fees

Amounts in NOK thousand	2018	2017
Fees and other remuneration - normal board activities	3,521	3,419
Fees - audit committee	599	531
Fees - compensation committee	293	286
<b>Total fees for board services provided to Hydro during the year</b>	<b>4,413</b>	<b>4,236</b>

Board member / observer	Board fees <sup>1)</sup>		Outstanding loans <sup>1) 2)</sup>		Number of shares <sup>3)</sup>	
	2018	2017	2018	2017	2018	2017
Dag Mejdell <sup>4)</sup>	780	740	-	-	35,000	35,000
Irene Rummelhoff <sup>5)</sup>	489	478	-	-	5,000	5,000
Finn Jebsen <sup>6)</sup>	554	541	-	-	53,406	53,406
Thomas Schulz	351	343	-	-	-	-
Liselott Kilaas <sup>7)</sup>	282	-	-	-	-	-
Marianne Wiinholt <sup>8)</sup>	483	418	-	-	-	-
Arve Baade <sup>9) 10)</sup>	88	-	-	-	4,347	-
Sten Roar Martinsen <sup>10) 11)</sup>	439	429	-	-	6,086	5,643
Svein Kåre Sund <sup>10) 12)</sup>	384	200	5	49	5,651	5,208
Tor Egil Skulstad <sup>10) 13)</sup>	-	-	-	-	443	-
Liv Monica Stubholt <sup>14)</sup>	201	472	-	-	-	-
Billy Fredagsvik <sup>10) 15)</sup>	362	418	21	87	5,030	4,587
Ove Ellefsen <sup>10) 16)</sup>	-	197	-	-	-	8,972
<b>Total</b>	<b>4,413</b>	<b>4,236</b>	<b>26</b>	<b>137</b>	<b>114,963</b>	<b>117,816</b>

1) Amounts in NOK thousand.

2) Loans are extended to board members who are also Hydro employees under an employee benefit scheme available to all employees in Norway. Loans as of December 31, 2018 and 2017 for board members as of December 31, 2018 and 2017, otherwise loans are as of the date the individual stepped down from the Board of Directors. At the end of 2018, the loan to Svein Kåre Sund had an interest of 5.9 percent, and was repaid in January 2019. As of the date of stepping down from the Board of Directors, the loan to Billy Fredagsvik had an interest rate of 5.9 percent, and the loan was repaid by the end of 2018. All payments have been made in a timely fashion and in accordance with the agreed payment schedule. Loans have not been extended to close members of family and controlled entities.

3) Number of shares owned as of December 31, 2018 and 2017 for board members as of December 31, 2018 and 2017; otherwise it is the number of shares owned as of the date the individual stepped down from the Board of Directors. Shareholdings disclosed include shares held by close members of family and controlled entities, in addition to shares held directly by the board member.

4) Chairperson of the board and chairperson of the board compensation committee.

5) Deputy chairperson of the board and member of the board compensation committee.

6) Chairperson of the board audit committee.

7) Member of the board as of May 23, 2018. Member of the board audit committee as of June 12, 2018.

8) Member of the board audit committee as of June 7, 2017.

9) Member of the board as of October 1, 2018.

10) Employee representative on the board elected by the employees in accordance with Norwegian Company Laws. As such, these individuals are also paid regular salary, remuneration in kind and pension benefits that are not included in the table above.

11) Member of the board compensation committee.

12) Member of the board as of May 23, 2017. Member of the board audit committee as of October 23, 2018.

13) Observer on the board as of October 2, 2017.

14) Member of the board and the board audit committee until May 23, 2018.

15) Member of the board audit committee as of June 7, 2017. Member of the board and the board audit committee until September 30, 2018.

16) Member of the board and the board audit committee until May 23, 2017.

The remuneration to the Board of Directors consists of the payment of fees and travel compensation. Travel compensation is paid to members living outside Scandinavia who attend meetings in person, with an amount of NOK 10,300 (2017: NOK 10,000) per meeting. Board members do not have any incentive or share-based compensation. Hydro has not made any guarantees on behalf of any of the board members. The only board members with loans from Hydro are the employee-elected members of the board.

Fees are based on the position of the board members and board committee assignments. Annual fees for 2018 for the chairperson of the board, deputy chairperson and directors are NOK 663,000 (2017: NOK 626,000), NOK 401,000 (2017: NOK 392,000) and NOK 351,000 (2017: NOK 343,000), respectively. The chairperson of the audit committee and the chairperson of the compensation committee receive an additional NOK 203,000 (2017: NOK 198,000) and NOK 117,000 (2017: NOK 114,000) annually in fees, respectively, and audit and compensation committee members receive NOK 132,000 (2017: NOK 129,000) and NOK 88,000 (2017: NOK 86,000) annually, respectively, for their participation on these committees. No fees are paid to the board observer.

### Corporate Assembly

Corporate Assembly members owned 34,597 shares as of December 31, 2018. Loans to employees who are members of the Corporate Assembly were extended under an employee benefit scheme that is available to all employees in Norway. Loans outstanding to Corporate Assembly members who are also Hydro employees totaled NOK 419 thousand as of December 31, 2018. The interest rates on these loans are 2.50 percent and 5.90 percent, with a repayment period between three and 12 years.

## Note 11 - Related party information

As of December 31, 2018, The Norwegian state had ownership interests of 34.6 percent of total shares outstanding (2017: 34.7 percent) in Hydro through the Ministry of Trade, Industry and Fisheries. In addition, Folketrygdfondet, which manages the Government Pension Fund – Norway<sup>3</sup> held 6.8 percent (2017: 6.5 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 significant interest in Hydro, and that the State thus is a related party.

The Norwegian state has ownership interests in a substantial number of companies. The ownership interests in 75 companies are managed by the ministries and covered by public information from the Ministry of Trade, Industry and Fisheries<sup>4</sup>. 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 SF and bank services from DNB ASA. Generally, transactions are agreed independently of the possible control exercised by the State.

The public enterprise Enova, which supports new energy and climate-related technology development in Norway, decided in June 2014 to contribute up to NOK 1.56 billion to Hydro's pilot project for new electrolysis technology at Karmøy, Norway. The contribution was approved by the European Free Trade Association, EFTA, in February 2015 with the first payment in July 2015. The grant has been paid over the preparation, building and commissioning period. As of the end of 2018, a total of NOK 1.56 million was received, representing the full grant.

A significant share of Hydro's defined benefit post-employment plans is managed by the independent pension trust, Norsk Hydro 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 8 million for both 2018 and 2017. Further, the pension trust is located in Hydro's head office. Office costs, including heating and administrative services and other administrative services, are charged with a total of NOK 6 million for 2018 and NOK 2 million for 2017.

The pension trust owns some of the office buildings 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 68 million and NOK 60 million for 2018 and 2017, respectively. The initial term of the rental contract expires in February 2022 after exercise of a one-year extension option. The contract includes an extension option for an additional five-year period. In addition, compensation related to cancellation of a previous contract was paid with NOK 83 million and NOK 81 million for 2018 and 2017, respectively. The compensation arrangement expires in 2021. The remaining provision for the compensation arrangement as of December 31, 2018 was NOK 219 million. As of the end of 2018, Hydro's outstanding balance towards Norsk Hydros Pensjonskasse was NOK 19 million.

The members of Hydro's board of directors during 2018 and 2017 are stated in note 10 Board of Directors and Corporate Assembly, where their remuneration and share ownership is outlined. 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. Liv Monica Stubholt, a Board member until May 2018, is partner in the Norwegian law firm Advokatfirmaet Selmer DA. Selmer has had assignments for Hydro resulting in fees of NOK 0.5 million in the period January to May, 2018 and NOK 2.0 million in 2017. Stubholt has not been involved in these services to Hydro. Some close family members of members of Hydro's management are employed in non-executive positions in Hydro.

Hydro's significant joint arrangements and transactions with those entities are described in note 32 Investments in joint arrangements and associates. Hydro has joint arrangements with a number of other companies. Generally, the relationships

<sup>3</sup> Shareholding is based on information from the Norwegian Central Securities Depository (VPS) as of December 31, 2018 and 2017. Due to lending of shares, an investor's holdings registered in its VPS account may vary.

<sup>4</sup> According to information on the Government web site [www.regjeringen.no](http://www.regjeringen.no), state ownership.

are 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.

Transactions with related parties are at arm's length principles.

## Note 12 - Financial and commercial risk management

Hydro is exposed to market risks from fluctuations in the price of commodities bought and sold, prices of other raw materials, currency exchange rates and interest rates. Price volatility, which may be significant, can have a substantial impact on Hydro's results. Market risk exposures are evaluated based on a holistic approach in order to take advantage of offsetting positions and to manage risk on a net exposure basis. Natural hedging positions are established where possible and economically viable. Hydro uses financial derivatives to some extent to manage financial and commercial risk exposures. Hydro's main policy to manage market volatility is to keep a strong financial position. Hydro's market risk strategy is materially unchanged in 2018 compared to previous years.

### Commodity price risk exposure

#### *Aluminium*

Hydro produces primary aluminium and aluminium casthouse products, both based on primary aluminium and remelted aluminium, and fabricated aluminium products. Hydro also engages in sourcing and trading activities to procure raw materials and primary aluminium for internal use and for resale to customers. These activities serve to optimize capacity utilization, reduce logistical costs and strengthen our market positions. Hydro also participates in trading activities within strict volume and risk limits.

Hydro enters into future contracts on the London Metal Exchange (LME) mainly for two purposes. The first is to achieve an average LME aluminium price on smelter production. Second, because Hydro's downstream businesses, remelting, and the sale of third-party products are based on margins above the LME price, Hydro seeks to offset the metal price exposure when entering into customer and supplier contracts with corresponding physical or derivative future contracts at fixed prices (back-to-back hedging). Hydro manages these exposures on a portfolio basis, taking LME positions based upon net exposures within given limits. Aluminium price volatility can result in significant fluctuations in earnings as the derivative positions are marked to their market value with changes to market value recognized in the income statement, while the underlying physical metal transactions normally are not marked-to-market, except for those included in trading portfolios. The majority of Hydro's LME contracts mature within one year.

Hydro's sales of primary aluminium, aluminium casthouse products and fabricated aluminium products include a premium above the LME aluminium price. The pricing of these premiums can be volatile, and is related to physical demand and supply, with regional and product-related differences. Over the later years, these premiums have been a higher share of the revenue than historic averages. 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.

In order to secure cash flow or margins for specific projects or special circumstances, Hydro might enter into futures contracts on a longer-term basis. In these cases, hedge accounting has normally been applied.

#### *Bauxite and alumina*

Hydro's production of alumina normally exceeds the alumina consumption in its primary aluminium production. In addition, Hydro has entered into long-term agreements to purchase alumina from third parties. In 2018 and into 2019, Hydro's production at Alunorte is limited by the production embargo, leading to higher purchases in the spot market. The majority of purchase and sale contracts are priced with reference to the Platts alumina price index, a spot market price index.

Hydro is a producer and consumer of bauxite. Hydro's need for bauxite is secured through long-term contracts as well as by own production. The purchasing contracts have links to the LME aluminium price and to the Platts alumina price index. Hydro has a limited volume of excess bauxite from long-term sourcing contracts, which is sold under medium and short-term contracts with prices linked to the alumina price index or open price negotiations.

#### *Electricity*

Hydro is a large power consumer with significant power production. Hydro's consumption is mainly secured through long-term contracts with power suppliers and through Hydro's own production in Norway. Hydro's own production is influenced by hydrological conditions which can vary significantly. The net power position in Norway is balanced out in the Nordic power market. In order to manage and mitigate risks related to price and volume fluctuations, Hydro utilizes physical contracts and derivatives including future contracts, forwards and options. Hydro also participates in trading activities within strict volume and risk limits.

A significant part of Hydro's power purchase contracts is linked to aluminium prices in order to mitigate market price risk related to the sales of its aluminium products. These contract elements are separated from their host contracts and accounted

for as derivatives. Further, some power contracts in Norway are priced in Euro. There is no consensus that the Euro is a commonly used currency in the relevant market, the euro price clauses are thus accounted for separately as currency forwards.

#### *Other raw materials*

Hydro is party to both long-term and short-term sourcing agreements for a range of raw materials and services with both fixed and variable prices. Such agreements include pitch, petroleum coke, caustic, natural gas, coal, fuel oil and freight. The number of purchasing agreements with prices linked to the price of other commodities such as aluminium is limited and the fair value exposure is considered to be immaterial.

#### **Foreign currency risk exposure**

The prices of Hydro's upstream products bauxite, alumina and primary aluminium, are mainly denominated in US dollars. Margins for 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. Hydro also incurs 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 underlying foreign currency risk is consequently linked to fluctuations in the value of the US dollar and Euro 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 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 from time to time.

#### *Foreign currency risk exposure in financial instruments*

Short-term receivables and payables are often held in currencies other than the functional currency of the unit. Fluctuations between the functional currency and the currency in which the receivable or payable is denominated are reported in Financial expense. Borrowings and deposits may be denominated in other currencies than the functional currency of the unit. Fluctuations between the functional currency and the instrument's currencies, both short and long term, impact the recognized value of the debt or deposit, and are reported in Financial expense. Embedded currency derivatives in non-financial contracts, including the Euro priced electricity contracts discussed above, contains a currency exposure with changes to the fair value of the embedded derivative included in Financial expenses. Investments in equity and debt instruments of other entities are often impacted by changes in currency exchange rates. To the extent such investments are carried at fair value, the currency changes are included in the changes of fair value and reported as an integral part of such changes.

#### **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, Swedish Krone, Euro, US dollars and Brazilian real. The corresponding interest rate exposures are consequently related to Norwegian Krone, Swedish Krone, Euro, US dollar and Brazilian real short-term rates.

Financial instruments and provisions are also exposed to changes in interest rates in connection with discounting of positions to present value. See sensitivity analysis of financial instruments in note 13 Financial instruments.

#### **Credit risk management**

Hydro manages credit risk by setting counterparty risk limits and establishing procedures for monitoring exposures and timely settlement of customer accounts. Prepayments or guarantees are required where credit risk is outside the limits set for the relevant counterparty. Hydro is also monitoring the financial performance of key suppliers in order to reduce the risk of default on operations and key projects. 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, and banks. Current counterparty risk related to the use of derivative instruments and financial operations is considered limited.

**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.

To fund cash deficits of a more permanent nature Hydro will normally raise equity, long-term bond or bank debt in available markets.

Repayments of long-term debt are disclosed in note 34 Short and long-term debt. Further, all other financial liabilities, such as trade payables, with the exception of derivatives, have a final maturity date within one year. 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 limited due to strict volume limits, value-at-risk and tenor limits for relevant trading activities.

Information about derivatives and other financial instruments held, including sensitivity analysis, is presented in note 13 Financial instruments.

Expected gross cash flows from derivatives accounted for as financial liabilities and financial assets, respectively, as of end of year:

Amounts in NOK million	December 31, 2018		December 31, 2017	
	Liabilities	Assets	Liabilities	Assets
2018			(456)	526
2019	(314)	580	(47)	47
2020	(45)	47	(14)	12
2021	(1)	1		
Total	(361)	628	(517)	585

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 14 Derivative instruments and hedge accounting.

**Note 13 - Financial instruments**

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.

The below specification relates to financial statement line items containing financial instruments. Information for 2018 is classified and measured in accordance with IFRS 9, while information for 2017 is classified and measured in accordance with IAS 39. See note 3 Changes in accounting principles and new pronouncements.

Instruments included in Financial instruments at FVTPL in 2017 are in 2018 classified partly as Financial instruments at FVTPL and partly as Derivatives at FVTPL. Instruments included in the category Loans and receivables in 2017 are classified as Debt instruments at amortized cost in 2018. Instruments included in the category Other financial liabilities in 2017 are classified as Financial liabilities at amortized cost in 2018. Investments classified as Available-for-sale financial assets have been classified partly as Financial instruments at FVTPL and partly as Equity instruments at FVOCI in 2018, depending on the characteristics of the instrument.

A reconciliation of the financial instruments in Hydro is presented below:

Amounts in NOK million	Derivatives at FVTPL <sup>1)</sup>	Derivatives identified as hedging instruments	Debt instruments at amortized cost	Financial instruments at FVTPL <sup>2)</sup>	Equity instruments at FVOCI <sup>1)</sup>	Financial liabilities at amortized cost	Non-financial assets and liabilities <sup>3)</sup>	Total
<b>2018</b>								
<b>Assets - current</b>								
Cash and cash equivalents	-	-	5,995	-	-	-	-	5,995
Short-term investments	-	-	119	856	-	-	-	975
Trade and other receivables	-	-	17,860	-	-	-	2,884	20,743
Other current financial assets	605	-	-	-	-	-	196	801
<b>Assets - non-current</b>								
Investments accounted for using the equity method	-	-	11	-	-	-	11,559	11,570
Other non-current assets	333	3	867	535	1,405	-	2,576	5,720
<b>Liabilities - current</b>								
Bank loans and other interest-bearing short-term debt	-	-	-	-	-	8,543	-	8,543
Trade and other payables	-	-	-	-	-	12,830	7,551	20,381
Other current financial liabilities	445	66	-	-	-	5	-	515
<b>Liabilities - non-current</b>								
Long-term debt	-	-	-	-	-	7,080	-	7,080
Other non-current financial liabilities	2,429	-	-	-	-	-	-	2,429

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.

Amounts in NOK million	Financial instruments at fair value through profit or loss <sup>1)</sup>	Derivatives identified as hedging instruments	Loans and receivables	Available-for-sale financial assets <sup>2)</sup>	Other financial liabilities <sup>3)</sup>	Non-financial assets and liabilities <sup>4)</sup>	Total
<b>2017</b>							
<b>Assets - current</b>							
Cash and cash equivalents	-	-	11,828	-	-	-	11,828
Short-term investments	1,053	-	257	-	-	-	1,311
Trade and other receivables	-	-	17,031	-	-	2,953	19,983
Other current financial assets	602	-	-	-	-	196	798
<b>Assets - non-current</b>							
Investments accounted for using the equity method	-	-	1	-	-	11,220	11,221
Other non-current assets	268	-	960	1,505	-	1,678	4,410
<b>Liabilities - current</b>							
Bank loans and other interest-bearing short-term debt	-	-	-	-	8,245	-	8,245
Trade and other payables	-	-	-	-	12,318	7,254	19,571
Other current financial liabilities	645	8	-	-	2	-	655
<b>Liabilities - non-current</b>							
Long-term debt	-	-	-	-	9,012	-	9,012
Other non-current financial liabilities	2,004	37	-	-	-	-	2,041

1) Financial Instruments at Fair Value Through Profit or Loss (FVTPL) are trading instruments required by ISA 39 to be at FVTPL.

2) Includes the investment in the independent pension trust Norsk Hydros Pensjonskasse, carried at cost.

3) Items disclosed under this category are financial liabilities at amortized cost.

4) 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 reported as part of Short-term investments.

Impairment of receivables are disclosed in note 26 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 <sup>1)</sup>
<b>2018</b>								
<b>Income statement line item</b>								
Revenue	(983)	-	-	-	-	-	-	(983)
Raw material and energy expense	(135)	163	-	-	-	-	-	28
Financial income	-	-	-	(3)	-	-	-	(3)
Financial expense	574	-	-	-	-	-	-	574
<b>Gain/loss in Other comprehensive income</b>								
Recognized in Other comprehensive income (before tax)					(394)			
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.

Amounts in NOK million	Financial instruments at fair value through profit or loss	Derivatives identified as hedging instruments	Loans and receivables	Available-for-sale financial assets	Other financial liabilities	Non-financial assets and liabilities	Total <sup>1)</sup>
<b>2017</b>							
<b>Income statement line item</b>							
Revenue	541	-	-	-	-	-	541
Raw material and energy expense	281	85	-	-	-	-	366
Financial income	(44)	-	-	(115)	-	-	(158)
Financial expense	811	-	-	-	-	-	811
<b>Gain/loss in Other comprehensive income</b>							
Recognized in Other comprehensive income (before tax)				266			
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 as of December 31, 2018 and December 31, 2017. 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.

Amounts in NOK million	Fair value as of December 31, 2018 <sup>1)</sup>	Gain (loss) from 10 percent increase in						
		Foreign currency exchange rates			Commodity prices		Interest- rates	
		USD	EUR	Other	Aluminium	Other		
Derivative financial instruments <sup>2)</sup>	(2,149)	-	(2,542)	-	-	-	33	-
Other financial instruments <sup>3)</sup>	(2,399)	(537)	303	(191)	-	-	-	24
Derivative commodity instruments <sup>4)</sup>	214	5	18	-	(298)	81	(3)	(1)
Financial instruments at FVOCI <sup>5)</sup>	1,343	256	(6)	1	-	19	(123)	137

Amounts in NOK million	Fair value as of December 31, 2017 <sup>1)</sup>	Gain (loss) from 10 percent increase in						
		Foreign currency exchange rates			Commodity prices		Interest- rates	
		USD	EUR	Other	Aluminium	Other		
Derivative financial instruments <sup>2)</sup>	(1,574)	(1)	(2,018)	(3)	-	-	21	-
Other financial instruments <sup>3)</sup>	2,088	(160)	128	(214)	-	-	2	31
Derivative commodity instruments <sup>4)</sup>	(205)	(56)	23	11	(130)	(41)	(14)	(3)
Financial instruments at FVOCI <sup>5)</sup>	924	282	(5)	-	-	33	(122)	95

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). 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	2018	Level 1	Level 2	Level 3	2017	Level 1	Level 2	Level 3
<b>Assets</b>								
Commodity derivatives	921	376	275	270	845	451	199	195
Currency derivatives	17	2	14	-	25	25	-	-
Cash flow hedges	3	-	-	3	-	-	-	-
Financial assets at FVTPL	1,391	253	603	535	1,053	331	722	-
Financial assets at FVOCI	1,405	-	-	1,405	969	-	-	969
<b>Total</b>	<b>3,738</b>	<b>631</b>	<b>892</b>	<b>2,213</b>	<b>2,893</b>	<b>808</b>	<b>921</b>	<b>1,164</b>
<b>Liabilities</b>								
Commodity derivatives	(708)	(146)	(236)	(325)	(1,049)	(419)	(157)	(473)
Currency derivatives	(2,165)	(4)	(2,161)	-	(1,600)	(34)	(1,566)	-
Cash flow hedges	(66)	-	-	(66)	(45)	-	-	(45)
<b>Total</b>	<b>(2,939)</b>	<b>(150)</b>	<b>(2,397)</b>	<b>(391)</b>	<b>(2,694)</b>	<b>(453)</b>	<b>(1,723)</b>	<b>(519)</b>

The following is an overview in which changes in level 3 measurements are specified:

Amounts in NOK million	Commodity derivatives		Currency derivatives	Cash flow hedges	Financial instruments at FVTPL	Equity instruments at FVOCI <sup>1)</sup>	Other
	Assets	Liabilities	Liabilities				
December 31, 2016	26	(47)	-	(280)	-	1,132	10
Total gains (losses)							
in Income statement	174	(473)	-	-	-	-	-
in Other comprehensive income	-	-	-	149	-	(266)	-
Purchases	-	-	-	-	-	7	-
Reclassified to level 2	-	-	-	-	-	-	(5)
Settlements	(1)	51	-	86	-	-	(5)
Currency translation difference	(4)	(3)	-	-	-	98	-
December 31, 2017	195	(473)	-	(45)	-	969	-
Total gains (losses)							
in Income statement	(119)	177	-	-	-	-	-
in Other comprehensive income	-	-	-	(141)	-	395	-
Purchases	195	(39)	-	-	-	-	-
Reclassified at transition to IFRS 9	-	-	-	-	535	-	-
Settlements	-	16	-	124	-	-	-
Currency translation difference	-	(5)	-	-	-	40	-
December 31, 2018	270	(325)	-	(63)	535	1,405	-
Total gains (losses) for the period	(119)	177	-	(141)	-	395	-
Total gains (losses) for the period included in the income statement for assets held at the end of the reporting period	(119)	177	-	-	-	-	-

1) Instruments classified as FVOCI in 2018 correspond to the category Available for sale financial assets in 2017.

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.

Sensitivities relating to commodity derivatives are based on models utilized in the calculation of position balance as of December 31, adjusted for alternate assumptions. Effects shown below are largely also representative of increases in rates or prices by 10 percent but with the opposite sign convention. The following is an overview of such sensitivity:

Amounts in NOK million	Gain (loss) from 10 percent decrease in				
	USD	EUR	Aluminium	Other commodity	Interest rates
Commodity derivatives	17	(14)	52	-	3
Cash flow hedges	-	6	-	(19)	-
Equity instruments at FVOCI	(314)	-	-	-	141

## Note 14 - Derivative instruments and hedge accounting

Derivative instruments, whether physically or financially settled, are accounted for under IFRS 9. All derivative instruments are accounted for at fair value with changes in the fair value recognized in the income statement, unless specific hedge criteria are met. Some of Hydro's commodity contracts are deemed to be derivatives under IFRS. For further explanation on the principles for which physical commodity contracts that are accounted for as derivatives, and which are considered own use, see note 2 Significant accounting policies.

### Embedded derivatives

Some contracts contain pricing links that affect cash flows in a manner different than the underlying commodity or financial instrument in the contract. For accounting purposes, these embedded derivatives are in some circumstances separated from the host contract and recognized at fair value. Hydro has separated and recognized at fair value embedded derivatives related to currency, aluminium, inflation and coal links from the underlying contracts.

### Commodity derivatives

The following types of commodity derivatives were recorded at fair value on the balance sheet as of December 31, 2018 and December 31, 2017. Contracts that are designated as hedging instruments in cash flow hedges are not included. The presentation of fair values for electricity and aluminium contracts shown in the table below includes the fair value of traditional derivative instruments such as futures, forwards and swaps, in conjunction with the physical contracts accounted for at fair value, as well as embedded derivatives.

Amounts in NOK million	2018	2017
<b>Assets</b>		
Electricity contracts	520	175
Aluminium futures, forwards and options	437	719
Other	95	164
Netting	(130)	(213)
<b>Total</b>	<b>921</b>	<b>845</b>
<b>Liabilities</b>		
Electricity contracts	(293)	(162)
Coal forwards	(302)	(397)
Aluminium futures, forwards and options	(243)	(704)
Netting	130	213
<b>Total</b>	<b>(708)</b>	<b>(1,049)</b>

Embedded derivatives are classified based on the underlying in the contract feature constituting a separable embedded derivative in the table above. Where there are 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 host contract for embedded derivatives and on the purpose of the instrument for freestanding derivatives.

### 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 2012 Hydro entered into a hedge arrangement for parts of the power consumption in the Rheinwerk smelter in Germany. The price differential between the German and the Nordic power market was secured through derivative contracts for 150 MW for the period 2013 to 2020.

No ineffectiveness was recognized in the income statement in 2018 or 2017.

The table below gives aggregated numbers related to the cash flow hedges for the period 2017 to 2018.

Amounts in NOK million	2019	2018	2017
Expected to be reclassified to the income statement during the year (NOK million)	(65)	(8)	(73)
Reclassified to the income statement from Other components of equity (NOK million) <sup>1)</sup>		(124)	(79)

1) Deviates from expected reclassifications due to change in market prices throughout the year. Negative amounts indicate a loss.

Liabilities of NOK 62 million and NOK 45 million were recognized as the fair value of cash flow hedging instruments for December 31, 2018 and 2017, 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 2018 and 2017, please see note 38 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. Hydro takes credit-spread into consideration when valuating positions when necessary.

For further information on fair values, see note 4 Measurement of fair value. See note 13 Financial instruments for a specification of the classification of derivative positions according to a fair value hierarchy.

## Note 15 - Revenues from contracts with customers

Hydro implemented IFRS 15 Revenue from Contracts with Customers as of January 1, 2018. The standard is implemented retrospectively with the cumulative effect of initially applying IFRS 15 recognized directly to equity at implementation. The amounts presented for the year 2017 are thus not fully comparable, however, the differences are limited.

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 contracts cover more than one year, however, these are a declining number. 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, which is the same time as under the previous standard used for 2017 amounts. Such contracts accounts for the majority of sales in the segments Bauxite & Alumina, Primary Metal, Metal Markets and Rolled Products, and a significant share of sales in Extruded Solutions. Some of these contracts includes 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. Payment terms for such products vary between customer segments and regions. The predominant terms vary between 30 to 120 days, and up to a 150 days.

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 the time from start 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 basis for producing 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 Extruded Solutions. 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 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 terms for such products vary between customer segments and regions. The predominant terms vary between 30 to 60 days.

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.

Sale of electricity, primarily from the Energy segment, continues to be recognized 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. During 2018, the majority of power sale from other segments than Energy is related to the 50 percent curtailment in Primary Metal's Albras plant, amounting to NOK 1,429 million for 2018 and NOK 254 million for 2017. 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 78 million and NOK 75 million in 2018 and 2017, 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 7 Operating and geographic segment information. Revenue divided by product type for the main product groups sold are as follows:

Amounts in NOK million	2018	2017
Extruded solutions	61,367	13,927
Rolled products	26,538	25,447
Standard ingots	8,997	11,820
Extrusion ingots	22,030	22,463
Other casthouse products	17,804	16,752
Alumina	11,322	12,788
Power	5,021	2,731
Other goods and services <sup>1)</sup>	5,333	3,774
Total revenue from contracts with customers	158,411	109,702
Other revenue	965	(482)
Total revenue	159,377	109,220

1) Includes sale of bauxite and revenue from allocated freight

### Sales commitments

Hydro has entered into sales contracts with customers, mainly for alumina and finished products, either as firm commitments or as committed frame agreements where the customer decides if, and for which volume, a future sale is made. The majority of these contractual commitments are for sale of products at price terms linked to market prices at, or close to, future delivery. The commitments amount to NOK 73 billion, calculated using market prices as of the end of the year. About NOK 21 billion of this amount is expected to be delivered in 2019.

## Note 16 - Other income

Amounts in NOK million	2018	2017
Gain on sale of property, plant and equipment	37	30
Net gain (loss) on sale of subsidiaries, associates and joint ventures <sup>1)</sup>	(6)	2,177
Revenue from utilities <sup>2)</sup>	58	89
Rental revenue	45	42
Government grants <sup>3)</sup>	380	498
Other <sup>4)</sup>	259	110
Other income, net	772	2,947

1) Amount in 2017 is related mainly to the net remeasurement gain on the previously owned shares in Sapa.

2) Revenue from utilities includes quay structures, pipe network, tank terminal, process water and grid rental.

3) Government grants includes export grants in Brazil, CO2 compensation and investment grants related to Hydro's pilot facility on Karmøy

4) Other includes royalties and insurance compensations.

## Note 17 - Raw material and energy expense

Amounts in NOK million	2018	2017
Raw material expense and production related cost	105,118	70,050
Change in inventories own production	(2,596)	(202)
Raw material and energy expense	102,523	69,848

Raw material expense and production related cost include effect of commodity derivative instruments. See note 14 Derivative instruments and hedge accounting.

## Note 18 - Employee remuneration

### 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 12,500 or NOK 25,000, 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 2017 performance measurement period was accrued and recognized over the service period of December 31, 2017 through March 31, 2018, the final acceptance date of the offer. In 2018 and 2017 the participation rates of eligible employees in the employee share purchase plan were 88 and 92 percent, respectively. Details related to the employee share purchase plan are provided in the table below.

### Employee share purchase plan

Performance measurement period	2018	2017	2016
Total shareholder return performance target achieved	<12%	≥12%	≥12%
Employee rebate offered, NOK	6,250	12,500	12,500

### Share purchase plan compensation

	2018	2017
Award share price, NOK	51.54	48.40
Number of shares issued, per employee	443	511
Total number of shares issued to employees	1,543,412	1,729,735
Compensation expense related to the award, NOK thousand	36,023	41,496

### Employee benefit expense

The average number of employees in Hydro for 2018 and 2017 was 35,731 and 18,422, respectively. As of year end 2018 and 2017, Hydro employed 36,236 and 34,625 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.

#### Employee benefit expense

Amounts in NOK million	2018	2017
Salary	18,090	10,434
Social security costs	2,910	1,660
Other benefits	1,023	400
Pension expense (note 37)	1,153	791
<b>Total</b>	<b>23,176</b>	<b>13,285</b>

## Note 19 - Depreciation and amortization expense

#### Specification of depreciation and amortization by asset category

Amounts in NOK million	2018	2017
Buildings	1,158	930
Machinery and equipment	5,705	5,004
Intangible assets	506	222
<b>Depreciation and amortization expense</b>	<b>7,369</b>	<b>6,156</b>

## Note 20 - Impairment of non-current assets

All Cash Generating Units (CGUs) or fixed assets that are not part of a CGU are reviewed for impairment indicators at each balance sheet date with the exception of goodwill and assets from recent acquisitions where the allocation of fair values is provisionally determined as of the balance sheet date. Tests for impairment have been performed for the CGUs where impairment indicators have been identified. The recoverable amount 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. For Hydro's businesses the pre-tax nominal discount rate is estimated at between 6.0 and 17.5 percent (2017: 8.75-16.0 percent). The higher rates are applicable for assets within the Bauxite & Alumina and Primary Metal activities in Brazil, while the lower rates are applicable for assets within Extruded Solutions and Rolled Products in Europe. Impairment losses have been recognized where the recoverable amount is less than the carrying value.

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. The carrying amount is not recoverable if it exceeds the higher of the asset's or cash generating unit's fair value less costs to sell or the value in use. 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.

There were no impairment losses recognized in 2018, and an impairment loss of NOK 5 million recognized in 2017.

Goodwill is allocated to CGUs or groups of CGUs as shown in the following table:

Amounts in NOK million	2018	2017
Extrusion North America (Extruded Solutions)	2,442	-
Extrusion Europe (Extruded Solutions)	778	-
Building Systems (Extrusion Solutions)	504	-
Precision Tubing (Extrusion Solutions)	145	-
Extruded Solutions	-	4,309
Bauxite & Alumina Operations	2,312	2,572
Remelters sector (Metal Markets)	404	388
<b>Total goodwill</b>	<b>6,584</b>	<b>7,269</b>

### Annual mandatory impairment tests

#### *Extruded Solutions*

Goodwill in Extruded Solutions 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 23 extrusion 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 40 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 45 locations in 29 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 19 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 year based on internal business plans approved by management. Results and investment levels are kept at a reasonably stable level from that period, which is considered representative. For a newly acquired business showing negative cash flow, expected increased business volumes are included, reflecting moderate positive cash flows in the future. 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. 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. Sensitivities are expressed as the changes in the parameter which would result in a recoverable amount equal to the carrying amount of the CGU. For the discount rate, the increased rate is applied for the entire period. For changes in annual nominal net cash flows, the reduced cash flow is applied to each year after the first year, 2019.

Amounts in NOK million	Extrusion North America	Extrusion Europe	Building Systems	Precision Tubing
Carrying value of goodwill	2,441	778	504	145
Carrying value of other assets	5,087	7,758	2,604	3,010
Carrying value of CGU	7,525	8,536	3,108	3,155
Recoverable amount	10,914	16,663	9,482	3,602
Recoverable amount in excess of carrying value	3,389	8,127	6,374	447

**Key assumptions:**

Discount rate	9.0%	6.0%	6.0%	8.5%
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**Sensitivities:**

Discount rate - % change	42%	92%	192%	12%
Discount rate - % point	12.75%	11.5%	17.5%	9.5%
Annual reduction in net cash flow per year after year 2019	(17.0%)	(29.0%)	(48.0%)	(7.0%)

*Bauxite & Alumina*

Goodwill in Bauxite & Alumina is allocated to a CGU consisting of the Alunorte alumina refinery, the main bauxite source Paragominas and certain related activities. Following regional flooding in the Barcarena region after a period of extreme rainfall in February 2018, authorities ordered several measures against Alunorte, including that the Alunorte alumina refinery is restricted to 50 percent of its capacity while authorities review the situation, over concerns that flooding led to harmful spills. The newly installed press filters were not allowed to be used. Alunorte was, at the beginning of October 2018, also prevented from using the old drum filter technology to prepare bauxite residue for deposit as the associated bauxite residue area (DRS1) was deemed unstable. At that time, Alunorte was allowed to restart commissioning of the new press filters. Residue prepared for deposit using press filter technology, which results in significantly dryer residue, has been deemed safe to deposit on DRS1. Alunorte is, however, not allowed to use the newly developed bauxite deposit area DRS2, as not all required operating licenses are in place.

Alunorte has eight press filters, which were designed to process 100 percent of Alunorte's bauxite residue. Alunorte was, prior to the embargo imposed in March 2018, in the process of commissioning the press filters and scaling down the use of drum filters. The press filters did not achieve their designed performance during this period. An additional filter is currently being installed and is expected to be in operation during the second half of 2019. The timing of a return to full production capacity at Alunorte when the embargo is lifted depends on whether, and how quickly the press filters can reach required capacity.

The recoverable amount has been determined based on a VIU calculation. The time of lifting the production embargo allowing only 50 percent of normal production is highly uncertain. The impairment test assumes two scenarios; one with the embargo lifted in the middle of 2019, and one with the embargo lifted at the end of 2019. For both scenarios, a return to full capacity is assumed to be reached over a period of two to three years, reflecting the uncertain capacity of the press filters. During the curtailment period, alumina prices at the world market have been significantly higher than in the period immediately preceding the embargo. The higher prices are assumed to be related to the production shortfall, and related undersupply of alumina in the world market. To which extent prices will remain high during 2019 and later should restart not be achieved within reasonable time, is highly uncertain. Further, how much prices will be reduced, and for how long lower prices may be expected, once the Alunorte refinery is allowed to increase its production towards normal production levels, is also highly uncertain. The prices are likely to be impacted by unrelated events in addition to the allowed production level at Alunorte. Further, other market prices and regulatory conditions, including the Brazilian indirect tax regime, are uncertain.

Recoverable amount determined as a VIU calculation amounts to about NOK 42 billion. The value significantly exceeds the carrying value of NOK 23 billion. The calculation used cash flow forecasts in BRL based on internal plans approved by management covering a five-year period. All significant price assumptions are internally derived based on external references. 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. The CGU is expected to remain in operation for at least the 40-year period. Improvements expected from certain planned equipment replacements are included. Further 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	
	2019	Long-term
Exchange rate BRL/USD	3.95	4.10
Alumina price real terms 2018 (USD/mt)	457	355
Production volume alumina (million mt)	3.6	6.3
Discount rate nominal, pre-tax	17.5%	17.5%

Significant cash flows are denominated in US dollars. These are translated to BRL at a rate of 3.95 for 2019 with an increase to a nominal rate of 4.10 in 2025, equal to a real exchange rate of 3.52. For future periods the exchange rate is projected with a rate development reflecting the inflation difference of 2.5 percentage points between international inflation and the higher expected Brazil specific inflation.

If one of the key parameters were changed with no changes to the other assumptions, the estimated recoverable amount for the CGU would equal the carrying amount with the following long-term real 2018 assumptions over the entire 40-year period:

	% change	Value
Exchange rate BRL/USD	(21%)	2.80
Alumina price (USD/mt)	(13%)	311
Discount rate (% point)	51%	26.5%

For 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

The CGU in Bauxite & Alumina was also tested for impairment as of the end of the second quarter and at the end of the third quarter following the embargo at Alunorte, which was deemed an impairment indicator at those times. The tests at the end of both interim periods, concluded that the CGU was not impaired.

The Albras smelter, also located in Barcarena, Brazil, was tested for impairment twice during 2018; at the end of the first quarter when the decision to curtail 50 percent of the production due to lack of alumina following from the embargo at Alunorte, and again at the end of the third quarter when it became evident that the curtailment period would be longer than initially assumed. At both times, we concluded that the plant was not impaired.

At the end of 2018 we identified an impairment indicator for the Slovakian primary aluminium plant Slovalco. The recoverable amount was determined as VIU based on Hydro's internal assumptions for aluminium prices, raw material prices including energy, currency exchange rates and timing of cash flows. Contract prices are used for raw materials and energy for periods covered by specific contracts with external suppliers. For periods where such consumption is not yet contracted, or where internal supply of such items as alumina is expected, estimated market prices are used. VIU for Slovalco, which had a carrying value of PPE of about NOK 1.1 billion, exceeded carrying amount by about 33 percent. No impairment write-down was thus recognized.

In 2017 we identified an impairment indicator for the primary aluminium plant at Husnes, Norway. The recoverable amount was determined as the VIU. Hydro has decided to upgrade and restart the closed line, which was assumed in the test. The recoverable amount exceeded the carrying amount of about NOK 0.4 billion significantly.

In addition certain assets were written down as impaired due to physical damage or obsolescence in 2017.

See note 5 Critical accounting judgment and key sources of estimation uncertainty for additional information about impairment testing. Impairment assessment for investments in associates, joint ventures and other financial assets are discussed in the specific notes.

## Note 21 - Research and development

Total expensed research and development cost was NOK 594 million in 2018 and NOK 500 million in 2017. Research and development activities are aiming at making production of aluminium more efficient including further improving the operational and environmental performance of Hydro's electrolysis technology. A significant proportion of the research and development means are also used for further developing the production processes and products within casting and alloy technology as well as extruded solutions, rolled products and alumina.

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. The capitalized development costs were NOK 21 million in 2018 and NOK 24 million in 2017.

## Note 22 - Operating leases

Future minimum lease payments due under non-cancellable operating leases are as follows:

Amounts in NOK million	Less than 1 year	1-5 years	Thereafter	Total
Operating lease obligation 2018	693	1,546	645	2,884
Operating lease obligation 2017	771	1,283	284	2,338

Operating lease expense for office space, machinery and equipment amounts to NOK 657 million for 2018 and NOK 311 million for 2017.

## Note 23 - Finance income and expense

Amounts in NOK million	2018	2017
Interest income (amortized cost)	250	322
Dividends received and net gain (loss) on securities	6	159
Finance income	255	481
Interest expense (amortized cost)	(699)	(378)
Capitalized interest	1	76
Net foreign exchange gain (loss)	(1,303)	(875)
Accretion	(260)	(368)
Other	(53)	(51)
Finance expense	(2,315)	(1,596)
Finance income (expense), net	(2,060)	(1,114)

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 24 - Income taxes

Amounts in NOK million	2018	2017
<b>Income before tax</b>		
Norway	4,327	6,954
Other countries	2,135	4,121
Total	6,462	11,075
<b>Current taxes</b>		
Norway	1,770	1,715
Other countries	954	860
Current income tax expense	2,724	2,575
<b>Deferred taxes</b>		
Norway	272	(315)
Other countries	(857)	(369)
Deferred tax expense (benefit)	(585)	(685)
Total income tax expense (benefit)	2,139	1,891

### Components of deferred taxes

Amounts in NOK million	2018	2017
Origination and reversal of temporary differences	(409)	(311)
Change in deferred tax asset from tax loss carryforwards	115	269
Effect of tax rate changes	(11)	(171)
Net change in unrecognized deferred tax assets	(492)	(207)
Tax (expense) benefit allocated to Other comprehensive income	211	(265)
Deferred tax expense (benefit)	(585)	(685)

### Reconciliation of tax expense to Norwegian nominal statutory tax rate

Amounts in NOK million	2018	2017
Expected income taxes at statutory tax rate <sup>1)</sup>	1,486	2,658
Hydro-electric power surtax <sup>2)</sup>	943	708
Equity accounted investments	(170)	(372)
Foreign tax rate differences	(417)	(142)
Favorable decisions in tax disputes <sup>3)</sup>	-	(108)
Tax free income	(44)	(601)
Deferred tax asset not recognized and expired tax loss carryforwards	2	(144)
Withholding tax and capital taxes	108	43
Other tax benefits and deductions with no tax benefits, net <sup>4), 5)</sup>	231	(151)
Income tax expense (benefit)	2,139	1,891

1) Norwegian nominal statutory tax rate is 23 percent. It is changed to 22 percent from 2019.

2) A surtax of 35.7 percent is applied to taxable income, with certain adjustments, for Norwegian hydro-electric power plants. The surtax comes in addition to the normal corporate taxation. The surtax rate is changed to 37 percent from 2019.

3) The Norwegian Tax Appeal Board ruled in favor of Hydro in tax disputes in 2017. This was related to losses incurred in 2009-2011 on refinancing of subsidiaries that were denied deduction for tax purposes.

4) A substantial part of the provision related to the Alunorte agreements with the Government of Pará and Ministério Público Federal made on September 5, 2018 (the TAC and TC agreements), is considered not deductible for tax purposes. The tax effect is included in the line Other tax benefits and deductions with no tax benefits, net.

5) A US tax reform was enacted in 2017 and resulted in significant changes to existing tax law in several areas, including a reduction in federal corporate tax rate from 35 percent in 2017 to 21 percent in 2018. The reduced tax rate resulted in a decrease in the deferred tax liability and hence a positive effect on the income tax expense in 2017. The effect is included in the line Other tax benefits and deductions with no tax benefits, net.

**Tax effects of temporary differences and tax loss carryforwards giving rise to deferred tax assets and liabilities**

Amounts in NOK million	Assets	Liabilities	Assets	Liabilities
	2018	2018	2017	2017
Inventory valuation	442	(639)	375	(558)
Accrued expenses	1,549	(311)	1,477	(278)
Property, plant and equipment	10,076	(16,042)	10,097	(15,936)
Intangible assets	1,549	(2,314)	1,538	(2,368)
Pensions	2,761	(1,088)	2,747	(1,274)
Derivatives	639	(209)	536	(145)
Other	517	(980)	162	(724)
Tax loss carryforwards	5,230		5,187	
Subtotal	22,763	(21,583)	22,120	(21,282)
Of which not recognized as tax asset	(2,553)		(2,743)	
Gross deferred tax assets (liabilities)	20,210	(21,583)	19,377	(21,282)
Net deferred tax assets (liabilities)		(1,373)		(1,905)
<b>Reconciliation to balance sheets</b>		<b>2018</b>		<b>2017</b>
Deferred tax assets		1,664		1,617
Deferred tax liabilities		3,037		3,522
Net deferred tax assets (liabilities)		(1,373)		(1,905)

Recognition of net deferred tax asset is based on expected taxable income in the future.

At the end of 2018, Hydro had tax loss carryforwards of NOK 16,936 million, mainly in Brazil, Spain, Australia, Italy and Belgium. Of the total, NOK 15,101 million is without expiration. The majority of the tax loss carryforwards with an expiry date expire after 2023. Tax assets are recognized for about 54 percent of the tax losses.

**Note 25 - Short-term investments**

Amounts in NOK million	2018	2017
Equity securities	253	315
Debt securities	603	738
Other	119	257
Total short-term investments	975	1,311

**Note 26 - Trade and other receivables**

Amounts in NOK million	2018	2017
Trade receivables	17,144	16,591
VAT and other sales taxes	1,578	2,008
Other receivables	2,170	1,438
Allowance for credit losses	(149)	(54)
Trade and other receivables	20,743	19,983

Of total trade receivables at year end 2018, about ten percent were past due, with the majority within 30 days. Extruded Solutions has a higher share of overdue receivables than the average of the other business areas.

## Note 27 - Inventories

Amounts in NOK million	2018	2017
Spare parts and raw materials	<b>6,086</b>	5,990
Work in progress	<b>5,710</b>	5,060
Alumina	<b>2,977</b>	1,189
Aluminium casthouse products	<b>7,394</b>	4,393
Fabricated products	<b>4,316</b>	4,080
<b>Inventories</b>	<b>26,483</b>	20,711

Raw materials includes 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 28 - Other non-current assets

Amounts in NOK million	2018	2017
Securities at fair value through other comprehensive income	<b>1,405</b>	969
Securities at fair value through profit or loss	<b>536</b>	537
Employee loans	<b>107</b>	100
Derivative instruments	<b>336</b>	268
Income taxes, VAT and other sales taxes	<b>2,576</b>	1,678
Other receivables	<b>759</b>	857
<b>Other non-current assets</b>	<b>5,720</b>	4,410

## Note 29 - Property, plant and equipment

Amounts in NOK million	Land and buildings	Machinery and equipment	Plant under construction	Total
<b>Cost</b>				
December 31, 2016	25,572	83,592	6,844	116,009
Additions	523	2,602	4,212	7,338
Acquisitions through business combinations	3,936	9,102	1,014	14,052
Disposals	(222)	(1,881)	(57)	(2,162)
Transfers <sup>1)</sup>	4,036	3,531	(7,567)	-
Foreign currency translation effect	(77)	(462)	(82)	(621)
December 31, 2017	33,769	96,484	4,363	134,616
Effect of change in accounting principle	(17)	(70)		(87)
Additions	(11)	2,422	4,614	7,025
Acquisitions through business combinations	1,167	(208)	-	959
Disposals	(126)	(1,813)	(56)	(1,995)
Transfers	683	3,229	(3,912)	-
Foreign currency translation effect	(827)	(2,355)	(125)	(3,307)
December 31, 2018	34,638	97,689	4,885	137,212
<b>Accumulated depreciation and impairment</b>				
December 31, 2016	(11,103)	(45,873)	(298)	(57,275)
Depreciation for the year	(930)	(5,004)	-	(5,934)
Impairment losses	(2)	(3)	-	(5)
Disposals	128	1,696	-	1,824
Transfers <sup>1)</sup>	(719)	719	-	-
Foreign currency translation effect	(3)	(221)	18	(206)
December 31, 2017	(12,629)	(48,686)	(280)	(61,596)
Depreciation for the year	(1,158)	(5,705)	-	(6,862)
Disposals	104	1,612	-	1,716
Transfers	(31)	31	-	-
Foreign currency translation effect	209	592	28	830
December 31, 2018	(13,505)	(52,155)	(252)	(65,912)
<b>Carrying value</b>				
December 31, 2017	21,122	47,728	4,083	72,933
December 31, 2018	21,133	45,533	4,633	71,299

1) Transfers includes reclassification of certain industrial structures following renewed assessment.

The table above includes assets held under finance lease arrangements by a total of NOK 621 million, which are mainly included in Machinery and equipment.

## Note 30 - Intangible assets

Amounts in NOK million	Intangible assets under development	Mineral and waterfall rights	Software	Technology	Acquired sourcing contracts	Other intangibles assets	Total
<b>Cost</b>							
December 31, 2016	289	1,019	1,041	352	1,220	649	4,570
Additions	65	-	84	-	-	17	167
Acquisitions through business combinations	2	-	250	1,441	-	1,204	2,897
Disposals	-	-	(88)	-	-	(30)	(118)
Transfers	(95)	-	94	-	-	-	-
Foreign currency translation effect	1	(54)	38	63	(75)	87	60
December 31, 2017	263	965	1,420	1,856	1,146	1,927	7,576
Additions	158	-	36	2	-	57	252
Acquisitions through business combinations	-	-	(4)	(19)	-	(95)	(118)
Disposals	-	-	(6)	-	-	(19)	(25)
Transfers	(274)	-	44	237	-	(6)	-
Foreign currency translation effect	2	(84)	(17)	9	(116)	30	(175)
December 31, 2018	148	881	1,472	2,084	1,030	1,895	7,510
<b>Accumulated amortization and impairment</b>							
December 31, 2016	-	-	(815)	(141)	(491)	(448)	(1,895)
Amortization for the year <sup>1)</sup>	-	-	(132)	(52)	(73)	(38)	(295)
Disposals	-	-	87	-	-	5	93
Foreign currency translation effect	-	-	(30)	(6)	33	(32)	(35)
December 31, 2017	-	-	(890)	(199)	(531)	(514)	(2,133)
Amortization for the year <sup>1)</sup>	-	-	(208)	(186)	(63)	(112)	(569)
Disposals	-	-	2	(3)	-	6	5
Foreign currency translation effect	-	-	7	(6)	54	(10)	45
December 31, 2018	-	-	(1,089)	(394)	(540)	(629)	(2,652)
<b>Carrying value</b>							
December 31, 2017	263	965	530	1,657	615	1,413	5,443
December 31, 2018	148	881	383	1,691	490	1,265	4,858

1) Amortization of a sourcing contract is reported as Raw material and energy expense in the income statement.

Mineral rights are not depreciated until extraction of the resources starts. Acquired waterfall rights have indefinite life and are thus not depreciated.

## Note 31 - Goodwill

Amounts in NOK million	Extruded Solutions	Bauxite & Alumina	Metal Markets	Total
<b>Cost</b>				
December 31, 2016	-	2,740	396	3,135
Acquisitions through business combinations	4,119	-	-	4,119
Foreign currency translation effect	190	(168)	(8)	14
December 31, 2017	4,309	2,572	388	7,269
Adjusted goodwill from business combination	(539)	-	-	(539)
Foreign currency translation effect	99	(261)	16	(145)
December 31, 2018	3,869	2,312	404	6,584

See note 20 Impairment of non-current assets for information about the annual impairment testing of goodwill.

See note 6 Significant subsidiaries and changes to the consolidated group for information about acquired goodwill.

## Note 32 - Investments in 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.

### 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 ANS, a power producer in Norway. Another two arrangements are classified as joint operations based on the contractual arrangements whereby all output is sold to the shareholders in proportion to their ownership interest at a cost based price formula. The major or sole sources of cash inflows for the joint arrangements are the owners, who are legally obliged to cover production costs. These are Aluminium Norf GmbH (Alunorf), a large rolling mill in Germany, and Aluminium & Chemie Rotterdam B.V., Aluchemie, an anode producer in the Netherlands.

### Joint ventures

The following joint ventures are 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). During 2018, Qatar Petroleum, which previously held 50 percent of the shares in Qatalum, transferred its shares to the newly established Qatar Aluminium Manufacturing Company, which was listed on the Qatar Stock Exchange, but which Qatar Petroleum retains a controlling interest in. Qatalum was at the outset granted a ten-year income tax holiday, expiring in 2020. A tax reform came into effect from 2010, which introduced a generally applicable corporate income tax rate of 10 percent. A tax rate of 35 percent applies to entities with oil and gas operations or where the activities are carried out under an agreement with the government or entities owned by the government, unless such agreement specifies another tax rate. According to the Qatalum joint venture agreement, the generally applicable tax rate will apply after 2020. It is Hydro's position that the generally applicable income tax rate, currently at 10 percent, shall apply to Qatalum after the expiry of the tax holiday.

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 11,980 million in 2018 and NOK 11,363 million in 2017. Related payables amounted to NOK 1,052 million in 2018 and NOK 1,051 million at the end of 2017. Sales from Hydro to Qatalum amounted to NOK 2,761 million in 2018 and NOK 2,222 million in 2017, primarily alumina. Related receivables amounted to NOK 3 million and NOK 128 million at the end of the periods. Qatalum is part of Primary Metal.



Sapa AS, a world leader in aluminium solutions delivering products within extrusions, building systems and precision tubing, was established in September 2013 as a joint venture between Hydro and Orkla ASA, a listed company in Norway. On October 2, 2017, Hydro acquired the additional 50 percent owned by Orkla ASA. Following completion of the transaction, Hydro owns 100 percent of the parent company Sapa AS, which has been renamed Hydro Extruded Solutions AS. All activities in the former Sapa group have been included in Hydro as business area Extruded Solutions. For further information about the transaction, please see note 6 Significant subsidiaries and changes to the consolidated group.

Hydro issued certain guarantees towards Sapa as part of establishing the company, primarily related to tax exposure. A provision of about NOK 100 million was recognized for these guarantees during the time of joint venture. Hydro sold metal products to Sapa at market prices. Sales from Hydro to Sapa amounted to NOK 3,916 million in the period up until completion of the acquisition, from January 1, 2017 to October 2, 2017.

The table below summarizes key figures for these joint ventures for 2018 and 2017. The figures are on the same basis as used for inclusion in the group financial statements. Fair value adjustments from Hydro's contribution of assets and businesses to the joint ventures 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 ventures on 100 percent basis. The 2017 income and expense amounts for Sapa are for the joint venture period January 1, 2017 to October 2, 2017. All balance sheet amounts are at the end of the years 2018 and 2017.

Amounts in NOK million	Qatalum		Sapa	
	Year/year ended		Period as JV	
	2018	2017	2018	2017
Revenue	12,309	11,645	-	43,616
Depreciation, amortization and impairment	2,139	2,301	-	974
Earnings before financial items and tax	1,929	1,963	-	2,240
Financial income (expense), net <sup>1)</sup>	(484)	(472)	-	(107)
Income tax expense	-	-	-	(533)
Net income (loss)	1,445	1,491	-	1,600
Other comprehensive income	151	194	-	(168)
Total comprehensive income	1,596	1,685	-	1,432
Cash and cash equivalents	2,543	3,133	-	-
Other current assets	4,625	4,168	-	-
Non-current assets	30,675	30,940	-	-
Current financial liabilities	2,094	1,854	-	-
Non-current financial liabilities	11,537	12,931	-	-
Other liabilities	1,789	1,426	-	-
Net assets	22,423	22,031	-	-
Hydro's share of net assets	11,211	11,015	-	-
Accumulated elimination of internal gain in inventory	64	(85)	-	-
Carrying value of Hydro's equity investment	11,276	10,930	-	-
Total investment	11,276	10,930	-	-

1) Financial income (expense), net includes interest expense for Qatalum with NOK 492 million and NOK 467 million for 2018 and 2017, respectively. Interest expense for Sapa is included with NOK 87 million for the period January 1, 2017 to October 2, 2017.

As part of the acquisition of Sapa, Hydro acquired an ownership interest in Technal Middle East W.L.L, a joint venture owned 50 percent each by Hydro and Bahrain Aluminium Extrusion Company B.S.C

Hydro also holds interests in certain associates accounted for using the equity method. In November 2017, Hydro purchased 26 percent of Corvus Energy Inc., a Canadian company producing battery solutions for ships. The following table provides a summary of changes in carrying value for Hydro's joint ventures and associates.

Amounts in NOK million	Qatalum	Sapa	Other JVs	Associates	Total
December 31, 2016	11,421	8,374	-	12	19,807
Hydro's share of net income (loss)	746	800	13	(4)	1,554
Hydro's share of other comprehensive income	97	(84)			13
Dividends and other payments received by Hydro	(747)	(1,500)			(2,247)
Companies acquired/(sold), net			227	39	266
Amortization				(3)	(3)
Changes elimination of internal gain in inventory	(46)	25			(21)
Derecognized at acquisition of control		(7,615)			(7,615)
Foreign currency translation and other	(541)			8	(533)
December 31, 2017	10,930	-	240	52	11,221
Hydro's share of net income (loss)	723		54	(19)	758
Hydro's share of other comprehensive income	75		(3)		72
Dividends and other payments received by Hydro	(1,173)		(46)		(1,219)
Companies acquired/(sold), net				25	25
Amortization			(2)	(15)	(17)
Loans			10		10
Changes elimination of internal gain in inventory	150				150
Foreign currency translation and other	571			(1)	570
December 31, 2018	11,276	-	252	42	11,570

## Note 33 - Trade and other payables

Amounts in NOK million	2018	2017
Accounts payable	16,361	15,195
Payroll and value added taxes	2,901	2,976
Accrued liabilities and other payables	1,120	1,400
Trade and other payables	20,381	19,571

## Note 34 - Short and long-term debt

Amounts in NOK million	2018	2017
Bank loans and overdraft facilities	5,455	7,595
Other interest-bearing short-term debt	275	276
Current portion of long-term debt	2,813	373
Bank loans and other interest-bearing short-term debt	8,543	8,245

Amounts in NOK million	2018	2017
USD	1,458	860
SEK	2,915	3,007
NOK	4,497	4,497
Other	29	38
Total unsecured loans	8,900	8,402
Finance lease obligations	993	983
Outstanding debt	9,893	9,385
Less: Current portion	(2,813)	(373)
Total long-term debt	7,080	9,012

Long-term debt includes six bonds in NOK and SEK, all listed on the Oslo Stock Exchange. Market values of the bonds is close to par value.

#### Repayments of long-term debt including interest

Amounts in NOK million	Unsecured loans	Other	Interest	Total
2019	2,773	40	293	3,106
2020	1,282	39	196	1,517
2021	870	40	172	1,081
2022	2,972	44	136	3,151
2023	1	45	82	127
Thereafter	1,003	785	368	2,156
<b>Total</b>	<b>8,900</b>	<b>993</b>	<b>1,246</b>	<b>11,139</b>

#### Reconciliation of liabilities arising from financing activities

Amounts in NOK million	Long-term debt	Bank loans and other interest-bearing short-term debt	Total liabilities from financing activities
December 31, 2016	3,397	3,283	6,679
Cash flows	5,934	935	6,869
Non-cash changes:			
Net change in current balance	(410)	410	-
Business combinations	64	3,556	3,620
Amortizations	9	-	9
Foreign currency effects	18	61	79
December 31, 2017	9,012	8,245	17,257
Cash flows	815	(2,676)	(1,861)
Non-cash changes:			
Net change in current balance	(2,771)	2,771	-
Amortizations	6	-	6
Foreign currency effects	18	204	221
December 31, 2018	7,080	8,543	15,623

## Note 35 - Provisions

Amounts in NOK million	2018			2017		
	Short-term	Long-term	Total	Short-term	Long-term	Total
Environmental clean-up and asset retirement obligations (ARO)	563	3,737	4,299	384	4,201	4,585
Employee benefits	1,151	762	1,913	1,048	714	1,762
Indirect taxes	202	393	595	246	200	446
Onerous contracts	113	107	220	118	208	326
Other	1,253	589	1,841	500	505	1,005
<b>Total provisions</b>	<b>3,281</b>	<b>5,588</b>	<b>8,868</b>	<b>2,296</b>	<b>5,828</b>	<b>8,124</b>

The following table includes a specification of changes to provisions for the year ending December 31, 2018 and the expected timing of cash outflows relating to the provisions.

Amounts in NOK million	Environmental clean-up and ARO	Employee benefits	Indirect taxes	Contracts	Other	Total
<b>Specification of change in provisions</b>						
December 31, 2017	4,585	1,762	446	326	1,005	8,124
Business combinations	(18)	3	-	-	8	(7)
Additions	454	1,333	304	58	1,330	3,479
Used during the year	(258)	(1,122)	(143)	(173)	(353)	(2,049)
Reversal of unused provisions	(37)	(77)	-	-	(178)	(292)
Accretion expense and effect of change in discount rate	(220)	8	-	9	1	(202)
Foreign currency translation	(206)	5	(12)	1	28	(184)
December 31, 2018	4,299	1,913	595	220	1,841	8,868
Timing of cash outflows						
2019	563	1,151	202	113	1,253	3,281
2020-2023	1,583	405	300	107	457	2,852
Thereafter	2,154	357	93	-	131	2,735
	4,299	1,913	595	220	1,841	8,868

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 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.

The most significant provisions relate to the following sites and issues. For Bauxite and 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 Bauxite and 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. For Primary Metal's closed Kurri Kurri smelter site in Australia we have obligations to remediate certain contaminated areas at the site as well as securing appropriate deposit of spent pot lining and certain other waste material, which is currently ongoing. The plan for remediation is not yet approved by the authorities. Hydro also has obligations for remediation of contamination on site and in related areas related to historic industrial activities in Germany and Norway, reported in Other and eliminations. The more significant of these sites are the sites in Schwandorf and Hannover in Germany. 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 in all active smelters, site clearance for certain leased land as well as 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 includes a charge related to a customs case in Germany and provisions for indirect taxes in Brazil.

Contracts comprise onerous contracts, and include compensation for exit of a rental contract for premises.

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, and certain liabilities related to representation and warranty provisions related to sale of businesses.

Sapa Profiles Inc. (SPI), a Portland, Oregon based subsidiary of Hydro Extruded Solutions AS (formerly Sapa AS) is under investigation by the United States Department of Justice (DOJ) Civil and Criminal Divisions regarding certain aluminum extrusions that SPI manufactured from 1996 to 2015, including extrusions that were delivered to a supplier to NASA. In early March 2019, the parties reached an agreement in principle, requiring Hydro to pay an amount of around NOK 400 million. Hydro has provided for this amount and the estimated legal costs as of the end of 2018. There may be adjustments to the amount as the detailed agreement matures, and related costs are determined. As part of the share purchase agreement for Sapa, the parties have agreed that Orkla ASA shall indemnify Hydro for 50 percent of any liability in relation to this case.

Further, Hydro has entered into two agreements with authorities in Pará, Brazil, in relation to the operations of the alumina refinery, Alunorte. The contracts include a technical Term of Adjusted Conduct (TAC) and a social Term of Commitment (TC). The TAC regulates certain technical studies and improvements, audits, fines and payments for food cards to families living in the hydrographic area of the Murucupi River. The TC addresses additional efforts and investments related to the social development of communities in Barcarena. The combined investments, costs and fines are estimated at about BRL 360 million, around NOK 750 million, of which about NOK 65 million relates to fines now paid. About NOK 600 million has been expensed in 2018. The remainder is primarily related to improvement of certain monitoring and water treatment equipment at the plant, expected to be capitalized. In addition, Hydro has committed to provide support to local societies close to the plant. Such measures are expensed as incurred.

## Note 36 - Contingent liabilities and contingent assets

Hydro is involved in or threatened with various legal and tax matters arising in the ordinary course of business. See note 5 Critical accounting judgment and key sources of estimation uncertainty for a discussion of how such items are assessed and measured. Where Hydro considers there is a current obligation based on a past event, and payment or remediation actions is probable, a provision is established, see note 35 Provisions. 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 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, our 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. Hydro's businesses in Brazil have a large portfolio of cases disputed by tax authorities, of which the majority relates to indirect taxes. This includes cases in the administrative and legal dispute systems with various background and risk of loss. In total known cases amount to about NOK 5.1 billion, of which about NOK 3.5 billion is considered possible. About half of those amounts are 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 in Note 35 Provisions, 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 and disclosed in note 35 Provisions. 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 timing and cost has not yet been planned, and is thus uncertain. For some sites, the exact level of pollution may also be uncertain as ground and water are not sampled where no indication of contamination is identified. Obligations for historic contamination of sites and surrounding areas in addition to areas provided for may be identified and deemed Hydro's responsibility, 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 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.

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.

## Note 37 - Employee retirement plans

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 for new entrants, and in some defined benefit plans, large groups of employees have converted to defined contribution arrangements. Still, a number of employees continues to earn benefits under defined benefit plans, but many of these plans are heavily impacted by deferred members and pensioners.

Amounts in NOK million	2018				2017			
	Norway	Germany	Other	Total	Norway	Germany	Other	Total
<b>Pension expense</b>								
Defined benefit plans	133	194	87	414	132	186	29	347
Defined contribution plans	175	-	292	467	153	-	100	253
Multiemployer plans	55	-	2	57	48	-	2	50
Termination benefits and other	63	11	62	136	44	3	41	87
Social security cost	53	-	26	78	49	-	4	53
Pension expense	478	205	470	1,153	425	189	177	791
Interest expense (income)	(20)	146	12	138	(2)	136	18	152
Remeasurement (gain) loss in other comprehensive income	1,065	(76)	(63)	925	(763)	(167)	(56)	(986)

Amounts in NOK million	2018				2017			
	Norway	Germany	Other	Total	Norway	Germany	Other	Total
<b>Recognized defined benefit asset and liability</b>								
Defined benefit obligation major plans	(12,904)	(9,240)	(5,165)	(27,310)	(12,247)	(9,173)	(5,512)	(26,932)
Plan assets	12,899	-	4,950	17,849	13,189	-	5,343	18,532
Reimbursement rights	310	-	-	310	303	-	-	303
Liability other plans	(29)	(134)	(528)	(691)	(21)	(127)	(532)	(681)
Social security cost	(598)	-	(45)	(644)	(552)	-	(40)	(591)
Net defined benefit liability	(322)	(9,375)	(789)	(10,486)	673	(9,300)	(741)	(9,368)
Recognized prepaid pension	4,523	45	594	5,162	5,143	47	559	5,750
Recognized pension liability	(4,845)	(9,420)	(1,383)	(15,648)	(4,471)	(9,348)	(1,300)	(15,118)
Net amount recognized	(322)	(9,375)	(789)	(10,486)	673	(9,300)	(741)	(9,368)

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.

Amounts in NOK million	2018				2017			
	Norway	Germany	Other	Total	Norway	Germany	Other	Total
<b>Change in defined benefit obligation (DBO)</b>								
Opening Balance	(12,247)	(9,173)	(5,512)	(26,932)	(12,495)	(8,327)	(102)	(20,924)
Current service cost	(128)	(194)	(29)	(351)	(127)	(186)	(8)	(321)
Past service cost and curtailment gain (loss)	-	-	(42)	(42)	-	-	(19)	(19)
Interest expense	(287)	(145)	(144)	(575)	(305)	(135)	(42)	(482)
Actuarial gain (loss) demographic assumptions	-	(73)	57	(17)	-	-	-	-
Actuarial gain (loss) economic assumptions	(588)	249	280	(59)	(164)	103	(165)	(227)
Experience gain (loss)	(200)	(93)	13	(280)	(44)	68	16	41
Benefit payments	590	281	219	1,090	618	266	56	940
Termination benefits	(44)	-	-	(44)	(46)	-	-	(46)
Settlements	-	-	36	36	340	-	147	487
Business combinations	-	-	-	-	(29)	(220)	(5,184)	(5,433)
Divestments	-	-	-	-	4	-	-	4
Foreign currency translation	-	(92)	(43)	(135)	-	(741)	(211)	(952)
Closing Balance	(12,904)	(9,240)	(5,165)	(27,310)	(12,247)	(9,173)	(5,512)	(26,932)

Amounts in NOK million	2018				2017			
	Norway	Germany	Other	Total	Norway	Germany	Other	Total
<b>Change in pension plan assets</b>								
Opening Balance	13,189	-	5,343	18,532	12,624	-	102	12,726
Interest income	313	-	147	460	312	-	41	353
Return on plan assets above (below) interest income	(265)	-	(352)	(617)	971	-	169	1,140
Company contributions	93	-	9	102	92	-	3	94
Benefit payments	(432)	-	(201)	(632)	(469)	-	(51)	(520)
Settlements	-	-	(40)	(40)	(340)	-	(147)	(487)
Business combinations	-	-	-	-	-	-	5,015	5,015
Foreign currency translation	-	-	43	43	-	-	211	211
Closing Balance	12,899	-	4,950	17,849	13,189	-	5,343	18,532

Amounts in NOK million	2018				2017			
	Norway	Germany	Other	Total	Norway	Germany	Other	Total
<b>Analysis of the defined benefit obligation (DBO)</b>								
Active members	(3,487)	(4,643)	(613)	(8,744)	(3,462)	(4,622)	(631)	(8,716)
Deferred members	(794)	(722)	(1,889)	(3,405)	(706)	(731)	(2,181)	(3,618)
Pensioners	(8,623)	(3,874)	(2,664)	(15,161)	(8,079)	(3,819)	(2,700)	(14,598)
Defined benefit obligation	(12,904)	(9,240)	(5,165)	(27,310)	(12,247)	(9,173)	(5,512)	(26,932)
Weighted average duration (years)	13.0	18.4			13.1	18.5		

Contributions to funded 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 1,200 million for 2018 and about NOK 950 million for 2017. 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 that are based on salaries up to a maximum level subject to tax deduction. For additional salaries, employees earn retirement benefits in unfunded contribution based plans. The remaining employees are covered by defined benefit plans that offer benefits based on final salary level and the number of years in service, and include benefits for dependents. Contributions to the plans providing benefits based on salaries up to a maximum level are subject to tax

deduction. The plans are funded; all vested benefits are required by law to be funded for such plans. Benefits based on salaries above this level are covered by unfunded plans. The main funded plans are managed by Norsk Hydros Pensjonskasse, a separate, regulated legal entity. Hydro's pension plans complement the public pension schemes in Norway. Plans providing benefits for salary levels above the tax deductible level have been closed for new members from January 1, 2017.

Effective January 1, 2017, Hydro increased contributions to defined contribution plans for most affected employees in Norway.

Hydro participates in a supplementary pension plan that entitles the majority of its Norwegian 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 annual contributions have increased since inception and are expected to increase further. The employer contributions are included in Multiemployer plans.

Significant actuarial assumptions for the main Norwegian defined benefit plans include:

Assumptions	Benefit obligation	Benefit expense	Benefit obligation	Benefit expense
	2018	2018	2017	2017
Discount rate	2.50%	2.40%	2.40%	2.50%
Expected salary increase	2.50%	2.25%	2.25%	2.25%
Expected pension increase	1.50%	1.00%	1.00%	1.00%
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			
		2018	2018
Discount rate increase 0.5% point		6.2%	799
Salary increase 0.5% point		(1.0%)	(132)
Pension increase 0.5% point		(6.2%)	(796)
One year longer life all members		(4.5%)	(580)

The plan assets in the funded plans provided through Norsk Hydros Pensjonskasse were invested as follows at the end of 2018 and 2017:

Amounts in NOK million, except percent	2018	2018	2017	2017
Cash and cash equivalents	2.6%	329	3.0%	393
Equity instruments Norway	20.5%	2,589	21.4%	2,767
Equity instruments other countries	18.9%	2,395	19.1%	2,463
Debt instruments	33.4%	4,220	32.1%	4,144
Investment funds	5.6%	705	6.0%	779
Real estate	19.0%	2,405	18.4%	2,379
Total	100.0%	12,644	100.0%	12,927

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 the UK, continental Europe and the US. 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 for new entrants, and all new employees are now offered benefits under new defined contribution-oriented plans. These plans are unfunded and treated as defined benefit plans for financial reporting purposes.

Significant actuarial assumptions for the main German plans include:

Weighted-average assumptions	Benefit obligation	Benefit expense	Benefit obligation	Benefit expense
	2018	2018	2017	2017
Discount rate	1.8%	1.6%	1.6%	1.6%
Expected salary increase	2.4%	2.4%	2.4%	2.4%
Expected pension increase	1.5%	1.5%	1.5%	1.5%
Mortality basis	RT 2018 G	RT 2005 G	RT 2005 G	RT 2005 G

The sensitivities shown in the table below have been calculated for the main German 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	2018	2018
Discount rate increase 0.5% point	8.4%	778
Salary increase 0.5% point	(2.7%)	(247)
Pension increase 0.5% point	(6.8%)	(625)
One year longer life all members	(4.5%)	(414)

## Other

Other includes Hydro's post-employment benefits outside Norway and Germany. Following the acquisition of the Sapa Group, October 2, 2017, Extruded Solutions' post-employment benefit plans outside Norway and Germany are included here. 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. Pension expense for 2018 includes a past service cost of NOK 40 million related to a judgment by the High Court of England and Wales requiring all employers who offered guaranteed minimum pensions in the period 1990 to 1997 to perform gender equalization, increasing the estimated liability for such benefits.

## Note 38 - Shareholders' equity

### Share capital

Number of shares	Ordinary shares issued	Treasury shares	Ordinary shares outstanding
December 31, 2016	2,068,998,276	(26,104,160)	2,042,894,116
Treasury shares issued to employees		1,803,232	1,803,232
December 31, 2017	2,068,998,276	(24,300,928)	2,044,697,348
Treasury shares issued to employees		1,605,449	1,605,449
December 31, 2018	2,068,998,276	(22,695,479)	2,046,302,797

The share capital of Norsk Hydro ASA as of December 31, 2018 and 2017 was NOK 2,271,760,107 consisting of 2,068,998,276 ordinary shares at a par value of NOK 1.098 per share. All shares have equal rights and are freely transferable.

### Treasury shares

The 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 Corporate Assembly and the Board of Directors.

The treasury shares amount per December 31, 2018 of NOK 756 million was comprised of NOK 25 million share capital and NOK 731 million retained earnings.

### Change in Other components of equity

The table below specifies the changes in Other components of equity for 2018 and 2017.

Amounts in NOK million	2018	2017
<b>Items that will not be reclassified to income statement:</b>		
<b>Remeasurement postemployment benefits</b>		
January 1	773	22
Remeasurement postemployment benefits during the year	(925)	986
Reclassified to retained earnings on divestment of subsidiaries	-	(14)
Deferred tax offset	208	(221)
December 31	55	773
<b>Remeasurement postemployment benefits equity accounted investments</b>		
January 1	-	(11)
Remeasurement postemployment benefits during the year	-	(2)
Reclassified to retained earnings on divestment of equity accounted investments	-	13
December 31	-	-
<b>Unrealized gain (loss) on assets measured at FVTOCI</b>		
January 1	(239)	16
Period unrealized loss on available-for-sale securities	394	(266)
Tax expense	-	11
December 31	155	(239)
<b>Items that will be reclassified to income statement:</b>		
<b>Currency translation differences</b>		
January 1	(1,864)	(467)
Currency translation differences during the year	(2,031)	(1,394)
Reclassified to Net income on liquidation of foreign operation	-	8
December 31	(3,895)	(1,854)
Effect of change in Accounting Principle		(10)
December 31 restated		(1,864)
<b>Cash flow hedges - See note 14 Derivative instruments and hedge accounting</b>		
January 1	(35)	(158)
Period gain recognized in Other comprehensive income	(141)	149
Reclassification of hedging gain (loss) to Net income	124	79
Tax expense	3	(55)
December 31	(49)	15
Effect of change in Accounting Principle		(50)
December 31 restated		(35)
<b>Other components of equity in equity accounted investments</b>		
January 1	33	769
Period gain (loss) recognized in Other comprehensive income	72	15
Reclassified to Net income on divestment of equity accounted investments	-	(751)
December 31	105	33
Total other components of equity attributable to Hydro shareholders as of December 31	(1,936)	20
Total other components of equity attributable to non-controlling interests as of December 31	(1,692)	(1,352)

### **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 2,045,796,971 for 2018 and 2,044,105,404 for 2017.

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 39 - Capital management**

Hydro's capital management policy is to maximize value creation over time, while maintaining a strong financial position and an investment grade credit rating. During 2018 net cash provided by operating activities was close to net cash used in investing activities.

### **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, Standard & Poor's (current rating BBB) and Moody's (current rating Baa2), both with stable outlook. Hydro targets, over the business cycle, a ratio of Funds from operations to Adjusted net cash (debt) of at least 40 percent, and an Adjusted net cash (debt) to Equity ratio below 55 percent.

### **Liquidity management and funding**

Hydro manages its liquidity and funding requirements centrally to cover group operating requirements and long-term capital needs. Hydro operates cash pools in several currencies where all 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 to the parent company. The activities in former Sapa (now Extruded Solutions) have been fully integrated in Hydro's treasury and cash management setup. At the end of 2018, NOK 3.0 billion of Hydro's cash position of NOK 6.0 billion was outside such group arrangements, mainly in Brazil.

Hydro has an ambition to access national and international capital markets as primary sources for external long-term funding.

Hydro has a syndicated USD 1,700 million revolving credit facility maturing in November 2020. The facility was undrawn per year-end 2018.

### **Funding of subsidiaries, associates and jointly controlled entities**

Normally the parent company, Norsk Hydro ASA, incurs debt and extends loans or equity to wholly-owned subsidiaries to fund capital requirements. Hydro's policy is to finance part-owned subsidiaries and investments in associates and joint arrangements according to its ownership share, on equal terms with the other owners. All financing is executed on an arm's length basis. Project financing is used for certain funding requirements mainly to mitigate risk while also considering partnership and other relevant factors.

### **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. Our ambition is in the long term to pay out, on average, 40 percent of net income as ordinary dividend over the cycle to our shareholders. The dividend policy has a 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 Equity ratio to assess the group's financial solidity and ability to absorb volatility in the markets. Net cash (debt) is defined as Hydro's cash and cash equivalents plus short-term investments, less short- and long-term interest-bearing debt. Adjusted net cash (debt) is adjusted for net cash (debt) positions regarded as unavailable for servicing debt, and includes pension liabilities and other obligations which are considered debt-like in nature. The calculation of Adjusted net cash (debt) will change when IFRS 16 Leases is implemented as of January 1, 2019. The adjustment for operating lease commitments, net of expected income tax benefit, will no longer be relevant, as the recognized lease liability will be included in Net cash (debt).

The ability to generate cash compared to financial liabilities is another important measure of risk exposure and financial solidity. Hydro's management uses Funds from operations and the ratio Funds from operations to Adjusted net cash (debt) as capital management measures. Funds from operations reflects the cash generation from Hydro's wholly and partly owned operating assets before changes in net operating capital, including the contribution from equity accounted investments, and after current tax expense.

Both financial ratio calculations include adjustments for the indebtedness of Hydro's equity accounted investments. Though Hydro has no financial obligations towards the lenders of its equity accounted investments, the adjustments are considered relevant as the debt and cash flow level in these entities affect Hydro's overall cash generation and financial risk profile.

Adjusted net cash (debt), Equity, Funds from operations and the above mentioned financial ratios are presented in the following table.

#### Adjusted net cash (debt) including net debt equity accounted investments (EAI)

Amounts in NOK million, except ratio	2018	2017
Cash and cash equivalents	5,995	11,828
Short-term investments	975	1,311
Bank loans and other interest-bearing short-term debt	(8,543)	(8,245)
Long-term debt	(7,080)	(9,012)
Net cash (debt)	(8,653)	(4,118)
Cash and cash equivalents and short-term investments in captive insurance company <sup>1)</sup>	(876)	(1,076)
Net pension obligation at fair value, net of expected income tax benefit <sup>2)</sup>	(8,813)	(7,895)
Operating lease commitments, net of expected income tax benefit <sup>3)</sup>	(1,708)	(1,585)
Short- and long-term provisions net of expected income tax benefit, and other liabilities <sup>4)</sup>	(3,077)	(3,295)
Adjusted net cash (debt)	(23,127)	(17,968)
Net debt in EAI <sup>5)</sup>	(5,584)	(5,798)
Adjusted net cash (debt) including EAI	(28,711)	(23,767)

#### Adjusted net cash (debt) including EAI / Equity

Total equity	(90,769)	(92,209)
Adjusted net cash (debt) including EAI / Equity	0.32	0.26

- 1) 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).
- 2) The expected income tax benefit related to the net pension liability is NOK 1,673 million and NOK 1,474 million, respectively, for 2018 and 2017.
- 3) Operating lease commitments are discounted using a rate of 2.69 percent and 1.14 percent for 2018 and 2017, respectively. The discount rate used for 2018 includes an estimated Hydro credit spread of 1.05 percent. The expected tax benefit on operating lease commitment is estimated at 30 percent. The adjustment for operating lease commitments, net of expected income tax benefit, will no longer be relevant when IFRS 16 Leases is implemented from January 1, 2019, as the recognized lease liability will be included in Net cash (debt).
- 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.
- 5) Net debt in equity accounted investments is defined as the total of Hydro's relative ownership percentage of each equity accounted investment's short and long-term interest-bearing debt less their cash positions, reduced by total outstanding loans from Hydro to the equity accounted investment. Net debt per individual equity accounted investment is limited to a floor of zero. The adjustments are related to Qatalum.

**Funds from operations / Adjusted net cash (debt) including EAI**

Amounts in NOK million, except ratio	2018	2017
Net income (loss)	4,323	9,184
Depreciation, amortization and impairment	7,369	6,162
Deferred taxes	(585)	(685)
Loss (gain) on sale of non-current assets	188	(2,046)
Transaction related effects (Sapa) <sup>1)</sup>	-	707
Net foreign exchange (gain) loss	1,303	875
Capitalized interest	(1)	(75)
Commodity derivatives	(415)	322
Hydro's share of depreciation, amortization and impairment in EAI	1,070	1,638
Funds from operations	13,252	16,081
Funds from operations / Adjusted net cash (debt) including EAI	0.46	0.68

1) Reversal of inventory revaluation in Sapa.

**Note 40 - Dividends**

Hydro's Board of Directors normally proposes a dividend per share in connection with the fourth quarter results that are published in February each year. The Annual General Meeting considers this proposal, normally in May, and the approved dividend is then paid to the shareholders. Dividends are paid once each calendar year; generally occurring in May. For non-Norwegian shareholders, Norwegian withholding tax will be deducted at source in accordance with the applicable Norwegian tax regulations. For additional information related to Hydro's dividend and shareholder policy see note 39 Capital management.

For fiscal year 2018 the Board of Directors has proposed a dividend of NOK 1.25 per share to be paid in May 2019. The Annual General Meeting, scheduled to be held May 7, 2019, will consider this dividend proposal. If approved, this would be a total dividend of approximately NOK 2,558 million. In accordance with IFRS, the fiscal year 2018 proposed dividend is not recognized as a liability in the 2018 financial statements.

Dividends declared and paid in 2018 and 2017 for the prior fiscal year, respectively, are as follows:

	Paid in 2018 for fiscal year 2017	Paid in 2017 for fiscal year 2016
Dividend per share paid, NOK	1.75	1.25
Total dividends paid, NOK million	3,581	2,556
Date proposed	February 15, 2018	February 8, 2017
Date approved	May 7, 2018	May 3, 2017
Dividend payment date	May 18, 2018	May 12, 2017

Dividends to non-controlling shareholders in Hydro's subsidiaries are reported as dividends in Consolidated statements of changes in equity.

**Note 41 - Contractual commitments and commitments for future investments**

Amounts in NOK million	2019	Investments thereafter	Total
Contract commitments for investments in property, plant and equipment	2,765	169	2,934
Additional authorized future investments in property, plant and equipment	2,618	794	3,412
Contract commitments for other future investments	13	-	13
Total	5,396	963	6,359

Additional authorized future investments include projects formally approved for development by the Board of Directors or management. General investment budgets are excluded from these amounts.

Hydro has long-term contractual commitments for the purchase of aluminium, raw materials, electricity, and transportation in addition to long-term sales commitments. The future non-cancellable fixed and determinable obligations under these commitments as of December 31, 2018 are shown in the table below:

Amounts in NOK million	Bauxite, alumina and aluminium	Energy related	Other
2019	15,346	12,653	5,125
2020	5,449	13,000	2,716
2021	4,617	10,905	1,522
2022	4,745	6,449	1,056
2023	4,625	6,726	715
Thereafter	15,814	47,471	8,412
<b>Total</b>	<b>50,597</b>	<b>97,204</b>	<b>19,547</b>

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.

Long-term sales commitments mainly relate to alumina, aluminium and electricity. The amounts include commitments for the delivery of electricity from power stations that will revert to the Norwegian Government. The volume from these power stations is 547 GWh in 2019 and 11.6 TWh in total. Commitments relating to concession power from stations that are not subject to reversion have an annual volume of 258 GWh.

Hydro also has contractual commitments for the sales and purchase of products from part-owned entities, see note 32 Investments in joint arrangement and associates. These commitments are excluded from the table above. Furthermore, Hydro has additional long-term purchase and sales commitments which include variable elements that are not included in the table above.

## Note 42 - Cash flow information

### Cash disbursements and receipts included in cash from operations

Amounts in NOK million	2018	2017
Income taxes paid	<b>3,231</b>	2,180
Interest paid	<b>653</b>	362
Interest received	<b>250</b>	322
Dividends received from available-for-sale investments	-	112

In 2018 and 2017, non-cash investing activities for asset retirement costs amounted to NOK 59 million and NOK 118 million, respectively.

## Note 43 - Auditor's remuneration

KPMG is the Group auditor of Norsk Hydro ASA. EY was the appointed group auditor for Sapa prior to the transaction on October 2, 2017, and continued as auditor for the former Sapa units now constituting business area Extruded Solutions. The business area Extruded Solutions has changed auditor to KPMG during 2018. The following table shows fees to the appointed auditors for 2018 and 2017. For 2017, the table includes fees to KPMG for the period January 1 to December 31, and fees to EY for the period October 2 to December 31. For all categories the reported fee is the recognized expense for the year.

Amounts in NOK million	Audit <sup>1)</sup>	Audit related <sup>2)</sup>	Other services <sup>3)</sup>	Tax related	Total
<b>2018</b>					
Norway	14	-	11	-	25
Outside Norway	36	-	-	3	39
Sum	51	1	11	3	66
<b>2017</b>					
Norway	15	1	6	-	23
Outside Norway	24	1	2	-	27
Total	39	2	8	-	50

1) Audit fees of NOK 51 million (2017: NOK 39 million) consist of fees to KPMG of NOK 36 million (2017: NOK 28 million), and fees to EY of NOK 15 million (2017: NOK 11 million).

2) Audit related fees of NOK 2 million in 2017 was fees to KPMG.

3) Other services mainly include KPMG's review of viability performance and EY services mainly include KPMG's review of viability performance and EY services related to tax and immigration services for expatriated employees. Fees for other services of NOK 11 million consist of fees to KPMG of NOK 3 million, and fees to EY of NOK 9 million.

# Financial statements Norsk Hydro ASA

## Income statements

Amounts in NOK million	Notes	2018	2017
Revenue		232	317
Gain (loss) on sale of subsidiaries, net	7	(3)	41
<b>Total operating income</b>		<b>229</b>	<b>357</b>
Employee benefit expense	2, 3	603	535
Depreciation and impairment	4	21	18
Other		251	278
<b>Total operating expenses</b>		<b>875</b>	<b>831</b>
<b>Operating loss</b>		<b>(647)</b>	<b>(474)</b>
Financial income, net	5	1,938	(17)
<b>Income before tax</b>		<b>1,292</b>	<b>(491)</b>
Income taxes	6	(276)	307
<b>Net income</b>		<b>1,015</b>	<b>(183)</b>
<b><i>Appropriation of net income and equity transfers</i></b>			
Dividend proposed		2,558	3,578
Retained earnings		(1,543)	(3,762)
<b>Total appropriation</b>		<b>1,015</b>	<b>(183)</b>



## Balance sheets

Amounts in NOK million, December 31	Notes	2018	2017
<b>Assets</b>			
Property, plant and equipment and intangible assets	4	226	214
Shares in subsidiaries	7	57,052	57,052
Receivables from subsidiaries	8, 10	13,908	11,598
Prepaid pension, investments and other non-current assets	2, 9	4,733	4,943
Total financial non-current assets		75,692	73,592
Receivables from subsidiaries		9,465	10,142
Prepaid expenses and other current assets	10	62	40
Cash and cash equivalents		2,984	7,889
Total current assets		12,512	18,072
Total assets		88,430	91,878
<b>Equity and liabilities</b>			
<b>Paid-in capital</b>			
Share capital	13	2,272	2,272
Treasury shares	13	(25)	(27)
Paid-in premium	13	28,987	28,987
Other paid-in capital	13	139	110
<b>Retained earnings</b>			
Retained earnings	13	28,622	30,521
Treasury shares	13	(731)	(783)
Equity	13	59,265	61,080
Long-term provisions	2, 9	3,373	3,219
Long-term debt	12	5,232	8,056
Payables to subsidiaries		-	49
Other long-term liabilities		5,232	8,105
Bank loans and other interest-bearing short-term debt		3,043	3,616
Dividends payable		2,558	3,578
Payables to subsidiaries		14,379	11,774
Other current liabilities		580	506
Total current liabilities		20,560	19,473
Total equity and liabilities		88,430	91,878

## Statements of cash flows

Amounts in NOK million	2018	2017
Net income	1,015	(183)
Depreciation and impairment	21	18
Net foreign exchange (gain) loss	(453)	819
Changes in receivables and payables, and other items	(794)	3,883
Net cash provided by (used in) operating activities	(211)	4,537
Purchases of short-term investments	-	(5,094)
Proceeds from sales of short-term investments	-	8,402
Net purchases of other investments	(46)	(602)
Net cash provided by (used in) investing activities	(46)	2,706
Dividends paid	(3,581)	(2,556)
Proceeds from shares issued	44	37
Other financing activities, net	(1,103)	(2,405)
Net cash used in financing activities	(4,640)	(4,924)
Foreign currency effects on cash	(8)	128
Net increase (decrease) in cash and cash equivalents	(4,905)	2,447
Cash and cash equivalents at beginning of year	7,889	5,442
Cash and cash equivalents at end of year	2,984	7,889

# 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 accounting principles generally accepted in Norway (N GAAP). 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 jointly controlled entities**

Shares in subsidiaries, associates and jointly controlled entities 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 jointly controlled entities are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may exceed the fair value of the investment. An impairment loss is reversed if the impairment situation is deemed to no longer exist.

### **Employee retirement plans**

Norsk Hydro ASA has adopted the alternative treatment allowed in NRS 6 whereby employee retirement plans are measured as required by IAS 19, see note 2 Significant accounting policies to the consolidated financial statements for additional information.

### **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. This is in accordance with NRS' preliminary standard on transactions and accounts in foreign currency.

### **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 NRS' preliminary standard regarding impairment of non-current 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.

### **Intangible assets**

Intangible assets acquired individually or as a group are recognized at fair value when acquired, in accordance with NRS' preliminary standard on 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.

Norsk Hydro ASA accounts for CO<sub>2</sub> emission allowances at cost as an intangible asset. The emission rights are not amortized, impairment testing is done on an annual basis. Sale of CO<sub>2</sub> emission rights is recognized at the time of sale at the transaction price.

### **Leased assets**

Leases are assessed under NRS 14 Leasing. Lease arrangements that transfer the majority of risks and control to Hydro are considered financial lease, and recognized as asset and liability. Payments under other leases and rental arrangements are expensed over the lease term.

**Derivative instruments**

Forward currency contracts and currency options are recognized in the financial statements and measured at fair value at each balance sheet date with the resulting unrealized gain or loss recorded in Financial income, net.

**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 NRS 15A Share-Based Payment. NRS 15A requires share-based payments to be accounted for as required by IFRS 2 Share-based Payment. See note 2 Significant accounting policies to the consolidated financial statements for additional information.

**Risk management**

For information about risk management in Norsk Hydro ASA see note 12 Financial and commercial risk management to the consolidated financial statements.

**Income taxes**

Deferred income tax expense is calculated using the liability method in accordance with NRS' preliminary standard on Income Taxes. Under the liability method, 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 directly in equity. The tax effect of equity transactions, such as group contribution given, 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

Norsk Hydro ASA has closed the main defined benefit plans for new members, and the majority of employees are now covered by a defined contribution plan that is based on salaries up to a maximum level subject to tax deduction. For additional salaries, employees earn retirement benefits in an unfunded contribution based plan. The remaining employees are covered by defined benefit plans that offer benefits based on final salary level and the number of years in service, and include benefits for dependents. The plan providing benefits based on salaries up to a maximum level is funded; all vested benefits are required by law to be funded for such plans. Benefits based on salaries above this level are covered by unfunded plans. The main funded plan is managed by Norsk Hydros Pensjonskasse, a separate, regulated legal entity. Hydro's pension plans supplement the public pension schemes in Norway. The plans comply with legal requirements for pension plans in Norway. Plans providing benefits for salary levels above the tax deductible level have been closed for new members from January 1, 2017.

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 annual contributions have increased since inception and are expected to increase further. The employer contributions are included in Multiemployer plans.

**Pension cost**

Amounts in NOK million	2018	2017
Defined benefit plans	37	36
Defined contribution plans	20	17
Multiemployer plans	4	3
Termination benefits and other	6	8
Social security cost	8	9
Pension expense	75	75
Interest expense (income)	(43)	(32)
Remeasurement (gain) loss directly to equity	445	(458)

**Recognized defined benefit assets and liability**

Amounts in NOK million	2018	2017
Defined benefit obligation major plans	(5,306)	(5,103)
Plan assets	6,699	6,832
Reimbursement rights	310	303
Liability other plans	(3)	(2)
Social security cost	(330)	(309)
Net defined benefit asset	1,371	1,722
Recognized prepaid pension	4,046	4,221
Recognized pension liability	(2,675)	(2,499)
Net amount recognized	1,371	1,722

**Change in defined benefit obligation (DBO)**

Amounts in NOK million	2018	2017
Opening Balance	(5,103)	(5,205)
Current service cost	(36)	(35)
Interest expense	(119)	(127)
Actuarial gain (loss) economic assumptions	(231)	(61)
Experience gain (loss)	(108)	(40)
Benefit payments	296	307
Terminations benefits	(6)	(6)
Settlements	-	65
Closing Balance	(5,306)	(5,103)

**Change in pension plan assets**

Amounts in NOK million	2018	2017
Opening Balance	6,832	6,369
Interest income	162	158
Return on plan assets above (below) interest income	(105)	563
Contributions to plans	5	20
Benefit payments	(196)	(211)
Settlements	-	(67)
Closing Balance	6,699	6,832

**Analysis of the defined benefit obligation (DBO)**

Amounts in NOK million	2018	2017
Active members	(1,115)	(1,119)
Deferred members	(468)	(426)
Pensioners	(3,722)	(3,557)
Defined benefit obligation	(5,306)	(5,103)

Assumptions	Benefit obligation 2018	Benefit expense 2018	Benefit obligation 2017	Benefit expense 2017
Discount rate	2.50%	2.40%	2.40%	2.50%
Expected salary increase	2.50%	2.25%	2.25%	2.25%
Expected pension increase	1.50%	1.00%	1.00%	1.00%
Mortality basis	K2013	K2013	K2013	K2013

See note 37 Employee retirement plans in notes to the consolidated financial statements for information about sensitivities.

### Note 3 - Management remuneration, employee costs and auditor fees

See note 9 Management remuneration in the notes to the consolidated financial statements for information and details related to the Corporate Management Board 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 10 Board of Directors and Corporate Assembly in the notes to the consolidated financial statements for information and details related to the Board of Directors' remuneration.

See note 18 Employee remuneration in the notes to the consolidated financial statements for information on the employee share purchase plan.

Partners and employees of Hydro's appointed auditors, KPMG, own no shares in Norsk Hydro ASA or any of its subsidiaries. Audit fees were NOK 8 million in both 2018 and 2017. Audit related fees were NOK 1 million in 2017. Fees for other services were NOK 2 million in 2018 and NOK 1 million in 2017.

The average number of employees in Norsk Hydro ASA was 282 in 2018 as compared to 272 in 2017. As of year end 2018 and 2017, Norsk Hydro ASA employed 286 and 277 employees, respectively.

Total loans given by Norsk Hydro ASA to Norwegian employees as of December 31, 2018 were NOK 97 million. Loans to employees consist of NOK 49 million secured loans (home and car loans) with the remainder unsecured. The unsecured loan balance as of December 31, 2018 related to the employee share purchase plan was NOK 13 million.

Payroll related expenses are presented in the table below.

Amounts in NOK million	2018	2017
<b>Employee benefit expense:</b>		
Salaries	467	402
Social security costs	59	60
Other benefits	3	1
Pension expense (note 2)	73	75
Internal invoicing of payroll related costs	-	(3)
Total	603	535

## Note 4 - Property, plant and equipment and intangible assets

Operating lease expense amounted to NOK 83 million in 2018 and NOK 72 million in 2017. The company has the following future operating lease commitments under non-cancellable leases: 2019: NOK 72 million, 2020: NOK 72 million, 2021: NOK 72 million, 2022: NOK 12 million.

Amounts in NOK million	Property, plant and equipment	Intangible assets	Total
Cost December 31, 2017	344	65	409
Additions at cost	33	-	33
Disposals at cost	(1)	-	(1)
Accumulated depreciation and impairment December 31, 2018	(185)	(31)	(215)
Carrying value December 31, 2018	191	35	226
Depreciation and impairment in 2018	(9)	(12)	(21)

Intangible assets mainly consist of software.

## Note 5 - Finance income and expense

Amounts in NOK million	2018	2017
Dividends from subsidiaries	1,218	588
Interest from group companies	475	362
Other interest income	47	73
Interest paid to group companies	(102)	(106)
Other interest expense	(213)	(151)
Net foreign exchange gain (loss)	453	(819)
Other, net	61	36
Financial income (expense), net	1,938	(17)

## Note 6 - Income taxes

The tax effect of temporary differences resulting in deferred tax assets (liabilities) are:

Amounts in NOK million	Temporary differences Tax effect	
	2018	2017
Short-term items	6	6
Long-term receivables from subsidiaries	(158)	-
Pensions <sup>1)</sup>	(302)	(396)
Long-term debt	49	-
Other long-term items	11	25
Tax loss carryforwards	-	-
Deferred tax assets (liabilities)	(394)	(365)

1) Includes NOK 92 million and NOK (111) million of tax benefit (expense) allocated to equity in 2018 and 2017 respectively.

In accordance with the preliminary accounting standard for tax, 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	2018	2017
Income (loss) before taxes	1,292	(491)
Expected income taxes at statutory tax rate	297	(118)
Dividend exclusion	(30)	(44)
Effect of tax rate change	(16)	(18)
Favorable decisions in tax disputes	-	(108)
Permanent differences and other, net	25	(20)
Income taxes	276	(307)
<b>Components of income taxes</b>		
Current income taxes	156	(131)
Change in deferred taxes	121	(176)
Income taxes	276	(307)

See note 24 Income taxes in the consolidated financial statements for further information.

Taxes payable were NOK 164 million per December 31, 2018 and NOK 63 million per December 31, 2017.

**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 <sup>1)</sup>	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 [www.hydro.com](http://www.hydro.com). The companies are listed by the business area in which the majority of their activities are managed.



Company name	Country	Ownership
<b>Bauxite &amp; Alumina</b>		
ALUNORTE - Alumina do Norte do Brasil S.A.	Brazil	92.13%
Mineração Paragominas SA	Brazil	100.00%
<b>Rolled Products</b>		
Hydro Aluminium Rolled Products GmbH	Germany	100.00%
Hydro Aluminium Rolled Products AS	Norway	100.00%
<b>Primary Metal</b>		
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%
<b>Metal Markets</b>		
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%
<b>Extruded Solutions</b>		
Hydro Extrusion Nenzing GmbH	Austria	100.00%
Hydro Extrusion Lichterfelde NV	Belgium	100.00%
Hydro Building Systems Belgium NV	Belgium	100.00%
Hydro Precision Tubing Lichterfelde NV	Belgium	100.00%
Hydro Extrusion Raeren SA	Belgium	100.00%
Hydro Extrusion Brasil S.A.	Brazil	100.00%
Hydro Extrusion Ltda	Brazil	100.00%
Hydro Extrusion Canada Inc.	Canada	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 BuildEx S.a.r.l.	France	100.00%
Hydro Extrusion Lucé/Chateauroux SAS	France	100.00%
Hydro Extrusion Puget SAS	France	100.00%
Hydro Extrusion Albi SAS	France	100.00%
Hydro Extrusion Offenburg GmbH	Germany	100.00%
Hydro Extrusion Deutschland GmbH	Germany	100.00%
Hydro Building Systems Germany GmbH	Germany	100.00%
Hydro Extrusion Hungary Kft	Hungary	100.00%
Sapa Extrusion India Pvt. Ltd.	India	100.00%
Hydro Extrusion Italy Srl	Italy	100.00%
Hydro Building Systems Italy S.p.a.	Italy	100.00%
Hydro Extrusion Hoogezaand B.V.	Netherlands	100.00%
Hydro Extrusion Drunen B.V.	Netherlands	100.00%
Hydro Extrusion Poland Sp. z.o.o	Poland	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 Extrusion UK Ltd.	United Kingdom	100.00%
Hydro Components UK Ltd.	United Kingdom	100.00%
Hydro Building Systems UK Ltd	United Kingdom	100.00%
Hydro Extrusion USA LLC	United States	100.00%
Hydro Extrusion Delhi LLC	United States	100.00%
Hydro Extrusion North America LLC	United States	100.00%
Hydro Extruder LLC	United States	100.00%
Hydro Extrusion Portland Inc	United States	100.00%
Hydro Precision Tubing USA LLC	United States	100.00%
<b>Energy</b>		
Røldal Suldal Kraft as	Norway	91.26%

Net loss in 2018 and net gain in 2017 on sale of subsidiaries refers to sale of Herøya Nett AS.

## Note 8 - Related party information

See note 11 Related party information in the notes to the consolidated financial statements for identification of related parties and primary relationships with those parties.

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. See note 5 Financial income and expense for information on interest paid to and received from group companies.

Norsk Hydro ASA allocates costs for corporate staff services and shared services to subsidiaries. The total amount allocated was NOK 122 million in 2018 and NOK 96 million in 2017. Receivables related to such costs amounted to NOK 122 million and NOK 93 million per December 31, 2018 and 2017, respectively.

For information on transactions with employees and management, see note 3 Management remuneration, employee costs and auditor fees and note 9 Management remuneration in the notes to the consolidated financial statements. For information on transactions with Board of Directors and Corporate Assembly see note 10 Board of Directors and Corporate Assembly in the notes to the consolidated financial statements. See note 11 for information on guarantees provided on behalf of subsidiaries and jointly controlled entities.

## Note 9 - Specification of balance sheet items

Amounts in NOK million	2018	2017
Securities	535	535
Prepaid pension	4,046	4,221
Investments in associates	-	48
Other non-current assets	152	138
<b>Total prepaid pension, investments and other non-current assets</b>	<b>4,733</b>	<b>4,943</b>
Pension liability	2,675	2,499
Deferred tax liabilities	394	365
Other long-term provisions	304	356
<b>Total long-term provisions</b>	<b>3,373</b>	<b>3,219</b>

Other long-term provisions include an onerous contract of office space, see note 11 Related party information in the notes to the consolidated financial statements.

## 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 2018 and 2017, the value of currency forward contracts outstanding with subsidiaries were as follows:

Amounts in NOK million	2018	2017
Currency forward contracts, short-term	10	5
Currency forward contracts, long-term	91	8
<b>Financial income, net</b>	<b>100</b>	<b>13</b>

The contracts represent exposure mainly in Euro. In addition, there are some contracts with exposure to US dollars, British pounds, Swiss franc, Danish krone, Swedish krone, Japanese yen and Turkish lira, representing lower amounts. The contracts mature no later than 2023.

## 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	2018	2017
Guarantees related to jointly controlled entities	348	22
Commercial guarantees	3,585	3,449
Total guarantees not recognized	3,934	3,471

## Note 12 - Long-term debt

Amounts in NOK million	2018	2017
USD	588	833
SEK	2,915	3,007
NOK	4,497	4,497
Total unsecured loans	8,000	8,337
Less: Current portion	(2,768)	(281)
Total long-term debt	5,232	8,056

As of December 31, 2018, long-term debt that falls due after 2023 amounted to NOK 999 million. See note 34 Short and long-term debt in notes to the consolidated financial statements for further information.

## Note 13 - Number of shares outstanding, shareholders and equity reconciliation

The share capital of Norsk Hydro ASA as of December 31, 2018 was NOK 2,271,760,107 consisting of 2,068,998,276 ordinary shares at NOK 1.098 per share. As of December 31, 2018, Norsk Hydro ASA had purchased 22,695,479 treasury shares at a cost of NOK 756 million. See Consolidated statements of changes in equity and note 38 Shareholders' equity for additional information.

The table shows shareholders holding one percent or more of the total 2,046,302,797 shares outstanding as of December 31, 2018, 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	139,282,717
State Street Bank and Trust Comp <sup>1)</sup>	82,340,647
Clearstream Banking S.A. <sup>1)</sup>	51,247,405
Banque Pictet & Cie SA <sup>1)</sup>	33,616,323
HSBC Bank PLC <sup>1)</sup>	31,517,490
JPMorgan Chase Bank, N.A., London <sup>1)</sup>	30,910,699
Vanguard International Growth FD	30,534,386
Verdipapirfondet Dnb Norge (IV)	26,281,231
State Street Bank and Trust Comp <sup>1)</sup>	25,308,950
Euroclear Bank S.A./N.V. <sup>1)</sup>	21,654,422

1) Nominee accounts.

#### Changes in equity

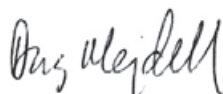
Amounts in NOK million	Paid-in capital	Retained earnings	Total equity
December 31, 2017	31,342	29,738	61,080
Net income		1,015	1,015
Remeasurement postemployment benefits		(353)	(353)
Dividend paid in 2018 not accrued <sup>1)</sup>		(3)	(3)
Dividend proposed		(2,558)	(2,558)
Treasury shares	31	52	83
December 31, 2018	31,373	27,891	59,265

1) Owners of shares sold from treasury shares in April 2018 received dividends for those shares in May 2018. However, this was not accrued in 2017.

# Responsibility statement

We confirm to the best of our knowledge that the consolidated financial statements for 2018 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 2018 have been prepared in accordance with the Norwegian Accounting Act and generally accepted accounting practice in Norway, 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 Board of Directors' 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 2018 has been prepared in accordance with the Norwegian Accounting Act §3-3d and the Norwegian Security Trading Act §5-5a.

Oslo, March 12, 2019



Dag Mejdell  
Chair



Irene Rummelhoff  
Deputy chair



Arve Baade  
Board member



Finn Jebsen  
Board member



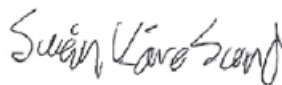
Liselott Kilaas  
Board member



Sten Roar Martinsen  
Board member



Thomas Schulz  
Board member



Svein Kåre Sund  
Board member



Marianne Wiinholt  
Board member



Svein Richard Brandtzæg  
President and CEO

# Independent auditor's report



To the Annual Shareholders' Meeting of Norsk Hydro ASA

## Report on the Audit of the Financial Statements

### Opinion

We have audited the financial statements of Norsk Hydro ASA. The financial statements comprise:

- The financial statements of the parent company Norsk Hydro ASA (the "Company"), which comprise the balance sheet as at 31 December 2018, and the income statement, and cash flow statement 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 2018, and income statement, statement of comprehensive income, statement of changes in equity, cash flow for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion:

- The financial statements are prepared in accordance with the law and regulations.
- The accompanying financial statements give a true and fair view of the financial position of the Company as at 31 December 2018, and its financial performance and its cash flows for the year then ended in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway ("NGAAP").
- The accompanying consolidated financial statements give a true and fair view of the financial position of the Group as at 31 December 2018, 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 ("IFRS").

### Basis for Opinion

We conducted our audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including 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 laws and regulations, 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.

### 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.

### Environmental clean-up cost and asset retirement obligations

Refer to Note 5 Critical accounting judgement and key sources of estimation uncertainty, Note 35 Provisions and Note 36 Contingent liabilities and contingent assets

### The key audit matter

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 company 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 these obligations requires 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 environmental clean-up provisions and asset retirement obligations of NOK 4,299 million as explained in note 35 and disclosed information pertaining to contingent liabilities in note 36.

### Impairment of goodwill, intangible and non-current assets

Refer to Note 5 Critical accounting judgment and key sources of estimation uncertainty, Note 20 Impairment of non-current assets, Note 29 Property, plant and equipment, Note 30 Intangible assets and Note 31 Goodwill.

### The key audit matter

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.

The economic environment and volatility of long-term assumptions indicate that impairment could be a risk related to specific assets and cash generating units and can also impact the assessment of impairment of goodwill. In 2018, following the curtailment of operations in Brazil, management's estimates related to the timing of the return to full capacity is a key assumption impacting the impairment testing of goodwill and certain assets in Brazil.

Management exercise judgement related to expected timing of future cash flows and key assumptions related to commodity and other prices, growth rates, foreign exchange rates, discount rates and production volumes.

As at 31 December 2018, the Group has goodwill of NOK 6,584 million, Property, plant and equipment of NOK 71,299 million and intangible assets of NOK 4,858 million. No impairment has been recognised during 2018.

### How the matter was addressed in our audit

Our audit procedures in this area included:

- Performing retrospective reviews of the accuracy of management's estimates in terms of timing, cash outflows and other assumptions where historical data is available
- 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 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, contingent liabilities and subsequent events.

### How the matter was addressed in our audit

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
- 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

## Tax assets and liabilities

Refer to Note 5 Critical accounting judgement and key sources of estimation uncertainty, Note 24 Income Tax, Note 26 Trade and other receivables, Note 28 Other non-current assets and Note 36 Contingent liabilities and contingent assets.

### The key audit matter

The Group's global operations create exposures to different tax regimes with complex legislation. The Group has recognized significant tax assets related to tax credits and losses carried forward and has exposure to tax claims in several jurisdictions.

The volume of tax credits is significant and the assessment of recoverability is dependent on interpretation of laws and regulations which may be subject to change over time.

Recoverability of deferred tax assets related to losses carried forward are assessed based on estimates of future taxable profits and are judgmental in nature.

Tax provisions and contingent liabilities are recognized and disclosed based on management's assessment of the probability of a future cash outflow and also the ability to reliably estimate the amount of any obligation. Due to the complexity of the various tax regimes in which the Group operates, there is significant judgement involved in these assessments.

As of 31 December 2018, the Group has recognized an asset of NOK 4,154 million in current and non-current Income taxes, VAT and other sales taxes and recognized deferred tax assets of NOK 1,664 million including deferred tax assets related to losses carried forward and taxes payable of NOK 2,266 million.

### Other information

Management is responsible for the other information. The other information comprises the information included in the Annual Report, with the exception of the financial statements and the Independent auditor's report.

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 and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

### Responsibilities of the Board of Directors and the President and CEO ("Management") for the Financial Statements

The Board of Directors and the President and CEO ("Management") are responsible for the preparation in accordance with law and regulations, including fair presentation of the financial statements of the Company in accordance with NGAAP, and for the preparation and fair presentation of the financial statements of the Group in accordance with IFRS, 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. The financial statements of the Company use the going concern basis of accounting insofar as it is not likely that the enterprise will cease operations. The financial statements of the Group use 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 laws, regulations, and auditing

### How the matter was addressed in our audit

Our audit procedures in this area included:

- Assessing the eligibility of tax credits recognized as assets and the recoverability of these amounts
- Assessing the judgment applied to the recognition of deferred tax assets and the reversal or recoverability of these within the many tax jurisdictions
- Assessing the process for identification of uncertain tax positions and management's assessment of the probable outcome
- Using our knowledge of local jurisdictions and involvement of our local tax specialists where deemed relevant to obtain an overview of the local requirements relevant to management's judgements and conclusions for significant estimates
- Reading available correspondence with relevant tax authorities to identify potential tax contingencies and for the basis of accounting entries and disclosures
- Challenging management as to which cases and exposures are significant and the level of corresponding disclosures to be included in the Annual report



standards and practices generally accepted in Norway, including 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 laws, regulations, and auditing standards and practices generally accepted in Norway, including 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 or 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 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 fair presentation.
- 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 that we identify during our audit.

We also provide the Board of Directors 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

### **Opinion on the Board of Directors' report**

Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors' report and in the statements on Corporate Governance and Corporate Social Responsibility concerning the financial statements, the going concern assumption, is consistent with the financial statements and complies with the law and regulations.

### **Opinion on Registration and Documentation**

Based on our audit of the financial statements as described above, and control procedures we have considered necessary in accordance with the International Standard on Assurance Engagements (ISAE) 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, it is our opinion that management has fulfilled its duty to produce a proper and clearly set out registration and documentation of the Company's accounting information in accordance with the law and bookkeeping standards and practices generally accepted in Norway.

Oslo, 12 March 2019  
KPMG AS

Lars Inge Pettersen  
State Authorised Public Accountant

Note: This translation from Norwegian has been prepared for information purposes only.

# Statement of the Corporate Assembly to the Annual general meeting of Norsk Hydro ASA

The Board of Directors' proposal for the financial statements for the financial year 2018 and the Auditors' report have been submitted to the corporate assembly.

The Corporate Assembly recommends that the directors' proposal regarding the financial statements for 2018 for the parent company, Norsk Hydro ASA, and for Norsk Hydro ASA and its subsidiaries be approved by the annual general meeting, and that the net income for 2018 of Norsk Hydro ASA be appropriated as recommended by the directors.

Oslo, March 12, 2019

Terje Venold

# Appendices to the Board of Directors' report

- 116 Alternative Performance Measures (APMs)
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## Quick overview

This section contains information that is part of the Board of Directors' formal responsibility and exceeding the information required directly in the Board of Directors' report.

All documents are approved by the Board of Directors and included in their signatures to the Board of Directors' Report.

The Country by Country report is also included in the Board of Directors' responsibility statement on page F86 as required by the Norwegian Accounting Act §3-3d and the Norwegian Securities Act §5-5a.

# Alternative Performance Measures (APMs)

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. 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 underlying EBIT in the discussions on periodic *underlying* financial and operating results and liquidity from the business areas and the group, while effects excluded from underlying EBIT and net income (loss) are discussed separately in the section on reported EBIT and net income. 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.
- *Underlying EBIT*: EBIT +/- identified items to be excluded from underlying EBIT as described below.
- *EBITDA*: EBIT + depreciation, amortization and impairments, net of investment grants.
- *Underlying EBITDA*: EBITDA +/- identified items to be excluded from underlying EBIT as described below + impairments.
- *Underlying net income (loss)*: Net income (loss) +/- items to be excluded from underlying income (loss) as described below.
- *Underlying earnings per share*: Underlying net income (loss) attributable to Hydro shareholders divided by a weighted average of outstanding shares (ref.: note 38 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.
- *Adjusted net cash (debt)*: Short- and long-term interest-bearing debt adjusted for Hydro's liquidity positions, and 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 equity ratio*: Adjusted net cash (debt)/total equity.
- *Funds from operations to adjusted net cash (debt) ratio*: Cash generation from Hydro's wholly and partly owned operating assets before changes in net operating capital, including the contribution from equity accounted investments, and after current tax expense/adjusted net cash (debt).
- *(Underlying) RoaCE*: (Underlying) RoaCE is defined as (underlying) "Earnings after tax" divided by average "Capital employed". (Underlying) "Earnings after tax" is defined as (underlying) "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 underlying figures, the tax effect of items excluded. "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 Employed can be derived by deducting "Cash and cash equivalents", "Short-term investments" and "Short-term and long-term interest free liabilities" (including deferred tax liabilities) from "Total assets". The two different approaches yield the same value.

**Items excluded from underlying EBIT, EBITDA, net income (loss) and earnings per share**

Hydro has defined two categories of items which are excluded from underlying 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 and the metal effect in Rolled Products. When realized, effects of changes in the market values since the inception are included in underlying EBIT. Changes in the market value of the trading portfolio are included in underlying 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, major impairments of property, plant and equipment, effects of disposals of businesses and operating assets, as well as other major effects of a special nature. Materiality is defined as items with a value above NOK 20 million. All items excluded from underlying results are reflecting a reversal of transactions recognized in the financial statements for the current period, except for the metal effect. 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 fixed-price customer and supplier contracts, where hedge accounting is not applied. 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 financial power contracts used for hedging purposes, as well as elimination of changes in fair value of embedded derivatives within certain internal power contracts.
- *Metal effect in Rolled Products* is an effect of timing differences resulting from inventory adjustments due to changing aluminium prices during the production, sales and logistics process, lasting two to three months. As a result, margins are impacted by timing differences resulting from the FIFO inventory valuation method (first in, first out), due to changing aluminium prices during the process. The effect of inventory write-downs is included. Decreasing aluminium prices in Euro results in a negative metal effect on margins, while increasing prices have a positive effect.
- *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.
- *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 simultaneously excluded from underlying results.
- *Alunorte agreements – provision* refers to the provision recognized in relation to the TAC and TC agreements with the Government of Pará and Ministério Público made on September 5, 2018.
- *(Gains) losses on divestments* include a net gain or loss on divested businesses and/or individual major assets.
- *Other effects* include insurance proceeds covering asset damage, legal settlements, etc. Insurance proceeds covering lost income are included in underlying results.
- *Pension* includes recognition of pension plan amendments and related curtailments and settlements.
- *Transaction related effects (Sapa)* reflect the net measurement gain relating to previously owned shares in Sapa and an inventory valuation expense related to the Sapa transaction.
- *Items excluded in equity accounted investments* reflects Hydro's share of items excluded from underlying net income in Sapa, until end of third quarter 2017, and 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.
- *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.
- *Calculated income tax effect*: In order to present underlying net income on a basis comparable with our underlying operating performance, the underlying income taxes are adjusted for the expected taxable effects on items excluded from underlying income before tax.
- *Other adjustments to net income* include other major financial and tax related effects not regarded as part of the underlying business performance of the period.

<b>Items excluded from underlying EBIT<sup>1)</sup></b>	<b>Year</b>	<b>Year</b>
NOK million	<b>2018</b>	<b>2017</b>
Alunorte agreements - provision <sup>2)</sup>	519	-
<b>Bauxite &amp; Alumina</b>	<b>519</b>	<b>-</b>
Unrealized derivative effects on LME related contracts	(143)	101
Unrealized derivative effects on power contracts	(218)	50
Significant rationalization charges and closure costs	-	181
<b>Primary Metal</b>	<b>(361)</b>	<b>331</b>
Unrealized derivative effects on LME related contracts	(200)	58
<b>Metal Markets</b>	<b>(200)</b>	<b>58</b>
Unrealized derivative effects on LME related contracts	111	41
Metal effect	(73)	(419)
Significant rationalization charges and closure costs	39	-
Other effects <sup>3)</sup>	-	245
<b>Rolled Products</b>	<b>77</b>	<b>(132)</b>
Unrealized derivative effects on LME related contracts	299	(4)
Significant rationalization charges and closure costs	40	29
Pension <sup>4)</sup>	40	-
Transaction related effects (Sapa) <sup>5)</sup>	-	(1,463)
Other effects <sup>6)</sup>	237	-
<b>Extruded Solutions</b>	<b>616</b>	<b>(1,438)</b>
Unrealized derivative effects on power contracts	(7)	-
<b>Energy</b>	<b>(7)</b>	<b>-</b>
Unrealized derivative effects on power contracts <sup>7)</sup>	(36)	197
Unrealized derivative effects on LME related contracts <sup>7)</sup>	(27)	23
Other effects <sup>8)</sup>	(34)	(33)
Unrealized derivative effects (Sapa) <sup>9)</sup>		20
Net foreign exchange (gain) loss (Sapa) <sup>9)</sup>		5
Calculated income tax effect (Sapa) <sup>9)</sup>		(6)
<b>Other and eliminations</b>	<b>(97)</b>	<b>206</b>
<b>Items excluded from underlying EBIT</b>	<b>547</b>	<b>(974)</b>

1) Negative figures indicate reversal of a gain and positive figures indicate reversal of a loss.

2) Alunorte agreements - provision, refers to the provision recognized in relation to the TAC and TC agreements with authorities in Pará, Brazil, made on September 5, 2018 (see note 35 to the Financial statements).

3) Other effects in Rolled Products reflect a charge related to a customs case in Germany.

4) Pension includes a charge of NOK 40 million due to remeasurement of all UK schemes with Guaranteed Minimum Pensions (GMP) required to be adjusted to equalize pension benefits for gender. The remeasurement is based on the accrued pension benefits in the period between 1990 and 1997.

5) Transaction related effects include the revaluation gain of Hydro's pre-transactional 50 percent share in Sapa, as well as the fair value allocated to inventory of finished goods and to the backlog of contractual deliveries as of closure, sold during fourth quarter 2017.

6) Other effects in Extruded Solutions include a charge of NOK 80 million due to adjustments to the value of certain assets in relation to the acquisition, and a legal agreement of NOK 157 million related to Sapa Profiles Inc. (SPI) that is under investigation (see note 35 to the Financial statements)

7) Unrealized derivative effects on power contracts and LME related contracts result from elimination of changes in the valuation of embedded derivatives within certain internal power contracts and in the valuation of certain internal aluminium contracts.

8) Other effects in Other and eliminations include the remeasurement of environmental liabilities related to closed business in Germany in 2017 and 2018

9) Items excluded in equity accounted investments (Sapa) for the year 2017

<b>Underlying EBITDA</b>	<b>Year</b>	<b>Year</b>
NOK million	<b>2018</b>	<b>2017</b>
EBITDA	15,796	18,344
Items excluded from underlying EBIT	547	(974)
<b>Underlying EBITDA</b>	<b>16,344</b>	<b>17,369</b>

<b>Underlying earnings per share</b>	<b>Year</b>	<b>Year</b>
NOK	<b>2018</b>	<b>2017</b>
Net income (loss)	<b>4,323</b>	9,184
Items excluded from net income (loss)	<b>1,495</b>	(788)
Underlying net income (loss)	<b>5,819</b>	8,396
Underlying net income attributable to non-controlling interests	<b>184</b>	331
Underlying net income attributable to Hydro shareholders	<b>5,635</b>	8,066
Number of shares	<b>2,046</b>	2,044
Underlying earnings per share	<b>2.75</b>	3.95

<b>RoACE</b>	Reported		Underlying	
NOK million	<b>2018</b>	2017	<b>2018</b>	2017
EBIT	<b>8,522</b>	12,189	<b>9,069</b>	11,215
Adjusted Income tax expense <sup>1)</sup>	<b>(2,757)</b>	(2,225)	<b>(2,721)</b>	(2,651)
EBIT after tax	<b>5,765</b>	9,964	<b>6,348</b>	8,564

NOK million	December 31		
	<b>2018</b>	2017	2016
Current assets <sup>2)</sup>	<b>48,027</b>	41,492	23,722
Property, plant and equipment	<b>71,299</b>	72,933	58,734
Other non-current assets	<b>35,559</b>	35,710	35,688
Current liabilities <sup>3)</sup>	<b>(26,444)</b>	(25,092)	(13,823)
Non-current liabilities <sup>4)</sup>	<b>(29,018)</b>	(28,715)	(22,651)
Capital Employed	<b>99,422</b>	96,327	81,670

Return on average Capital Employed (RoACE)	Reported		Underlying	
	<b>2018</b>	2017	<b>2018</b>	2017
Hydro	<b>5.9 %</b>	11.2 %	<b>6.5 %</b>	9.6 %

1) Adjusted income tax expense is based on reported and underlying tax expense adjusted for tax on financial items.

2) Excluding cash and cash equivalents and short-term investments.

3) Excluding bank loans and other interest-bearing short-term debt.

4) Excluding long-term debt.

## 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. From 2017, 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.

The Country-by-country report is approved by the board of directors and included in their responsibility statement.



**Payments to authorities per project and authority (exploration and extractive activities, alumina refining and aluminium production) in 2018**

Extractive related activities (all in Brazil) <sup>1)</sup>	Taxes and fees <sup>2)</sup> NOK million	Royalties NOK million	License fees <sup>3)</sup> NOK million	Infrastructure, contractual <sup>4)</sup> NOK million	Infrastructure, voluntary <sup>4)</sup> NOK million	Investments NOK million	Revenue <sup>5)</sup> NOK million	Production volume 1 000 mt	Total expenses <sup>5/6)</sup> NOK million
<b>Mineracao Paragominas SA, total</b>									
	<b>104</b>	<b>62</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>300</b>	<b>2,011</b>	<b>6,214</b>	<b>1,857</b>
Federal	58	6	2						
Pará State	46	18	-						
Paragominas municipality	-	37	-						
<b>Norsk Hydro Brasil Ltda, total</b>									
	<b>17</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>6</b>	<b>8</b>	<b>15</b>	<b>-</b>	<b>49</b>
Federal	17	-	-						
Rio de Janeiro State	-	-	-						
São Paulo Municipality	-	-	-						
<b>Alunorte - Alumina do Norte do Brasil SA, total</b>									
	<b>69</b>	<b>-</b>	<b>-</b>	<b>10<sup>8)</sup></b>	<b>13</b>	<b>659</b>	<b>9,333</b>	<b>3,712</b>	<b>11,280</b>
Federal	52	-	-						
Pará State	17	-	-						
Barcarena Municipality	-	-	-						
<b>Albras - Alumínio Brasileiro SA, total</b>									
	<b>204</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>361</b>	<b>7,261</b>	<b>250</b>	<b>6,929</b>
Federal	204	-	-						
Pará State	-	-	-						
Barcarena Municipality	-	-	-						
<b>Total<sup>7)</sup></b>	<b>394</b>	<b>62</b>	<b>2</b>	<b>11</b>	<b>22</b>	<b>1,328</b>	<b>18,620</b>	<b>10,176</b>	<b>20,115</b>

1) In 2018, 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.

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 to the social statements in Hydro's Annual Report 2017.

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.

8) Contractual infrastructure payments related to food cards as part of the TAC.

## 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 state tax on the sale of goods, freight and certain services, similar to VAT. ICMS is intended to be 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. Since ICMS is an indirect tax, the net ICMS effect is reported as a cost in Hydro's financial accounts instead of as a tax item.

In the state of Pará, Hydro is subject to a tax regime that aims at preventing the accumulation of ICMS recognized credits, and reduces net payable ICMS. From our operations, we generate ICMS tax revenue to Pará when purchasing diesel and fuel oil, when Albras acquires electricity, and also on sales of products to customers located outside the state.

The ICMS regime Hydro is subject to requires Hydro to comply with certain conditions related to vertical integration of aluminium production in Pará. It also requires Hydro to contribute to the development in the region and enable sustainable growth in Pará.

The ICMS deferral is subject to approval by Brazil's National Council of Finance Policy (CONFAZ). In 2018, the Public Auditing Prosecutors for the State of Pará (MP-C/PA) initiated a general process before the State Accounting Court to better understand approvals, compliance and transparency of tax incentives established by the State of Pará.

PIS and COFINS are two social contribution taxes charged on gross income, in most cases at the rate of 9.25 percent. Hydro's group companies in Brazil are charged under a non-cumulative system that resembles VAT. Similar to ICMS, export transactions are not subject to this tax. As a result, Brazilian exporters, like Alunorte and Albras, 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 table below includes Hydro entities involved in extractive activities as well as other Hydro entities in the state of Pará.

**Other taxes paid to authorities in Brazil\***

<b>Extractive related activities</b>	<b>ICMS</b>	<b>PIS</b>	<b>COFINS</b>	<b>IPTU</b>	<b>Total contribution</b>
	NOK million	NOK million	NOK million	NOK million	NOK million
<b>Mineracao Paragominas SA, total</b>	<b>25</b>	-	-	-	<b>25</b>
Federal	-	-	-	-	-
Pará State	25	-	-	-	25
Paragominas municipality	-	-	-	-	-
<b>Norsk Hydro Brasil Ltda, total</b>	<b>1</b>	-	-	-	<b>2</b>
Federal	-	-	-	-	-
Rio de Janeiro State	1	-	-	-	2
São Paulo Municipality	-	-	-	-	-
<b>Alunorte - Alumina do Norte do Brasil SA, total</b>	<b>355</b>	-	-	<b>12</b>	<b>366</b>
Federal	-	-	-	-	-
Pará State	355	-	-	-	366
Barcarena Municipality	-	-	-	12	-
<b>Albras - Alumínio Brasileiro SA, total</b>	<b>363</b>	<b>20</b>	<b>92</b>	<b>11</b>	<b>486</b>
Federal	-	20	92	-	486
Pará State	363	-	-	-	-
Barcarena Municipality	-	-	-	11	-
<b>Total</b>	<b>743</b>	<b>20</b>	<b>92</b>	<b>23</b>	<b>878</b>

\*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

Jurisdiction	Legal entity	Description of the entity's activity	Ownership 31. dec	Number of permanent employees <sup>1)</sup>	Number of temporary employees <sup>1)</sup>	Interest paid to Hydro legal entities in another jurisdiction, NOK million	Revenue, NOK million <sup>2)</sup>	Income before tax, NOK million <sup>3)</sup>	Income taxes, NOK million <sup>4)</sup>	Income taxes paid, NOK million <sup>5)</sup>	Retained earnings, NOK million <sup>6)</sup>
Argentina	Hydro Extrusion Argentina S.A. (previously Sapa Aluminium Argentina SA)	Precision tubing production	100 %	126	-	1	241	2	-2	5	42
<b>Total Argentina</b>				<b>126</b>	<b>-</b>	<b>1</b>	<b>241</b>	<b>2</b>	<b>-2</b>	<b>5</b>	<b>42</b>
Australia	Hydro Aluminium Australia Pty. Limited <sup>7)</sup>	Local holding company	100%	-	-	-	1,327	-66	-	-	-306
	Hydro Aluminium Kurri Kurri Pty. Limited	Real estate	100%	9	-	-	40	40	-	-	-1,957
<b>Total Australia</b>				<b>9</b>	<b>-</b>	<b>-</b>	<b>1,366</b>	<b>-27</b>	<b>-</b>	<b>-</b>	<b>-1,652</b>
Austria	Hydro Building Systems Austria GmbH	Sales company	100%	370	29	-	193	2	1	-9	55
	Hydro Components Nenzing GmbH	Extrusion component production	100%	103	10	-	111	-3	-1	1	18
	Hydro Extrusion Nenzing GmbH	Extrusion production	100%	320	9	-	2,063	154	39	33	298
	Hydro Holding Austria GmbH	Local holding company	100%	-	-	-	-	143	-1	7	204
<b>Total Austria</b>				<b>793</b>	<b>48</b>	<b>-</b>	<b>2,367</b>	<b>296</b>	<b>38</b>	<b>33</b>	<b>576</b>
Belgium	Hydro Allease NV	Support services	100%	-	-	-	6	10	4	2	21
	Hydro Aluminium Belgium BVBA	Support services	100%	-	-	-	-	-	-	-	-
	Hydro Building Systems Belgium NV	Building systems production	100%	221	3	-	460	-	-8	-	-174
	Hydro Extrusion Lichtervelde NV	Precision tubing production	100%	186	-	-	1,529	47	19	-	344
	Hydro Extrusion Raeren S.A.	Extrusion production	100%	180	22	-	794	28	9	2	147
	Norsk Hydro EU Sprl	Public affairs	100%	3	-	-	5	-	-	-	1
	Hydro Extrusion Eupen SA (previously Sapa Extrusion EXPA S.A)	Dies production	100 %	54	-	-	81	-26	-8	-	111
	Hydro Precision Tubing Lichtervelde NV (previously Sapa Precision Tubing Lichtervelde NV)	Precision tubing production	100%	179	5	-	531	-14	5	-	85
	Sapa Precision Tubing Senefve S.A.	<i>Entity is dormant</i>	100%	-	-	-	-	-	-	-	10
<b>Total Belgium</b>				<b>823</b>	<b>30</b>	<b>-</b>	<b>3,405</b>	<b>44</b>	<b>21</b>	<b>5</b>	<b>544</b>
Brazil	ALBRAS - Alumínio Brasileiro SA	Primary aluminium production	51%	1,165	58	-	7,261	310	110	204	2,981
	ALUNORTE - Alumina do Norte do Brasil S.A.	Alumina refinery	92.1 %	1,922	105	37	9,333	-3,345	-1,000	52	2,473
	Ananke Alumina SA	Local holding company	100%	-	-	-	28	30	10	24	1,645
	Atlas Alumínio SA	Local holding company	100%	-	-	-	274	267	90	110	401
	Calypto Alumina SA	Local holding company	100%	-	-	-	-	-	-	-	-1
	CAP - Companhia de Alumina do Pará SA	Planned alumina refinery	81%	-	-	-	-	-13	-	-	-398

Hydro Extrusion Brasil S.A. (previously Sapa Aluminium Brasil S.A)	100%	383	20	8	749	-30	-9	4	-36
Hydro Extrusion Ltda.	100%	466	13	-	626	-106	-37	-	-31
Mineração Paragominas SA	100%	1,359	58	-	2,011	215	72	58	810
Norsk Hydro Brasil Ltda.	100%	358	41	-	15	-36	4	17	-415
Norsk Hydro Energia Ltda.	100%	-	-	-	987	5	2	-	4
<b>Total Brazil</b>		<b>5,653</b>	<b>295</b>	<b>45</b>	<b>21,283</b>	<b>-2,703</b>	<b>-758</b>	<b>470</b>	<b>7,434</b>
Canada									
Hydro Aluminium Canada & Co. Ltd. <sup>(8)</sup>	100%	3	-	2	2,286	431	55	159	1,355
Hydro Aluminium Canada Inc.	100%	-	-	-	1	1	-	-	26
Hydro Extrusion Canada Inc. (previously Sapa Canada Inc.)	100%	532	2	1	2,632	67	16	31	631
<b>Total Canada</b>		<b>535</b>	<b>2</b>	<b>3</b>	<b>4,919</b>	<b>498</b>	<b>70</b>	<b>190</b>	<b>2,012</b>
China & Hong Kong									
Hydro Aluminium Beijing Ltd.	100%	10	-	-	549	32	8	13	69
Hydro Building Systems (Beijing) Co. Ltd. (previously Sapa Building Systems (Beijing) Co. Ltd.)	100%	20	-	-	82	-4	-	-	-71
Hydro Precision Tubing (Suzhou) Co. Ltd. (previously Sapa Precision Tubing (Suzhou) Co. Ltd.)	100%	378	-	-	833	20	8	6	-33
Sapa Asia Limited	100%	-	-	-	-	-	-	-	-5
Sapa Extrusion (Jiangyin) Co. Ltd.	100%	-	-	-	-	-1	-	-	-27
Sapa Extrusion (Shanghai) Company Ltd.	100%	199	-	-	294	44	13	9	143
Sapa (Shanghai) Management Co. Ltd.	100%	-	-	-	1	1	3	1	-17
Sapa Precision Tubing Shanghai Ltd.	100%	58	-	-	110	-5	-1	2	12
<b>Total China &amp; Hong Kong</b>		<b>665</b>	<b>-</b>	<b>-</b>	<b>1,868</b>	<b>87</b>	<b>31</b>	<b>30</b>	<b>70</b>
Croatia									
Hydro Building Systems Croatia d.o.o.	-	-	-	-	-	-	-	-	-
<b>Total Croatia</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Czech Republic									
Hydro Building Systems Czechia s.r.o. (previously Sapa Building Systems sro)	100%	6	-	-	7	-	-	-	1
<b>Total Czech Republic</b>		<b>6</b>	<b>-</b>	<b>-</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>
Denmark									
Dataskabet af 23 august 2016 AS under frivillig likvidation	100%	-	-	-	-	-	-	2	-
Hydro Aluminium Rolled Products Denmark AS	100%	2	-	-	4	1	1	-	6

Hydro Extrusion Denmark A/S	Extrusion production	100%	276	-	1	1,267	56	11	6	172
Hydro Holding Denmark A/S	Local holding company	100%	-	-	-	-	-8	-2	-22	1,431
Hydro Precision Tubing Tønder A/S	Precision tubing production	100%	447	1	1	1,443	90	20	24	547
<b>Total Denmark</b>			<b>725</b>	<b>1</b>	<b>2</b>	<b>2,713</b>	<b>139</b>	<b>30</b>	<b>9</b>	<b>2,155</b>
Hydro Extrusion Baltics AS (previously Hydro Extrusion Estonia AS)	Extrusion production	100%	12	-	-	56	1	-	-	10
<b>Total Estonia</b>			<b>12</b>	<b>-</b>	<b>-</b>	<b>56</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>10</b>
Hydro Extrusion Finland Oy	Sales company	100%	10	1	-	176	7	1	1	19
<b>Total Finland</b>			<b>10</b>	<b>1</b>	<b>-</b>	<b>176</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>19</b>
France										
Extrusion Services S.a.r.l	Local holding company	100%	42	-	-	487	8	2	4	158
Hydro Albi SNC	Extrusion production	100%	20	-	-	-	-	-	-1	-
Hydro Aluminium France S.A.S.	Local holding company	100%	9	-	-	16	5	1	-1	9
Hydro Aluminium Sales and Trading s.n.c.	Sales company	100%	3	-	-	9	1	-	-	2
Hydro Buildex Sarl	Extrusion production	100%	105	7	-	557	39	13	5	104
Hydro Building Systems France Sarl <sup>(10)</sup>	Building systems production	100%	710	35	-	3,024	181	69	50	297
Hydro Building Systems Holding France SAS <sup>(12)</sup>	Entity is dissolved in 2018	100%	-	-	-	-	-	-	-	-
Hydro Extrusion Albi SAS <sup>(11)</sup>	Administrative services	100%	171	5	-	992	62	23	-15	210
Hydro Extrusion Lucé/Châteauroux SAS	Extrusion production	100%	343	5	-	1,028	1	5	-18	-194
Hydro Extrusion Puget SAS	Extrusion production	100%	402	1	-	873	-26	8	-10	-53
Hydro France SAS <sup>(12)</sup>	Entity is dissolved in 2018	100%	-	-	-	-	-	-	-	-
Hydro Holding France SAS <sup>(12)</sup>	Local holding company	100%	-	-	-	1	107	-21	115	-305
Hydro Laqueage Albi SAS <sup>(11)</sup>	Sales company	100%	74	-	-	-	-	-	-	-
Hydro Tool Center SAS	Tool and spare parts services	100%	5	-	-	43	1	-	-	4
Sapa Building Systems Puget SAS <sup>(10)</sup>	Entity is dissolved in 2018	100%	-	-	-	-	-	-	-	-
Sapa Shared Service Center France I.T.C s.n.c	IT shared services	100%	-	-	-	20	1	-	-1	1
<b>Total France</b>			<b>1,884</b>	<b>53</b>	<b>-</b>	<b>7,050</b>	<b>381</b>	<b>100</b>	<b>127</b>	<b>234</b>
Germany										
Eugen Notter GmbH	Building systems production	100%	26	1	-	12	-2	-1	2	13
Hydro Aluminium Deutschland GmbH	Local holding company	100%	69	3	-	49	-5	-23	-8	4,174
Hydro Aluminium Dormagen GmbH	Finishing	100%	6	4	-	52	9	-	-	5
Hydro Aluminium Gießerei Rackwitz GmbH	Remelter	100%	-	-	-	1,066	87	-	-	29
Hydro Aluminium High Purity GmbH	High-purity aluminium production	100%	-	-	-	296	-13	-3	-	54
Hydro Aluminium Recycling Deutschland GmbH	Remelter	100%	161	38	-	68	14	-1	-	80





		4	2	231	10	4	7	62
<b>Total Japan</b>								
Latvia	Hydro Extrusion Latvia SIA	100%	-	6	-	-	-	-5
<b>Total Latvia</b>				<b>6</b>				<b>-5</b>
Lithuania	Hydro Building Systems Lithuania UAB	100%	-	71	4	1	1	11
	Hydro Extrusion Lithuania UAB	100%	222	256	13	1	1	27
<b>Total Lithuania</b>			222	<b>327</b>	<b>17</b>	<b>1</b>	<b>1</b>	<b>38</b>
Luxembourg	Hydro Aluminium Clervaux S.A.	100%	53	1,496	1,156	25	10	179
<b>Total Luxembourg</b>			<b>53</b>	<b>1,496</b>	<b>1,156</b>	<b>25</b>	<b>10</b>	<b>179</b>
Mexico	Hydro Aluminium Metals Mexico S. de R.L.	-	-	-	-	-	-	-
	Hydro Precision Tubing Monterrey S. de R.L. de C.V. (previously Sapa Precision Tubing Monterrey S. de R.L. de C.V.)	100%	123	78	8	5	-1	122
	Hydro Precision Tubing Reynosa S. de R.L. de C.V. (previously Sapa Precision Tubing Reynosa S. de R.L. de C.V.)	100%	206	81	7	3	3	19
	Hydro Precision Tubing Services Monterrey S. de R.L. de C.V. (previously Monterrey Extrusions Services S. de R.L. de C.V.)	100%	-	30	1	-	1	-
<b>Total Mexico</b>			<b>329</b>	<b>189</b>	<b>16</b>	<b>8</b>	<b>4</b>	<b>140</b>
Mozambique	Sapa Building Systems Moçambique Lda	100%	-	1	7	-	-	-
<b>Total Mozambique</b>				<b>1</b>	<b>7</b>			
Netherlands	Hydro Albras B.V.	100%	-	-	166	-	-	-2
	Hydro Aluminium Brasil Investment B.V.	100%	-	-	-12	-	-	916
	Hydro Aluminium Investment B.V.	100%	-	-	4	-	-	-
	Hydro Aluminium Netherlands B.V.	100%	-	-	1,148	-	-	225
	Hydro Aluminium Pará B.V.	100%	-	-	-	-	-	-126
	Hydro Aluminium Qatalum Holding B.V.	100%	-	-	1,166	-	-	893
	Hydro Aluminium Rolled Products Benelux B.V.	100%	4	5	1	-	-	3
	Hydro Alunorte B.V.	100%	-	-	67	-	-	-1
	Hydro Building Systems Netherlands B.V.	100%	-	40	5	-	-	-3
	Hydro CAP B.V.	100%	-	-	-	-	-	-405
	Hydro Extrusion Drunen B.V.	100%	410	1,579	29	-2	-	857
	Hydro Extrusion Holding Netherlands B.V. (previously Fintuna Holding (Nederland B.V.))	100%	-	1	-10	-4	-	-27
	Hydro Extrusion Hoogezand B.V.	100%	155	611	21	3	14	186
	Hydro Holding Netherlands B.V. (previously Sapa Nederland B.V.)	100%	-	-	-9	-8	-6	58



Russian Federation	OOO Sapa Building Systems	Liquidated in 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Russian Federation</b>			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Singapore	Hydro Aluminium Asia Pte. Ltd.	Trading company	15	1	-	8,134	140	17	11	11	534						
	Hydro Aluminium Asia Rolled Products Pte. Ltd.	Sales company	2	-	-	5	1	-	-	-	5						
	Hydro Holding Singapore Pte. Ltd.	Sales and local holding company	17	-	-	49	-	-	-	-	-407						
<b>Total Singapore</b>			<b>34</b>	<b>1</b>	-	<b>8,188</b>	<b>141</b>	<b>17</b>	<b>11</b>	<b>11</b>	<b>132</b>						
Slovakia	Hydro Extrusion Slovakia a.s.	Extrusion production	377	-	-	668	21	6	6	-34							
	Sovalco a.s.	Primary aluminium production	508	-	-	3,837	345	74	66	708							
	ZSNP DA, s.r.o.	Transportation	-	-	-	9	2	-	-	4							
<b>Total Slovakia</b>			<b>885</b>	-	-	<b>4,514</b>	<b>368</b>	<b>80</b>	<b>73</b>	<b>678</b>							
South Africa	Technal Systems South Africa (Pty) Ltd.	Entity is in liquidation	-	-	-	-	-2	-	-	-13							
Total South Africa			-	-	-	-	-2	-	-	-13							
Spain	Hydro Aluminium Iberia S.A.U	Remelter	49	2	-	919	81	15	32	243							
	Hydro Aluminium Rolled Products Iberia S.L.	Sales company	6	-	-	10	4	1	1	6							
	Hydro Building Systems Spain S.L.U.	Building systems production	256	2	-	781	5	7	-	22							
	Hydro Extruded Solutions Holding S.L.U.	Local holding company	46	1	-	38	-	-	-	21							
	Hydro Extrusion Spain S.A.U.	Extrusion production	394	37	-	1,514	31	4	-7	518							
<b>Total Spain</b>			<b>751</b>	<b>42</b>	-	<b>3,262</b>	<b>121</b>	<b>27</b>	<b>25</b>	<b>811</b>							
Sweden	Hydro Aluminium Sverige AB	Sales company	2	-	-	3	-	-	-	6							
	Hydro Building Systems Sweden AB	Building systems production	111	2	-	657	86	-	-	13							
	Hydro Extruded Solutions AB	Local holding company   R&D	48	-	19	64	-119	48	59	1,616							
	Hydro Extrusion Sweden AB	Extrusion production	894	15	3	2,545	21	-5	-	668							
	Sapa China Holding AB	Local holding company	-	-	-	-	-	-	-	-							
<b>Total Sweden</b>			<b>1,055</b>	<b>17</b>	<b>22</b>	<b>3,270</b>	<b>-12</b>	<b>43</b>	<b>60</b>	<b>2,303</b>							
Switzerland	Hydro Aluminium International SA	Sales company	12	-	15	24,265	1,048	124	-	66							
	Hydro Aluminium Walzprodukte AG	Sales company	3	-	-	4	1	-	-	3							
	Hydro Building Systems Switzerland AG	Sales company	38	-	-	241	16	4	2	36							
<b>Total Switzerland</b>			<b>53</b>	-	<b>15</b>	<b>24,511</b>	<b>1,065</b>	<b>127</b>	<b>2</b>	<b>106</b>							
Turkey	Hydro Yapi Sistem Sanayi VE Ticaret AS	Sales company	31	-	1	64	-1	-1	4	40							
<b>Total Turkey</b>			<b>31</b>	-	<b>1</b>	<b>64</b>	<b>-1</b>	<b>-1</b>	<b>4</b>	<b>40</b>							
Ukraine	Sapa Profiles UA	Entity is in liquidation	-	-	-	-	-	-	-	-							

Total Ukraine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United Arab Emirates		Hydro Building Systems Middle East FZE	Sales company	100%	15	-	-	-	-	173	24	-	-	-	-	-	-	-	43
<b>Total United Arab Emirates</b>					<b>15</b>	-	-	-	-	<b>173</b>	<b>24</b>	-	-	-	-	-	-	-	<b>43</b>
United Kingdom	Hydro Aluminium Deeside Ltd.	Remelter		100%	45	-	-	-	-	834	34	7	2	2	74				
	Hydro Aluminium Rolled Products Ltd.	Sales company		100%	-	-	-	-	-	11	2	1	-	-	3				
	Hydro Building Systems UK Ltd.	Building systems production		100%	162	1	-	-	-	596	-6	2	4	4	331				
	Hydro Components UK Ltd.	Extrusion component production		100%	-	2	-	-	-	652	-79	-16	6	6	130				
	Hydro Extrusion UK Ltd.	Extrusion production		100%	962	-	-	-	-	1,735	20	-13	-3	-3	7				
	Hydro Holdings UK Ltd.	Local holding company		100%	6	-	-	-	-	1	-226	-	-7	-7	-71				
	Sapa Aluminium Extrusion Ltd.	<i>Entity dissolved in 2018</i>		100%	-	-	-	-	-	-	-	-	-	-	-				
	Sapa Building Systems (Wakefield) Ltd.	<i>Entity dissolved in 2018</i>		100%	54	-	-	-	-	-	-	-	-	-	-				
	Sapa UK Ltd.	<i>Entity is dormant</i>		100%	-	-	-	-	-	-	-	-	-	-	-				
<b>Total United Kingdom</b>					<b>1,229</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3,828</b>	<b>-254</b>	<b>-20</b>	<b>3</b>	<b>3</b>	<b>474</b>	<b>-2,002</b>				
USA	EMC Ashtabula Inc	<i>Entity is dormant</i>		100%	-	-	-	-	-	-	-9	-2	-	-	-				
	EMC Metals Inc	Local holding company		100%	-	-	-	-	-	-	-9	3	-	-	378				
	Hydro Aluminium Metals USA, LLC	Local holding company		100%	140	2	-	-	5,845	180	3	3	-	-	-1,576				
	Hydro Aluminium Tornago Inc.	Local holding company		100%	-	-	-	-	-	-	-	-	-	-	-174				
	Hydro Building Systems North America Inc. (previously Hydro Aluminium USA Inc.)	Sales company		100%	-	-	-	-	-	-	-	-	-	-	-				
	Hydro Extruder LLC	Extrusion production		100%	1,186	1	-	-	5,981	193	-24	3	3	397					
	Hydro Extrusion Delhi LLC	Extrusion production		100%	356	2	-	-	1,635	-2	14	-	-	51					
	Hydro Extrusion North America LLC	Extrusion production		100%	1,127	-	-	-	6,302	147	-20	-2	-2	-2,156					
	Hydro Extrusion Portland Holding Inc.	Local holding company		100%	-	-	-	-	-	-34	-	-	-	252					
	Hydro Extrusion Portland Inc.	Extrusion production		100%	632	1	-	-	2,151	67	-1	2	2	410					
	Hydro Extrusion USA LLC	Extrusion production and support services		100%	2,681	16	10	10	12,767	502	141	7	7	1,045					
	Hydro Holding North America Inc.	Local holding company		100%	-	-	-	-	-	76	-140	49	49	215					
	Hydro Metals Holding US LLC	Local holding company		100%	-	-	-	-	-	106	5	-	-	101					
	Hydro Precision Tubing Adrian Inc.	<i>Entity is dormant</i>		100%	-	-	-	-	-	-5	-	-	-	-298					
	Hydro Precision Tubing Louisville Inc.	<i>Entity is dormant</i>		100%	-	-	-	-	-	-	-	-	-	-70					
	Hydro Precision Tubing Monterrey Central LLC (previously Sapa Precision Tubing Central LLC)	Precision tubing production		100%	-	-	-	-	-	-	-	-	-	-					
	Hydro Precision Tubing Monterrey LLC (previously Sapa Precision Tubing LLC)	Precision tubing production		100%	-	-	1	1	474	61	13	-	-	177					

Hydro Precision Tubing USA LLC (previously Sapa Precision Tubing Rockledge LLC)	100%	166	-	-	1,161	66	-11	-2	33
Norsk Hydro North America LLC (previously Norsk Hydro North America Inc.)	100%	-	-	-	-	124	271	-1	-486
<b>Total USA</b>		<b>6,288</b>	<b>22</b>	<b>11</b>	<b>36,316</b>	<b>1,464</b>	<b>251</b>	<b>57</b>	<b>-3,702</b>
Vietnam		233	5	-	150	18	3	1	5
<b>Total Vietnam</b>		<b>233</b>	<b>5</b>	<b>-</b>	<b>150</b>	<b>18</b>	<b>3</b>	<b>1</b>	<b>5</b>
<b>Total Eliminations, non-controlling interests and goodwill and excess values not attributable to specific legal entities</b>		-	-	-	-87,839	-12,368	-291	-21	-34,935
<b>Total joint operations and joint ventures</b>		-	-	-	<b>3,163</b>	<b>-383</b>	<b>10</b>	<b>38</b>	<b>-2,699</b>
<b>Grand total<sup>14)</sup></b>		<b>36,236</b>	<b>1,680</b>	<b>254</b>	<b>159,377</b>	<b>6,462</b>	<b>2,139</b>	<b>3,231</b>	<b>57,127</b>

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

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) Hydro Aluminium Canada & Co. Ltd. is used to report Hydro portion of operations for Aluminerie Alouette Inc, a joint venture

9) Sapa Building Systems GmbH was merged into Hydro Building Systems Germany GmbH in Q2 2018

10) Sapa Building Systems Puget SAS was merged into Hydro Building Systems France SARL in Q1 2018

11) Hydro Laqueage Albi SAS was merged into Hydro Extrusion Albi SAS in Q4 2018

12) Hydro Building Systems Holding France SAS was merged into Hydro Holding France SAS in Q3 2018. Hydro France SAS was dissolved into Hydro Holding France SAS in Q4 2018

13) Hydro Building Systems Lda. and Naco Portugal SGPS Lda merged into Hydro Building Systems Portugal SA (POV) in Q2 2018

14) Only figures where a total is presented can be consolidated

## 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. For a complete overview of the description given of each company in public registers, see [www.hydro.com/reporting2017](http://www.hydro.com/reporting2017)

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	Manufacturing or production of building systems
Company kindergarden	Kindergarden for children of employees or tenants
Dies production	Production of dies for extrusion of aluminium
Energy sourcing	Sourcing of energy for Hydro operations
Extrusion component production	Manufacturing or production of components
Extrusion production	Includes one or more extrusion plant(s) and is normally also responsible for sales and marketing of its products. R&D activities can also be included
Finishing	Slitting of rolled products for automotive
High-purity aluminium production	Production of aluminium of minimum 99.99 percent purity
Insurance	In-house insurance
IT shared services	IT shared services for Hydro operations
Local holding company	Holding & Financing. Holding shares or other equity instruments. Administrative, management or support services
Pension fund	Employee pension fund
Power production	Production of hydropower in Norway
Power trading	Trading of power and energy services
Precision tubing production	Manufacturing or production of extruded aluminium products, such as aluminium tubes, micro-pore extrusions, and welded aluminium 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	Development and property management. Owner of land. Developing of infrastructure
R&D	Research and development activities
Remelter	Facility remelting standard ingots, process scrap and/or post-consumer scrap
Rolling mill	Production of rolled products
Sales company	Sales, marketing and distribution offices
Support services	Administrative, management or support services
Tool and spare parts services	Provides tool and spare parts services, in addition to administrative and management support
Trading company	Sales, marketing and distribution of casthouse aluminium products
Transportation	Transport of raw materials by train tracks

# Norwegian code of practice for corporate governance

This chapter provides a detailed overview of how Hydro follows the Norwegian Code of Practice for Corporate Governance of 2018. 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 2018.

## Deviations from the Norwegian code of practice for corporate governance

In the board of directors' assessment, we have deviations from three sections in the code of practice:

### 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 of directors has generally not participated in the general meeting. Matters under consideration at the general meeting of shareholders have not yet required this. The chairperson of the board of directors is always on hand to present the report and answer any questions. Other board members participate as needed. The board of directors considers this to be adequate.

2) *"Making arrangements to ensure an independent chairman for the general meeting"*: Section 9 in Hydro's articles of association states that the general meeting is chaired by the chairperson of the corporate assembly, or, in his or her absence, by the deputy chair. This arrangement has been approved by the company's general meeting.

### Section 7, Nomination committee:

Hydro has one deviation from this section:

*"The company's guidelines for the nomination committee should establish rules for rotation of the members of the nomination committee"*: The nomination committee has no formal rules on rotation of its members. The nomination committee's mandate expresses, however, the intention to "over the course of time balance the need for continuity against the need for renewal in respect of each governing organ." The chairperson of the committee, who is also the chairperson of the corporate assembly, has been a member of the committee since 2012, became acting chairperson in 2014 and was elected chairperson in 2015. The other members were elected to the nomination committee in 2008, 2014 and 2015.

### 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 take-over bid"*: The board of directors 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 34.3 percent of the Hydro shares (as of 31.12.2018) and has by virtue of the Active Ownership Report (Report to the Storting no. 27 (2013-2014)) expressed a long-term ownership perspective in the company for the purpose of retaining its head office and research activities in Norway.

## 1. Statement of corporate governance

Hydro follows the Norwegian Code of Practice for Corporate Governance of 2018.

## 2. Hydro's business

Hydro is a global aluminium company with production, sales and trading activities throughout the value chain, from bauxite, alumina and energy generation to the production of primary aluminium and rolled and extruded products as well as recycling. Based in Norway, the company has 35,000 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 we serve.

The company's objectives, as stated in its articles of association, are to engage in industry, commerce and transport, to utilize energy resources and raw materials, and to engage in other activities connected with these objectives. Its business activities may also be conducted through participation in or in cooperation with other enterprises.

The board of directors evaluates the company's objectives, strategies and risk profile at least annually and reports on it in the Board of Directors' report

The Hydro Way represents our framework for leadership, organization and culture and is the foundation for our governance system, including our code of conduct. Hydro's Code of Conduct has been approved by the board of directors, which also oversees that Hydro has appropriate corporate directives for, among other things, risk management, HSE and corporate responsibility.

*References*: Hydro's articles of association are available at [www.hydro.com/governance](http://www.hydro.com/governance). Learn more about The Hydro Way and Hydro's corporate directives at [www.hydro.com/principles](http://www.hydro.com/principles), and Board of Directors' Report 2018 in this document.

## 3. Equity and dividend

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

Hydro's dividend policy is in the long term to pay out, on average, 40 percent of net income as ordinary dividend over the cycle to our shareholders. The dividend policy has a floor of NOK 1.25 per share.

The dividend per share is proposed by the board of directors, based on Hydro's dividend policy, and approved by the general meeting of shareholders.

The board of directors may obtain authorization from the general meeting of shareholders to buy back Hydro shares in the market. In such cases, the board will normally request that the shares are acquired in the open market, and that the authority lasts no longer than until the next general meeting.

When the general meeting of shareholders considers whether or not to authorize the board of directors to carry out share capital increases for different purposes, each purpose must be considered separately by the meeting. Such authorization will be limited in time, and will last no longer than until the date of the next general meeting. Authorization granted to the board of directors is restricted to specific purposes. Such authorization was last given in 2010 in connection with the Vale transaction.

See also item 4.

*References:* Learn more about Hydro's equity and dividend policy under Shareholder information in Hydro's Annual Report 2018.

## 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.

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 of directors and the investors is normally conducted via the management. Under special circumstances the board, represented by the chairperson, may conduct dialogue directly with investors.

Regulation of share issues and preemptive rights are described in the company's articles of association.

### State ownership

As of December 31, 2018 the Norwegian state, represented by the Ministry of Trade, Industry and Fisheries, owned 34.3 percent of Hydro's issued shares. Hydro holds regular meetings with the Ministry, where topics discussed include Hydro's economic and strategic development, corporate social responsibility, 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 (Stortinget), it may be necessary to provide the Ministry with insider information. In such cases, the state is subject to the general rules that apply to the handling of such information.

*References:* Learn more about major shareholders in the "Shareholder Information" section of Hydro's Annual Report 2018 and sale of the Hydro share to employees in note 17 (Employee remuneration) to the consolidated financial statements. Hydro's code of conduct can be found on [www.hydro.com/principles](http://www.hydro.com/principles). Hydro's articles of association can be found on [www.hydro.com/governance](http://www.hydro.com/governance). See also note 11 (Related party information) to the consolidated financial statements.

## 5. Freely negotiable shares

The Hydro share is freely negotiable. It is among the most traded shares on the Oslo Stock Exchange and is subject to efficient pricing. As of December 31, 2018 the Norwegian state, represented by the Ministry of Trade, Industry and Fisheries, owned 34.3 percent of Hydro's shares, while the Government Pension Fund Norway owned 6.7 percent. Shareholding is based on information from the Norwegian Central Securities Depository (VPS) as of December 31, 2018. 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 in Hydro's Annual Report 2018.

## 6. General meeting of shareholders

Notice of a general meeting of shareholders with supporting information is normally published on [www.hydro.com](http://www.hydro.com) more than three weeks in advance, and is sent to the shareholders at least three weeks before the meeting is held.

Notice of a general meeting of shareholders provides information on the procedures which shareholders must observe in order to participate in and vote at the meetings. 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 [www.hydro.com](http://www.hydro.com):

- 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



Our aim is that resolution proposals and supporting information that are distributed are sufficiently detailed and comprehensive 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 of shareholders is maximum 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 of shareholders in order to obtain voting rights.

Shareholders who are unable to attend in person may vote by proxy. Hydro will nominate a person who will be available to vote on behalf of shareholders as their proxy.

The general meeting of shareholders votes for each candidate nominated for election to the company's corporate assembly and nomination committee.

To the extent possible, the form of proxy will facilitate separate voting instructions for each matter to be considered by the meeting and for each of the candidates nominated for election. It is possible to vote electronically in advance.

The general meeting of shareholders is chaired by the chairperson of the corporate assembly or, in his or her absence, by the deputy chairperson.

The chairperson of the board of directors, minimum one nomination committee representative, the President and CEO, and the auditor attend the general meeting.

*References:* Learn more about the general meeting of shareholders at [www.hydro.com/investor](http://www.hydro.com/investor)

*Deviations:* See the first page of this section.

## 7. Nomination committee

In accordance with Hydro's articles of association, the company must appoint a nomination committee. This committee is comprised of minimum three members, maximum four, who are either shareholders or shareholder representatives. The committee's chairperson and members are appointed by the general meeting of shareholders. At least two, including the chairperson, must be elected from the shareholder-elected representatives in the corporate assembly. If the chairperson resigns as member of the Nomination Committee during the electoral period, the Nomination Committee shall elect among its members a new chairperson for the remainder of the new chairperson's electoral period.

The guidelines for the nomination committee have been approved by the general meeting of shareholders, which also determines the remuneration of the committee. All 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.

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 Corporate Assembly, the Nomination Committee and the Board of Directors are published well in advance on the Company's website. In carrying out its duties the Nomination Committee should actively maintain contact with the shareholder community and should ensure that its recommendations are anchored with major shareholders.

All members of the nomination committee are independent of Hydro's board of directors, chief executive officer and other executive management staff. As the largest shareholder, the Norwegian state is represented on the nomination committee by secretary general Mette I. Wikborg.

*References:* Hydro's Articles of Association can be found at [www.hydro.com/governance](http://www.hydro.com/governance). More information about Hydro's nomination committee can be found at the same site. Members of the nomination committee are listed on [www.hydro.com/governance](http://www.hydro.com/governance). Nominations can be submitted electronically, also from [www.hydro.com/governance](http://www.hydro.com/governance)

*Deviations:* See the first page of this section.

## 8. Corporate assembly and board of directors: composition and independence

All board directors, members of the board committees and members of the corporate assembly are independent of the company's executive management and material business relationships. One member of the corporate assembly is dependent of major Hydro shareholders: Nils Bastiansen, who is an employee of the Government Pension Fund Norway, is a member of the corporate assembly. There were a few matters where certain board members were disqualified. Liv Monica Stubholt, a board member until May 2018, is partner in the Norwegian law firm Advokatfirmaet Selmer DA. Selmer has had assignments for Hydro resulting in fees of NOK 0.5 million in the period January to May 2018. Stubholt has not been involved in these services to Hydro. Thomas Schulz is the CEO of the listed company FLSchmidt. Sales and purchases between FLSchmidt and fully owned Hydro subsidiaries totaled DKK 21.8 million in 2018. Schulz was not directly involved in these transactions

Two-thirds of the corporate assembly and their deputies are elected by the general meeting of shareholders. The nomination committee nominates candidates with a view to obtain a broad representation by the company's shareholders and other relevant stakeholders with competence in, for example, technology, finance, research, and corporate social responsibility.

The corporate assembly elects the board of directors, including its chair and deputy chair.

In compliance with Hydro's articles of association, the board of directors consists of between nine and 11 members. These are elected for a period of up to two years.

The nomination committee aims to achieve a board composition whereby the members complement each other professionally and the board of directors is able to function as a corporate body.

As of December 31, 2018, seven of the board's directors owned a total of 114,520 shares. Hydro has no 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 Securities Trading Act.

*References:* The Government Pension Fund Norway is a significant shareholder in Hydro. An overview of the members of the corporate assembly, the current composition of the board of directors and information about their independence, and Hydro's articles of association at [www.hydro.com/governance](http://www.hydro.com/governance)

## 9. The work of the board of directors

The board of directors has established procedures for its own work and that of the company's management, with particular emphasis on clear internal division of responsibilities whereby the board has responsibility for supervising and administrating the company, and the company's management has responsibility for the general operation of the group.

### 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 dealt with. The code applies to all of Hydro's board members and employees. It is the opinion of the board of directors that there were no transactions that were material between the group and its shareholders, board members, corporate management board or related parties in 2018 except those described under item 8.

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

The board of directors has an annual work plan, with particular emphasis on objectives, strategy and implementation.

Since 2001, Hydro has had an audit committee and a compensation committee. The audit committee has four members and the compensation committee three members. The shareholder-elected members are all independent of the company. In the opinion of the board of directors, the audit committee meets the Norwegian requirements regarding independence and competence.

The board of directors conducts an annual self-assessment of its work, competence and cooperation with management and a separate assessment of the chairperson of the board. In addition, the audit committee performs a self-assessment. The assessment results are submitted to the nomination committee, which in turn assesses the board's composition and competence.

*References:* See the section Board developments in the Board of Directors' report. 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 2018. The board of directors' mandate can be found at [www.hydro.com/governance](http://www.hydro.com/governance)

## 10. Risk management and internal controls

The board of directors ensures that the company has sound internal controls and appropriate risk management systems through, for example, an annual review of the key risk areas and the company's internal controls. Internal audit corporate reports directly to the board of directors, but is for administrative purposes placed under the purview of the chief financial officer.

Hydro's internal control system includes all parts of our 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 related to financial reporting can be found at [www.hydro.com/governance](http://www.hydro.com/governance)

*References:* A review of Hydro's major risks can be found in the section Risk review in the Board of Directors' report.

## 11. Remuneration of the board of directors

The board directors elected by the shareholders perform no duties for the company other than their board duties.

Remuneration is determined by the corporate assembly, 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 of directors is based neither on performance nor on shares or share options.

*References:* All aspects of remuneration of the board of directors are described in note 10 (Board of directors and corporate assembly) to the consolidated financial statements. See also Hydro's articles of association.

## 12. Remuneration of the executive management

The board of directors has established guidelines for remuneration of members of the executive management. These guidelines are communicated to the general meeting of shareholders and included in the annual report. The guidelines for determining remuneration of the executive management are based on the main principles for Hydro's remuneration policy, which is that Hydro shall pay its employees a total compensation package that is competitive, but not among the highest, and in line with good industry standards locally. Where appropriate, compensation packages should also include a performance-based component, and the basic salary should reflect individual performance.

The guidelines are also intended to contribute to long-term value creation for the company's shareholders. A ceiling has been set on performance-based compensation. The company has share-based long-term incentive programs, but no share option scheme for its executive management.

The board of directors' statement on management remuneration is made public through note 8 to the consolidated financial statements. Note 8 is sent forward to the general meeting of shareholders for advisory vote, however, the part of section of note 8 which concerns compensation based on shares is presented for a binding vote.

*References:* The board's guidelines for management remuneration are described in note 8 (Board of directors' statement on management remuneration) to the consolidated financial statements. All aspects of remuneration of executive management are described in note 9 (Management remuneration). The employee share purchase plan is described in note 17 (Employee remuneration). Hydro's remuneration policy is also described in Hydro's people policy, which can be found at [www.hydro.com/principles](http://www.hydro.com/principles)

## 13. Information and communication

Hydro has established guidelines for the company's reporting of financial and extra-financial information based on transparency and with regard to the requirement of equal treatment of all parties in the securities market. This also pertains to contact with shareholders outside of the general meeting of shareholders.

Shareholder information is available at [www.hydro.com](http://www.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 at [hydro.com](http://hydro.com) when distributed. Presentation of the quarterly reports as well as the annual shareholder meeting are simultaneously broadcasted through web casts. 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 this report and at [www.hydro.com/investor](http://www.hydro.com/investor) where also more information about web casts and the Hydro share can be found, including key legal information for shareholders in Norsk Hydro ASA. Hydro's code of conduct is available at [www.hydro.com/principles](http://www.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 defense mechanisms against acquisition offers in our 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 to the audit committee the main features of the plan for the audit of Hydro.

The external auditor participates in considering relevant matters in meetings of the audit committee. The minutes from these meetings are distributed to all the board directors. This practice is in line with the EU audit directive. Each year the auditor expresses its opinion on internal control procedures to the audit committee including identified weaknesses and proposals for improvement.

The auditor participates in board meetings where the company's financial statements are discussed. In the meetings the auditor will review material changes in the company's accounting policies, assess material accounting estimates and any other material matters on which the auditor and management may disagree, and identify weaknesses in and suggest improvements to the company's internal controls. The board of directors and the audit committee meet at least annually and hold 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. All use of services from an external auditor, including non-audit services, is subject to prior approval as defined by the audit committee.

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 of shareholders.

In 2010, the general meeting of shareholders chose KPMG as new external auditor for the group with effect from the reporting period 2010.

*References:* Learn more about the external auditor in the sections Corporate Governance and Viability Performance statements in Hydro's Annual Report 2018, note 43 (Auditor's remuneration) to the consolidated financial statements, and Note 3 (Management remuneration, employee costs and auditor fees).

# Modern Slavery transparency statement

Hydro's Modern slavery transparency statement has been developed to comply with the legal requirements as stated in the UK Modern Slavery Act 2015, valid to Hydro from 2016, and the Australia Modern Slavery Bill 2018, valid to Hydro from 2020. The reporting requirements apply to Hydro as a supplier of goods with a total turnover of £36 million or more in the UK and more than AUD 100 million in Australia. The statement 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, Hydro Building Systems UK Ltd., Hydro Components UK Ltd and Hydro Extrusion UK Ltd in the UK and the fully-owned holding company Hydro Aluminium Australia Pty Limited in Australia. The latter is the owner of Hydro's 12.4 percent of the shares in the joint venture Tomago Aluminium Smelter and Tomago Aluminium Smelter management company Tomago Aluminium Company Pty.

The Modern slavery transparency statement is prepared based on information collected from all consolidated entities in Hydro. In addition, the above-mentioned legal entities have been consulted on the statement itself.

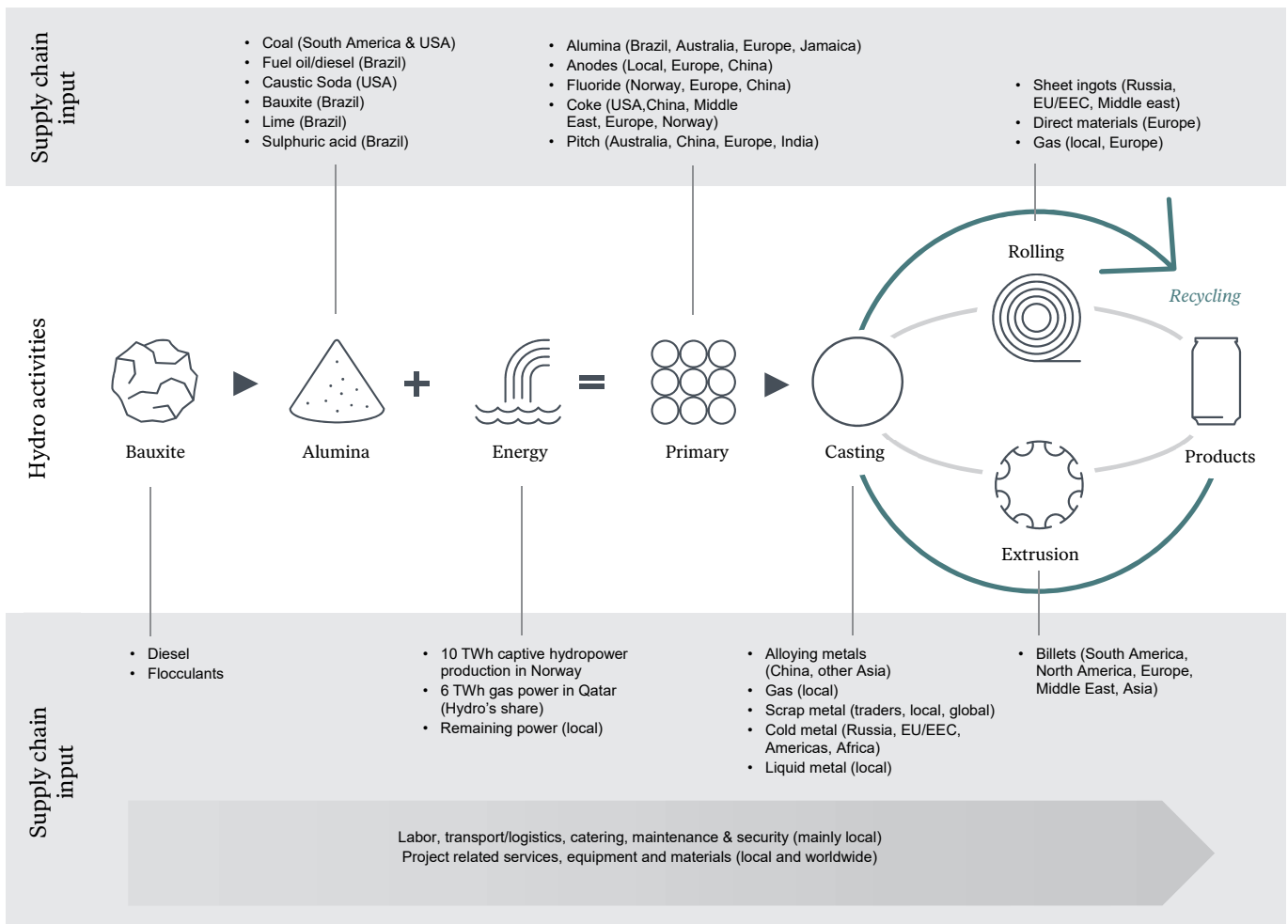
Entities that are not fully owned by, but are controlled by Hydro, can have different policies. We believe that their relevant policies are aligned with the ones of Hydro.

*The UK and Australia Modern Slavery transparency statement is approved by the board of directors of the parent company Norsk Hydro ASA. The statement is included in the board's responsibility statement and included in the Financial Statements and Board of Directors' Report 2018.*

## Our business and supply chain

Hydro is a fully integrated aluminium company with 36,000 employees in 40 countries on all continents. In addition to production of primary aluminium, rolled and extruded products and recycling, Hydro also extracts bauxite, refines alumina and generates energy to be the only 360° company in the global aluminium industry. Our operations include one of the world's largest bauxite mines and the world's largest alumina refinery, both located in Brazil. We have primary metal production facilities in Europe, Canada, Australia, Brazil and Qatar. Hydro is a large operator of power production in Norway. Extrusion activities are mainly located in Europe and North America, but we also have significant operations in Asia and Brazil. Hydro is present within all market segments for aluminium, with sales and trading activities throughout the value chain serving more than 30,000 customers. Following the Sapa acquisition, Hydro has more than 30,000 active suppliers globally. Most of these are situated in the same countries as our production facilities.

Hydro's supply chain



The figure shows Hydro's supply chain related to its value chain, and does not reflect the current organizational structure.

Our policies and commitments

As a global aluminium company with mining interests, ensuring responsible conduct is important throughout Hydro's value chain. We have to consider our impact on society, spanning from construction to divestment, as well as the exposure to corruption and human rights violations, within our own operations and in the supply chain.

Our compliance system shall ensure that all persons acting on behalf of Hydro comply with applicable laws and regulations and with the requirements adopted by Hydro.

Hydro's corporate social responsibility (CSR) is built on the aspiration of making a positive difference by strengthening our business partners and the local communities where we operate. To do this, we target the fundamental drivers of long-term development. In line with stakeholder expectations and needs, and through strong partnerships, we aim to:

- Contribute to quality education in our communities
- Promote decent work throughout the value and supply chain
- Foster economic growth in our communities
- Strengthen local communities and institutions through capacity building on human rights and good governance

As an employer, owner and purchaser, an important contribution toward respecting human rights is to secure decent working conditions in our organization, in minority-owned companies and with our suppliers. Information pertaining to Hydro's human rights policies and compliance is regularly communicated to the board of directors, the Corporate Management Board, business area management teams, and relevant parties such as union representatives.

We support the principles underlying the Universal Declaration of Human Rights, the UN Global Compact and ILO's eight core conventions. Our human rights policy is based on the UN Guiding Principles on Business and Human Rights, and we report on our adherence in the GRI index. We are a member of the International Council on Mining and

Metals (ICMM) and are committed to following their principles and position statements. We use the GRI Standards for voluntary reporting of sustainable development.

An example of how we work with alleged human rights breaches is from our supply chain. We have been in dialog with a metal supplier, based on alleged human rights breaches, to perform CSR and HSE audits throughout their value chain. As we have been denied access to certain parts, we will terminate the contract unless the supplier alters the decision.

Hydro's supplier requirements regarding corporate responsibility are, as stated in our global directives and procedures, an integral part of all stages of the procurement process. The requirements cover issues related to environment, human rights, anti-corruption and working conditions, including work environment.

The principles laid down in Hydro's Supplier Code of Conduct are made binding through contractual clauses. The requirements demand the supplier to comply with all applicable laws and regulations relating to corruption and bribery, human rights and working conditions and environment to ensure that Hydro's business relationships reflect the values and principles that Hydro promotes internally and externally. The contracts shall include clauses regarding auditing rights and the supplier's responsibility to actively promote the principles set out in Hydro's Supplier Code of Conduct with its own suppliers/contractors and sub-suppliers/subcontractors of any tier that have a material contribution to the supply of goods and services to Hydro under the contract.

In 2018, Extruded Solutions rolled out the Supplier Code of Conduct to most new suppliers and made it an integral part of the global terms and conditions of purchase which are part of most purchase order. For legal entities where Hydro holds less than 100 percent of the voting rights, Hydro representatives in the boards of directors shall endeavor to implement the ambitions and principles related to Hydro's global policies including human rights.

## Training and capacity building

Leaders and specialists go through training on CSR and human rights on a regular basis. The training is related to Hydro's CSR policy, guidelines and aspirations supporting our business strategy and emphasizing responsible sourcing.

Hydro has also further developed the cooperation with FIEPA (Pará Federation of employers) and REDES (a supplier development network developed by the Industry Federation of Pará), both in Brazil. Together we have organized training for more than 50 local suppliers in 2017 and 2018 and strengthened their competence on HSE, management systems, quality and labor rights. About 3000 employees have been reached so far.

In 2018, we launched the strategic target to contribute to quality education skills development for 500,000 people in our communities and for business partners by the end of 2030.

## Risk assessments of human and labor rights

With more than 30,000 active suppliers, Hydro risks being exposed to human rights violations including modern slavery. Human rights are integrated in our business planning, enterprise risk management and follow-up process including relevant key performance indicators. Human rights risks and issues are evaluated in the annual enterprise risk mapping. We also carry out more specific analysis related to operations or certain countries or regions. In addition, our participation in ICMM gives input to our assessments of human rights risks.

We constantly strive to improve our work to identify and mitigate human rights impacts. The latest human rights mapping was done by the Danish Institute on Human Rights (DIHR) in 2017, covering all countries in which Hydro operates (excluding Extruded Solutions). Children's rights related to Hydro's operations in Brazil have been addressed by the Global Child Forum's report "Norsk Hydro Brazil's journey towards social responsibility" published in 2018. The study "Companies in Fragile Contexts: Redefining Social Investment." by Africa Centre for Dispute Settlement, published in 2017, addresses how Hydro can work with human rights impact in fragile contexts.

Rapporten er offentlig tilgjengelig. Det er planlagt en grundig undersøkelse (due diligence) knyttet til menneskerettigheter for Alunorte-raffineriet og Paragominas-gruven i 2019.

Hydro's procedure for integrity risk management of business partners includes suppliers and customers, strategic partners and intermediaries/agents, and sets requirements for integrity due diligence. Implementation is risk-based and takes into consideration contractual value, country risk, etc. With a few exceptions, our business partners shall be risk-assessed prior to entering into a new contract or renewing an existing contract. We consider the risk of incidents of child labor abuse, compulsory or forced labor in our supply chain to be low in the majority of Hydro's own operations. We do, however, recognize a risk of forced or compulsory labor among suppliers in the Middle East, South America and Asia.

## Responsible behavior

We recognize that business can have an important role in supporting the fulfillment of human rights. Hydro did not detect any significant breaches of human rights in our own operations in 2018. Some of the measures we pursue to ensure integrity and responsible behavior include:

- Ongoing human rights due diligence, including audits of joint ventures and suppliers
- Continuous stakeholder engagement linked to existing operations and new projects

Through our operations, we contribute to the economic and human development of our employees and the communities in which we operate. We work to ensure informed and effective participation by individuals and groups who are actually or potentially affected by our operations. We respect indigenous peoples' rights, including the right to free, prior and informed consent, and the rights of local communities

when our activities may affect their lands, territories and livelihoods.

An important contribution toward respecting human rights is to secure decent working conditions in our organization and promote the same standards in jointly operated and minority-owned companies, and with our suppliers. In Qatalum, in Qatar, where Hydro holds a 50 percent share, the large majority of employees are migrant workers. Proper working conditions for them is key to us.

We are concerned about fundamental labor rights, such as freedom of association and collective bargaining, minimum wage requirements and the regulation of working hours. We have a long tradition of maintaining a good dialogue with employee organizations. Hydro's major sites in Europe and Brazil are unionized. Extruded Solutions has a major presence in the USA, and 60 percent of our US employees are working at unionized sites. We have activities in countries where trade unions are restricted, where we look for alternative forums to empower employees. Hydro's Global Framework Agreement was last updated in 2016 and has been extended through the end of 2019. The agreement aims at creating an open channel of information between the parties about industrial relation issues in order to continuously improve and develop good work practices in our worldwide operations.

In addition, we establish or facilitate access to effective grievance mechanisms for individuals and groups that may be affected by our operations.

Suppliers, customers and other business partners registered in our main accounting systems (except Extruded Solutions) are screened on a weekly basis against recognized international sanction lists. Extruded Solutions has implemented the Integrity Risk Management process for all its suppliers in 2018. Regular sanctions screening will start in 2019. Furthermore, supplier audits and site visits are performed by Hydro personnel and external auditors based on risk analysis.

Excluding Extruded Solutions, Hydro performed 83 supplier audits in 2018. All but four of these audits included HSE and CSR-related topics. In Extruded Solutions,

we performed 262 supplier audits. Our approach to audit findings is to correct and act in a transparent manner, learning and implementing corrective actions. We are in particular concerned about corrective actions in relation to possible child, forced or compulsory labor.

Security guards are employed on a regular basis to protect our personnel and assets. No armed guards were engaged in our activities in 2018, and there were no significant incidents reported in connection with the use of security guards. Hydro is committed to the Voluntary Principles on Security and Human Rights.

Our compliance system is based on prevention, detection, reporting and responding. Information pertaining to Hydro's human rights, policies and compliance is regularly communicated to the board of directors, the Corporate Management Board, business area management teams, and other relevant parties, including union representatives.

All documents listed under References below are also valid for all our subsidiaries subject to the UK Modern Slavery Act and the Australia Modern Slavery Bill.

## References

A number of Hydro's steering documents are relevant for our work against modern slavery. These include, but are not limited to:

- NHC-CD07 Hydro's Code of Conduct
- GD02 Hydro's People Directive
- GD03 Health, Security, Safety and Environment
- GD09 Hydro's Social Responsibility
- GP09-01 Corporate Social Responsibility in the supply chain
- GP09-01 Hydro's Supplier Code of Conduct
- GP09-03 Hydro's Human Rights Policy
- The Hydro Integrity Program Handbook

All documents are available at [www.hydro.com/principles](http://www.hydro.com/principles)



# Additional information

## Annual General Meeting

The Annual General Meeting will be held at the company's offices at Drammensveien 260, Oslo, Norway, on Tuesday, May 7, 2019, at 14:00 CET. Shareholders who wish to attend are asked to inform the registrar by 16:00 CET on Friday, May 3:

DNB Bank ASA  
Registrar's Department  
P.O.Box 1600 Sentrum  
N-0021 Oslo, Norway

You may also register electronically on our website [www.hydro.com/register](http://www.hydro.com/register) or via VPS Investor Services. Any shareholder may appoint a proxy with written authority to attend the meeting and vote on his or her behalf. Voting rights are discussed under "Major shareholders and voting rights".

## 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 2019

April 30	First quarter results
May 7	Annual General Meeting
May 8	Shares traded ex-dividend
May 9	Record date for dividend
May 16	Dividend payment date
July 23	Second quarter results
October 23	Third quarter results

Hydro reserves the right to revise these dates.



*We are aluminium*

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Hydro is a fully integrated aluminium company with 35,000 employees in 40 countries on all continents, combining local expertise, worldwide reach and unmatched capabilities in R&D. In addition to production of primary aluminium, rolled and extruded products and recycling, Hydro also extracts bauxite, refines alumina and generates energy to be the only 360° company of the global aluminium industry. Hydro is present within all market segments for aluminium, with sales and trading activities throughout the value chain serving more than 30,000 customers. Based in Norway and rooted in more than a century of experience in renewable energy, technology and innovation, Hydro is committed to strengthening the viability of its customers and communities, shaping a sustainable future through innovative aluminium solutions.