# Annual report
2018

Hafslund ECO

*For a renewable and fully electric future*

# Contents



# Highlights in 2018

## Hafslund E-CO incorporated

*On 20 June 2018, Oslo City Council resolved to integrate Norway's largest networks company, Hafslund AS and Norway's second-largest power company, E-CO Energi Holding AS into one group with a joint board and management team, thereby creating Norway's largest integrated energy group – Hafslund E-CO. The integration of two strong centres of excellence in hydropower production and electrical supply provides a unique starting point to create long-term value.*

## Record year for production

*2018 was a record year for our Production business area, which posted an operating profit of NOK 3,669 million on the back of record high power prices.*

## Investments in increased production capacity

*Production made total investments of NOK 650 million in 2018, of which NOK 464 million related to the construction of new power plants. In 2018, the Rosten power plant was completed, while four other power plant developments have been approved and initiated. Combined these five projects will generate around 1.0 TWh in new renewable energy.*

## Increased efficiency and good delivery quality in the network

*In 2018, Networks reinforced its position as one of Norway's most efficient networks companies by taking the front position under NVE's regulation model in both the regional and distribution networks.*

## Successful AMS project entering final stage

*The AMS project (automatic meters) is entering the final stage, with most of the regular roll-out stages completed. By the end of 2018, 670,000 meters out of a planned total of 685,000 meters had been installed. The total investment forecast has been cut from NOK 2.1 billion to NOK 1.8 billion due to higher installation efficiency than originally planned.*

## Consolidation and growth

*In 2018, Hafslund E-CO signed a letter of intent with Eidsiva Energi on the possible merger of the two companies. In March 2019, the boards of the two companies agreed on a draft agreement for the actual merger. Given ownership acceptance in both companies and the necessary regulatory approval, the transaction is expected to be completed in the third quarter of 2019. The Group has also initiated a dialogue with Fredrikstad Energi for a possible acquisition or merger.*

## New vision

*Hafslund E-CO is active along the entire renewable value chain. This gives the group a unique starting point to address the greatest challenge facing modern society, man-made climate change, which also underpins Hafslund E-CO's new vision* ***– for a renewable and fully electric future.***

# Key figures

| NOK million | 2018 | 2017 |
|---|---|---|
| **FINANCIAL KEY FIGURES** | | |
| Revenue | 10,786 | 9,166 |
| EBITDA | 5,504 | 4,458 |
| EBIT | 4,413 | 3,421 |
| Profit before tax | 3,908 | 2,970 |
| Profit for the year | 1,605 | 5,351 |
| Profit continued operations | 1,605 | 1,741 |
| Net interest-bearing debt | 18,139 | 16,993 |
| Equity | 16,501 | 17,126 |
| Total assets | 49,180 | 45,781 |
| Capital employed | 41,108 | 39,474 |
| Investments | 2,231 | 2,159 |
| ROE (%) | 10 % | 10 % |
| ROCE (%) | 11 % | 9 % |
| Debt / EBITDA (x) | 3,3 | 3,9 |
| FFO / Debt (%) | 20 % | 18 % |
| Equity ratio (%) | 34 % | 37 % |
| **OTHER KEY FIGURES** | | |
| Number of employees | 623 | 612 |
| H2 - total number of injuries per million hours worked | 9,2 | - |

11%
**ROCE**

14.3 TWh
**Produced hydropower**

20.7 TWh
**Distributed power**

NOK 1,605 million
**Profit for the year**

**System price 2014 - 2018 (øre/kWh)**

## E-CO Energi, Production

| NOK million | 2018 | 2017 |
|---|---|---|
| **FINANCIAL KEY FIGURES** | | |
| Revenue | 5,164 | 3,592 |
| EBITDA | 4,036 | 2,575 |
| EBIT | 3,669 | 2,237 |
| Profit before tax | 3,364 | 1,987 |
| Profit for the year | 1,223 | 1,037 |
| Profit continued operations | 1,223 | 1,037 |
| Net interest-bearing debt | 9,464 | 10,439 |
| Equity | 12,954 | 12,364 |
| Total assets | 33,738 | 30,458 |
| Capital employed | 27,588 | 27,070 |
| Investments | 650 | 549 |
| ROE (%) | 10 % | 8 % |
| ROCE (%) | 13 % | 8 % |
| Debt / EBITDA (x) | 2,3 | 4,1 |
| FFO / Debt (%) | 26 % | 16 % |
| Equity ratio (%) | 38 % | 41 % |
| **OTHER KEY FIGURES** | | |
| Number of employees | 185 | 197 |
| H2 - total number of injuries per million hours worked | 7,1 | 7,2 |
| Produced volume (TWh) | 14,3 | 12,2 |
| Achieved price (øre/kWh) | 39,6 | 28,1 |

## Hafslund, Networks

| NOK million | 2018 | 2017 |
|---|---|---|
| **FINANCIAL KEY FIGURES** | | |
| Revenue | 5,621 | 5,169 |
| EBITDA | 1,481 | 1,629 |
| EBIT | 758 | 957 |
| Profit before tax | 582 | 756 |
| Profit for the year | 483 | 4,315 |
| Profit continued operations | 483 | 612 |
| Net interest-bearing debt | 7,161 | 6,554 |
| Equity | 5,150 | 4,762 |
| Total assets | 15,438 | 15,323 |
| Capital employed | 13,548 | 12,404 |
| Investments | 1,580 | 1,610 |
| ROE (%) | 9 % | 13 % |
| ROCE (%) | 6 % | 8 % |
| Debt / EBITDA (x) | 4,8 | 4,0 |
| FFO / Debt (%) | 17 % | 19 % |
| Equity ratio (%) | 33 % | 31 % |
| **OTHER KEY FIGURES** | | |
| Number of employees | 409 | 402 |
| H2 - total number of injuries per million hours worked | 9,9 | 9,0 |
| NVE capital (Regulatory asset base) | 10,875 | 9,817 |
| Delivered volume (TWh) | 20,7 | 19,6 |
| Efficiency (%) | 115 % | 113 % |
| Change in income surplus/(deficit) | -104 | 197 |

# Message from the CEO

We were there at the very beginning when the first electric street lights were turned on. Now we are helping create a zero-emissions society with smart cities. Hafslund and E-CO were merged in July 2018 and can both trace their roots back to the advent of electrification in the 1890s. We are naturally proud of this history – and are equally proud of our role in helping shape a renewable and fully electric future.

## Ready for the future

Hafslund E-CO is a new company, wholly owned by the City of Oslo. The integration of the companies offers new opportunities to exploit energy resources and reinforce centres of excellence in the best interests of our customers, our employees, society and our owner.

Digitalisation and new technology are paving the way for new and smarter energy solutions. We are developing and making improvements in existing business areas and have recently established a new business area focusing on charging, batteries and new electrification solutions. We are doing this both in partnership, and competition, with other companies. We will leverage our expertise in energy production and distribution to continue to create the solutions of tomorrow.

## Major changes and projects

We almost completed the roll-out of new electric meters across the networkarea before the new year. This has been a very large and successful project in which a big project organisation has reaped the rewards of efficient collaboration, willingness to change and innovation. We are currently participating in several major network developments and power plant projects. Rosten power plant was completed in 2018, while Vamma 12 will be commissioned in spring 2019, followed by Nedre Otta and Mork in 2020, and Tolga in 2021.

## Skilled and flexible employees

Even with major projects and structural changes in 2017 and 2018, our business areas delivered strong results, primarily thanks to the high level of expertise and willing contribution of all our team.

Ability to change will be one of our most important qualities as we meet the challenges of the future. Many of our current and future projects and processes will demand even stronger and wider expertise. Our highly capable employees have demonstrated that we have the capability to find smart solutions for the challenges of the future.

## Clear priorities

Our ambitions are expressed in five main strategic focus areas which together will help us spearhead efforts to create a renewable and fully electric future.

- We will contribute to cost-effective electrification. Norwegian power will create domestic value and efficient climate solutions.
- We will have the power industry's most satisfied customers and be a preferred partner within energy solutions.
- We will build Norway's leading centre of excellence in renewable energy.
- We will be the most profitable energy group and an early adopter of new technology.
- We will secure continued growth in Production and Networks, through organic growth and by taking the lead in consolidation.

## Our vision: "For a renewable and fully electric future"

At Hafslund E-CO, we are proudly contributing to make Norway a renewable and fully electric society. We intend to do our part in contributing to realising a zero-emissions society, and to offer our customers the best services at the lowest possible price. We always use cutting-edge technology to construct power plants. One example of this is the expansion of the Vamma 12 Power Plant, which is Norway's first "all-digital" power plant development.

We will also digitalise the electric value chain to enable it to become the heart of the digitalisation of Oslo's infrastructure, and to develop bona fide smart cities. We are already working on a number of exciting projects that could contribute to emissions-free public transport and make life easier for electric car owners. Our owner, the City of Oslo, is European Green Capital 2019. This inspires and commits us in equal measure.



## We create market solutions

The power industry bears a significant responsibility. We must extract the maximum from Norway's power production resources and help the world find solutions to climate challenges. At Hafslund E-CO, we are working to make more renewable energy available where it is needed, for example by delivering renewable energy to replace fossil sources used for heating and transport in Norway, and through exchanges with neighbouring countries. This increases the security of supply and provides opportunities to optimally exploit reservoir power.

Hafslund E-CO is committed to generating the highest possible value from the energy we manage, and ensuring good value creation for our customers. Renewable energy is one of the most important commodities Norway produces, and we have a responsibility to ensure that our owner, society at large and the climate derive the maximum possible benefit from what we create. This is our contribution.

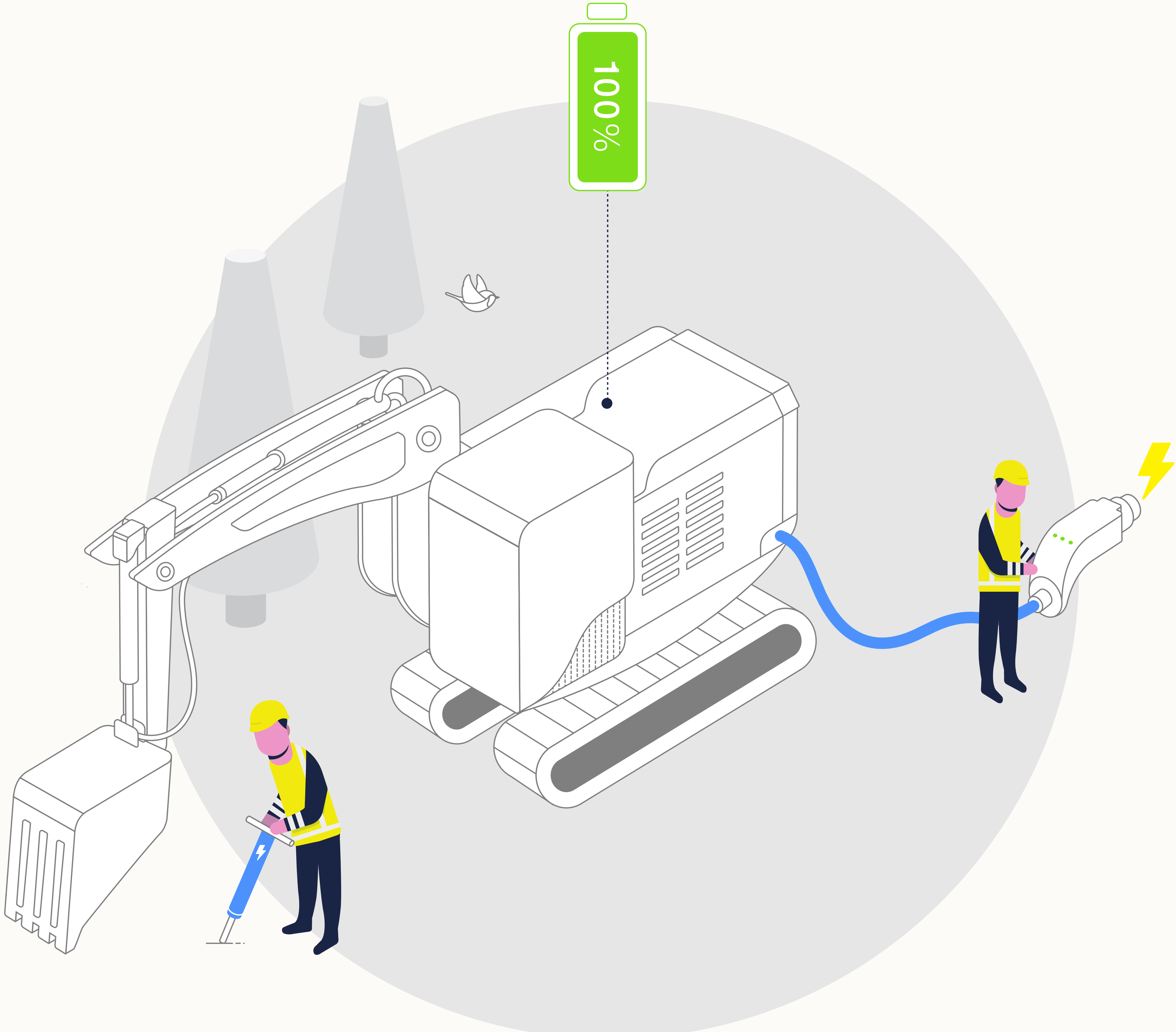
> For a renewable and fully electric future.

**Finn Bjørn Ruyter**
*CEO*

# The fully electric construction site

*– a reality in 2019?*

For renewable energy to have climate value, it must reach the users and replace fossil sources of energy. Hafslund E-CO aims to contribute to the electrification of construction sites and make Oslo one of the first cities in the world to have a fully electric construction site by the end of 2019.




## 0 $CO_2$ emission

*An emissions-free excavator of 30 tonnes used on construction sites will reduce emissions of the greenhouse gas $CO_2$ by 100 tonnes of $CO_2$ equivalents a year. At the same time, the local noise load will be reduced considerably and the excavator will not have a negative effect on air quality.*

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# Vision, values and strategies

Although Hafslund E-CO is a new group, it is built on solid businesses with roots going back to the end of the 19th century. The integration of two strong areas of expertise in hydropower production and electrical supply provides a unique starting point to create long-term values for the owner, the city of Oslo, strengthen the work on electrification and reduce greenhouse gas emissions.

### The establishment of Hafslund E-CO:

**The largest integrated power group in Norway**

Immediately after the establishment of Hafslund E-CO during the summer of 2018, the development of a strategic plan for the new Group was initiated. A strategy must be built on a shared internal culture and an idea of the company's purpose and the goals the business and its employees wish to embrace. Parallel to developing the strategic plan, the Group therefore developed new core values, and formulated a new vision and a new corporate social responsibility statement.

## Hafslund E-CO's vision:

### For a renewable and fully electric future

Our vision "for a renewable and fully electric future" reflects the shared goals of everyone at Hafslund E-CO – the board, management and the rest of the team. Hafslund E-CO is active along the entire renewable value chain. All the way from power production and power trading, through the power network, to the homes of consumers and smart electrification solutions for end users. This gives Hafslund E-CO a unique starting point to address the greatest challenge facing modern society – man-made climate changes.

## Hafslund E-CO's values:

### Open, responsible, innovative

Our values open, responsible and innovative describe our existing and expected future corporate culture. In essence; what we expect of everyone who represents Hafslund E-CO. Everyone must recognise themselves in the values. Yet also find them something to strive for.

Openness means valuing otherness and diversity. Whether we are talking about our colleagues, ideas, partners or new challenges. We value enthusiasm and a positive mindset, and are highly receptive to and tolerant of new ideas. Everyone at Hafslund E-CO must be good at sharing information internally and externally, and closely cooperate with the local communities where we operate. On both successes and improvements.

Openness will be essential, in order to make Oslo the world's first fossil-free capital. Hafslund E-CO will develop and offer solutions that facilitate full electrification of the transport sector, construction sites and other sectors where fossil energy is still used. However, achieving this goal cost-effectively, will require us to collaborate with other centres of excellence, share knowledge across companies and public agencies, and above all – be receptive to new ideas.

Responsibility means acting with respect, decency and honesty in all contexts. It is important to show trust and keep to our promises, and to value quality and cost-effective solutions. Showing respect and responsibility enables us to cultivate a good reputation amongst ourselves and in the eyes of others.

Responsibility entails, for example, developing sustainable solutions for nature and the environment. At Hafslund E-CO, all our hydropower projects are designed to be built and operated with as little impact on

> "
> In order for Oslo to become the world's first fossil-free capital, Hafslund E-CO will collaborate with other centers of excellence and share knowledge across.

the environment as possible. We partner with leading centres of excellense to create sound environmental solutions in our watercourses while maintaining power production through optimal design and operation of our facilities. We aim to extract the most possible power out of every drop of water than runs through our turbines, while causing the least possible upset to the environment.

Innovative means the ability to make continuous improvements and challenge ourselves. To achieve this, we value courage, energy and initiative – give room to experiment and dare to fail. Being innovative is essential if we are to be a leading energy group.

Innovative means, for example, spearheading work to digitalise the electrical value chain. This value chain will potentially become the heart of Oslo's infrastructure, and contribute to create a smart city. Readily available information will make it easier to address problems at networks customers. Hafslund E-CO is also using cloud-based solutions, artificial intelligence, machine learning and data from sensors to improve operating, maintenance and investment decisions.

### Hafslund E-CO's social responsibility:

**Generating long-term values through renewable energy, the secure supply of energy and development of a smart and fully electrified zero- emissions society**

Our social mission describes our place in society and the role the Hafslund E-CO Group will play moving forward. This involves taking a long-term approach to investing and managing the Group's hydropower and networks assets, and unequivocally choosing renewable ahead of fossil solutions. It also commits us to ensuring high availability and uptime in our power production and networks facilities. In practice this means that everything that can be electrified should be electrified if there are cost-effective measures that bring society faster and smarter to an emission-free future.

### Hafslund E-CO's five main strategic goals:

**Competence, profitability, growth, electrification and customer satisfaction**

Our strategy maps the route to our goals. Hafslund E-CO has set five ambitious goals to provide direction and focus towards a renewable and fully electric future.

Hafslund E-CO will establish a leading centre of competence by developing our existing team and attracting necessary new talents. We believe that in the future, competence will make the difference between companies that really succeed and those that do not.

Hafslund E-CO has set itself a goal of being the most profitable energy group. To achieve this, we will have to maintain our position as the networks company with the lowest operating costs per customer, while within power production, we must maintain an optimal cost per kWh and kW of produced power. We will also develop new, profitable business areas based on renewable energy. We will achieve these goals by spearheading the use of new technology and digital solutions. This includes automation of processes in areas such as power trading and customer connections, and use of machine learning for activities such as predictive maintenance and fault resolution.

Hafslund E-CO will secure continued growth in production and networks, through organic growth and by driving industry consolidation. There is a clear correlation between size and efficiency in the power industry, and we will continue our efforts to create larger entities. The gains from economies of scale will benefit both our owner and consumers. We will also contribute to greater transmission capacity from Norway and expand the capacity of our power plants.

Hafslund E-CO will contribute to cost-effective electrification by leveraging our expertise and experience in electrical infrastructure. New, electrical infrastructure such as charging infrastructure also offers economies of scale and requires smart and guided thinking.

Hafslund E-CO shall have the power industry's most satisfied customers and be a preferred partner for energy solutions. The Group shall provide the best service and solutions in the industry, and offer simple, self service solutions to our customers. And in an increasingly complex environment, it will be critical to develop good partnerships. Both to deliver new services and products, but also to manage the Group's resources increasingly efficiently.

A strategic plan is dynamic. We will continuously develop and update our strategic plan to reflect changes in technology, markets, laws and regulations, and other framework conditions, as well as experiences gained from our own operations. For Hafslund E-CO, 2018 marks the start of an exciting journey towards a renewable and fully electric future.

7500 kWh

## Value in each drop

*For Hafslund E-CO, the goal is to get the most out of every drop that runs through the turbines to the least possible disadvantage for the environment.*

*1 $m^3$ of water per second converts to approximately 7,500 kW in the Aurland 1 power station. This corresponds to 7,500 heaters of 1,000 W.*

# Hafslund E-CO's five main strategic goals

### Leading centre of competence

*Development of employees and the ability to attract the necessary skills*

### Most profitable

*Be the leader in adopting new technology to become the most profitable power group*

### Maintain growth

*Maintain continuous growth within production and networks through organic growth and by taking the lead in industry consolidation*

### Electrification

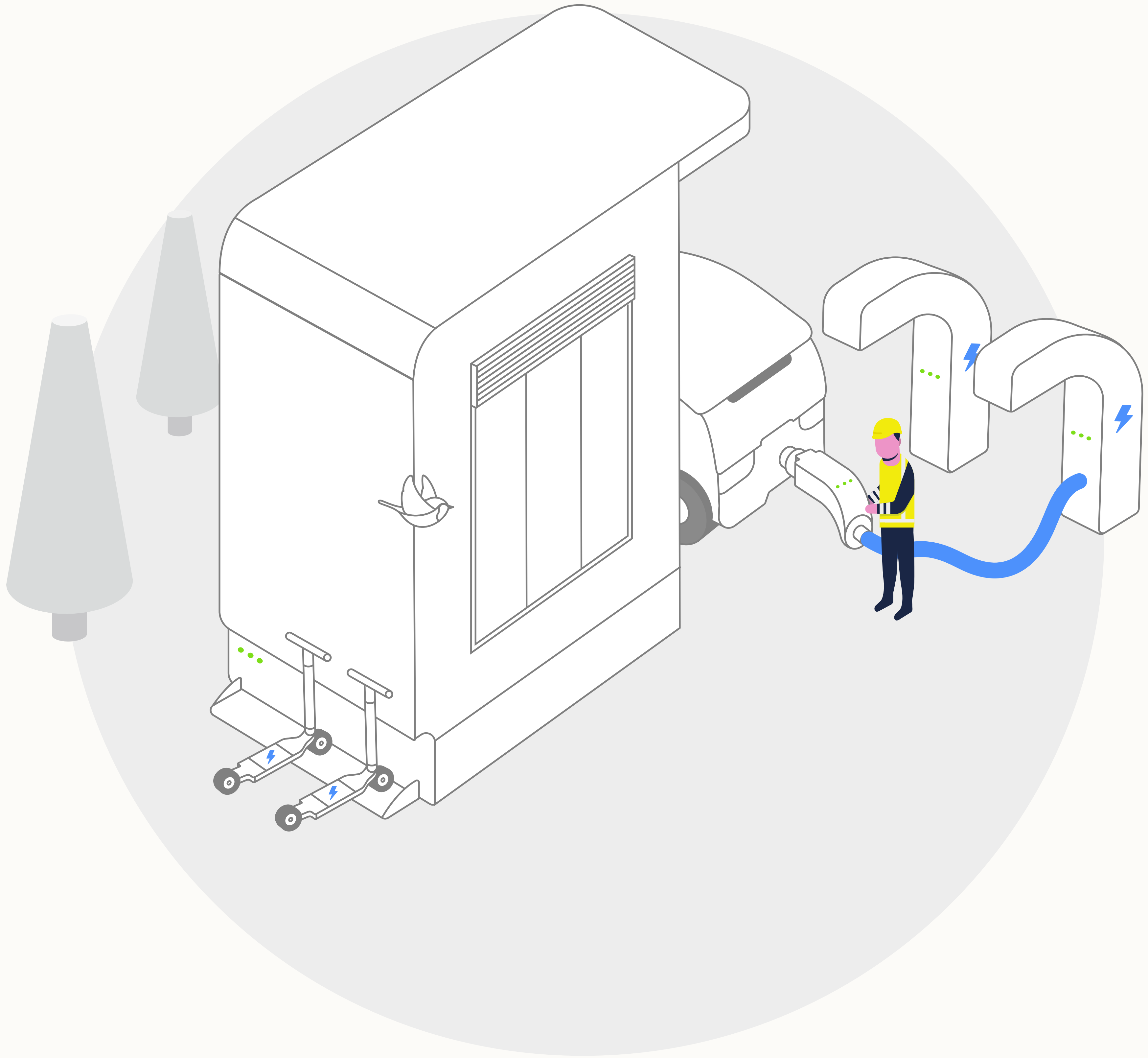
*Contribute to cost-efficient electrification*

### Satisfied customers

*Have the power industry's most satisfied customers and be a preferred partner within energy solutions*

# The smart city

The smart city puts the citizens first. For Hafslund E-CO, the smart city concept is about making the city a better place to live and work with focus on innovation and sustainability. The Group's ambition is to contribute to innovative solutions for mobility, including making it easier to charge electric cars, smart parking and smart street-lights. From a sustainability point of view, Hafslund E-CO may contribute to reductions in energy use through smart automation of commercial buildings, dynamic energy pricing, smart street lights, smart home solutions as well as monitoring of water use and pollution.



## Electrification

*Anything that can be electrified should be electrified if there are cost-effective measures that bring society faster and smarter to an emission-free future.*

# Board of Directors, Hafslund E-CO AS

In July 2018, Oslo City Council decided to integrate Norway's largest networks company, Hafslund AS, and Norway's second-largest power company, E-CO Energi Holding AS, into one group with a joint board and management team, to create Norway's largest integrated energy group – Hafslund E-CO.

A new Group board was established following the merger. The new board held five meetings in 2018. Key focus areas in the meetings included industry consolidation and the establishment of a shared vision, shared values and a shared strategy for the Group. The board believes that further industry consolidation will be a prerequisite to achieve continuous improvements and innovation in a rapidly changing energy system. In 2018, Hafslund E-CO signed a Letter of Intent with Eidsiva Energi concerning a potential merger of the two companies. The Group also initiated a dialogue with Fredrikstad Energi to assess a potential acquisition or merger. The Group has also assessed other structural projects and opportunities. The board of Hafslund E-CO has actively participated in these initiatives and welcomes further work on potential mergers and acquisitions.

# Alexandra Bech Gjørv
## Board Chair

Alexandra Bech Gjørv is CEO of SINTEF, one of Europe's largest research institutes.

**Background:**
Alexandra is a qualified lawyer from the University of Oslo, Oxford University in the UK and Suffolk University in Boston, USA.

**Other offices and previous experience:**
Alexandra has extensive industrial experience from management positions at Equinor and Norsk Hydro, where she among other was responsible for the development of the companies' New Energy business, Group director HR, HSE and CSR as well as holding several management positions in Hydro Automotive. Alexandra was previously Chair of Eidsiva Energi and a director of the French company Technip, as well as Schibsted, Norske Skog and NRK. Between 2009 and 2015, Alexandra was a partner in the law firm Hjort, where she specialised in employment law, energy law and investigations. She also headed the 22 July Commission, which was ordered by Norway's parliament following the Oslo bombing and subsequent shootings on Utøya in 2011.

# Bente Sollid Storehaug
## Director

Bente Sollid Storehaug is Managing Director of Digital Hverdag AS.

**Background:**

Bente has a degree in political science and executive studies from INSEAD (international board education), BI Norwegian Business School (mentoring) and MIT (Blockchain innovation).

**Other offices and previous experience:**

Bente founded Digital Hverdag AS in 1993 and led the company through a series of mergers and acquisitions leading up to the company's IPO on the Stockholm Stock Exchange. Since 2000, she has worked as an independent investor and adviser and served on the boards of start-ups and listed companies. She is Chair of the Boastcom Group and a director of the Eika Group, Polaris Media ASA, Europris ASA and the car group, Motor Gruppen AS.

# Bjørn Erik Næss

## Director, Chair of the Audit Committee

Bjørn Erik Næss stepped down as CFO of DNB ASA on 1 March 2017, a position he held for nine years, and currently serves on a number of boards.

**Background:**

Bjørn Erik has a Master degree in Business Administration from the Norwegian School of Economics (NHH) and has completed a management programme at Darden Business School in the USA.

**Other offices and previous experience:**

Bjørn Erik was previously SVP and CFO of Aker Kværner ASA, and held similar positions in Orkla and Carlsberg (Denmark). He has gained extensive experience from management roles both in Norway and internationally over the last 25 years. He is also Chair of Axactor AS, and a director of DNB Livsforsikring AS and Luminor AB.

# Bård Vegar Solhjell
## Director

Bård Vegar Solhjell has been Secretary General of the World Wide Fund for Nature Norway (WWF) since March 2018.

**Background:**

Bård Vegar has a degree in Political Science from the University of Oslo.

**Other offices and previous experience:**

Bård Vegar was previously Minister of Environment, Minister of Education and Research and State Secretary for the Office of the Prime Minister in Jens Storltenberg's "red-green" coalition government. From 2009 to 2017, he was member of Parliament for Akershus, and between 2007 and 2015, Deputy Leader of Norway's Socialist Left Party. He is a regular columnist for three Norwegian newspapers where he mainly writes about the climate, energy and other social issues. He has written four books on key economic and political issues, the most recent of which was entitled "Jakta på makta. 12 råd for effektiv påvirkning" (The hunt for power. 12 tips for effective influence) in cooperation with Ketil Raknes (2018). He is Deputy Chair of the Fritt Ord (Free Word) Foundation, and is a director of the Oslo School of Architecture and Design and the by:Larm Music Festival.



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# Mari Thjømøe

## Director and member of the Audit Committee

Mari Thjømøe runs her own investment and consultancy company.

**Background:**

Mari has a Master degree in Business Administration from the BI Norwegian Business School/American Graduate School of International Business, and is a qualified CFA/Chartered Financial Analyst from the Norwegian School of Economics (NHH).

**Other offices and previous experience:**

Mari was formerly CFO and acting CEO of Norwegian Property, CFO of the life insurance company KLP Forsikring, and SVP at Statoil ASA (now Equinor). She serves on the boards of several companies, including the Danish non-life insurance group Tryg AS, Scatec Solar ASA, TF Bank AB (Chair), Norconsult AS (Vice-Chair), Nordic Mining ASA and SINTEF's governing board. She was Chair of the Norwegian Investor Relations Association for many years, and was also Deputy Chair, and Chair of the Audit Committee at E-CO Energi Holding AS between 2013 and 2018.

# Arvid Amundsen

## Director (Employee Representative)

Arvid Amundsen has been with E-CO Energi since 1987, and currently works in the Maintenance Department in Hol in Hallingdal.

**Background:**

Arvid has a certificate of apprenticeship as a painter and a two-year programme for energy operators from Sogndal and Tromsø. He also has post degree training within electrical power generation and distribution networks from the Labro School in Kongsberg.

**Other offices and previous experience:**

Arvid was Senior Union Representative in the Hallingdal–Aurland Solbergfoss (HAS) branch of the EL&IT trade union from 2006 to 2008, when he also served on E-CO Vannkraft's board of directors. He has completed several terms as the union's Site Representative, Senior Employee Safety Representative and Employee Safety Representative. He was a member of the E-CO Energi Holding AS board from 2016 to 2018 before he was appointed director of the Hafslund E-CO AS board as an employee representative. He is also Group Union Representative for EL&IT.

# Per Luneborg

## Director (Employee Representative) and member of the Audit Committee

Per Luneborg is a Senior Advisor at Hafslund Nett AS.

**Background:**

Per has a Bachelors degree (cand.mag.) in Electrotechnical and financial subjects from the Artic University of Norway.

**Other offices and previous experience:**

Per joined Oslo Energi AS in 1996 and has worked as a Senior Engineer, Team Leader and Project Manager in several companies within the Group's network operations. He was appointed as an alternate director of Hafslund in 2003 and as a director in 2007. He has been Group Employee Representative for the Norwegian Society of Engineers and Technologists (NITO) at Hafslund Nett AS since 2003.

## Board



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# Johnny Kjønås

## Director (Employee Representative)

Johnny Kjønås is a Senior Engineer at Hafslund Nett AS.

**Background:**

Johnny has a Master degree in Engineering from the Norwegian University of Science and Technology (NTNU).

**Other offices and previous experience:**

Johnny joined Bærum Energiverk in 1992 and has worked as a Senior Engineer and Project Manager in several companies within the Group's network operations. He served on the board of Hafslund Nett AS from 2010 to 2018, and was an alternate director of Hafslund ASA/AS from 2010. He has been Group Employee Representative for the Norwegian Society of Graduate Technical and Scientific Professionals (Tekna) at Hafslund Nett AS since 2007.

# Organisation and management

Hafslund E-CO is Norway's largest integrated power group with activities along the entire renewable energy chain. All the way from power production and power trading, through the power network, to the homes of consumers and smart electrification solutions at end users. This gives Hafslund E-CO a unique starting point to create value for its owner and other stakeholders.


### Hafslund E-CO – Norway's largest networks company and second-largest hydropower producer

Hafslund E-CO's power production activities are managed and operated through E-CO Energi, which is Norway's second-largest hydropower producer with a mean production of around 14 TWh per year. This is equivalent to the annual power consumption of around 1.5 million people. E-CO Energi owns and operates 50 power plants spread across Southern Norway (see map). The company's largest wholly owned production facilities are located in Aurland, Hallingdal and Nedre Glomma. E-CO Energi also has significant shareholdings in power plants in Hedmark and Oppland through its 61 per cent shareholding in Oppland Energi and 40 per cent stake in Opplandskraft (direct and indirect). E-CO Energi also co-owns the project company NorthConnect, which is planning a DC power line to the UK. Production activities are headed by SVP Power Generation and Managing Director of E-CO Energi, Alf Inge Berget.

The Group's Networks business area is managed and operated through Hafslund Nett, Norway's largest networks provider. Operation and maintenance are mainly outsourced to subcontractors who are monitored by the company's employees. Networks has around 730,000 customers in Oslo, Akershus and Østfold and expects to organically grow the customer base by around 8,000 customers each year going forward, on the back of population growth and migration into the network area. By the end of 2018, new smart meters have been installed for most customers. The roll-out of smart meters has been an important project for Networks in recent years and completion will represent a key milestone for the digitalisation of the power network. Smart meters will provide Networks with better overview of the quality of the power network and facilitate more efficient maintenance and development, which over time will result in a lower network rental for customers. Networks is headed by SVP Networks and Managing Director of Hafslund Nett, Kristin Lian.

Hafslund E-CO AS (the Group's parent company) is wholly owned by the City of Oslo. The Group is led by CEO Finn Bjørn Ruyter and at the end of 2018 employed 633 staff.

## Management

The integration of Hafslund and E-CO Energi resulted in the formation of Norway's largest integrated power group, for which a new Group management team was appointed on 4 August 2018. The Group's vision is "for a renewable and fully electric future" and the ambition is to generate long-term value through renewable energy, the secure supply of energy and the development of a smart and fully electric zero-emissions society.

Group management's mandate is to facilitate and actively participate in the process to identify and implement measures that contribute to strategic goal achievement. The group management of Hafslund E-CO consists of people with considerable cross-functional as well as specialised in-depth knowledge that together will contribute to move the group forward on the road to a fully electric future.

> Ability to change will be very important as we meet the challenges of the future. In Hafslund E-CO, we believe that competence in the future, to an even greater extent than today, will make the difference between companies that really succeed and those that do not.

# Group management

Anders Østby | Siw Hellesen | Alf Inge Berget | Toril Benum | Finn Bjørn Ruyter | Kristin Lian | Tore Olaf Rimmereid | Heidi Ulmo | Martin S. Lundby | Per-Arne Torbjørnsdal

# Finn Bjørn Ruyter

CEO

Finn Bjørn Ruyter was appointed CEO of Hafslund E-CO AS on 4 July 2018. He was previously CEO of Hafslund ASA/AS, a position he held since January 2012.

**Background:**

Finn Bjørn holds a Masters degree in Engineering from the Norwegian University of Science and Technology (NTNU) and has an MBA from BI Norwegian Business School.

**Other offices and previous experience:**

Before becoming CEO of Hafslund ASA/AS, Finn Bjørn was CFO of the Hafslund Group from 2010 to 2011. Between 1991 and 1996, he worked in power trading at Norsk Hydro, while from 1996 to 2009, he headed the power trading activities at Elkem, before later joining the company's energy division. From 2009 to 2010, he was COO of the Philippine hydropower company SN Aboitiz Power, based in Manila. Finn Bjørn is also Vice Chair of Energy Norway and holds a number of other directorships.

## Management



Next chapter

# Tore Olaf Rimmereid

## Deputy CEO and SVP Corporate Strategy

Tore Olaf Rimmereid was appointed Deputy CEO and SVP Corporate Strategy on 1 September 2018. He was previously CEO of E-CO Energi, a position he held since September 2009.

### Background:

Tore Olaf has an MBA from the Norwegian School of Economics and is also a Chartered Financial Analyst.

### Other offices and previous experience:

Before joining E-CO Energi, he was Director of Administration and Finance at NRK, CFO at Sparebank1 and held various positions at Kreditkassen. He is currently also Vice Chair of the board of DNB ASA and was previously Chair of E-CO Energi, and a member of the board of Hafslund ASA. Tore Olaf has also been Chair of Energy Norway and Political Secretary for the Norwegian Conservative Party's parliamentary group.

## Management



Next chapter

# Martin S. Lundby
## Acting CFO

Martin S. Lundby was appointed acting CFO from 1 August 2018 while Heidi Ulmo is on maternity leave. Martin was acting CFO of Hafslund AS from 18 June 2018.

**Background:**

Martin has an MSc in Industrial Economics and Technology Management from the Norwegian University of Science and Technology (NTNU).

**Other offices and previous experience:**

Before taking up his position as acting CFO, Martin was Head of Finance and Investor Relations at Hafslund ASA/AS from January 2016. Between 2013 and 2015, he was a business developer at Hafslund ASA focusing on M&A and strategy, and he has also served as Board Secretary at Hafslund ASA. From 2011 to 2013, he worked as a transaction adviser at EY.

## Management



*Next chapter*

# Heidi Ulmo

## CFO – on maternity leave

Heidi Ulmo has been CFO of Hafslund E-CO AS since 1 August 2018. She was CFO of Hafslund ASA/AS from August 2012.

**Background:**

Heidi has an MSc in International Accounting and Finance from the London School of Economics, and an MBA from the University of Strathclyde in Glasgow (UK). She is also a Chartered Financial Analyst (CFA).

**Other offices and previous experience:**

From 2010 to 2012, Heidi was Director of Corporate Finance at DNB Markets. Between 2007 and 2010, she was CFO of Infratek ASA, and from 2005 to 2007, she was responsible for Investor Relations and Corporate Strategy at Hafslund ASA. Between 1996 and 2005, she gained wide-ranging experience from PwC in London and McKinsey in Oslo, as well as from Carnegie Investment Banking's Corporate Finance department in Oslo. She is also currently a director of the cooperative building association OBOS.

## Management



Next chapter

# Alf Inge Berget

## SVP Power Generation and Managing Director of E-CO Energi AS

Alf Inge Berget took up his position as Senior Vice President Power Generation and Managing Director of E-CO Energi AS on 1 September 2018. He was previously COO of the same company, a position he held since 2008.

**Background:**

Alf Inge has a degree in Electrical Engineering from Oslo College of Engineering and additional qualification in Business Economics. He also holds a Master of Management degree from BI Norwegian Business School.

**Other offices and previous experience:**

Before joining E-CO Energi, Alf Inge was CEO of Eltel Networks in Norway. He was previously employed by the Hafslund Group as CEO of Hafslund Fakturaservice. He also currently serves on the board of HydroCen.

## Management



Next chapter

# Kristin Lian

## SVP Networks and Managing Director of Hafslund Nett AS

Kristin Lian took up her position as Senior Vice President Networks on 1 September 2018. She was previously Senior Vice President Networks at Hafslund ASA/AS and Managing Director of Hafslund Nett, a position she held since 2013.

**Background:**

Kristin holds a Master degree in Electrical Engineering from the Norwegian University of Science and Technology (NTNU).

**Other offices and previous experience:**

Before taking up her position as Senior Vice President, Kristin was Director of Network Development at Hafslund Nett AS from 2010 to 2013, where her responsibilities included investment decisions and development of Hafslund's distribution and regional networks. Kristin joined Viken Energinett, which later became part of Hafslund Nett, in 1999 and has also been Director of Planning at Hafslund Nett and Department Manager at Hafslund's systems control centre. Kristin serves on the board of SINTEF Energi AS.



Next chapter

# Toril Benum
## SVP New Energy

Toril Benum took up her position as Senior Vice President New Energy on 1 September 2018. Toril has been Project Director of the AMS project at Hafslund Nett since May 2015 and Director of Projects and Development at Hafslund Nett since March 2017.

### Background:

Toril holds a Master degree in Mechanical Engineering from the Norwegian University of Science and Technology (NTNU).

### Other offices and previous experience:

Before joining Hafslund Nett, Toril was CIO of Veidekke ASA (2010–2015), and has also held several management positions at Aker Solutions.

## Management



Next chapter

# Siw Hellesen

## SVP HR and Organisational Development

Siw Hellesen took up her position as Senior Vice President HR and Organisational Development on 1 September 2018. She was previously Senior Vice President HR and Competence at Hafslund Nett, a position she held since November 2016.

### Background:

Siw holds a Master degree in Political Science (cand.polit.) from the University of Bergen, specialising in administration and organisational science. She is currently taking an executive MBA at the Norwegian School of Economics.

### Other offices and previous experience:

Between 2015 and 2016, Siw was Director of Organisational Development at Hafslund ASA, and from 2011 to 2015, Department Manager for Organisational Development, where her responsibilities included competence and management development, recruitment and Hafslund's improvement programme (LEAN). Siw joined Hafslund ASA in 2008 as an Organisational Consultant. In 2007, she was HR Manager at Orkla Brands, and between 2002 and 2006, a Senior Advisor at the Ministry of Education and Research.

## Management

# Per-Arne Torbjørnsdal

## SVP Corporate Communications and Public Affairs

Per-Arne Torbjørnsdal took up his position as Senior Vice President Corporate Communications and Public Affairs on 1 September 2018. He was previously SVP Corporate Strategy and Communication at E-CO Energi AS.

**Background:**

Per-Arne holds a Master degree in Law (cand.jur.) from the University of Oslo, specialising in international energy law at the University of Leiden in the Netherlands. He also has a Business Administration degree from BI Norwegian Business School.

**Other offices and previous experience:**

From 2010 to 2017, Per-Arne was SVP Corporate Development, and from 2002 to 2010, SVP Communication and Public Affairs at E-CO Energi AS. Between 1997 and 2001, he served as Chief of Staff on the Norwegian Conservative Party's City Council group and later Political Advisor to the Vice Mayor for finance at the City of Oslo. He advises the energy policy committees at Energy Norway and the European industry organisation Eurelectric.

## Management



Next chapter

# Anders Østby

## SVP Power Market

Anders Østby took up his position as Senior Vice President Power Market on 1 September 2018. Prior to this, he was Managing Director of Hafslund Produksjon AS, a position he held since 2008.

### Background:

Østby holds a Master degree in Electrical Engineering from Heriot-Watt University in Edinburgh (UK) and has also studied finance and project management at BI Norwegian Business School.

### Other offices and previous experience:

Anders has been Senior Vice President Production at Hafslund ASA, and Managing Director of Hafslund Produksjon. He has also been responsible for construction of Hafslund's new power stations at Kykkelsrud and Vamma. He was previously Director of Hafslund Operatør's Markets division, Director of Network Development and Operations Manager and Departmental Manager for the Planning Department at Hafslund Nett.

## Management



Next chapter

# A sustainable Hafslund E-CO

Clean, renewable energy is part of the climate solutions of the future. Through its core business, Hafslund E-CO plays an important role on the road to a smart society, where the use of fossil energy sources is replaced by emission-free renewable energy. Together with the owner and local communities, Hafslund E-CO is working for a renewable and fully electric future.

## Climate – the big picture

Hafslund E-CO is dependent on a good relationship with stakeholders and therefore works closely with the business sector, municipalities and local communities. The Group's activities help to secure jobs, safeguard society's supply of clean energy and increase value creation. In this way, Hafslund E-CO creates value locally, regionally and nationally, while contributing to lower greenhouse gas emissions, which has a positive effect globally.

## Corporate social responsibility – material areas

Hafslund E-CO wants the entire organisation to be sustainable and strives to ensure that the Group's impact on the environment and society is as positive as possible.

To distinguish material areas related to corporate social responsibility from other important areas, the Group has conducted a materiality analysis. The analysis is based on what is considered significant for Hafslund E-CO and equivalently for the Group's stakeholders. The analysis highlights both risks and opportunities and has identified four key areas crucial for attaining our strategic goals:

- Reliable producer and supplier of renewable energy
- Ethical business conduct and competence in focus
- Environmental impact (including climate change, electrification and effect on the external environment)
- Responsible supply chain and local value creation

### Reliable producer and supplier of renewable energy

Hafslund E-CO owns, develops and operates hydropower plants and critical infrastructure for society's power supply. The Group's business creates significant socio-economic ripple effects, contributes to long-term job opportunities and safeguards society's supply of clean energy.

Society expects an uninterrupted supply of energy at all times. Hafslund E-CO's social responsibility is to ensure safe and reliable production and supply of renewable energy. In 2018, Networks achieved security of supply equivalent to 99.98 per cent, taking into account both planned and unplanned events. This means that, on average, the Group's customers were without electricity for 88 minutes of which 22 minutes were planned and notified. The Group's Networks business area is among the network operators in Norway with the lowest percentage network losses and the fewest interruptions.

The loss of energy in the transmission network has socioeconomic costs. It is therefore important to ensure efficient power transfer with low energy losses. The network loss in 2018 was 1,240 GWh, compared to 1,212 GWh in 2017. The losses depend on factors such as the network load, which in turn largely depends on the outdoor temperature. To minimise such losses, it is important to place strict requirements on components and equipment when making investments.

The Production business area, with its reservoir power plants, provides renewable power production, also during periods of low precipitation. This allows the Group to contribute to the efficient utilisation of hydropower resources and to the balance and quality of the power system. The company works continuously to increase power production and thereby reduce Norway and Northern Europe's greenhouse gas emissions in the long term.

### Ethical business conduct and competence in focus

The Group's code of conduct governs the work on ethics and anti-corruption. All employees must behave with respect and integrity towards their colleagues, business associates, customers or others with whom they come in contact with through their work. The Group's ambition is to be an attractive place to work and aims to have a working environment based on loyalty and trust – and a corporate culture that attracts, and further develops competent and motivated employees. Job satisfaction and a good working environment are crucial if the Group is to retain competent employees. We therefore conduct extensive employee satisfaction surveys on a regular basis, normally every other year, to gain insight into how our employees perceive their job and the Group culture.

With regards to ethical conduct, the Group's code of conduct requires Hafslund E-CO's employees and board members to avoid situations that may give rise to personal and/or financial conflicts of interest. To facilitate reporting of events of concern, Hafslund E-CO has a dedicated whistleblowing channel.

Hafslund E-CO should also be a safe workplace, without accidents, injuries or losses. The Group has a zero vision for injuries and a target absence rate of less than 3.5 per cent. For the Group as a whole, we recorded a total of ten lost-time injuries and 12 non-lost-time injuries involving our own employees and suppliers working at the Group's facilities in 2018. This corresponds to an injury rate of 4.2 lost-time injuries per million working hours (H1 indicator) and a total injury frequency (number of lost-time and non-lost-time injuries per million working hours -H2 indicator) of 9.2 for the Group. Of the ten lost-time injuries in 2018, all were related to suppliers. Hafslund E-CO had an absence rate of 3.6 per cent in 2018 due to sickness. In the Production business area, the absence rate decreased, while the absence rate in Networks increased in the same period. To reduce the overall absence rate we have implemented a number of measures including follow-up training for managers, as well as targeted measures at the individual level.

## Environmental impact

As a power producer and network operator, Hafslund E-CO's environmental impact is mainly within three areas: climate change, electrification and the external environment. Thanks to our renewable energy production, the Group makes an important contribution to attaining environmental goals by counteracting unwanted climate change and promoting the electrification of society. While our activities affect the external environment both aesthetically and as a result of changes in water flow and water temperature in regulated rivers and watercourses, the Group aims to conduct its environmental interventions as low-impact as possible.

### *Climate changes*

The world is currently facing much greater environmental challenges than ever before. Average temperatures are rising and the world is experiencing more extreme weather events than previously. Recent climate changes are largely manmade, partly due to emissions of greenhouse gases[1] from burning fossil fuels. The UN's Sustainable Development Goal number 13 states that it is necessary to "take urgent action to combat climate change and its impacts". One of the proposed measures is to invest far more in renewable energy.

Producing and delivering renewable energy is the Group's most important contribution to combat climate change. If the Group's emission-free hydropower production of 14.3 TWh in 2018 were to be replaced by gas power, this would correspond to an emissions increase of 5.2 million tonnes of $CO_2$ – the same as almost two million cars emit in a year.

*[1]A greenhouse gas is a gas in the atmosphere that contributes to the greenhouse effect, and which, at increased concentrations, will contribute to global warming.*

# 5.2 million tonnes $CO_2$ saved

## The climate contribution from hydropower

*If the Group's zero-emission hydropower production of 14.3 TWh in 2018 had been replaced by for example gas power, the resulting increase in $CO_2$ emission would amount to 5.2 million tonnes – which is equivalent to the $CO_2$ emissions from almost two million cars per year.*



One of the benefits of hydropower is that only negligible levels of greenhouse gases are emitted after a power plant has been built. Life cycle analyses (LCA) show the total emissions in a product's lifecycle from the extraction of raw materials to production, distribution, use, reuse, maintenance and recycling – to final disposal, including all transportation involved. Life cycle analyses of various power production techniques show that hydropower has very low emissions. The research institute Østfoldforskning has calculated emissions from a number of Norwegian hydropower plants through life cycle analyses and the calculations show that the emissions from a typical Norwegian hydropower plant are 2.39 g $CO_2$ equivalents per kWh. For Hafslund E-CO's total production of 14.3 TWh, the institute's analysis indicates emissions from the entire life cycle corresponding to about 34,000 tonnes of $CO_2$ or roughly the same as 14,000 cars emit within a year. The net environmental gain from electrifying the energy supply is thus substantial.

The Group's $CO_2$ emissions related to day-to-day operations are largely related to unplanned emissions of sulphur hexafluoride ($SF_6$), a harmful greenhouse gas used as an insulation and cut-off medium in switching stations. In 2018, Network's facilities contained 26,827 kilograms of $SF_6$, and emissions totalled 40 kilograms, compared to 39 kilograms in 2017. Emissions from Production were 5.4 kilograms, against 8 kilograms the year before. Total emissions of $SF_6$ thus constituted 45.4 kilograms in 2018. Converted into emissions from cars, this equals approximately 400 cars per year. Reducing emissions of $SF_6$ is a priority area in the Group and we are currently working on a project that is examining alternatives to this potent greenhouse gas.

In addition to minimising emissions from day-to-day operations, the Group aims to limit greenhouse gas emissions from administration and transport. The Group is therefore actively using emission-free vehicles in operations where possible, and makes extensive use of video conferencing to limit business travel. Emissions from flights, helicopter use, electricity consumption and fuel for cars and machines fluctuate from year to year depending on the level of activity.

To further contribute to replacing fossil energy sources by emission free power moving forward, the Group is continuously making improvements and implementing new projects. One hydropower plant (Rosten) was put into operation in 2018. Four power plants are under construction (Vamma, Nedre Otta, Mork and Tolga). Furthermore, the Group is a co-owner of an interconnector project that is currently in the licensing process (NorthConnect). Increased exchange capacity[2] makes it possible to exchange renewable energy across borders, and thereby reduce the use of fossil energy.

***Electrification***

Hafslund E-CO contributes to the electrification of the society. The Group plays an important role in the electrification of the transport sector in particular. Hafslund E-CO is facilitating an extensive implementation of electric vehicles in our network area, right from the overhead network and out to the end customer. The Group is in close contact with and assists various operators of public transportation, as well as private customers, housing cooperatives and other providers of charging stations by facilitating services and providing solutions. In addition to supporting the ongoing electrification of transport in the local area, Hafslund E-CO is involved in a pilot programme for the electrification of long-haul road transport. Hafslund E-CO is also working on the electrification of construction sites and will, according to plan, help make Oslo become one of the first cities in the world to have fully electric construction sites during 2019. The Group is also working on emission-free solutions for renovations of our own dams and other plants.

[2]*Exchange capacity = the capacity to transport power across borders.*

***The external environment***

The energy system of the future will be based solely on renewable, carbon-neutral energy sources. Hafslund E-CO plays an important role as a producer and distributor of renewable energy to our customers, and we work continuously to ensure that our activities are carried out in a way that has as little impact on the environment as possible. The Group shall also keep the environmental impact of internal operations at a low level. The construction, operation and maintenance of hydropower plants does affect the natural environment. The effects are mainly local and related to physical interventions in nature and the impact on biodiversity through changes in water flow and water temperature.

When we construct power plants, review dams and reinvest in the Production business area, Hafslund E-CO actively seeks solutions that keeps the impact of environmental interventions as low as possible, and use knowledge-based techniques that represent best practice. Our facilities shall also be operated in such a way that the Group experiences no environmental nonconformities. The Group's licences are subject to minimum and maximum regulated water levels, and requirements for minimum water flow in absolute quantities that must be met at all times.

No non-conformities related to the license conditions (water levels etc.) were reported in 2018, but the Group unfortunately experienced four incidents related to the external environment during the year. The most serious incident concerned sediment transport in the Flåm river relating to the dam modernisation project at the Leinafoss power plant. The incident is under review to identify the extent of negative effects on the watercourse downstream. Lessons learnt from this review will be utilised in the planning of future modernisation projects.

The Group is implementing landscape and improvement measures where there are defined needs, and the goal is to use such measures to reduce the impact of our operations on the external environment. In line with public orders, trout is stocked in a number of mountain lakes, a measure that creates good fishing lakes for the benefit of locals and visitors alike. The Group also participates in several research projects to assess whether the measures initiated have the anticipated effect and investigates whether it is possible to improve the fish welfare through other measures, such as by changing the operating schedules at our facilities.

In rivers where there is no requirement for minimum water flow, but where increased water flow may have a positive environmental impact, our Production business area has introduced voluntary minimum water flow requirements. This reduces energy production, but it is a loss the Group is happy to accept if it produces a positive environmental impact. In 2018, the loss in profit from voluntary water release in Aurland and Hallingdal was approximately NOK 3.6 million.

Regulating watercourses also has positive environmental effects beyond the production of clean energy. During flood periods, the Group has, on several occasions, been able to contribute to reducing the amount of water in rivers and watercourses, thereby averting flooding and damage to property and the environment.

For several dam modernisation projects, Production has required pitching stone for the dams. Hafslund E-CO was the first hydropower producer to convert quarries into lakes or extensions of existing lakes. In 2018, we completed our work at Store Vargevatn and the quarry was filled with water throughout the summer. A final inspection was conducted by the Norwegian Water Resources and Energy Directorate (NVE) who were very satisfied with the solution. A new quarry (quarry lake) has been started at Strandevatn.

Networks still has a number of high voltage powerlines that use oil as an insulating medium. If this type of cable is damaged, oil can seep into the ground or watercourses. In 2018, we refilled 2,196 litres of cable oil, against 1,667 litres in 2017. There have been no reports of harm to fish or birds as a result of oil discharges in 2018.

The impact on the external environment of Hafslund E-CO's other activities largely derives from buildings, transport and externally sourced services, including transport and contracting activities. Hafslund E-CO works continuously to minimise the negative effects of these activities.

For additional information of our Production business area (E-CO Energi), please refer to the separate environmental report.

## Responsible supply chain and local value creation

Hafslund E-CO is committed to maintaining the highest ethical standards in all business operations. We communicate this message within the Group by promoting one of our core values: responsible. By showing respect and responsibility, our goal is to build a good reputation, both internally and in society at large. This is crucial for achieving good cooperation, which in turn will contribute to creating increased value in the local communities in which the Group operates.

Hafslund E-CO has implemented the Oslo model, which is an umbrella term for a number of credibility provisions that are included in contract terms for the purchase of goods, services and construction. Oslo City Council asked all limited companies owned by the city to introduce the Oslo model during 2018.

The Group places strict requirements on suppliers of all goods and services. All suppliers and their subcontractors must conduct their business in accordance with nationally and internationally recognised principles and guidelines (related to human and labour rights, corruption, health, safety and the environment). The Group carries out purchases in line with good business practice. The Network business area also carries out purchases in accordance with the Norwegian Public Procurement Act and the Norwegian Regulations concerning Supply Sector Purchases.

Hafslund E-CO has established a separate code of conduct for suppliers based on international ILO and UN conventions. The choice of suppliers and partners is an important aspect of our work to achieve a sustainable industry. Hafslund E-CO wants to take greater responsibility for the environment and the social impact of the value chain of which the Group is a part.

Efforts to influence suppliers and partners to reduce emissions, improve environmental management and secure good social conditions will be intensified.

***The Group's purchasing principles stipulate that:***

- Hafslund E-CO shall, as far as possible, together with suppliers, find good environmental and climate solutions.
- Suppliers must ensure that all equipment used in watercourses is dry before use, and disinfected if necessary, to prevent the spread of organisms between different watercourses.
- Hafslund E-CO requires suppliers to be registered in UNCE[3] (formerly Sellicha) to qualify for delivery of goods and services to the Group's major projects, and only suppliers with environmental management systems are used.

In 2018, Hafslund E-CO introduced credibility requirements to counteract workplace crime and social dumping in the construction industry. The requirements are designed to ensure decent working conditions for employees and contractors, limit the number of participants in the supply chain and provide for an increase in apprenticeships and trained professionals. These requirements have been well received in the supplier market. Suppliers are followed up to ensure compliance with the requirements.

Hafslund E-CO's business generates values in the local communities where the Group operates. Employees receive salaries, municipalities and authorities receive taxes and fees, and local suppliers are awarded challenging assignments, while our owner receives dividends.

*[3]UNCE is a qualification scheme for the energy industry that carries out HSEQ audits (health, safety, environment and quality) and project audits on behalf of the member companies. The audits comply with the ISO 19011 standard.*

The Group seeks to use local service providers and partners where this is practicable. Having a short distance between the suppliers and our facilities contributes to environmental savings and secures local jobs.

In 2018, the Group contributed NOK 560 million to host municipalities. This contribution came in the form of natural resource and property taxes, licence fees and concessionary power. In total, the Group contributed over NOK 1.8 billion in taxes and fees in 2018, while the dividend paid to the Group's owner, the City of Oslo, was NOK 985 million.

## Other social involvement

In addition to creating jobs, paying taxes and fees, increasing demand for local goods and services and securing the power supply, the Group's activities also contribute to society in other ways.

### By-products of production

A by-product of watercourse development is a surplus of material in the form of rock and crushed stone. This material is delivered to depots which can be used for local community development. Our Production business area works to ensure that surplus material can be used locally as part of road construction, cement production or other purposes that benefit society.

### Children and young people

The Group has set up funds to support the activities of children and youth in their local communities. Our Networks business area collaborates with the local newspaper Romerikes Blad on the Romeriksfondet (The Romerike Fund), which awards funding to teams and associations several times a year. The winners are decided in part by a jury and in part through voting among the readers of Romerikes Blad. The winners are presented in the newspaper.

Our Production business area provides financial support for sports teams, associations and young sporting and cultural talents in the local communities where we have major production facilities, such as in Aurland, Hallingdal and Østfold. E-CO Energi is a partner for the Energy Centre at Hunderfossen Family Park, an experience centre that focuses on hydropower and other renewable energy. E-CO Energi has also created a display centre on the environment and power production at our premises in Gol.

### Innovation and branding

Innovative is one of the Group's values. Innovative means, among other things, the ability to continuously improve and challenge the operations. At Hafslund E-CO, our employees are searching for the solutions of tomorrow and our collaboration with StartupLab is part of our efforts to strengthen innovation work in the Group. Hafslund E-CO is also the main partner for Ungt Entreprenørskap (Young Entrepreneurship), an organisation that inspires young people in Oslo and Østfold to be innovative and create value.

### Climate and the environment

Hafslund E-CO collaborates with the environmental organisations Bellona and Zero. Bellona and Zero both have a strong professional apparatus and are good sparring partners for the Group on the issues of energy production and energy supply. Together, the Group and its partners work for a better environment locally and globally.

## Humanitarian initiatives

Our Networks business area has partnerships with the humanitarian aid organisation Engineers Without Borders (EWB), which provides opportunities for the Group's employees to engage in humanitarian work locally and globally.

Networks' partnership with the Norwegian volunteer organisation Natteravnene (the Night Ravens) includes both financial support and involvement in the local community. Through this partnership, the Group's employees have the opportunity to show their social commitment both as employees and as private individuals.

Our Production business area partners with the Norwegian Red Cross. The largest share of our support goes to international "Water for Life" projects. Clean water is crucial not only in the acute phase after disasters, but also in long-term humanitarian work. Further support for the Red Cross goes to Norwegian Red Cross Search and Rescue Corps, primarily in the areas where the company operates.

Production also partners with the Norwegian Air Ambulance Foundation. This partnership contributes to enhancing the expertise of the emergency services personnel in Hallingdal. With its helicopter base in Ål, the Norwegian Air Ambulance provides safe, fast and efficient ambulance service for the entire region.

## Culture

Hafslund E-CO owns and manages Hafslund Manor in Sarpsborg. Since the 1400s, Hafslund Manor has been a manor house of international quality. Today, it offers a beautiful historical backdrop for courses, conferences, weddings and other special events. The manor is used both internally and externally in a variety of ways. The main house is open for guided tours and certain events. The park is always open to the public.

## On the road to a renewable and fully electric future

Environment, sustainability and corporate social responsibility are central to Hafslund E-CO. By working continuously on projects that contribute to lasting value creation, such as by replacing fossil energy sources with clean energy, the Group plays an important role in a sustainable society on the road to a renewable and fully electric future.

> Clean, renewable energy is a part of the climate solutions of the future. Producing and delivering renewable energy is Hafslund E-CO's most significant climate contribution.

# Analytical information and key figures

Hafslund E-CO shall generate long-term values by being the most efficient producer of renewable energy, offering a secure supply of energy and contribute to the development of a smart and fully electrified zero-emissions society.

## Value creation

Creating value for Hafslund E-CO's owner and lenders is essential if the Group is to continue to grow and develop. This makes our Return on Capital Employed (ROCE) – which indicates whether capital invested in Hafslund E-CO is generating a competitive return – an important key ratio. The Group's strategic goal is to be Norway's most profitable power group. This goal is expressed in various ways in the Group's two business areas Production (power generation) and Networks[1] (power supply).

The Group has also established a new business area, New Energy, in order to leverage Network's and Production's expertise to create new growth opportunities for the Group and to help our owner achieve their climate goals. The business area is still being developed and is provisionally being reported as part of the parent company[2].

[1]Networks is part of the Hafslund segment, which also includes other business, where activities are expected to be insignificant going forward.
[2]The parent company is Hafslund E-CO AS.

As a commodity, electricity is subject to major price fluctuations linked to supply and demand. Renewable (hydro, wind and solar) energy competes with power generated from thermal power plants (coal, gas and nuclear power) in the European market. While Hafslund E-CO currently only generates renewable hydropower through our subsidiary E-CO Energi, we are also assessing alternative sources of renewable power. To become leaders in renewable hydropower production will require us to utilise the water to achieve the highest possible price in the market. New technology, including advanced algorithms and data-driven models, is now being actively used to make good commercial decisions. Going forward, algorithms, data and sensor technology will also support production activities by contributing to more efficient maintenance and production decisions. One example of this is our work to develop a digital twin for one of our power plants. The twin is intended to maximise availability and reduce operating and maintenance costs for the power plant. The development work started in 2018 and is expected to be completed in 2019.

We are currently the leading networks company in Norway and aim to maintain our lead. This will require us to be the most cost-effective network company in Norway while maintaining a high quality of supply and network availability. Maintaining our lead will also require us to continue to focus on costs and be early adopters of new technology and new forms of collaboration. Networks will continue its growth and improvement initiatives within digitalisation and automation in order to further improve operational efficiency. In addition, digitalisation of the customer interface will be pivotal to successful implementation of our customer-centric approach.

Hafslund E-CO has set itself a goal of being the most efficient producer of renewable energy and the most efficient networks company in Norway by 2025, with full digital integration from planning through to construction, operation and maintenance. To achieve our goals, Hafslund E-CO is focusing on understanding and optimising revenue and cost drivers in our business areas.

## Value drivers for Production

### The Norwegian hydropower system

The Norwegian hydropower system has a normal annual production of around 134 TWh[3] and an aggregate power capacity of 31,000 MW[4]. Norway currently has more than 800 reservoirs with a storage capacity equivalent to around 87 TWh. The 30 largest reservoirs, three of which are wholly or partly owned by Hafslund E-CO, account for around half of the total capacity.

Norway has around half of Europe's total reservoir capacity[5]. Large storage capacity and high installed power capacity provide the Norwegian hydropower system with significant flexibility. Most of Norway's reservoirs were built before 1990, but upgrades and expansions of power plants have increased reservoir utilisation capacity in recent years. Relatively little growth is expected in hydropower production in Norway in the next few years, as capacity investments in renewable energy largely are being channelled towards solar and wind power, sources of energy that

*[3]TWh – One terawatt hour equals one billion kilowatt hours. This roughly equates to the annual power consumption in Drammen.*
*[4]MW – a measurement of the power, or consumption of energy (one megawatt equals 1,000 kilowatts). The highest-ever energy consumption measured in Norway is 23,969 MW (6 January 2010).*
*[5]Source: NVE "The power market and the Norwegian power system" provides information on normal annual production, power capacity, number of reservoirs and percentage of the European reservoir capacity.*

Hafslund E-CO also aims to invest in. Although, in common with other renewable energy, the primary energy source for hydropower (water) is free, access is limited and extremely variable (major year-to-year fluctuations in precipitation). Value creation in hydropower production is therefore largely driven by revenue-considerations, while operating expenses are relatively constant.

## Revenue drivers

Hafslund E-CO's production activities are managed and operated by E-CO Energi and partners. Generated power is sold in the Nordic wholesale market and power revenues are determined by the produced volume and achieved price, including production planning and power price hedging.

### *Volume*

E-CO Energi is Norway's second-largest hydropower producer with an annual mean production of around 14 TWh (approximately 10 per cent of total power production in Norway) and a production capacity of around 3,350 MW. Our largest, and Norway's third-largest, power plant is in Aurland. The facility has an annual mean production of more than 2 TWh (equivalent to the annual consumption of roughly 110,000 households, or a quarter of the annual power consumption in Oslo). For more information about our power plants' capacity, please visit E-CO Energi's website www.e-co.no.

Following a period of high investments in increased production capacity and dam refurbishment, investment levels are expected to be somewhat lower in future years and will mainly relate to maintenance projects and dam upgrades. This will generate some organic growth while a potential merger with Eidsiva would increase annual mean production to around 18 TWh.

*Flexible and intermittent production*

The Group has both flexible (reservoir-based) and intermittent (run-of-river) hydropower production. Reservoir-based production totals around 10 TWh. The benefit of this type of production is that it can be adapted to the consumption profile (water is saved in periods of high inflow and low consumption and used in periods of low inflow and high consumption). Inflow for Norwegian hydropower can vary by up to 60 TWh per year, from 160 TWh in wet years to 100 TWh in dry years. The reservoirs make it possible to adopt hydropower production to the various challenges created by the vagaries of the Nordic climate. In run-of-river plants, which do not have significant reservoir capacity, production is determined by the inflow.

Flexible hydropower offers benefits currently unmatched by other renewable production technologies. This is because it can deliver power whenever it is needed – unlike wind farms when there is no wind, or solar power facilities when the sun is not shining. In 2017 and 2018, the Group leveraged this flexibility and favourable power prices in the power markets to generate above-annual mean production.

*Reservoir utilisation*

Individual producers can determine how they utilise their reservoirs within the licensing requirements for minimum water flow and regulations for maximum and minimum water levels.

The basic challenge in utilising hydropower reservoirs is that it is impossible to accurately predict the future inflows to the power plants, or how big demand will be. Consequently, decisions to produce now or save water will always be subject to uncertainty. Advanced algorithms and data-driven models are used to make production decisions.

## ***Power prices***

Coal and gas prices, $CO_2$ emissions allowance prices, exchange capacity with the continent, the electricity certification scheme, the percentage of licensed power, price hedging of future sales using power derivatives and increased power consumption are all important drivers of the Nordic power price.

*Prices of alternative energy sources, $CO_2$ emissions allowances and exchange capacity*

Since the Norwegian power system is linked to the Nordic, and to some extent the European power market, the alternative to using the water for production would be to import power from neighbouring countries. This means that the price of imported power impacts the production decisions of Norwegian hydropower producers. In the Nordic market, costs in Danish and Finnish coal-fired power plants in particular affect the power price as this production often is marginal (increases or reduces in line with changes in consumption and other production). While coal prices rose marginally, gas prices increased sharply in 2018.

The prices of European emissions allowances for $CO_2$ rose significantly in 2018 because of various measures implemented by the EU. The EU has introduced reforms for the fourth phase of the emissions allowance market (2021–2030), which have resulted in fewer emissions allowance offers for this period. Measures have also been taken to control access to emissions allowances in the third phase in the form of a market stability reserve that will be introduced from 2019. This mechanism ensures that a percentage of the emissions allowance surplus is withdrawn from

2 TWh

**Hafslund E-CO's biggest power plant**

*Our power plant, Aurland 1, is the third largest power plant in Norway with an annual mean production of more than 2 TWh. This is sufficient to cover the annual consumption of approximately 110,000 households.*



the market and placed in a reserve. The reserve can be re-introduced to the market, but only at a limited rate and if the surplus falls below a certain limit. With gas prices rising more than coal prices, it has also been necessary to impose a higher emissions allowance price to skew production from coal power plants to gas power plants, which produce lower emissions. Higher emissions allowance prices are pushing up production costs for fossil power, which in turn is contributing to an increase in the value of hydropower and the market price of power. Higher prices of coal, gas and $CO_2$ emissions allowances all combined to increase power prices in 2018.

Increased exchange capacity[6] impacts the power price due to closer linking of the Nordic and European power systems. Higher exchange capacity is also producing a more robust system and reducing the probability of power shortages in dry years, while further development of the exchange capacity is narrowing price differences between Norway and other countries.

*The electricity certificate scheme*

The launch of the Norwegian-Swedish electricity certification scheme has led to higher investments in unregulated, renewable energy. Power producers who develop new renewable energy production are allocated electricity certificates that can be sold in the market. The sale of certificates therefore generates additional revenue for producers in addition to the income they receive from the sale of power. This is contributing to an increase in the supply of renewable energy and consequently lower prices. The emissions allowance, together with low electricity certificate

[6]*Exchange capacity - The possibility to exchange power with other countries.*

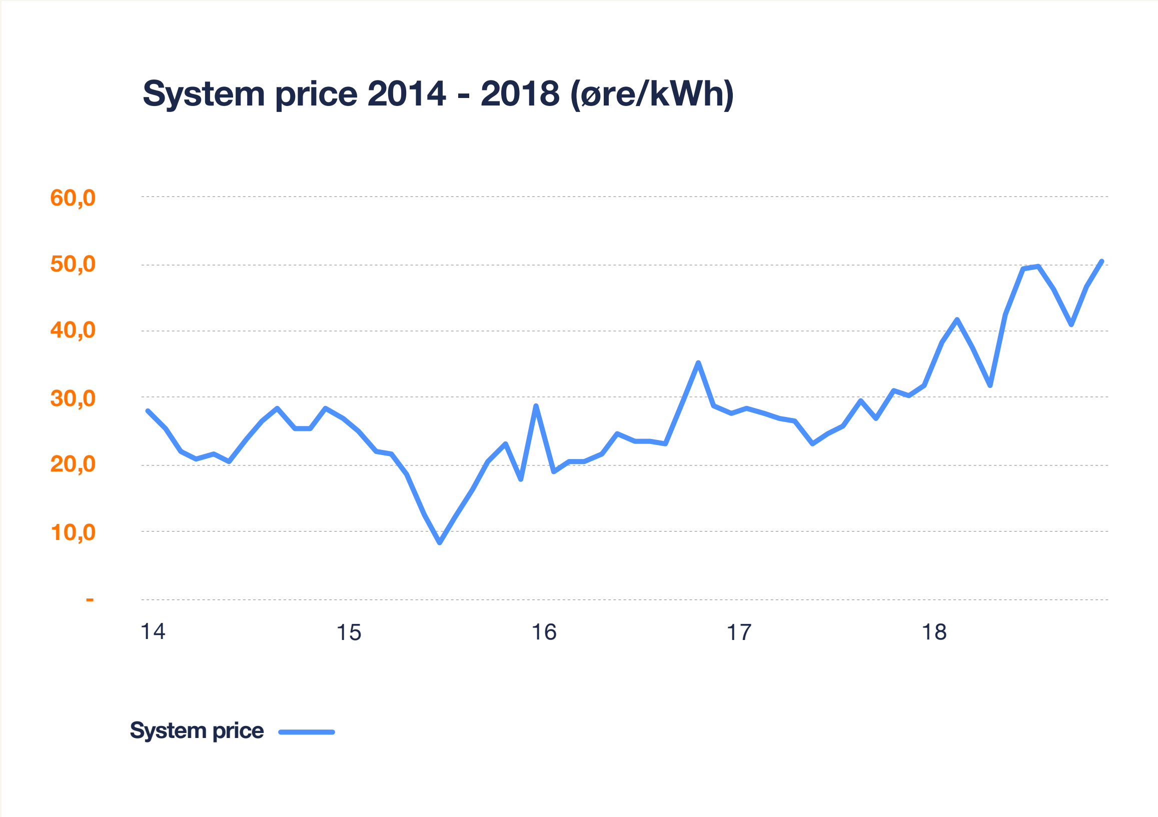
surpluses, has contributed to a significant rise in the price of the electricity certificates. Many electricity certification scheme projects are currently being developed, and since the price of electricity certificates is market-based, a strong reduction in prices is expected from 2021 onwards.

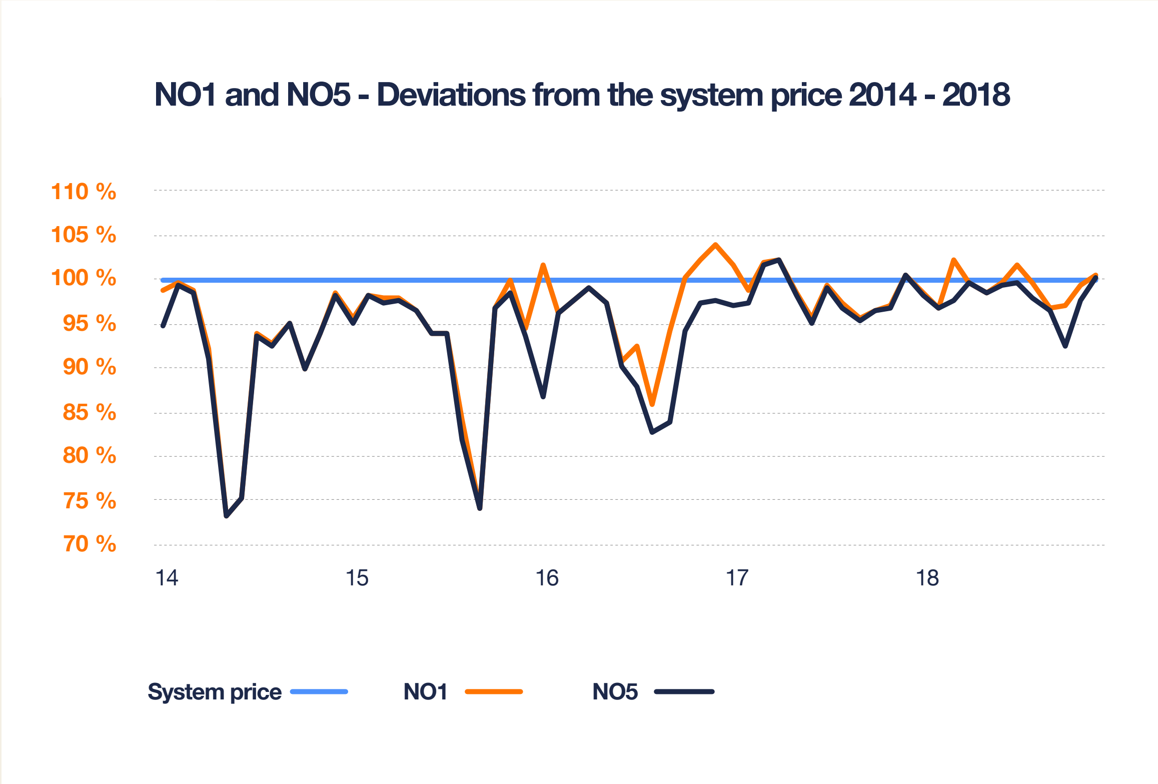
*Licensed power*

The Group is awarded perpetual licences for developing and operating hydropower plants, in return for which the Group is obliged to deliver licensed power to local authorities (municipalities and county municipalities) each year. This obligation is covered by both physical deliveries and a financial settlement scheme whereby the Group pays the difference between the spot and licensed power price to the party entitled to receive licensed power. In 2018, the volume of power that was sold under these terms amounted to 0.9 TWh and the average price of these deliverables was 13.2 øre per kWh.

*Market prices*

The system price in the Nordic region is the reference price for the Nordic power market. The achieved price is affected by the price area in which production takes place. Norway is divided into five price areas and E-CO Energi is roughly equally active in the areas NO1 (Eastern Norway) and NO5 (Western Norway). The graphs show the change in the system price and area prices for NO1 and NO5 between 2014 and 2018. For more information on achieved prices in 2018, please refer to the Board of Directors Report.



*Power derivatives*

As a power producer, Hafslund E-CO is exposed to fluctuations in market prices and volume uncertainty. Hafslund E-CO has an active hedging strategy and performs ongoing analyses. The Group price-hedges future power in order to reduce the power price risk and stabilise the Group's earnings. Market risk is managed using financial instruments, mainly in the Nordic power market. The Group has introduced frameworks for hedging hydropower production volumes for up to 15 years into the future to further reduce risk relating to future cash flows.

To be able to follow the market closely and dynamically, as well as build up expertise in different instruments, the Group engages in trading activities alongside hedging activities. These activities are intended to generate a positive long-term return and are used as analytical input. The power derivatives help reduce volatility in achieved prices.

## Cost drivers

Operating expenses for hydropower production are relatively low. They are independent of price and volume, and mainly comprise energy purchases and transmission costs (20 per cent of total operating expenses), salaries and other payroll costs (15 per cent), property tax and licence fees (20 per cent), other operating expenses (20 per cent) and depreciation, amortisation and impairments (25 per cent). Total salaries and other payroll costs and other operating expenses are referred to as influenceable costs. The Group monitors changes in its competitiveness compared to other operators by comparing operating costs per kWh with the rest of the industry. These comparisons reveal E-CO Energi to be one of the most efficient companies in Norway with an influenceable cost per kWh of 3.7 øre. In 2018, the operating cost per kWh was 10.6 øre.

## Production - 1 January - 31 December

| NOK Million | Reference | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| **PROFIT AND LOSS** | | | | | | |
| Revenues and other income | | 5,164 | 3,592 | 2,710 | 2,511 | 2,863 |
| Energy purchases and transmission | | -338 | -261 | -275 | -233 | -257 |
| Salary and other personnel expenses | | -228 | -210 | -180 | -206 | -157 |
| Property tax and licensing fees | | -279 | -269 | -278 | -261 | -258 |
| Other operating expenses | | -300 | -279 | -231 | -190 | -220 |
| Income/loss from associated companies | | 17 | 2 | 6 | - | 47 |
| Depreciation and amortization | | -367 | -339 | -308 | -274 | -273 |
| EBIT | | 3,669 | 2,237 | 1,444 | 1,347 | 1,745 |
| Profit after tax | | 1,223 | 1,037 | 505 | 533 | 713 |
| **OTHER KEY FIGURES** | | | | | | |
| Investments | | 650 | 549 | 335 | 297 | 236 |
| Capital Employed | | 27,588 | 27,070 | 16,321 | 14,061 | 13,986 |
| Return on Capital Employed (ROCE) | | 13 % | 8 % | 9 % | 10 % | 12 % |
| Production volume (TWh) | | 14,3 | 12,2 | 11,2 | 10,7 | 10,6 |
| Market price (øre/kWh) | | 41,6 | 26,8 | 23,5 | 17,6 | 22,7 |
| Achieved price (øre/kWh) | | 39,6 | 28,1 | 25,4 | 23,6 | 27,1 |
| Achieved price/market price (%) | | 95 % | 105 % | 108 % | 134 % | 119 % |
| Power and currency derivative contracts | | -376 | 57 | -225 | | |
| Influenceable costs per kWh (øre/kWh) | | 3,7 | 4,0 | 3,7 | 3,7 | 3,6 |
| Operating expenses per kWh (øre/kWh) | | 10,6 | 11,1 | 11,4 | 10,9 | 11,0 |
| Number of employees per 31.12 | | 185 | 197 | 172 | 177 | 174 |

* *Figures for 2014 and 2015 are Norwegian GAAP not IFRS*

Resource rent tax is a special tax on Norwegian hydropower which pushes the total cost of hydropower production up. The Norwegian State Budget for 2019 has increased resource rent tax and raised the marginal tax rate for hydropower from 58.7 per cent to 59 per cent. The structure of resource rent tax is currently contributing to the deferment or cancellation of socio-economically profitable hydro power projects.

### Changes in key figures, E-CO Energi

The table shows changes in selected key figures for E-CO Energi between 2014 and 2018.

## Value drivers, Networks

Networks is a licensed, natural monopoly subject to direct regulation in the form of specific requirements and obligations, as well as incentive-based regulation in the form of income regulation. Under the income regulation system, the NVE[7] assigns networks businesses a regulatory revenue cap each year based on performance compared with the rest of the networks industry in Norway. This ensures a relatively stable and predictable return.

### Regulatory model

The current legal framework and incentive regulation established by the NVE require that the industry over time covers its operating and maintenance costs for the network and receive a reasonable return on invested capital. The return is the reference interest rate established by the NVE, which in 2018 was 6.1 per cent. The interest rate is calculated based on a standard weighted average cost of capital (WACC) model, and has been

[7]NVE = the Norwegian Water Resources and Energy Directorate

# Number 1

**Target for 2025**

*Hafslund E-CO has set itself a goal of being the most efficient producer of renewable energy and the most efficient networks company in Norway by 2025, with full digital integration from planning through to construction, operation and maintenance.*

around 6–7 per cent since 2013. The variable parameters in the model are inflation, the 5-year swap interest rate, and an industry-specific credit risk premium. The NVE has introduced a revised model for the NVE interest rate from 2019. Including the proposed changes, the NVE interest rate for 2019 is estimated at 5.8 per cent (estimate from NVE as of October 2018).

To incentivise efficient operations, companies that deliver high quality (availability) at a low cost relative to the rest of the industry are rewarded by being permitted to achieve a higher return than the NVE interest rate. The NVE calculates an efficiency rating based on several parameters, which include costs for operation and maintenance of the network.

The NVE establishes the framework for permitted income, which then form the basis for customer tariffs. Permitted income essentially comprises a revenue cap calculated by the NVE, and certain costs that are excluded from the calculation. A company's revenue cap has two parts. Currently 40 per cent relates to a company's own costs, including a return element based on the NVE interest rate and recorded network capital  plus working capital of 1 per cent. The remaining 60 per cent are a cost norm. The cost norm is the company's efficiency multiplied by the cost basis. If a company is more cost-efficient than the industry average, it will therefore achieve a higher return than the industry average. Costs excluded from the revenue cap calculation primarily consist of costs of the overhead network (including Statnett).

In 2018, Hafslund Nett achieved an efficiency rating of 115 per cent. This resulted in a return on network capital 50 per cent above the NVE interest rate thanks to a low cost per customer and high security of supply.

## Cost drivers

Networks costs consist of several elements, including operating and maintenance costs for the network and network losses. In 2018, Networks' operating costs and depreciation totalled NOK 2,517 per customer, down from NOK 2,754 in 2014, in part due to cost reductions. Costs are driven by the condition of the network and plans for network development, along with customer-initiated changes. Constant efforts to achieve operational optimisations and cost reductions are the main reason why Networks now is a leader in the industry.

With a few exceptions, end customers receive their electricity from the distribution network. To get there, it is transported through the transmission network that is owned by Statnett, and the regional network, which in the Group's network areas is owned by Hafslund Nett.

Hafslund Nett collects costs of the transmission network via tariffs on behalf of parties such as Statnett. In 2018, costs of the overhead network amounted to 17 per cent of the average customer tariff, 29 per cent covered Hafslund Nett's costs, while the remainder of the tariff covered government levies. The percentage of tariffs used to cover the overhead network has risen in recent years. The increase is primarily attributable to a rise in Statnett's tariff following major investments in the transmission network.

Networks also incurs costs relating to network losses on the transmission of energy. This volume loss must be purchased at market prices. This cost was significantly higher in 2018 than in 2017 due to higher power prices.

[8] *Network capital = Completed property, plant and equipment including a fixed addition for working capital.*
[9] *Cost norm  = https://www.nve.no/reguleringsmyndigheten-for-energi-rme-marked-og-monopol/okonomisk-regulering-av-nettselskap/reguleringsmodellen/kostnadsnormen/*

## Revenue drivers

*Network rental*

Network revenues derive from the transmission of electricity, and are paid by customer through tariffs (the network rental). Tariffs are established at the start of the year based on the NVE's revenue cap, taking account of factors such as delivered energy and costs of the overhead network. Hafslund Nett has historically adjusted tariffs at the start of the year in order to avoid changes during the year, in line with a general desire to maintain a stable network rental. At 25.54 øre per kWh, compared with an industry average of 29.36 øre per kWh, Hafslund Nett had one of the lowest network rentals to retail customers in Norway in 2018[10].

*Investment contributions*

Costs of connecting new customers to the network or reinforcing the network for existing customers are covered by the party responsible for the measure. Revenue from such measures is referred to as investment contributions in the income statement.

*Income surpluses/shortfalls*

If the network rental is higher or lower than the permitted income established by NVE, this will give rise to an income surplus or an income shortfall, respectively. Income surpluses must be repaid to the customer over time through lower tariffs while income shortfalls can be recovered through future tariff increases. Accumulated income surpluses/shortfalls are not recognised in the balance sheet under IFRSs, but are reflected in the tariffs (i.e. in future network rental). In 2018, Hafslund Nett reduced its income surplus by NOK 104 million to NOK 283 million at the end of the year. The network rental is determined based on the premise that actual income will correspond to permitted income over time.

[10]Source: NVE, converted øre/kWh without VAT and consumption tax with an annual consumption of 20,000 kWh.

## Changes in key figures, Networks

Hafslund Nett runs the Networks business area in the Hafslund segment. The table below reconciles Networks' operating revenues, operating expenses and operating profit with equivalent values in the Hafslund segment. The rest of Hafslund's result relates to the other business activities, that are not network-related and that are not expected to materially impact results in the future.

| NOK Million | Hafslund | Networks | Other activities |
|---|---|---|---|
| **2018** | | | |
| Revenue | 5,621 | 5,571 | 51 |
| Net operating costs | -4,864 | -4,760 | -104 |
| Operating profit | 758 | 811 | -53 |
| **2017** | | | |
| Revenue | 5,169 | 5,066 | 104 |
| Net operating costs | -4,213 | -4,050 | -163 |
| Operating profit | 957 | 1,016 | -59 |

## Networks - 1 January - 31 December

| NOK Million | Reference | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|
| **PROFIT AND LOSS** | | | | | | |
| Revenues and other income | | 5,571 | 5,066 | 4,757 | 4,361 | 4,147 |
| Energy purchases and transmission | | -2,926 | -2,262 | -1,923 | -1,639 | -1,507 |
| Operating expenses including depreciation | | -1,834 | -1,788 | -1,774 | -1,899 | -1,881 |
| EBIT | | 811 | 1,016 | 1,060 | 823 | 759 |
| **OTHER KEY FIGURES** | | | | | | |
| Investments | | 1,580 | 1,602 | 1,009 | 926 | 674 |
| Capital Employed | | 13,294 | 12,608 | 11,870 | 11,116 | 10,537 |
| Return on Capital Employed (ROCE) | | 6,2 % | 8,3 % | 9,2 % | 7,6 % | 7,2 % |
| Energy delivery end users | | 20,7 | 19,6 | 19,5 | 19,0 | 17,5 |
| Average tariff distribution net excl. public fees (øre/kWh) | | 24,2 | 23,5 | 22,4 | 20,9 | 20,3 |
| Net losses volume (GWh) | | 1,240 | 1,212 | 1,295 | 986 | 961 |
| Costs excluded from the permitted income | | 1,996 | 1,610 | 1,315 | 1,166 | 1,021 |
| Number of customers (000) | | 729 | 709 | 697 | 689 | 683 |
| Number of employees per 31.12 | | 409 | 402 | 360 | 319 | 347 |
| **REGULATORY KEY FIGURES** | | | | | | |
| NVE-capital | | 10,875 | 9,817 | 8,818 | 7,907 | 7,567 |
| NVE-rate | | 6,1 % | 6,1 % | 6,4 % | 6,3 % | 6,6 % |
| Return on NVE capital | | 9,7 % | 9,6 % | 14,4 % | 10,8 % | 9,5 % |
| Permitted income | | 5,186 | 4,457 | 5,111 | 3,995 | 3,668 |
| KILE-cost | | 121 | 87 | 81 | 72 | 87 |
| Efficiency | | 115 % | 113 % | 102 % | 110 % | 104 % |
| Accumulated surplus income per 31.12 | | 283 | 387 | 187 | 873 | 701 |

# Smart and efficient maintenance

Hafslund E-CO's production business pays constant attention to cost-efficiency and aims to be among the leading hydropower providers in putting digital tools to use. In 2018, work to develop a digital twin at one of the power stations was initiated. The project is due for completion during 2019, and the ambition is to utilize the twin to improve availability and reduce operating and maintenance costs at the site.

## Digital twin

*A digital twin is a digital representation of a physical object or process. The benefits of a digital twin is the possibility to improve process efficiency, identify the need for maintenance before it is too late as well as visualizing substantial changes and the consequences of such.*

## Definitions and alternative performance measures

| Term | Definition |
|---|---|
| EBITDA | EBIT + Depreciation |
| Net interest-bearing debt | Gross interest-bearing debt - Interest-bearing receivables |
| Interest-bearing receivables | Cash and cash equivalents + money market funds |
| Capital employed | Equity + Net interest-bearing debt + Net tax positions |
| ROE | Profit for the year / Equity (Average for the year) |
| ROCE | EBIT / Capital employed (Average for the year) |
| Gjeld / EBITDA | Net interest-bearing debt per 31.12 / EBITDA |
| FFO / Gjeld | (EBITDA - interest paid - taxes paid) / Net interest-bearing debt per 31.12 |
| Power production | Total production in power plants in TWh |
| Achieved power price | Weighted power price including concession power and realized power price hedging |
| NVE capital (regulatory asset base) | Completed fixed assets in the network operations including a fixed percentage mark-up for working capital |

| NOK million | 2018 | 2017 |
|---|---|---|
| **GROSS AND NET INTEREST-BEARING DEBT** | | |
| Long-term interest-bearing debt | 18,533 | 17,430 |
| Value change loan portfolio | -185 | -276 |
| Short-term interest-bearing debt | 3,052 | 2,197 |
| **Gross interest-bearing debt** | **21,399** | **19,352** |
| Money market funds | 200 | 403 |
| Cash and cash equivalents | 2,993 | 1,946 |
| Other long-term interest-bearing receivables | 67 | 10 |
| **Net interest-bearing debt** | **18,139** | **16,993** |
| **CAPITAL EMPLOYED** | | |
| Equity | 16,501 | 17,126 |
| Net interest-bearing debt | 18,139 | 16,993 |
| Net tax positions | 6,469 | 5,355 |
| **Capital employed** | **41,108** | **39,474** |
| **NET TAX POSITIONS** | | |
| Deferred tax assets | - 319 | - 293 |
| Deferred tax liabilities | 4,380 | 4,383 |
| Current tax liabilities | 1,062 | 610 |
| Current resource rent tax liabilities | 1,346 | 655 |
| **Net tax positions** | **6,469** | **5,355** |

# Definitions and alternative performance measures *(continued)*

| NOK million | 2018 | 2017 |
|---|---|---|
| **ROCE / RETURN ON CAPITAL EMPLOYED** | | |
| EBIT | 4,413 | 3,421 |
| Divided by: | | |
| Average capital employed * | 40,291 | 39,474 |
| **ROCE / return on capital employed** | **11 %** | **9 %** |
| **ROE / RETURN ON EQUITY** | | |
| Profit for the year | 1,605 | 5,351 |
| Profit discontinued operations | - | 3,610 |
| Profit continued operations | 1,605 | 1,741 |
| Divided by: | | |
| Average equity * | 16,814 | 17,126 |
| **ROE / return on equity** | **10 %** | **10 %** |

| NOK million | 2018 | 2017 |
|---|---|---|
| **DEBT / EBITDA** | | |
| Net interest-bearing debt | 18,139 | 16,993 |
| Divided by: | | |
| EBITDA | 5,504 | 4,458 |
| **Debt / EBITDA** | **3,3** | **3,8** |
| **FFO / DEBT** | | |
| EBITDA | 5,504 | 4,458 |
| Paid interest | -533 | -558 |
| Paid taxes | -1,297 | -764 |
| Divided by: | - | - |
| Net interest-bearing debt | 18,139 | 16,993 |
| **FFO / Debt** | **20 %** | **18 %** |

* Capital employed and equity for 2017 is ending balance only.

# Contents

3



# Report from the Board of Directors 2018

High power prices, efficient operations and high availability in the power plants contributed to strong results in business area Production, while the ownership in regulated networks provided stable, predictable and above-average industry returns. The solid results make Hafslund E-CO ready for growth and for leveraging the commercial opportunities offered by renewable energy and electrification.

## The Hafslund E-CO group

On 20 June 2018, Oslo City Council resolved to group their ownership of Hafslund AS and E-CO Energi Holding AS under a joint board and management team to create Norway's largest integrated energy group – Hafslund E-CO. Operations are currently carried out in two business areas, Production and Networks. In 2018, the Group established a new business area, New Energy, as part of the future-oriented strategy to develop new growth opportunities and help the owner achieve their climate goals.

The City of Oslo owns 100 per cent of the shares in the parent company Hafslund E-CO AS.

## Strategy and business development

One of the main reasons why the City of Oslo wanted to group their ownership of Production and Networks under Hafslund E-CO was to facilitate the demand for new electrification and zero emissions solutions and help society achieve its climate goals. To incorporate these goals in the Group's vision, values and strategic ambitions, several Group-wide processes were carried out in autumn 2018. Hafslund E-CO's vision "For a renewable and fully electric future" signals the Group's route towards society's climate goals for 2050.

In accordance with the owner's desires, Hafslund E-CO will develop existing and new business areas to secure further growth and pave the way for new commercial opportunities moving forward. Supported by the vision and strategic goals, a new business area, New Energy we established in 2018, to develop smart solutions for areas such as electrical infrastructure and smart city solutions. The group intends to develop these solutions by linking expertise and knowledge about customers' needs, technological development, network expansion and renewable energy production. As Norway's largest integrated energy group Hafslund E-CO is uniquely positioned to develop such solutions. New Energy aims to deliver holistic and reliable solutions that will create significant value for the company and help the City of Oslo achieve its climate goals.

## Results, cash flow, balance sheet and equity – Group

The consolidated financial statements for Hafslund E-CO AS for 2018 have been prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the EU. All amounts with the

14.3 TWh

**Energy production**

*E-CO Energy is Norway's second largest hydropower producers with a production of 14.3 TWh in 2018, sufficient to cover the energy consumption of approximately 715,000 households.*

20.7 TWh

**Energy distribution**

*Hafslund Nett is Norway's largest networks provider, distributing 20.7 TWh of hydropower in 2018.*

exception of figures stated in the discussion of the parent company financial statements of Hafslund E-CO AS on page 79, apply to the consolidated financial statements, since the parent company's operations are limited.

Unless otherwise stated, in the following, prior-year figures are listed in brackets. Figures for 2017 have been restated based on Hafslund E-CO's company structure per 31. December 2018. For information on how the combination of Hafslund AS and E-CO Energi Holding AS has affected the accounting figures, please refer to Note 1.4 Transactions and events in 2018 to the consolidated financial statements.

## Results

In 2018, the Group posted an operating profit of NOK 4,413 million, which was 29 per cent higher than in 2017, mainly due to higher power prices. The profit after tax for the year came in at NOK 1,605 million in 2018. This was down on the prior-year figure of NOK 1,741 million due to an increase in the tax expense of NOK 1,075 million. Realised and unrealised losses on power and currency derivatives of NOK 741 million increased the effective tax rate by 6 percentage points, as these items are not included in the calculation of resource rent tax. The net profit for the year of NOK 1,605 million equated to a return on equity of 10 per cent (10 per cent) and a return on capital employed of 11 per cent (9 per cent).

The Group posted sales revenues of NOK 11,411 million in 2018 (NOK 8,879 million). The increase is primarily attributable to an average increase in power prices of 55 per cent against 2017, and partly due to a higher network rental from 1 January 2018 as a result of a higher network rental from Statnett and a higher governmental fee on electrical power. Total operating income only rose by NOK 1,620 million (18 per cent) compared to 2017 as other operating income includes realised and unrealised losses on power hedging contracts of NOK 741 million (gain of NOK 57 million).

Net financial items of NOK 505 million were NOK 54 million higher than in 2017. The increase is primarily attributable to increased interest costs as a result of higher interest-bearing debt. The tax expense of NOK 2,303 million (NOK 1,228 million) includes resource rent tax on hydropower production of NOK 1,346 million (NOK 655 million).

## Cash flow, balance sheet and equity

EBITDA for the year closed on NOK 5,504 million in 2018 (NOK 4,458 million). The Group paid taxes and interest totalling NOK 1,830 million (NOK 1,322 million), and reduced working capital by NOK 265 million during 2018 (NOK 582 million increase). This generated a net cash flow from operations of NOK 3,663 million in 2018 (NOK 4,022 million).

The net cash flow from investing activities closed on NOK -2,178 million (NOK -3,378 million). The Group has over the last few years made significant investments, mainly as a result of the AMS project, upgrades to the distribution and regional networks, dam rehabilitation and investments in increased production capacity. In 2018, gross investments amounted to NOK 2,231 million (NOK 2,159 million), which equals 204 per cent of depreciation (208 per cent).

After dividends paid in 2018 of NOK 998 million (NOK 1,332 million), the net cash flow for repayment of debt was NOK 487 million.

As of year-end 2018, the Group had total assets of NOK 49,180 million (NOK 45,781 million). The recognised value of waterfall rights was NOK 12,914 million (NOK 12,350 million), while the recognised value of property, plant and equipment was NOK 25,370 million (NOK 24,230 million). The increase in waterfall rights is primarily attributable to the corresponding recognition of a change in the calculation of the liability to landowners. The increase in property, plant and equipment is due to high investment levels. Since the combination of Hafslund AS and E-CO Energi Holding AS was implemented in accordance with the continuity principle, excess values and goodwill relating to E-CO Energi Holding AS's acquisition of Hafslund's production activities in 2017 have been continued in the consolidated financial statements. At the reporting date, the Group had total equity of NOK 16,501 million (NOK 17,126 million), which corresponds to an equity ratio of 34 per cent (37 per cent).

At year-end 2018, net interest-bearing debt amounted to NOK 18,139 million, while the credit key figures, the net liabilities/EBITDA ratio and the FFO/net interest-bearing liabilities ratio were 3.3x and 20 per cent, respectively. The Group has a robust financing structure with long-term, committed drawing rights. At the end of 2018, the Group had unutilised drawing rights of NOK 4,002 million. None of the companies' loan agreements impose any covenants.

## The power market in 2018

### The development in power price drivers

Prices of coal, gas and emissions allowances, exchange capacity with the continent, the electricity certificate scheme and power consumption are all important drivers of the Nordic power price.

Coal prices were around USD 86 per tonne at the end of 2018, broadly unchanged from the beginning of the year. The gas price in Europe increased from around EUR 19.5 per MWh to EUR 22.5 per MWh. The price of European emissions allowance quotas increased markedly during 2018, from around EUR 8 per tonne at the beginning of the year to around EUR 24 per tonne in December. The increase is primarily attributable to measures taken by the EU. The increase in the price of coal, gas and emissions allowances all helped push up the price of Norwegian-produced renewable hydropower during 2018.

The upgrading of several interconnectors contributed to a reduction in the price difference between the achieved area prices and the Nordic system price (reference price for the Nordic power market) in 2018. This trend is expected to continue moving forward due to increased exchange capacity, which in turn will contribute to security of supply throughout the Nordic region.

2018 was a turbulent year for the electricity certificate market. A high mandatory emission cap, along with historically low electricity certificate surpluses, contributed to a significant increase in the price of electricity certificates for contracts up to March 2020. However, many electricity certification scheme projects are currently being developed, and the industry is now well placed to achieve the target of 46.4 TWh of new production for Norway and Sweden combined by 2030. The Norwegian Water Resources and Energy Directorate (NVE) and the Swedish Energy Agency have recommended closing the Swedish electricity certificate market in 2030. Over-construction and low electricity certificate prices are likely from 2021.

For more detailed information on power price drivers, please refer to the section on Analytical Information in this annual report.

## Achieved area prices, the Nordic system price and forward prices

The average spot price for price area NO5 (Western Norway), where more than half of the Group's power production is located, was 41.3 øre per kWh in 2018. This represents an increase of 14.4 øre per kWh against 2017 and is the highest annual price since 2010. The average price in NO1 (Eastern Norway) in 2018 was 41.9 øre per kWh, up 14.8 øre per kWh on the previous year. The lowest monthly price was in January; 31.3 and 31.2 øre per kWh in NO1 and NO5, respectively. Precipitation was low during the summer, and once the snow had melted, inflow fell strongly in both Norway and Sweden. At the same time, prices were high on the continent due to rising thermal prices, little wind and low water-flow in the rivers. This also pushed up prices in the Nordic region until major precipitation in the autumn. As discussed above, price differences between the achieved area prices and the Nordic system price fell in 2018 due to the upgrading of several interconnectors. The Nordic system price was 42.2 øre per kWh in 2018 (27.4 øre per kWh).

The increase in the price of emissions allowances and commodities is also reflected in higher forward prices for Nordic power, and prices in the futures market rose sharply during the year. The annual contract for delivery in 2019 rose by 21 øre per kWh during 2018 and closed the year on 47 øre per kWh. The annual contracts for 2020 and 2021 closed the year on 38.5 øre per kWh and 34.7 øre per kWh respectively, representing increases of 12.6 øre per kWh and 8.2 øre per kWh respectively.

42.2 øre per kWh

### Nordic system price

*The Nordic system price was 42.2 øre per kWh in 2018. This represented an increase of 14.8 øre per kWh from 2017, and is the highest annual system price since 2010.*

### Price hedging

Hafslund E-CO has an active hedging strategy and performs ongoing analysis to take up positions in the Nordic power market. To reduce the risk associated with the uncertainty regarding future prices and production volume, the Group hedges income from production using financial derivatives. The hedged portion of production varies according to expected market development and production volume. The Group among others, utilises Nasdaq as a trading platform for power price hedging. The liquidity of Nasdaq has gradually been reduced over the last few years, and the Group is constantly evaluating the attractiveness for different counterparties and trading platforms for future power price hedging.

### The development in consumption and power production

Norwegian power consumption was a record-high 136.2 TWh in 2018 (134.1 TWh). The increase was driven by industry growth, higher consumption for production of oil and gas, greater electrification, increasing prosperity and population growth. Total power production closed on 146.4 TWh in 2018 (149.3 TWh). Increased electrification is expected to drive the development in power consumption going forward.

At 132.2 TWh, the utilisable inflow to Norwegian power plants in 2018 was lower than in 2017, but close to the normal annual level of 135 TWh. The inflow was at a record-low level throughout the summer, while the autumn saw weeks of record-high inflows. By using flexible reservoir capacity, hydropower production closed the year on 137 TWh (143.1 TWh).

Norwegian wind power production expanded further in 2018 and new production capacity corresponding to 2.2 TWh normal annual production was commissioned during the year. A further 9 TWh of wind power production is expected to be commissioned in Norway by 2021. To date, this development has largely been driven by the electricity certificate scheme. Increased availability of unregulated renewable energy will result in greater fluctuations, which the Group can leverage by utilising its flexible reservoir power in the balancing markets.

## Results – business areas

Hafslund E-CO currently comprises the business areas Production and Networks through 100 per cent shareholdings in the subsidiaries E-CO Energi Holding AS ("E-CO Energi") and Hafslund AS ("Hafslund"). E-CO Energi is Norway's second-largest hydropower producer, with 50 power plants and a production of 14.3 TWh in 2018. Hafslund owns and operates the power network in large parts of Oslo, Akershus and Østfold through Norway's largest networks operator, Hafslund Nett. Hafslund also includes other activities that are not network-related and which is not expected to materially impact results in future. The board of directors report refers to the segment Hafslund in its entirety, including other activities.

In 2018, the Group established a new business area, New Energy, to leverage Networks' and Production's expertise to create new growth opportunities for the Group and to help the owner achieve their climate goals. The business area is in the development stage and is provisionally reported as part of the parent company Hafslund E-CO AS.

### E-CO Energi (Production)

***Profit for the period***

2018 was a record year for E-CO Energi, which posted an operating profit (EBIT) of NOK 3,669 million. This represents a year-on-year increase of NOK 1,432 million. The increase was mainly a result of higher energy prices and increased production volume. The operating profit includes unrealised loss on power and currency derivative contracts of NOK 376 million (profit of NOK 57 million). The underlying operating profit (operating profit excluding unrealised profit or loss on power and currency derivative contracts) was NOK 4,045 million in 2018, an increase of NOK 1,866 million or 86 per cent from 2017.

The net profit after tax for the year ended at NOK 1,223 million (NOK 1,037 million). This is the best result in E-CO Energi's history.

***Revenue and production volume***

E-CO Energi posted revenue of NOK 5,164 million in 2018, an increase of NOK 1,572 million against 2017. The increase is attributable to higher power prices, partially offset by losses on power and currency derivative contracts. The achieved power price in 2018 was 39.6 øre per kWh (28.1 øre per kWh), up 11.5 øre per kWh on the previous year. E-CO Energi successfully leveraged the significant price increase throughout 2018, even though the realised losses from power and currency derivatives reduced the achieved power price compared to the spot price. The time-weighted spot price in 2018 for NO 1 (Eastern Norway) and NO5 (Western Norway) where E-CO Energi has production facilities, was 41.6 øre per kWh (26.8 øre per kWh). The higher year-on-year achieved power price increased the operating profit by NOK 1,428 million compared with 2017.

E-CO Energi's total power production was 14.3 TWh in 2018, up 2.1 TWh from 2017. 1.6 TWh of the total increase is attributable to the full-year effect of Hafslund Produksjon acquired in 2017. Efficient operations and resource utilisation contributed to good availability at the power plants, and there were no incidents of significant operational interruptions during the year. Higher power production increased the operating profit by NOK 577 million compared with 2017. Sales of concessionary power were 0.9 Twh GWh in 2018.

*Costs and operational performance*

Total operating expenses, including energy purchases and transmission costs, depreciation and amortisation for 2018 amounted to NOK 1,512 million, up NOK 154 million compared to 2017. The higher costs are primarily attributable to the full-year effect of the acquisition of Hafslund Produksjon, as well as increased transmission costs.

Net financial expenses amounted to NOK 305 million in 2018 (NOK 250 million). The increase was largely attributable to the full-year effect of loans taken to finance the purchase of Hafslund Produksjon.

The tax expense of NOK 2,141 million in 2018 (NOK 950 million) corresponds to an effective tax rate of 64 per cent of the profit before tax (48 per cent). Realised and unrealised losses on power and currency derivatives increased the effective tax rate by 6 percentage points since these items are not included in the calculation of resource rent tax. The tax expense includes resource rent tax payable of NOK 1,346 million (NOK 655 million).

E-CO Energi had total investments of 650 million in 2018 (NOK 549 million), of which NOK 464 million related to the construction of new power plants. In 2018, Rosten power plant was completed. As of year-end 2018, E-CO Energi was engaged in the construction of four additional power plants. Together, these five investments will increase the production capacity of renewable energy by around 1 TWh per year.

**Rosten Power Plant:**
- Commissioned: Q2 2018
- Capacity: Around 200 GWh renewable energy per year.
- Total investment: NOK 644 million, of which E-CO Energi's share comprises 40 per cent.

**Vamma 12 (new unit at the Vamma Power Plant):**
- Expected commissioning: Spring 2019.
- Capacity: Around 1 TWh, whereof additional capacity of around 230 GWh renewable energy per year.
- Accumulated investments at the end of 2018: NOK 859 million, of which E-CO Energi's share comprises 90 per cent.
- Contingency effect: Vamma 12 will replace a significant share of production currently generated by Vamma's other units, while the replaced units will remain in use during flood periods.

**Nedre Otta Power Plant:**
- Expected commissioning: 2020.
- Capacity: Around 315 GWh renewable energy per year.
- Accumulated investments at the end of 2018: NOK 863 million, of which E-CO Energi's share comprises 27 per cent.

**Mork Power Plant:**
- Expected commissioning: Q4 2020
- Capacity: 44 GWh renewable energy per year.
- Accumulated investments at the end of 2018: 0 (construction commence 2019). E-CO Energi's shareholding is 67 per cent.

**Tolga Power Plant:**
- Expected commissioning: H2 2021.
- Capacity: Around 205 GWh renewable energy per year.
- Accumulated investments at the end of 2018: NOK 175 million, of which E-CO Energi's share comprises 40 per cent.

***Outlook for the coming year***

At the close of 2018, forward prices were significantly higher than at year-end 2017. The annual contract price for delivery in 2019 was 47 øre per kWh. At the end of 2018, the expected production volume for 2019 was 14.4 TWh. Based on current forward prices and forecast production volume, E-CO Energi looks set to produce strong results also in 2019.

## Hafslund (Networks and Other activities)

***Profit for the period***

In 2018, Hafslund posted EBIT of NOK 758 million (NOK 957 million), to which Networks contributed NOK 811 million (NOK 1,016 million) and other activities that are not network related NOK -53 million (NOK -59 million). EBITDA was NOK 1,481 million in 2018 (NOK 1,629 million), of which NOK 1,530 million related to Networks and NOK -50 million to other activities. Efficient operations and cost reductions helped improve Networks' results in 2018, while network losses rose as a result of higher electricity prices and outages caused by several storms. Profitability was also negatively impacted by the company's decision to reduce surplus income in 2018 to maintain a stable network rental for customers throughout the year.

Net profit after tax for 2018 was NOK 483 million (NOK 612 million excluding discontinued operations).

The negative contribution from other activities is attributable to operating losses and impairment losses on shareholdings in associates, and results from the parent company Hafslund AS. The contribution from other activities is not expected to materially impact Group results going forward.

***Revenue, energy deliveries:***
In 2018, Hafslund posted revenue of NOK 5,621 million (NOK 5,169 million), of which NOK 5,571 million related to Networks and NOK 51 million to other activities.

At 20,715 GWh, the energy delivery in 2018 was up on the prior-year figure of 19,576 GWh. In addition to organic growth, the volume increase was mainly due to the transfer of customers from the central network.

***Costs and operational performance:***
Hafslund's total operating expenses, including energy purchases and transmission costs, depreciation and amortisation was NOK 4,819 million in 2018, up NOK 596 million from 2017. Of the total operating expenses, NOK 4,761 million related to Networks and NOK 59 million to other activities. Energy purchases and transmission costs rose by NOK 612 million

against 2017, mainly due to higher costs for the overhead network and higher costs for network losses due to higher power prices.

In 2018, Networks reinforced its position as one of Norway's most efficient networks operators by becoming a benchmark company under NVE's regulation model in both the regional and distribution networks.

Network operators are obliged to include the cost of drawing power from the overhead network in their tariffs. Partly due to increased costs at Statnett, Hafslund increased its network rental for retail customers from 1 January 2018 by 2.20 øre per kWh. Despite price increased for power and an increased number of storms, network rental was not increased further in 2018 and consumers and business customers in Hafslund's network area can still benefit from one of the lowest distribution network rentals in Norway. According to NVE's network statistics, at the start of 2018, Hafslund had a network rental of 25.54 øre per kWh, compared to the Norwegian average of 29.36 øre per kWh before VAT and consumption charges.[1]

While the company has achieved good quality of delivery to network customers in recent years, a high number of storms, including Storm Johanne, resulted in slightly lower security of delivery than targeted. Security of delivery in 2018 was 99.98 per cent, which is behind target of 99.99 per cent.

Networks is constantly working to optimise its operations and reduce costs. This benefits customers in the form of lower distribution network rental, while simultaneously enabling the Group to achieve above industry average return on investment. The NVE's target rate of return, which underpins the revenue cap and is intended to ensure the industry obtains a reasonable return on its investments, was set at 6.1 per cent in 2018. Hafslund E-CO's Networks business area generated a return of 9.7 per cent. Thanks to cost-effective operations and high delivery quality, Networks consequently achieved a significantly higher operating profit and return than the industry average for Norwegian networks operators in 2018. At the end of 2018, Networks had an NVE capital of NOK 10.9 billion (NOK 9.8 billion) and capital employed of NOK 13.3 billion (NOK 12.6 billion). At the same time, Hafslund including other activities had employed capital of NOK 13.5 billion (NOK 12.4 billion).

In addition to the roll-out of automatic meters (AMS), Networks implemented several automation and digitalisation measures to achieve cost reductions, more efficient operations and an improved customer interface in 2018. Networks gained 19,400 new customers during the year, bringing the total number of customers at year-end to 728,500.

The AMS project is entering its final stage, and the regular roll-out stages have been completed. By the end of 2018, the project had installed 670,000 out of a planned total of 685,000 meters. The project is scheduled to be completed during the first quarter of 2019. New network installations and the replacement of common meters by private meters, is outside the scope of the AMS project, but also these customers have received new automatic meters during the project phase.

***Outlook for the coming year***

At the end of 2018, Networks had accumulated surplus income of

[1] *https://www.nve.no/reguleringsmyndigheten-for-energi-rme-marked-og-monopol/nettjenester/nettleie/nettleiestatistikk/nettleie-statistikk-for-husholdninger/*

NOK 283 million, compared to NOK 387 million at the end of 2017. The reduction in accumulated surplus income is partly attributable to the desire to keep the network rental charge as stable as possible. Assuming normal energy demand, planned network tariffs and forward power prices, as well as planned maintenance and cost changes, Networks' operating profit for 2019 is expected to come in 10–15 per cent higher than in 2018.

Networks is in the final phase of a period of extensive investments due to the roll-out of AMS meters and upgrades of the distribution and regional networks. Networks made total investments of NOK 1,580 million (NOK 1,602 million) in 2018. The total investment forecast for the AMS project has been reduced from NOK 2,100 million to NOK 1,800 million. The reduction is primarily attributable to higher-than-planned installation efficiency, and no unexpected cost-increasing events. Investments are expected to be scaled back from 2019 to a level sufficient to cover maintenance and expansion once the AMS project has been completed. Investments for 2019 are expected to come in at around NOK 1,300 million. For further information on Network's cost and income drivers, please refer to the section Analytical Information.

## Corporate social responsibility

Hafslund E-CO is responsible for all social consequences caused by the Group's operations with regards to the external environment, working conditions, human rights and other social issues. Corporate Social Responsibility has a high strategic priority and permeates the Group's entire value chain and business. Hafslund E-CO constantly strives to promote the Group's values to employees, suppliers and partners. For further information on Corporate Social Responsibility, please refer to the section A sustainable Hafslund E-CO.

### HSE

***Lost-time injuries***

Health, safety and the environment has high priority across the Group. Hafslund E-CO aims to achieve zero injuries for own employees and suppliers, and systematically works to reduce the number of injuries. Reporting of undesired incidents and close follow-up of serious incidents and near misses are a key part of the Group's systematic HSE work.

In total, 10 lost-time injuries and 12 injuries where no absenteeism was required were registered among Hafslund E-CO employees and suppliers working at Hafslund E-CO's sites in 2018. This corresponds to an injury rate for the Group of 4.2 lost-time injuries per million hours worked (H1 indicator) and a total injury frequency (number of lost-time and injuries without absenteeism per million hours worked (H2 indicator)) of 9.2. All lost-time injuries in 2018 related to suppliers.

***Sick leave***

Hafslund E-CO aims to achieve an overall sick leave rate below 3.5 per cent. In 2018, sick leave at Hafslund E-CO was 3.6 per cent. The Group has implemented measures in areas where sick leave rates have been high, including training and follow-up for managers, and targeted measures for individuals. Joint professional and social activities contribute to promote a common culture and maintain a good working environment. Active business sports teams also foster team spirit and satisfaction.

*Employee development*

Hafslund E-CO aims to establish a leading centre of competence by developing the existing team and attract necessary new talents. The competence of the Group's employees is a key success factor and a prerequisite for continuous value development. Hafslund E-CO facilitates human resource development and systematically enhances the development of managers and employees. The Group has introduced a competence management process, "The Power Station", which is intended to strengthen performance management, promote strategic competence development and identify future competence requirements. Recognising future needs will enable the Group to take the right measures to develop and attract the required expertise going forward. In 2018, the Group focused on digital expertise. In line with strategic ambitions, the Group intends to step up future training activities.

## Government relations and framework conditions

For Hafslund E-CO to be able to create long-term value and help realise a renewable and fully electric society, it is critical that central decision-makers receive valid input regarding the impact of official framework conditions. In this manner, Hafslund E-CO may contribute to better political and regulatory decisions.

### Need for stable framework conditions

Ambitious regional, national and international goals for reduction of greenhouse gas emissions have been set. Hydropower is uniquely positioned to satisfy future needs for emissions-free, flexible and profitable power. Hydropower is flexible and can help balance production from sources such as wind and solar power. A reliable and modern power network will play a critical role in the phasing out of greenhouse gas emissions, through the electrification of the transport sector and building and construction sites.

To ensure that renewable power has a climate value, it must reach consumers and replace fossil energy sources both in and outside the Nordic market. For businesses exposed to competition, market-based, technology-neutral and predictable tools must be further developed to enable climate goals to be achieved in the most cost-effective manner possible. Even after the upgrade to automatic meters has been implemented, the networks operators face major investments and probable sector consolidation in the coming years. Stable, long-term regulation will be critical to securing efficient operations and realising the right socio-economic investments.

### Consequences of resource rent taxation

The Norwegian State Budget for 2019 has increased resource rent tax and raised the marginal tax rate for hydropower production from 58.7 per cent to 59 per cent. No change has been announced for the tax-free allowance scheme, which is currently significantly below the interest rate used by power producers to finance their operations. The structure of resource rent tax is contributing to the deferment or cancellation of socio-economically profitable projects. In 2018, the government appointed an expert working group to carry out a full review of power plant taxation. The working group is scheduled to present its proposals in October 2019. Hafslund E-CO believes that there at present is a significant disconnect between the tax framework and Norwegian renewable energy's intended role under official environmental policy.

### Socio-economic effects of equalisation of the network rental

In the Norwegian State Budget for 2019, the Storting (the Norwegian parliament) asked the government to investigate how the network rental could be equalised for all consumers through optimal organisation of the power network. Based on NVE's reports on the overall regulation of the power network, the Ministry of Petroleum and Energy concluded that equalisation of the tariffs across the networks companies would reduce incentives for efficient operations from network operators by weakening the link between the network operators' costs and customers' network rental, and consequently might result in higher prices for society as a whole. Hafslund E-CO believes that equalising network rentals would reduce companies' incentives to keep costs down. In addition, customers would not receive the right price signals about where it is most socio-economically profitable to locate, and the incentives to realise benefits-of-scale through industry consolidation would be reduced.

## Risk management

Hafslund E-CO's operations is exposed to risk in many areas. The most important risks are of a market, financial, regulatory and political, operational and reputational nature. Risk management is an integral part of the Group's business activities, and is designed to secure achievement of strategic and operational goals. Guidelines and frameworks have been established for the management of risk in the business areas. The Group's overall risk is assessed by the Audit Committee and the Board of Directors.

The purpose of risk management is to take the right risk based on the Group's risk capacity and ability, expertise, financial strength and development plans.

## Financial risk

Hafslund E-CO is exposed to financial risk in several areas and risk is monitored and managed by the Group's finance department.

### *Market risk*

As a power producer, Hafslund E-CO is exposed to movements in market prices for power and volume uncertainty, and the Group manages risk through active market participation. Clear limits for the Group's power price risk has been established. Exposure is kept within set levels and followed up through reporting to management and the Board. Within these limits, some future hydropower production is hedged. The company also takes active positions in the power market.

The scope of hedging may vary, based on an overall assessment of market prices and future developments that could impact power production. The Group's hedging strategy takes account of resource rent taxation, where an increase in the spot price of power is expected to have a neutral or positive effect on expected cash flow after tax. Currency markets are used to manage foreign exchange risk deriving from hedging.

Hafslund E-CO uses Value at Risk (VaR) as one of its operational risk management targets for power price risk. VaR describes the maximum loss that could be expected for a power portfolio during a given period for a given confidence level. Exposure is monitored by dedicated risk responsible in Production and the Group's Risk Management function, and exposure reports are reviewed by Group management.

### *Interest and exchange rate risk*

Interest rate exposure on loans must be viewed in the context of natural interest rate hedging, since interest rate exposure related to the reference rate for Networks revenue ceiling is sought correlated with interest on the loan side. Most of the Group's revenues derive from network rental denominated in NOK and the sale of power denominated in EUR, which is translated to NOK on an ongoing basis. Costs in the business areas are mainly incurred in NOK. The Group may enter into loan agreements and other agreements in foreign currency where appropriate. All loans in foreign currency are currently hedged.

### *Credit and counterparty risk*

Credit and counterparty risk is the Group's risk of losses resulting from counterparties/customers not being able to fulfil their obligations to Hafslund E-CO. The Group is exposed to credit and counterparty risk, through the distribution of electricity to end consumers, financial and physical power trading and in connection with financing activities. The introduction of re-invoicing of network rentals implies that the majority of network rental income now is received via power suppliers. This counterparty risk is managed using guarantees and established routines for following up the exposure. The majority of hydropower production is currently sold in the spot market. Counterparty risk from entering into long-term physical and financial contracts is managed using clearing, guarantees and settlement mechanisms. Exposure is closely followed up and contract counterparties are continually assessed. Counterparty risk relating to trading in interest rates and foreign currency is limited by defining lower limits for approved counterparties' credit ratings, and by distributing exposure over several counterparties. Historically, the Group's business areas have experienced low losses on receivables.

***Liquidity risk***
Liquidity risk is the risk that the Group will not be able to service its financial obligations as they mature. The Group is exposed to liquidity risk to the extent that cash flows from the business do not correspond with financial obligations. Hafslund E-CO's cash flow fluctuates in line with factors such as market prices, seasonality and investment levels.

The Group's strategy for managing liquidity risk is to maintain sufficient liquid funds at all times so that financial obligations can be serviced on maturity, also in the case of extraordinary events, without risking unacceptable financial or reputational loss.

Liquidity risk is minimised by analysing expected in- and outflows and assumption of new short- and long-term borrowings. The Group has established long-term, committed drawing facilities to secure available liquidity, also in periods when it may be difficult to obtain financing in the markets. At the end of December 2018, unutilised drawing rights amounted to NOK 4,002 million (NOK 4,502 million). The Group also has a liquidity reserve in the form of bank deposits and money market funds, and unutilised bank credit facilities of NOK 300 million.

## Regulatory and political risk

Hafslund E-CO operates licensed activities, subject to regulation from NVE and other authorities. Consequently, the Group is impacted by regulatory changes in many areas. Regulatory and statutory changes can potentially have a major impact on future financial results and the Group closely monitors these risks through continuous analyses of the regulatory framework.

Networks is a licensed, natural monopoly subject to direct regulation in the form of specific requirements and obligations, and incentive-based regulation in the form of income regulation. Network operators' annual income cap is determined each year by NVE, and fluctuations may result from changes in the regulatory model and/or changes in the parameters included in the model.

The production business is subject to licensing conditions including water flow requirements and regulations for safety concerning dams and waterways. Changes in regulatory conditions can potentially limit production. The competitiveness of flexible hydropower is also dependent on market regulation in the physical and financial power markets.

## Operational risk

Hafslund E-CO is exposed to operational risk along its entire value chain. The greatest operational risk is related to ongoing operations and project implementation, and line managers are responsible for day-to-day risk management. The business areas manage operational risk through systematic maintenance, detailed operational procedures, controls, contingency plans, etc. The Group aims to leverage artificial intelligence, machine learning and data from sensors to make better operational, maintenance and investment decisions going forward.

The Group has entered into insurance agreements, including property damage insurance. Liability insurance has also been taken out, including dam liability insurance covering third-party injuries or damage to third-party property. The Group also has insurance policies for lost power production due to stoppages.

Both network and production activities are exposed to security of supply risk, and the Group closely monitors cybersecurity in line with digital developments in the power system. Hafslund E-CO participates in KraftCERT, a centre of excellence for the energy industry that assists its members with advice and management of safety-critical ICT events. The Group did not experience any targeted attacks in 2018, nor any non-targeted attacks that compromised security. Hafslund E-CO's business areas have established systems for registering and reporting critical conditions, undesired incidents and injuries. Analyses are performed on an ongoing basis with a view to evaluate and plan any required measures.

### Internal control

Internal control is a key part of risk management at Hafslund E-CO, and an area the Group continuously work to improve and strengthen. The Group has internal functions for risk monitoring, internal control and compliance with laws and regulations, and engages external expertise to carry out internal control and internal audit projects where necessary.

Financial reporting risk is a high priority area, and the Group has dedicated roles, responsibilities and duties for accounting processes. Procedures and routines have been established for reporting, including controls and documentation. These controls focus on areas deemed to present the highest risk of errors in the financial statements. Hafslund E-CO has systems and expertise to produce accurate and efficient financial reporting.

All the Group's companies are subject to legislation, regulations, regulatory requirements, and internal guidelines. Management of risk of inadequate compliance with laws and regulations is a constant focus area. This work is performed in the line with support from specialist functions.

Internal awareness campaigns are used to reinforce knowledge and secure compliance in key focus areas such as data protection. Hafslund E-CO shall be a responsible player within all parts of the value chain, and aims to ensure compliance by identifying risks and implementing risk-reducing measures.

The integration of Hafslund AS and E-CO Energi Holding AS has highlighted some differences between the business areas with regards to internal control procedures. These will be analysed and harmonised in 2019.

## Corporate governance

The City of Oslo owns 100 per cent of the shares in Hafslund E-CO AS. The Board has adopted principles for corporate governance in line with the Norwegian Code of Practice for Corporate Governance as of 17 October 2018 ("NCGB recommendation") and the City of Oslo's principles for sound governance of limited companies. These principles are intended to support the owner's profitability targets and contribute to long-term value creation, as well as secure the owner's and other stakeholders' trust in the Board, management and the company. A declaration on corporate governance in accordance with section 3-3b of the Norwegian Accounting Act can be viewed on the company's website.

## The work of the Board of Directors

A new Board of Directors was appointed following the incorporation of Hafslund E-CO on 4 July 2018. The General Meeting appointed Hilde Tonne Acting Chair pending the appointment of a permanent Chair. Bente Sollid Storehaug, Bjørn Erik Næss, Bård Vegar Solhjell and Mari Thjømøe were elected as directors. Per Orfjell, Per Luneborg and Arvid Amundsen were elected as employee Board representatives.

Storehaug, Næss, Orfjell and Luneborg served on the Board of the former Hafslund AS, while Thjømøe, Solhjell and Amundsen served on the Board of the former E-CO Energi Holding AS. Per Orfjell passed away on 10 August 2018, and Johnny Kjønås was elected as an employee Board representative. Hafslund E-CO's General Meeting appointed Alexandra Bech Gjørv as Chair of Hafslund E-CO AS on 6 September 2018. Hafslund E-CO satisfies the requirements for representation of both genders on the Board of Directors of listed companies.

Hafslund E-CO's Board works in accordance with the adopted rules of procedure for the Board. There is agreement within Hafslund E-CO not to establish a Corporate Assembly. Consequently, the Board reports directly to the General Meeting.

The Compensation Committee comprises Alexandra Bech Gjørv (Chair), Bente Sollid Storehaug, Bård Vegar Solhjell and Johnny Kjønås. For further information about remuneration paid to executive management and directors and the Board's declaration on remuneration to executive management, please refer to Note 7.1 Remuneration to senior executives and board members to the consolidated financial statements. The Board's Audit Committee assists the Board with the preparation of the financial statements and internal control. The Audit Committee comprises Bjørn Erik Næss (Chair), Mari Thjømøe and Per Luneborg. The Audit Committee satisfies the requirement that at least one member shall be independent of the Group's operations and have an accounting or auditing qualification. Individual directors' backgrounds are described in the section on the Board of Directors in the annual report.

Following its constitution on 4 July, the Board held five meetings in 2018.

Since the incorporation of Hafslund E-CO, the Board has focused on developing a corporate strategy that will facilitate growth and development in the best interests of the owner and the Group's employees and stakeholders. The Board has also contributed to the development of the Group's new core values, social mission and vision. In addition, the Board has actively participated in assessments of structural projects and opportunities.

## Dividend and appropriation of profit for the year

Hafslund E-CO AS posted a profit after tax of NOK 1,323 million in 2018. The dividend is determined each year in consultation with the owner so as to maintain the company's capital requirements and credit quality. The Board will propose to the Annual General Meeting of 23 April 2019 that a dividend of NOK 1,284 million be paid for the 2018 accounting year. The Board proposes that Hafslund E-CO's net profit for the year be appropriated as follows:

| | |
|---|---|
| **Net profit for the year in Hafslund E-CO AS's financial statements** | **NOK 1,323 million** |
| **APPROPRIATIONS:** | |
| Proposed dividend from Hafslund E-CO AS to the City of Oslo | NOK 1,284 million |
| To other equity | NOK 39 million |

## Going concern assumption

In accordance with the requirements of the Norwegian Accounting Act, the Board confirms that the annual financial statements have been prepared in accordance with the going concern assumption and that the company satisfies these conditions.

## Outlook[2]

Hafslund E-CO is Norway's largest integrated energy group, and currently comprises the two business areas Production and Networks. The Group's results are exposed to fluctuations in power prices through its' business area Production, while the regulated Networks operations delivers stable and predictable returns.

Earnings from production activities are directly impacted by changes in power prices and production volume since sales revenues are a function of achieved price and produced volume. Favourable market prices contributed to good results in 2018, while high forward prices for Nordic power supports expectations of strong performance also in 2019. As of year-end 2018, the annual contract priced for delivery of power in 2019 was 47 øre per kWh, which was 21 øre per kWh higher than at the start of the year. However, as a commodity, power is subject to major price fluctuations. Assuming full spot-price exposure and normal production, an increase/decrease in the power price over the year of 10 øre per kWh would increase, respectively reduce, the operating profit by NOK 1,300 million. To secure cash flows and leverage market prospects, Hafslund E-CO hedges the price of some sales of produced energy in the power market.

In addition to an ongoing focus on cost-efficiency for business area Production, the Group aims to become a leading hydropower centre of competence by early-adopting digital tools. One example of this is the work to develop a digital twin[3] for one of the power plants, that started in 2018. This project is expected to be complete during 2019. The ambition with the digital twin is to improve availability and reduce operating and maintenance costs at the power plant.

Networks' earnings are influenced by the business area's relative cost efficiency compared to the rest of the Norwegian networks industry, interest rate fluctuations and changes in public regulations. Cost-efficiency has been a long-standing focus area for Networks, and in 2018 the Group achieved its goal of becoming the most efficient networks operator in Norway. Networks will continue to concentrate on ongoing growth and improvement initiatives within digitalisation and automation to further improve operational efficiency and maintain the leading position. To achieve the goal of having the industry's most satisfied customers, Networks will prioritise digitalisation of the customer interface going forward.

The expected average investment level in the period 2019–2022 will be around NOK 2 billion. This is down from the period 2016–2018 due to the completion of the roll-out of automatic meters, but still significantly higher than the deprecation level due to significant investments in upgrades of the distribution and regional networks, and investment in higher production capacity and dam refurbishments.

On February 11 2019, the District Court of Oslo pronounced a ruling on the determination of the settlement price for the minority shareholders in former Hafslund ASA. The District Court concluded with a market value of NOK 147.13 per share, compared to the compulsory redemption price from August 3, 2017 of NOK 96.76 per share. Oslo Energi Holding AS has decided to appeal the District Court´s decisiton. If the ruling from the District Court becomes final, Hafslund E-CO will have to repay NOK 500 million of a subordinated loan between Oslo Energi Holding and

*[2]The Board of Directors points out that significant uncertainty normally attaches to consideration of future conditions.*
*[3]A digital twin is a digital representation of a physical object or process. The benefits of a digital twin is the possibility to improve process efficiency, identify the need for maintenance before it is too late as well as visualizing substantial changes and the consequences of such.*

Hafslund E-CO. The liquidity effect of the ruling will thus be around NOK 500 million, but will not affect the Group's key financial ratios, as the outstanding amount on the subordinated loan will be reduced accordingly.

The Group will continue to pursue existing organic growth opportunities, and seek out new areas for both organic and structural growth. One of Hafslund E-CO's goals is to leverage the commercial opportunities offered by the transition to a renewable and fully electric society. Through the newly established business area, New Energy, Hafslund E-CO will develop zero emissions solutions for customers, both alone and with contribution from relevant partners.

Hafslund E-CO will also contribute to industry consolidation by identifying structural growth opportunities. In 2018, the Group signed a letter of intent with Eidsiva Energi concerning a potential merger of the two companies. The boards of the two companies in March 2019 agreed on a draft agreement for the merger. The negotiated draft is in line with the letter of intent and will be proposed to the companies' boards during the second quarter of 2019. Given owner acceptance in both companies and the necessary regulatory approval, the transactions are expected to be completed in the third quarter of 2019. Hafslund E-CO will, after a completed transaction, own 50 per cent of new Eidsiva, which in turn will own the networks operations in today's Hafslund Nett and Eidsiva Nett. At the same time, Eidsiva Vannkraft will be transferred to the subsidiary E-CO Energi AS, and become part of a jointly owned production company where Hafslund E-CO (through E-CO Energi Holding AS) will be the majority owner with 57.2 per cent and Eidsiva Energi AS (where Hafslund E-CO will own 50 percent) will have an owner-ship interest of 42.8 percent. Overall, Hafslund E-CO becomes the owner of 78.6 per cent of the production company.

The Group also started talks with Fredrikstad Energi on a potential acquisition or merger. Hafslund E-CO is also assessing other structural projects and opportunities. Consolidation will strengthen the ability to compete and increase the Group's profitability through realisation of scale effects, improve the operational efficiency, and increase the speed of digitalisation. This will contribute to reduced network rental for consumers and businesses alike and an ability to offer competitive solutions going forward.

Hafslund E-CO additionally aims to be one of the power industry's most innovative companies in the years to come. This will require the Group to spearhead work to digitalise the electrical value chain. This value chain could potentially become the heart of Oslo's infrastructure, and contribute to the creation of a smart city, with smart construction sites, smart public transport solutions and pave the way for a renewable and fully electric future.

*Oslo, 10 April 2019*

**The Board of Directors of Hafslund E-CO AS**

| | | | |
|---|---|---|---|
| Alexandra Bech Gjørv<br>*Board Chair* | Bente Sollid Storehaug | Bjørn Erik Næss | Bård Vegar Solhjell |
| Mari Thjømøe | Arvid Amundsen | Per Luneborg | Johnny Kjønås |

Finn Bjørn Ruyter
*CEO*

# Contents

**Financial statements and notes Hafslund E-CO Group**

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# Consolidated statement of comprehensive income
## - 1 January- 31 December

| NOK million | Note | 2018 | 2017 |
|---|---|---|---|
| Sales revenue | 2.2 | 11,411 | 8,879 |
| Other operating revenue | 2.2 | -625 | 287 |
| **Revenue** | 2.2 | **10,786** | **9,166** |
| Energy purchases and transmission | 2.3 | -3,229 | -2,539 |
| Salary and other personnel costs | 2.4 | -558 | -578 |
| Property tax and licensing fees | 2.5 | -329 | -320 |
| Other operating costs | 2.6 | -1,138 | -1,284 |
| Profit/loss from equity-accounted investees | 3.5 | -28 | 13 |
| **EBITDA** | | **5,504** | **4,458** |
| Depreciation and amortisation | 3.1, 3.2, 3.3 | -1,091 | -1,037 |
| **Operating profit (EBIT)** | | **4,413** | **3,421** |
| Interest income | 5.13 | 43 | 27 |
| Interest expense | 5.13 | -573 | -510 |
| Other finance income/costs | 5.13 | 25 | 32 |
| **Net financial items** | | **-505** | **-451** |
| **Profit before tax** | | **3,908** | **2,970** |
| Income taxes | 6.1 | -2,303 | -1,228 |
| **Profit for the year - continued operations** | | **1,605** | **1,741** |
| Profit for the year - discontinued operations | 9.4 | - | 3,610 |
| **Profit for the year** | | **1,605** | **5,351** |

| NOK million | Note | 2018 | 2017 |
|---|---|---|---|
| **PROFIT FOR THE YEAR ATTRIBUTABLE TO** | | | |
| Owners of Hafslund E-CO | | 1,419 | 5,236 |
| Non-controlling interests | | 186 | 115 |
| **ITEMS THAT MAY BE RECLASSIFIED TO PROFIT OR LOSS IN SUBSEQUENT PERIODS** | | | |
| Change in fair value of financial instruments | 5.6 | 14 | -8 |
| Translation differences | | | -8 |
| Income tax effects | 5.6 | -4 | 2 |
| **Total items that may be reclassified to profit or loss in subsequent periods** | | **10** | **-14** |
| **ITEMS THAT MAY NOT TO BE RECLASSIFIED TO PROFIT OR LOSS** | | | |
| Actuarial gains (losses) on defined benefit plans | 7.2 | 290 | 33 |
| Income tax effects | 7.2 | -66 | 2 |
| **Total items that may not to be reclassified to profit or loss** | | **224** | **35** |
| **Other comprehensive income for the year** | | **234** | **21** |
| **Total comprehensive income for the year** | | **1,839** | **5,372** |
| **TOTAL COMPREHENSIVE INCOME FOR THE YEAR ATTRIBUTABLE TO** | | | |
| Owners of Hafslund E-CO | | 1,653 | 5,257 |
| Non-controlling interests | | 186 | 115 |

# Consolidated statement of financial position

- 31 December

| NOK million | Note | 2018 | 2017 |
|---|---|---|---|
| **ASSETS** | | | |
| Property, plant and equipment | 3.1 | 25,370 | 24,230 |
| Intangible assets | 3.2 | 16,475 | 15,891 |
| Deferred tax assets | 6.1 | 319 | 293 |
| Equity-accounted investees | 3.5 | 416 | 317 |
| Non-current financial derivatives | 5.4 | 928 | 812 |
| Other non-current receivables | 5.9 | 786 | 513 |
| **Non-current assets** | | **44,295** | **42,055** |
| Inventory | | 31 | 74 |
| Trade receivables | 5.10 | 472 | 352 |
| Other non-interest bearing current receivables | 5.10 | 1,186 | 862 |
| Shares and other financial assets | 5.11 | 202 | 421 |
| Current financial derivatives | 5.4 | 1 | 72 |
| Cash and cash equivalents | 5.11 | 2,993 | 1,946 |
| **Current assets** | | **4,885** | **3,727** |
| **Assets** | | **49,180** | **45,781** |

| NOK million | Note | 2018 | 2017 |
|---|---|---|---|
| **EQUITY AND LIABILITY** | | | |
| Paid-in capital | | 15,395 | 9,622 |
| Other equity | | -962 | 5,608 |
| Non-controlling interests | | 2,068 | 1,896 |
| **Equity** | | **16,501** | **17,126** |
| Non-current interest-bearing debt | 5.2, 5.3 | 18,533 | 17,430 |
| Deferred tax liabilities | 6.1 | 4,380 | 4,383 |
| Pension liabilities | 7.2 | 114 | 132 |
| Non-current financial derivatives | 5.4 | 93 | 140 |
| Oher liabilities and obligations | 4.1 | 1,294 | 753 |
| **Non-current liabilities** | | **24,414** | **22,839** |
| Trade payables | 5.12 | 395 | 409 |
| Other current non-interest-bearing liabilities | 5.12 | 2,060 | 1,919 |
| Current financial derivatives (liabilities) | 5.4 | 350 | 27 |
| Current tax liabilities | 6.1 | 2,408 | 1,265 |
| Current interest-bearing debt | 5.2, 5.3 | 3,052 | 2,197 |
| **Current liabilities** | | **8,265** | **5,817** |
| **Equity and liabilities** | | **49,180** | **45,781** |

# Consolidated statement of cash flows

## - 1 January - 31 December

| NOK million | 2018 | 2017 |
|---|---|---|
| **CASH FLOWS FROM OPERATING ACTIVITIES** | | |
| **EBITDA** | **5,504** | **4,458** |
| Gains/losses om disposal of operating assets | -10 | -5 |
| Changes in inventories | 43 | 2 |
| Unrealised changes in derivatives | 376 | -57 |
| Changes in trade receivables and other non-interest-bearing receivables | -365 | 18 |
| Changes in trade payables and other current non-interest-bearing liabilities | 57 | 562 |
| Other non-cash income and expenses | -112 | 66 |
| **Cash flows from operating activities** | **5,494** | **5,044** |
| interest paid | -533 | -558 |
| Taxes paid | -1,297 | -764 |
| **Net cash flows from operating activities - continuing operations** | **3,663** | **3,722** |
| Net cash flows from operating activities - discontinued operations | | 300 |

| NOK million | 2018 | 2017 |
|---|---|---|
| **CASH FLOWS FROM INVESTING ACTIVITIES** | | |
| Investment in property, plant and equipment | -2,185 | -2,097 |
| Proceeds from sale of property, plant and equipment, etc. | 17 | - |
| Acquisition of business | -31 | -4,061 |
| Other investment activities | 20 | -14 |
| **Cash flows from investment activities - continuing operations** | **-2,178** | **-6,172** |
| Cash flows from investment activities - discontinued operations | | 2,794 |
| **CASH FLOWS FROM FINANCING ACTIVITIES** | | |
| New interest-bearing debt | 4,000 | 5,900 |
| Repayment of interest-bearing debt | -3,650 | -4,662 |
| Other financing activities | 8 | 10 |
| Dividends paid and other equity transactions | -998 | -1,332 |
| **Cash flows from financing activities** | **-639** | **-84** |
| **Changes in cash and cash equivalents** | **846** | **560** |
| Cash and cash equivalents at 1 January | 2,349 | 1,788 |
| Foreign currency gains/losses on cash and cash equivalents | -1 | - |
| **Cash and cash equivalents at 31 December** | **3,195** | **2,348** |

# Consolidated statement of changes in equity - 1 January - 31 December

| NOK million | Share capital | Share permium | Other equity | Equity attributable to owners of the parent | Non-controlling interests | Total equity |
|---|---|---|---|---|---|---|
| **Equity at 1 January 2017** | **1,898** | **5,983** | **7,859** | **15,740** | **994** | **16,734** |
| **COMPREHENSIVE INCOME 2017** | | | | | | |
| Profit for the year | - | - | 5,236 | 5,236 | 115 | 5,351 |
| Other comprehensive income | - | - | 21 | 21 | - | 21 |
| **Total comprehensive income for the year** | **-** | **-** | **5,257** | **5,257** | **115** | **5,372** |
| **TRANSACTIONS WITH OWNERS** | | | | | | |
| Ordinary dividends for 2016 | - | - | -1,244 | -1,244 | - | -1,244 |
| Additional dividends | - | - | -7,034 | -7,034 | - | -7,034 |
| Demerger | -89 | -2,195 | 774 | -1,510 | - | -1,510 |
| Capital increase | 332 | 3,668 | - | 4,000 | - | 4,000 |
| Non-controlling inserests - acquisition | - | - | - | - | 791 | 791 |
| Change in treasury shares | 25 | - | - | 25 | - | 25 |
| Disposal of non-controlling interests | - | - | - | - | -4 | -4 |
| **Total transactions with owners** | **268** | **1,473** | **-7,504** | **-5,763** | **787** | **-4,976** |
| Other changes in equity | - | - | -4 | -4 | - | -4 |
| **Equity at 31 December 2017** | **2,166** | **7,456** | **5,608** | **15,230** | **1,896** | **17,126** |

# Consolidated statement of changes in equity - 1 January - 31 December

| NOK million | Share capital | Share permium | Other equity | Equity attributable to owners of the parent | Non-controlling interests | Total equity |
|---|---|---|---|---|---|---|
| **Equity at 31 December 2017** | **2,166** | **7,456** | **5,608** | **15,230** | **1,896** | **17,126** |
| **COMPREHENSIVE INCOME 2018** | | | | | | |
| Profit for the year | - | - | 1,419 | 1,419 | 186 | 1,605 |
| Other comprehensive income | - | - | 234 | 234 | - | 234 |
| **Total comprehensive income for the year** | **-** | **-** | **1,653** | **1,653** | **186** | **1,839** |
| **TRANSACTIONS WITH OWNERS** | | | | | | |
| Ordinary dividends for 2017 | - | - | -985 | -985 | -13 | -998 |
| Other capital distribution | - | - | -1,500 | -1,500 | - | -1,500 |
| **Total transactions with owners** | **-** | **-** | **-2,485** | **-2,485** | **-13** | **-2,498** |
| Other changes in equity | - | - | -3 | -3 | - | -3 |
| Other changes in equity, equity accounted investees | - | - | 39 | 39 | - | 39 |
| Reclassification as a result of intergration Hafslund and E-CO Energi | -2,066 | 7,839 | -5,773 | - | - | - |
| **Equity at 31 December 2018** | **100** | **15,295** | **-962** | **14,433** | **2,068** | **16,501** |

*Oslo, 10 April 2019*

## The Board of Directors of Hafslund E-CO AS

Alexandra Bech Gjørv
*Board Chair*

Bente Sollid Storehaug

Bjørn Erik Næss

Bård Vegar Solhjell

Mari Thjømøe

Arvid Amundsen

Per Luneborg

Johnny Kjønås

Finn Bjørn Ruyter
*CEO*

## Note 1.1 General information

Hafslund E-CO is an integrated energy and infrastructure group wholly owned by the City of Oslo.

On 20 July 2018 the Oslo City Council decided to combine the ownership of Hafslund AS and E-CO Energi Holding AS under joint board and management. Hafslund E-CO AS was established on 4 July 2018. Hafslund E-CO owns Norway's second largest power production company, E-CO Energi AS, through its subsidiary E-CO Energi Holding AS, and Norway's largest networks company, Hafslund Nett AS, through its subsidiary Hafslund AS. The Group has a 49 per cent shareholding in Fredrikstad Energi AS, and some smaller investments. E-CO Energi AS is a part-owner in the project company NorthConnect, which is planning an electrical "interconnector" between Norway and Scotland.

The company's registered office is situated in Oslo. The consolidated financial statements were authorised for issue by Hafslund E-CO AS's board of directors on 10 April 2019.

## Note 1.2 General accounting policies

### Basis for preparation of the annual financial statements

The consolidated financial statements for Hafslund E-CO AS for 2018 have been prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the EU.

The consolidated financial statements have been prepared on the historical cost basis, with the exception of some assets and liabilities that are measured at fair value. Please see Note 5.5 Fair value for a more detailed description. Preparation of financial statements in accordance with IFRSs requires the use of estimates and judgements. Items significantly impacted by judgements or assumptions and significant estimates are described in the relevant notes.

### Currency

The consolidated financial statements are presented in Norwegian kroner (NOK), which is the parent company's and the subsidiaries' functional currency. All amounts are stated in NOK million unless otherwise stated. Items denominated in foreign currency in the statement of financial position are translated at the exchange rate at the balance sheet date. Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions.

### Current and non-current presentation

***Assets are classified as current when they are:***

- Expected to be realised as part of the Group's ordinary business cycle
- Held for sale as the main purpose
- Expected to be realised within 12 months of the reporting period, or
- Constitute cash or cash equivalents not restricted for more than 12 months.

All other assets are classified as non-current.

***Liabilities are classified as current when they are:***

- Expected to be settled as part of the Group's ordinary business cycle
- Held for sale as the main purpose
- Expected to be settled within 12 months of the reporting period, or
- The Group has the right to defer settlement for at least 12 months after the reporting period.

All other liabilities are classified as non-current.

## Note 1.3 Changes in standards and interpretations with future effect

The Group's assessment of the impact of new standards, and changes in existing standards and interpretations are listed below.

### IFRS 16 Leases

IFRS 16 Leases applies to annual financial statements for accounting periods beginning on or after 1 January 2019. Hafslund E-CO will apply the standard from 1 January 2019, using the modified retrospective transition method, where the accumulated effect of initial application of IFRS 16 is adjusted against retained earnings as at 1 January 2019. The comparative figures are not amended as a result of the transition to IFRS 16 applying this method.

All right-of-use assets will be recognised at the value of the lease obligation as at 1 January 2019, except for some major leases where the right-of-use asset will be recognised as if IFRS 16 has always been applied.

The Group has evaluated the effect of the implementation of IFRS 16 as described below. Actual effects of the implementation of the standard may be subject to change due to further amendments of the new accounting policies until the Group presents its first financial statements that include the date of initial application.

IFRS 16 introduces a single, on-balance-sheet lease accounting model for lessees. Effective 1 January 2019, Hafslund E-CO will recognise a right-of-use asset that represents its right to use the underlying asset and a lease liability that represents the obligation to make lease payments.

IFRS 16 replaces existing leases guidance, including IAS 17 Leases and IFRIC 4 Determining Whether an Arrangement Contains a Lease.

The Group will recognise new assets and liabilities for its operating leases for office premises, transformer substations, waterfall rights and power plants. The nature of expenses related to those leases will now change because the Group will recognise a depreciation charge for the right-of-use asset and interest expense on lease liabilities. Options that grant the right to extend or terminate the lease are taken into account and reflected in the calculation of the minimum lease term in cases where it is deemed reasonably certain that the option will be exercised. A similar evaluation is made of purchase options on the underlying asset.

The Group has no finance leases.

Based on the information currently available, the Group estimates that it will recognise lease liabilities of about NOK 1.3 billion and right-of-use assets of about NOK 1 billion at 1 January 2019. Based on these estimates, the effect on equity as at 1 January 2019 will be around NOK 0.2 billion, taking into account the effect of deferred taxes.

***Leases in which the Group is a lessor***
The Group's activities as a lessor are limited. Consequently, no significant impact on the consolidated financial statements is expected for leases in which the Group is a lessor.

### Other standards and interpretations

The Group does not expect changes in other standards and interpretations to have a significant impact on the Group's financial statements but will assess the impact when transactions and events arise that are affected by these changes.

## Note 1.4 Transactions and events in 2018

### Integration of Hafslund and E-CO Energi

On 20 July 2018 the Oslo City Council decided to combine the ownership of Hafslund AS and E-CO Energi Holding AS under a new wholly owned parent company. Hafslund E-CO AS was established on 4 July 2018 with the subsidiaries Hafslund AS and E-CO Energi Holding AS, which together form the new Group.

Since the two companies were wholly-owned by the City of Oslo both before and after the merger, the transaction is defined as a business combination under common control.

IFRSs do not prescribe the accounting treatment for a business combination under common control. It is therefore necessary to refer to IAS 8 to determine the accounting treatment of the business combination between Hafslund and E-CO Energi.  In practice, IFRSs permit two approaches to the accounting treatment:

- Application of IFRS 3 and the rules on the acquisition method when the transaction takes place under common control. In such cases, all the rules of IFRS 3 must be fully applied, including identifying the acquirer (the acquisition method)
- Combine the accounting values in the two groups (continuity of interest).

Management has decided to recognise the combination using book values (continuity) by combining the consolidated figures for the two subgroups. The combination is based on a retrospective approach, in which the results of the combining parties for the entire accounting year (2018) are recognised, although the formal combination took place during the year. The comparative figures have been combined since the City of Oslo controlled the two companies during the comparative period. Consequently, the accounting figures for the two subgroups have been combined in the consolidated financial statements to establish the Hafslund E-CO Group's comparative figures for 2017. Management believes that this approach provides the most relevant basis for assessing the results, cash flows and financial position of the Hafslund E-CO Group.

### More information on the comparative figures

The comparative figures for 2017 are impacted by E-CO Energi Holding AS's purchase of 90 per cent of the shares in Hafslund Produksjon Holding AS on 4 August 2017. The remaining 10 per cent were sold to an entity outside the Hafslund E-CO Group. The sale was part of a larger transaction, in which the former Hafslund ASA Group was de-listed and several business areas divested to external parties.

E-CO Energi Holding recognised the acquisition of Hafslund Produksjon Holding AS as a business combination in accordance with IFRS 3 (the acquisition method) in its consolidated financial statements, and measured the assets and liabilities acquired in the business combination at fair value.

As a result of the combination of the consolidated figures of Hafslund and E-CO Energy, Hafslund Produksjon Holding AS is recognised in the consolidated financial statements of Hafslund E-CO Group at its book value in the consolidated financial statements of E-CO Energi. The comparative figures for 2017 are also affected, in that waterfall rights, power stations and dam facilities and goodwill are recognised at their book values (continuity) from E-CO Energy's consolidated financial statements.

The table below shows the effects of the conbination on the comparative figures (2017).

In the Hafslund Group, the first seven months of the income statement of Hafslund Produksjon Holding are presented as discontinued operations since the business was sold from Hafslund to E-CO Energy in 2017. For Hafslund E-CO however, this is not discontinued operations and is therefore presented under continuing operations in the 2017 figures for the Hafslund E-CO Group, as shown in the table below.

| NOK million | 2017 E-CO Energi group (official annual accounts) | 2017 Hafslund group (official annual accounts) | 1.1. - 31.07.2017 Hafslund Produksjon | 2017 Hafslund E-CO Group |
|---|---|---|---|---|
| **PROFIT FOR THE YEAR, CONTINUING OPERATIONS** | | | | |
| Revenue | 3,592 | 5,169 | 405 | 9,166 |
| Operating profit | 2,237 | 957 | 227 | 3,421 |
| Net financial items | -250 | -201 | - | -451 |
| Profit before tax | 1,987 | 756 | 227 | 2,970 |
| Taxes | -950 | -143 | -135 | -1,228 |
| **Profit for the year, continuing operations** | **1,037** | **612** | **92** | **1,741** |

Profit for the year from discontinued operations in the Hafslund Group in 2017 included NOK 92 million related to Hafslund Production, while the 2017 figures for Hafslund E-CO Group presents Hafslund Production as continuing business, as shown in the table.

Assets and liabilities acquired in connection with E-CO Energy's acquisition of Hafslund Produksjon were measured at fair value in E-CO Energi's consolidated financial statements in 2017. These figures are continued in Hafslund E-CO's consolidated financial statements, and also affect the 2017 figures. The difference between the book values in the Hafslund Group and the E-CO Energi Group has resulted in the following adjustments to the existing assets in Hafslund E-CO's consolidated financial statements:

| | NOK million |
|---|---|
| Power stations and dam facilities | -29 |
| Waterfall rights | 3,248 |
| Goodwill | 2,916 |
| **Total adjustment book values** | **6,135** |

See also Note 3.1 Property, plant and equipment and Note 3.2 Intangible assets.

## Note 2.1 Segment information

### Key accounting policies

Reported operating segments are in accordance with the management reporting structure to the chief operating decision-maker. The Group's chief operating decision-maker, which is responsible for allocation of resources to and assessment of earnings from the operating segments, is defined as Group management. Hafslund E-CO reports business areas as operating segments.

In the past year, Hafslund E-CO has established itself as an integrated energy and infrastructure group. Hafslund E-CO has two segments, Production (E-CO Energi) and Networks (Hafslund). Group management assesses the business areas' performance and profitability based on EBITDA, the operating result, net profit and the return on capital employed. Hafslund also includes business activities that is not network related, and which is expected to be immaterial to the results in the years to come. Other activities and eliminations consist of the parent company Hafslund E-CO AS and group eliminations. For 2017 income and costs for Hafslund Production in the first seven months of the year are included in this column.

The share of profit/loss from equity-accounted investees is presented in the respective main segments Production (E-CO Energi) and Networks (Hafslund), under operations.

Transactions between business areas are conducted in accordance with the arm's length principle.

The column Other business and eliminations includes figures for Hafslund Produksjon for the period 1 January – 31 July 2017. These are presented as discontinued operations in the figures for Networks (Hafslund Group) in 2017. In the Hafslund E-CO Group, Hafslund Produksjon is included in the result from continued operations in 2017 as the Group prepares comparative figures based on book values (accounting continuity). For a more detailed description of the accounting effects of the merger of Hafslund and E-CO Energi, please refer to note 1.4 Transactions and events in 2018.

# Note 2.1 Segment information *(continued)*

| NOK million | Production 2018 | Production 2017 | Networks 2018 | Networks 2017 | Other activities and eliminations 2018 | Other activities and eliminations 2017 | Group 2018 | Group 2017 |
|---|---|---|---|---|---|---|---|---|
| **PROFIT OR LOSS** | | | | | | | | |
| **Sales revenue** | **5,894** | **3,494** | **5,516** | **4,983** | **-** | **402** | **11,411** | **8,879** |
| **Other operating revenue** | **-731** | **98** | **105** | **186** | **1** | **3** | **-625** | **287** |
| **Revenue** | **5,164** | **3,592** | **5,621** | **5,169** | **1** | **405** | **10,786** | **9,166** |
| Energy purchases and transmission | -338 | -261 | -2,891 | -2,278 | - | - | -3,229 | -2,539 |
| Salary and other personnel costs | -228 | -210 | -308 | -346 | -23 | -21 | -558 | -578 |
| Property tax and licensing fees | -279 | -269 | -50 | -15 | - | -36 | -329 | -320 |
| Other operating costs | -300 | -279 | -847 | -912 | 8 | -93 | -1,138 | -1,284 |
| Profit/loss from equity-accounted investees | 17 | 2 | -45 | 10 | - | - | -28 | 13 |
| **EBITDA** | **4,036** | **2,575** | **1,481** | **1,629** | **-13** | **254** | **5,504** | **4,458** |
| Depreciation and amortisation | -367 | -339 | -724 | -672 | - | -26 | -1,091 | -1,037 |
| **Operating profit (EBIT)** | **3,669** | **2,237** | **758** | **957** | **-13** | **227** | **4,413** | **3,421** |
| Interest income | 37 | 22 | 6 | 5 | - | - | 43 | 27 |
| Interest expenses | -353 | -282 | -195 | -228 | -25 | - | -573 | -510 |
| Other finance income/expenses | 11 | 10 | 14 | 22 | - | - | 25 | 32 |
| **Net financial items** | **-305** | **-250** | **-175** | **-201** | **-25** | **-** | **-505** | **-451** |
| **Profit before tax** | **3,364** | **1,987** | **582** | **756** | **-38** | **227** | **3,908** | **2,970** |
| Income taxes | -2,141 | -950 | -99 | -143 | -63 | -135 | -2,303 | -1,228 |
| **Profit from continued operations** | **1,223** | **1,037** | **483** | **612** | **-101** | **92** | **1,605** | **1,741** |

# Note 2.1 Segment information *(continued)*

| | Production | | Networks | | Other activities and eliminations | | Group | |
|---|---|---|---|---|---|---|---|---|
| NOK million | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 | 2017 |
| **ASSETS** | | | | | | | | |
| Property, plant and equipment | 12,588 | 12,293 | 12,782 | 11,937 | - | - | 25,370 | 24,230 |
| Intangible assets | 15,851 | 15,267 | 624 | 624 | - | - | 16,475 | 15,891 |
| Deferred tax assets | 319 | 293 | - | - | - | - | 319 | 293 |
| Equity-accounted investees | 137 | 32 | 279 | 285 | - | - | 416 | 317 |
| Non-current financial derivatives | 928 | 812 | - | - | - | - | 928 | 812 |
| Other non-current receivables | 197 | 218 | 587 | 294 | 2 | - | 786 | 513 |
| **Non-current assets** | **30,021** | **28,914** | **14,272** | **13,141** | **2** | **-** | **44,295** | **42,055** |
| Inventory | 1 | 1 | 30 | 73 | - | - | 31 | 74 |
| Trade receivables | 233 | 107 | 228 | 244 | 11 | - | 472 | 352 |
| Other non-interest bearing current receivables | 436 | 139 | 745 | 723 | 5 | - | 1,186 | 862 |
| Shares and other financial assets | 200 | 403 | 2 | 19 | - | - | 202 | 421 |
| Current financial derivatives | - | 54 | 1 | 18 | - | - | 1 | 72 |
| Cash and cash equivalents | 2,847 | 840 | 160 | 1,105 | -14 | - | 2,993 | 1,946 |
| **Current assets** | **3,717** | **1,544** | **1,166** | **2,182** | **2** | **-** | **4,885** | **3,727** |
| **Assets** | **33,738** | **30,458** | **15,438** | **15,323** | **4** | **-** | **49,180** | **45,781** |

# Note 2.1 Segment information *(continued)*

| NOK million | Production 2018 | Production 2017 | Networks 2018 | Networks 2017 | Other activities and eliminations 2018 | Other activities and eliminations 2017 | Group 2018 | Group 2017 |
|---|---|---|---|---|---|---|---|---|
| **EQUITY AND LIABILITY** | | | | | | | | |
| Paid in capital | 7,606 | 7,606 | 2,016 | 2,016 | 5,773 | - | 15,395 | 9,622 |
| Other equity | 3,281 | 2,862 | 3,134 | 2,746 | -7,377 | - | -962 | 5,608 |
| Non-controlling interests | 2,068 | 1,896 | - | - | - | - | 2,068 | 1,896 |
| **Equity** | **12,954** | **12,364** | **5,150** | **4,762** | **-1,604** | **-** | **16,501** | **17,126** |
| Non-current interest-bearing debt | 12,168 | 10,907 | 4,864 | 6,523 | 1,500 | - | 18,533 | 17,430 |
| Deferred tax liabilities | 3,331 | 3,295 | 1,049 | 1,089 | - | - | 4,380 | 4,383 |
| Pension liabilities | 47 | 57 | 63 | 75 | 4 | - | 114 | 132 |
| Non-current financial derivatives | 93 | 140 | - | - | - | - | 93 | 140 |
| Other liabilities and obligations | 1,294 | 753 | - | - | - | - | 1,294 | 753 |
| **Non-current liabilities** | **16,934** | **15,152** | **5,976** | **7,686** | **1,504** | **-** | **24,414** | **22,839** |
| Trade payables | 90 | 89 | 306 | 320 | -1 | - | 395 | 409 |
| Other current non interest-bearing liabilities | 719 | 561 | 1,298 | 1,358 | 43 | - | 2,060 | 1,919 |
| Current financial derivatives | 350 | 27 | - | - | - | - | 350 | 27 |
| Current tax liabilities | 2,158 | 1,265 | 189 | - | 62 | - | 2,408 | 1,265 |
| Current interest-bearing debt | 533 | 1,000 | 2,519 | 1,197 | - | - | 3,052 | 2,197 |
| **Current liabilities** | **3,849** | **2,942** | **4,312** | **2,875** | **104** | **-** | **8,265** | **5,817** |
| **Equity and liabilities** | **33,738** | **30,458** | **15,438** | **15,323** | **4** | **-** | **49,180** | **45,781** |

# Note 2.1 Segment information *(continued)*

| NOK million | Production 2018 | Production 2017 | Networks 2018 | Networks 2017 | Other activities and eliminations 2018 | Other activities and eliminations 2017 | Group 2018 | Group 2017 |
|---|---|---|---|---|---|---|---|---|
| **NET INTEREST-BEARING DEBT** | | | | | | | | |
| Non-current interest-bearing debt[1] | 11,996 | 10,692 | 4,851 | 6,462 | 1,500 | - | 18,348 | 17,155 |
| Current interest-bearing debt | 533 | 1,000 | 2,519 | 1,197 | - | - | 3,052 | 2,197 |
| Non-current interest-bearing assets | 18 | 10 | 49 | - | - | - | 67 | 10 |
| Money market funds | 200 | 403 | - | - | - | - | 200 | 403 |
| Cash and cash equivalents | 2,847 | 840 | 160 | 1,105 | -14 | - | 2,993 | 1,946 |
| **Net interest-bearing debt** | **9,464** | **10,439** | **7,161** | **6,554** | **1,514** | **-** | **18,139** | **16,993** |
| **CAPITAL EMPLOYED** | | | | | | | | |
| Equity | 12,954 | 12,364 | 5,150 | 4,762 | -1,604 | - | 16,501 | 17,126 |
| Net interest-bearing debt | 9,464 | 10,439 | 7,161 | 6,554 | 1,514 | - | 18,139 | 16,993 |
| Taxes net | 5,169 | 4,267 | 1,238 | 1,089 | 62 | - | 6,469 | 5,355 |
| **Capital employed** | **27,588** | **27,070** | **13,548** | **12,404** | **-28** | **-** | **41,108** | **39,474** |
| **INVESTMENTS** | | | | | | | | |
| Property, plant and equipment | 650 | 549 | 1,580 | 1,610 | - | - | 2,230 | 2,159 |

[1] Non-current interest-bearing debt is stated before fair value adjustment and carrying amount of fair value hedges.

# Note 2.2 Revenue

## Key accounting policies

The Group implemented IFRS 15 Revenue from Contracts with Customers from 1 January 2018 and applied the full retrospective method of application. IFRS 15 has not resulted in any material changes to the Group's method of revenue recognition. The total effect of implementation was not material for the Group and had no effects on equity at the time of implementation.

The Group's revenue mainly comprise revenue from network rentals and revenue from sales of power in the wholesale market. The main principles for revenue recognition for Hafslund E-CO's revenue streams are described below.

## Revenue from network activities

***Permitted income***

Electrical power is distributed through distribution networks, which is a natural monopoly. The regulatory authority is the Norwegian Water Resources and Energy Directorate (NVE). NVE establishes the framework for permitted income for network companies in Norway, which is intended to ensure that the industry as a whole receives a reasonable return on invested capital. Permitted income for Hafslund Nett mainly comprises the company's own framework for permitted income and rental costs of the overhead network (Statnett).

***Network rental/actual revenue***

Customers pay a network rental fee for access to the supply network and for distribution of electrical power.

The aggregate network rental mainly comprises fixed component revenue, power revenue and energy revenue (network rental multiplied by transmitted volume in the supply network). The total of this revenue is referred to as actual revenue from network activities and it is this amount that is recognised as revenue for network activities in the consolidated financial statements. Network rental represent the compensation the Group receives from customers for ongoing access to the power network. Revenue is recognised based on the right to invoice the customer.

***Income surpluses/shortfalls***

There are many reasons why permitted income may differ from actual revenue. Higher actual revenue than permitted income gives rise to income surplus and vice versa. In accordance with IFRSs, income surpluses/shortfalls are defined as a regulatory liability or asset that does not qualify for balance sheet recognition. This is justified on grounds that a liability or receivable is not linked to a contract with a particular customer, and that settlement of the receivable or liability is dependent on future deliveries. The network rental is determined based on the premise that over time actual revenue will correspond to permitted income.

***Investment contributions***

Networks also receives revenue from investment contributions that are paid by the relevant customer to cover actual expenses in connection with the establishment of new network connections or strengthening the network for existing customers. Investment contributions are deemed to be a separate delivery obligation that is recognised as revenue as the network connection is realised.

## Note 2.2 Revenue *(continued)*

***Sales of electricity required for supply - power revenue***
The Group is obliged to supply electricity to network customers that do not have an agreement with a power supplier. Revenue recognition is based on the right to invoice the customer, which is at the time of delivery.

### Revenue from production activities

***Power revenue***
Produced power is mainly sold via the Nord Pool Spot exchange and to Hafslund Strøm AS. The right to invoice agreed consideration for power arises when the power has been generated and delivered and power revenue is recognised on this basis.

The Group takes the view that the exchange (Nord Pool) should be regarded as a customer in accordance with IFRS 15 since the Group has an enforceable contract with Nord Pool AS. The same applies to Hafslund Strøm AS, which is owned by Fortum Consumer Solutions AS.

As a principal rule, power revenue from own production is generally presented as gross revenue in profit or loss. Purchases are recognised as gross cost of sale if purchases and sales are administered independently, are designated gross on Nord Pool and the purchase is within the Group's commercial needs for purchases of power as part of ordinary activities.

***Concessionary power***
The Group is obliged to deliver concessionary power to municipalities and county authorities at either a regulated OED (Ministry of Petroleum and Energy) price or an estimated full cost. Hafslund E-CO does not consider revenue from delivery of concessionary power to derive from a customer contract as defined in IFRS 15 but applies the principles in IFRS 15 by analogy and therefore also presents revenue from the sale of concessionary power under sales revenue.

Please see Note 4.1 Other liabilities and obligations for further information.

### Other operating revenue

***Power derivatives***
E-CO Energi uses power price derivatives and foreign currency derivatives to hedge future sales revenue. The Group does not apply hedge accounting for hedging of power revenue. Realized and unrealized value changes related to derivatives for financial hedging of future sales revenue is recognised and presented as Other operating revenue. See also Note 5.1 Financial instruments.

Sales revenue (revenue from contracts with customers) and other operating revenue are distributed across the business areas as follows:

## Note 2.2 Revenue *(continued)*

| NOK million | Production 2018 | Production 2017 | Networks 2018 | Networks 2017 | Other activities and eliminations 2018 | Other activities and eliminations 2017 | Group 2018 | Group 2017 |
|---|---|---|---|---|---|---|---|---|
| **REVENUE** | | | | | | | | |
| Power revenue | 5,765 | 3,358 | 184 | 133 | - | 402 | 5,949 | 3,893 |
| Concessionary power | 78 | 85 | - | - | - | - | 78 | 85 |
| Investment contributions | - | - | 299 | 232 | - | - | 299 | 232 |
| Network rental/actual revenue | 51 | 51 | 5,033 | 4,618 | - | - | 5,085 | 4,669 |
| **Sales revenue** | **5,894** | **3,494** | **5,516** | **4,983** | **-** | **402** | **11,411** | **8,879** |
| Realised gain/loss power derivatives | -364 | - | - | - | - | - | -364 | - |
| Unrealised gain/loss power derivatives | -376 | 57 | - | - | - | - | -376 | 57 |
| Other operating revenue | 10 | 41 | 104 | 186 | 2 | 3 | 116 | 230 |
| **Other operating revenue** | **-731** | **98** | **105** | **186** | **1** | **3** | **-625** | **287** |
| **Revenue** | **5,164** | **3,592** | **5,621** | **5,169** | **1** | **405** | **10,786** | **9,166** |

The network business' power revenue is revenue from the obligation to supply electricity and consists of power sales to network customers without an agreement with a power supplier.

Power revenue in the column Other activities and eliminations apply to power revenue in Hafslund Produksjon during the period 1 January - 31 July 2017, see also note 2.1 Segment information.

## Note 2.2 Revenue *(continued)*

The table below provides information on contract balances as of 31 December.

| NOK million | 2018 | 2017 |
|---|---|---|
| **CONTRACT BALANCES AT 31 DECEMBER** | | |
| Receivables included in trade receivables (note 5.10) | 386 | 245 |
| Earned, non-invoiced revenue (note 5.10) | 704 | 637 |
| **Receivables at 31 December** | **1,090** | **882** |

Earned, non-invoiced revenue consists of network rental revenue of NOK 679 million (NOK 631 million) and revenue from mandatory supply of electricity of NOK 25 million (NOK 6 million) and is regarded as receivables as the group has unconditional right to receive payment.

The Group did not have any remaining performance obligations as of 31. December 2018.

Performance obligations and principles for revenue recognition:

| Performance obligation | Revenue recognition principles |
|---|---|
| Network rental/actual revenue | Based on the right to invoice the customer (over time) |
| Investment contributions | As the network connection is realised (over time) |
| Power revenue | Based on the right to invoice the customer (at the time of delivery) |

### Key estimates and assumptions

Recognition of investment contributions is an area that involves significant use of judgement. Individual customers must cover the full cost, without add-ons, of providing or reinforcing the network for their use through an investment contribution. Hafslund E-CO treats the deliverable covered by the investment contribution as a separate performance obligation. This performance obligation is recognised as revenue as the network connection is realised. The expenses included in the investment contribution are not included in the network capital, and therefore do not give rise to returns in later periods. These expenses do therefore not qualify as assets for accounting purposes.

In previous years, costs relating to investment contributions were presented as other operating costs. Since 1 January 2018, expenses relating to investment contributions are presented as cost of sales, and the comparative figures for 2017 have been re-presented accordingly.

If investment contributions had not been regarded as a separate performance obligation, but as part of the subsequent deliverable for distribution of electricity, this may have resulted in a different revenue recognition profile.

The implementation of IFRS 15 has not resulted in any change in equity as at 1 January 2018.

## Note 2.3 Energy purchases and transmission costs

| NOK million | 2018 | 2017 |
|---|---|---|
| **ENERGY PURCHASES AND TRANSMISSION COSTS** | | |
| Energy purchases | 693 | 486 |
| Transmission costs | 2,237 | 1,821 |
| Acquisition of goods and services for customer invoicing | 300 | 232 |
| **Energy purchases and transmission costs** | **3,229** | **2,539** |

Transmission costs primarily relate to feed-in costs to the central grid.

## Note 2.4 Salaries and other personnel costs

| NOK million | 2018 | 2017 |
|---|---|---|
| **SALARIES AND OTHER PERSONNEL COSTS** | | |
| Wages and salaries | 408 | 419 |
| Employers' national insurance contributions | 76 | 78 |
| Pension costs | 46 | 61 |
| Other personnel costs | 27 | 21 |
| **Salaries and other payroll costs** | **558** | **578** |
| | | |
| Average number of full-time equivalents employed in the group | 622 | 591 |

Pension costs are discussed in more detail in Note 7.2 Pensions.

## Note 2.5 Property tax and licence fees

### Key accounting policies

***Property tax***

Property tax is classified and recognised under operating expenses in the income statement in the year it is levied.

***Licence fees***

Licence fees are paid annually to the government and local authorities for the right to use waterfalls. Such fees are recognised as costs in the period to which they relate. Please see note 4.1 for a more detailed description of power obligations.

| NOK million | 2018 | 2017 |
|---|---|---|
| **PROPERTY TAX AND LICENCE FEES** | | |
| Property tax | 240 | 236 |
| License fees | 89 | 84 |
| **Property tax and licence fees** | **329** | **320** |

Property tax is calculated based on valuations determined in accordance with Section 8 of the Norwegian Property Tax Act. The tax rate is a maximum of 0.7 per cent.

## Note 2.6 Other operating costs

| NOK million | 2018 | 2017 |
|---|---|---|
| **OTHER OPERATING COSTS** | | |
| Maintenance | 643 | 682 |
| Purchase of external services | 127 | 117 |
| Office expenses | 221 | 202 |
| Insurance | 33 | 25 |
| Sales and marketing expenses | 8 | 13 |
| Loss on receivables | 21 | 24 |
| Other items | 86 | 220 |
| **Other operating costs** | **1,138** | **1,284** |
| **AUDITOR'S FEES (NOK'000)** | | |
| Mandatory audit | 3,390 | 3,455 |
| Other assurance services | 164 | 1,636 |
| Tax consultancy services | 703 | 627 |
| Other non-audit fees | 3,472 | 1,569 |
| **Total auditor's fees** | **7,729** | **7,287** |

The breakdown includes auditor's audit fee for the entire Group. Other advisory services include among others, IFRS-implementation assistance at E-CO Energi, disposal of companies in 2017, assistance in connection with the establishment of the Hafslund E-CO Group and related affairs in 2018. Value Added Tax is not included in the fee specification.

## Note 3.1 Property, plant and equipment

### Key accounting policies

Property, plant and equipment is measured at cost, less accumulated depreciation and impairments. When assets are sold or divested, the carrying amount is deducted and any gain or loss is recognised in the income statement.

The cost of property, plant and equipment is the purchase price, including levies/taxes and costs directly related to preparing the non-current asset for use.

Borrowing costs attributable to procurement, design or production of a qualifying asset are added to the cost. A qualifying asset is an asset that requires a long time to be prepared for its intended use or for sale, for example, a hydropower plant.

Expenses incurred after an operating asset has been taken into use, such as ongoing maintenance, are recognised in profit or loss, while other expenses (periodic maintenance) that are expected to generate future economic benefits are capitalised. The carrying amount of replaced parts is deducted and recognised in profit or loss.

The depreciation period and method are assessed annually, and any changes are recognised as estimate changes.

Facilities under construction are classified as property, plant and equipment and recognised at cost until they have been completed. Facilities under construction are not depreciated until they are ready for use.
For details of impairment principles for property, plant and equipment, please see note 3.3.

# Note 3.1 Property, plant and equipment *(continued)*

## Key estimates and assumptions

Property, plant and equipment is depreciated over the operating asset's expected useful life. Expected useful lives are estimated based on experience, history and discretionary judgements relating to technical use and profitability and are adjusted to reflect any changes in expectations. Residual value is taken into account in determining depreciation, and assessments of residual values also make use of estimates.

Provisions are not recognised for asset retirement obligations, since there is no right of reversion to state ownership for the Group's power plants.

| NOK million | Power stations and dam facilities | Networks | Technical equipment and chattels | Other property | Facilities under construction | Property, plant and equipment |
|---|---|---|---|---|---|---|
| **2017** | | | | | | |
| Balance at 1 January | 10,850 | 9,331 | 753 | 199 | 2,298 | 23,432 |
| Operating investments | 223 | 791 | 758 | - | 429 | 2,202 |
| Net adjustments relating to purchase/ disposal | -29 | 21 | -126 | -94 | -134 | -363 |
| Depreciation for the year | -362 | -509 | -165 | -3 | - | -1,037 |
| Impairment for the year | - | - | - | - | - | - |
| Other items | -21 | - | 20 | - | 1 | - |
| **Balance at 31 December** | **10,661** | **9,634** | **1,241** | **102** | **2,593** | **24,230** |

# Note 3.1 Property, plant and equipment *(continued)*

| NOK million | Power stations and dam facilities | Networks | Technical equipment and chattels | Other property | Facilities under construction | Property, plant and equipment |
|---|---|---|---|---|---|---|
| **At 31 December** | | | | | | |
| Cost | 17,549 | 17,366 | 2,587 | 153 | 2,593 | 40,247 |
| Accumulated depreciation | -6,854 | -7,732 | -1,283 | -51 | - | -15,920 |
| Accumulated impairment | -34 | - | -62 | - | - | -96 |
| **Balance at 31 December** | **10,661** | **9,634** | **1,241** | **102** | **2,593** | **24,230** |
| **2018** | | | | | | |
| Balance at 1 January | 10,661 | 9,634 | 1,241 | 102 | 2,593 | 24,230 |
| Operating investments | 665 | 837 | 819 | 83 | -171 | 2,233 |
| Acquisition and disposal of business | -3 | -8 | -3 | 34 | - | 21 |
| Depreciation for the year | -360 | -510 | -219 | -3 | - | -1,091 |
| Impairment for the year | - | - | - | - | - | - |
| Other items | 76 | - | -12 | -95 | 8 | -23 |
| **Balance at 31 December** | **11,039** | **9,953** | **1,827** | **120** | **2,430** | **25,370** |
| **At 31 December 2018** | | | | | | |
| Cost | 18,147 | 18,092 | 2,837 | 179 | 2,430 | 41,684 |
| Accumulated depreciation | -7,107 | -8,139 | -1,010 | -59 | - | -16,314 |
| Accumulated impairment | - | - | - | - | - | - |
| **Balance at 31 December 2018** | **11,039** | **9,953** | **1,827** | **120** | **2,430** | **25,370** |
| **Depreciation period (number of years)** | 4-100 | 10-50 | 3-30 | 100/No depreciation | No depreciation | |

## Note 3.1 Property, plant and equipment *(continued)*

### Discussion of key matters

The table above also includes shareholdings in facilities that are owned through joint operations. Further information on joint operations is provided in Note 3.6 Joint operations.

As a result of the combination of Hafslund and E-CO Energi on 4 July 2018, a net adjustment to existing carrying amounts of power stations and dam facilities of NOK -29 million was recognised in the comparative figures. The adjustment has arisen because the business combination is recognised using book values (continuity) in the respective groups. This reduction also affects the consolidated 2017 figures. The amount is presented on the line “Net adjustment relating to purchase/disposal” in the table above in the column power stations and dam facilities. Further information on the combination and its accounting effects is provided in Note 1.4 Transactions and events in 2018.

Hafslund E-CO has capitalised borrowing costs of NOK 63 million for qualifying assets in 2018 (NOK 24 million). The weighted average interest rate on borrowings for the respective Hafslund and E-CO Energi Holding subgroups have been applied. For assessments relating to impairments, please see Note 3.3 Impairment testing.

# Note 3.2 Intangible assets and goodwill

## Key accounting policies

Intangible assets, which in Hafslund E-CO consist of waterfall rights and goodwill, are recognised at cost. Goodwill and intangible assets with an indefinite useful life are not amortised, but tested for impairment each year.
Some business combinations give rise to “technical goodwill” due to the fact that it is not possible to recognise deferred tax liabilities at fair value. The fair value of deferred tax liabilities is normally lower than their nominal value, and it is this difference that gives rise to the technical goodwill.

For details of principles relating to impairment of intangible assets and goodwill, please see Note 3.3 Impairment testing.

## Key estimates and assumptions

The production operating segment has perpetual licences (no right of reversion to state ownership). Purchased waterfall rights are therefore deemed to be perpetual and are not amortised. The rights are classified as intangible assets since the Group takes the view that acquired waterfalls are not physical, but that the Group has paid for the right to utilise future precipitation and snow melt to generate power.

| NOK million | Waterfall rights | Goodwill | Intangible assets |
|---|---|---|---|
| **2017** | | | |
| Balance at 1 January | 9,073 | 2,436 | 11,509 |
| Additions | 30 | - | 30 |
| Net adjustment in connection with integration | 3,248 | 2,916 | 6,164 |
| Disposal at cost | - | -1,812 | -1,812 |
| **Balance at 31 December** | **12,350** | **3,540** | **15,890** |
| **At 31 December** | | | |
| Cost | 12,350 | 3,540 | 15,890 |
| Accumulated impairment | - | - | - |
| **Balance at 31 December** | **12,350** | **3,540** | **15,890** |
| **2018** | | | |
| Balance at 1 January | 12,350 | 3,540 | 15,890 |
| Additions | 564 | - | 564 |
| Other items | - | 20 | 20 |
| **Balance at 31 December** | **12,914** | **3,560** | **16,475** |
| **At 31 Desember** | | | |
| Cost | 12,914 | 3,560 | 16,475 |
| Accumulated impairment | - | - | - |
| **Balance at 31 December** | **12,914** | **3,560** | **16,475** |

## Discussion of key matters

The combination of Hafslund and E-CO Energi on 4 July 2018 resulted in a net increase in existing carrying amounts of respectively NOK 3,248 million for waterfall rights and NOK 2,916 million for goodwill. This is due to the fact that the combination was recognised using book values (continuity) from the consolidated financial statements of the respective groups. The increase affects the consolidated 2017 figures. These amounts are presented on the line "Net adjustment in connection with integration" in the table above. Further information on the combination and its accounting effects is provided in Note 1.4 Transactions and events in 2018.

# Note 3.3 Impairment testing

## Key accounting policies

Property, plant and equipment, intangible assets and goodwill are monitored for indications of potential impairment on a continuous basis. Cash-generating units with intangible assets with an indefinite useful life and goodwill are tested for impairment annually. If there are indications of impairment, impairment tests are immediately performed. If these tests indicate that the carrying amounts can no longer be justified, the assets are written down to their recoverable amount. Impairment tests are carried out by identifying and discounting (to value-in-use) cash flows relating to the cash-generating units applying a risk-adjusted, market-based rate of return.

In assessing impairments, non-current assets are grouped at the lowest level where it is possible to identify independent cash inflows (cash generating units/CGUs).

Investments in companies recognised using the equity method are tested for impairment whenever there are indicators of potential impairment. An impairment charge is recognised for investments if their recoverable amount, estimated as the higher of fair value less costs to sell and value in use, is lower than the carrying amount.

At each reporting date, it is assessed whether there is any basis for reversing previous impairment losses of property, plant and equipment. Previous impairment losses of goodwill are not reversed.

## Key estimates and assumptions

***Cash-generating units***

The Group has defined Networks as a single cash-generating unit. Production is split up into power plant areas. This means that power plants that are located in the same watercourse and jointly managed are regarded as a single cash-generating unit. Impairment tests are carried out by calculating the present value of future cash flows from the cash-generating unit, which are then tested against associated carrying amounts.

***Estimation uncertainty***

The Group has significant property, plant and equipment and intangible assets, including goodwill. Changes in these assets are presented in Note 3.1 Property, plant and equipment and Note 3.2 Intangible assets. Estimation uncertainty attaches to property, plant and equipment and intangible assets, since both the valuation and the estimated useful lives of these assets are based on future information, which is hard to predict with a high degree of certainty. Intangible assets are deemed to present the highest degree of uncertainty. Intangible assets are primarily measured and recognised in the balance sheet based on the company's own valuations, and mainly derive from the acquisition of businesses. Goodwill is residual and arises from acquisitions.

The Group's cash-generating units are tested for impairment each year. The Group assesses whether there are any indications of potential impairment each quarter. If there are any indications of impairment, impairment tests are immediately performed.

Assessing indicators of potential impairment involves discretionary judgements. Typical indicators of potential impairment include changes in market prices, agreements, negative events or other operating conditions.

Calculations of value-in-use are based on discretionary judgements and assumptions concerning future cash flows, the most important of which relate to future power prices, the regulatory regime, exchange rates, sales volumes and return requirements.

***Budgeting and forecasting assumptions***

The impairment tests carried out for 2018 are based on the budget for 2019. For Other business, forecasts for the next four years before the terminal value is established.  For Networks and Production cash flows for a longer period are applied, before the terminal value is established. This is due to long-term changes in regulatory efficiency (DEA) and the NVE interest rate in Networks' income framework model and power prices for Production, as well as planned future investment levels. It is assumed that the current framework for permitted income model will be continued until the terminal year. Power prices used in the impairment tests are based on an analysis company's (independent third-party) low-case scenario for future price development as of September 2018, along with forward curves in the market (Nasdaq).

***Discount rate***

The applied discount rate is based on the company's cost of capital, which in turn is based on a weighted average return requirement for equity and loan capital. The return on equity requirement is estimated using the capital asset pricing model (CAPM). The return on loan capital requirement is estimated based on the long-term risk-free interest rate plus a credit margin derived from Hafslund and E-CO Energy's marginal long-term interest rate. The discount rate is adjusted for the expected debt-to-assets ratio and business risk for the individual cash-generating unit. A pre-tax discount rate in the range 5.1–10.9 per cent has been applied for the various cash-generating units.

***Sensitivity***

The Group has carried out sensitivity analyses examining the consequences of changes in various assumptions for the recoverable amount. Scenarios examined include a 20 per cent decrease in the NVE interest rate, a 30 per cent decrease in power prices in the terminal year, lower efficiency (DEA) and a 20 per cent increase in the discount rate. Networks and Production showed strong resilience in the performed sensitivity tests. Impairment tests carried out in 2018 justified the balance sheet values for property, plant and equipment, intangible assets and goodwill. The list below shows carrying amounts at the end of 2018:

| NOK million | Production 2018 | Networks 2018 | Group 2018 |
|---|---|---|---|
| **BALANCE SUBJECT TO TESTING** | | | |
| Property, Plant and Equipment | 12,588 | 12,782 | 25,370 |
| Goodwill | 2,936 | 624 | 3,560 |
| Waterfall rights | 12,914 | - | 12,914 |
| **Balance tested for impairment** | **28,439** | **13,406** | **41,845** |

## Note 3.4 Lease commitments

### Key accounting policies

As of 31 December 2018, Hafslund E-COs future lease payments primarily relate to office buildings, transformer substations, waterfall rights and power plants.

Lease agreements where all the risk and rewards of ownership of the asset have not been substantially transferred are classified as operating leases. All the Group's leases are operating leases with varying payment terms, price regulation clauses and rights to prolongation and purchase. Lease payments are classified as operating expenses and are recognised on a straight-line basis over the lease term.

The Group does not have any finance lease agreements.

| NOK million | 2018 | 2017 |
|---|---|---|
| **FUTURE LEASE PAYMENTS, OPERATING LEASES** | | |
| Less than one year | 132 | 124 |
| Between one and five years | 703 | 822 |
| More than five years | 117 | 130 |
| **Future lease payments, operating leases** | **952** | **1,076** |

In 2018, an amount of NOK 133 million (NOK 154 million) was recognised in profit or loss for leases of office buildings, transformer substations, power plants and other assets.

## Note 3.5 Equity-accounted investees

### Key accounting policies

The Group's quity-accounted investees comprise interests in associates which are entities over which Hafslund E-CO exerts significant influence, but not control. Significant influence will generally exist when the Group has a shareholding of between 20 and 50 per cent of the voting rights.

All the Group's investments in associates are recognised in accordance with the equity method. Investments are recognised at cost at the time of acquisition, and the Group's share of the results in subsequent periods is recognised in income or expenses. Amounts recognised in the balance sheet include any implicit goodwill identified at the time of acquisition, less any subsequent impairments. On the reduction of a shareholding in an associate where the Group retains significant influence, only a pro rata share of amounts previously recognised in other comprehensive income is reclassified in the income statement.

The Group's share of its associates' post-acquisition profits or losses is recognised under Share of profit/loss from equity-accounted investees, which is included in the Group's operating result and added to the recognised value of the investment. The Group's share of other comprehensive income of the associate is recognised in the consolidated comprehensive income and the value of the investment recognised in the statement of financial position is adjusted accordingly. When the Group's share of losses in an associate equals or exceeds its interest in the associate, including doubtful receivables for the entity, the Group does not recognise further losses, unless it has incurred obligations or

## Note 3.5 Equity-accounted investees *(continued)*

made payments on behalf of the associate.

At the end of each accounting period, the Group determines whether there is any need to recognise an impairment loss on the investment in the associate. In such cases, the impairment loss is measured as the difference between the recoverable amount of the investment and its book value under “Share of profit/loss from equity-accounted investees”.

In the event of any gains or losses on transactions between the Group and its associates, only the proportionate share relating to external shareholders is recognised. Unrealised losses are eliminated unless there is a need to recognise an impairment for the asset that was the subject of the transaction. The financial statements of associates have been restated where necessary to ensure consistency with the policies adopted by the Group.

Dilution gains and losses arising on investments in associates are recognised in profit or loss.

The Group presents its shareholdings in associates under in the consolidated statement of financial position under “Equity-accounted investees”.

### Key estimates and assumptions

Based on an overall assessment considering size and complexity, Fredrikstad Energi AS is deemed to be a material associate. None of the associates are listed or have observable market values.

| Company name | Acquisition date | Registered office | Shareholding | Voting rights |
|---|---|---|---|---|
| Rakkestad Energi AS | 2001 | Rakkestad | 33 % | 33 % |
| Trøgstad Energiverk AS | 2014 | Trøgstad | 49 % | 49 % |
| Kraftcert AS | 2014 | Lysaker | 33 % | 33 % |
| Fredrikstad Energi AS | 2014 | Fredrikstad | 49 % | 49 % |
| Energy Future Invest AS | 2012 | Gjøvik | 50 % | 50 % |
| NGK Utbygging | 2014 | Oslo | 25 % | 25 % |
| Glomma og Laagens Brukseierforening | 1918 | Lillehammer | - | 26,9 % |
| NorthConnect | 2010 | Kristiansand | 20 % | 20 % |

**2018**

| NOK million | Fredrikstad Energi AS | Other | Total |
|---|---|---|---|
| **BALANCE AT 1 JANUARY 2018** | **189** | **128** | **317** |
| Reclassification [1)] | - | 69 | 69 |
| Share of profit after tax | -17 | -18 | -36 |
| Depreciation excess values | 9 | -1 | 8 |
| Additions/disposals | - | 19 | 19 |
| Other equity changes | 40 | -1 | 39 |
| **Balance at 31 December 2018** | **220** | **196** | **416** |

*[1]Holdings in Glomma og Laagens Brukseierforening and NorthConnect were in 2017 classified as joint operations and financial asset, respectively.*

## Note 3.5 Equity-accounted investees *(continued)*

**2017**

| NOK million | Fredrikstad Energi AS | Other | Total |
|---|---|---|---|
| **BALANCE AT 1 JANUARY 2017** | **198** | **161** | **358** |
| Share of profit after tax | - | 5 | 5 |
| Depreciation excess values | 9 | -1 | 8 |
| Buyout minority | -8 | - | -8 |
| Additions/disposals | - | -36 | -36 |
| Dividends | -10 | -1 | -10 |
| **Balance at 31 December 2017** | **189** | **128** | **317** |

Fredrikstad Energi AS is a Norwegian energy group primarily engaged in construction, operation and maintenance of the network and the sale of energy, primarily in local markets. Fredrikstad Energi AS is headquartered in Fredrikstad.

The Group recognised an impairment loss on its shareholding in Energy Future Invest AS, which owns shares in Norwegian Crystals AS ("NC"). The Group has also recognised an impairment loss on its direct shareholding in NC. Both investments had been written down to 0 (zero) as of 31 December 2018. The total impairment loss in profit or loss was NOK 55.1 million, of which NOK 38.2 million in Share of profit/loss from equity-accounted investees and NOK 16.9 million in Other financial income/expenses.

## Note 3.6 Joint arrangements

### Key accounting policies

***Joint arrangements***

A joint arrangement is an arrangement where two or more parties have joint control. Joint control exists when decisions on relevant activities require unanimity between the parties sharing control.

Investments in joint arrangements are classified as either joint operations or joint ventures. Joint operations are arrangements where the parties with joint control over the arrangement have rights to the assets and responsibilities for the liabilities in the joint operation. Such arrangements are recognised by the Group at its proportionate interest in the operation's income, expenses, assets and liabilities. All the Group's joint arrangements are deemed to be joint operations, and the Group's interest coincides with the shareholding in all cases.

### Key estimates and assumptions

Assessing whether an investment is a subsidiary, joint operation/venture or associate requires the use of judgement, in particular regarding the level of control. The Group assesses the level of control based on facts and circumstances pertaining to each individual investment.

In the case of power companies and power plants, such assessments typically relate to production decisions and mechanisms determining who can withdraw power and at what times. The frameworks for operation of jointly owned power plants are often regulated through an agreement between the owners which, depending on how strictly operations

## Note 3.6 Joint arrangements *(continued)*

are regulated through this agreement, could be an indicator of joint control. By analysing the operator agreement, the Group assesses whether joint control exists with regards to influencing relevant activities and value drivers, and whether the agreement provides flexibility to influence business plans and budgets.

If it is concluded that joint control exists, the Group assesses whether the arrangement should be classified as a joint operation or joint venture. Assessing whether a joint arrangement is a joint operation or joint venture requires an overall assessment, which takes account of shareholder agreements, the rights and obligations of participants, as well as other underlying facts and circumstances.

Hafslund E-CO considers power plants that are organised as a separate legal entity, where there is an independent business that sells power production in the market under its own name and where the owners share the net return in accordance with their stake to be joint ventures. If there are agreements that allocate total power production, total assets and liabilities between the parties, Hafslund E-CO classifies the investment as a joint operation. Investments that are not a separate legal entity will always be a joint operation.

| Company name | Classification | Registered office | Shareholding | Voting rights |
|---|---|---|---|---|
| Foreningen til Hallingdals-vassdragets regulering | Joint operations | Oslo | | 73.5 % |
| Forening til Bægnavassdragets regulering | Joint operations | Hønefoss | | 38.3 % |
| Vinstra Kraftselskap DA | Joint operations | Lillehammer | 66.7 % | |
| Opplandskraft DA | Joint operations | Lillehammer | 50.0 % | |
| Øvre Otta DA | Joint operations | Lillehammer | 36.7 % | |
| Nedre Otta DA | Joint operations | Lillehammer | 26.9 % | |
| Storbrofoss Kraftanlegg DA | Joint operations | Lillehammer | 80.0 % | |
| Bagn Kraftverk DA | Joint operations | Porsgrunn | 16.0 % | |
| Embretsfosskraftverkene DA | Joint operations | Drammen | 50.0 % | |
| Aurlandsanleggene | Joint operations | Oslo | 93.0 % | |
| Solbergfossanlegget | Joint operations | Oslo | 66.7 % | |
| Usta Kraftverk | Joint operations | Oslo | 57.1 % | |
| Nes Kraftverk | Joint operations | Oslo | 57.1 % | |
| Rosten Kraftverk | Joint operations | Lillehammer | 72.0 % | |
| Uvdalsverkene | Joint operations | Porsgrunn | 10.0 % | |
| Sarp Kraftverk | Joint operations | Askim | 50.0 % | |

## Note 3.6 Joint arrangements *(continued)*

### Discussion of key matters

At the reporting date, the Group regarded all its investments in joint arrangements to be joint operations, where the Group recognises its interests in each individual asset and liability item along with a corresponding share of income and expenses in the arrangement. The Group's interest coincides with the shareholding.

The Group collaborates with other companies on the construction and operation of power plants. The owner companies' pro-rata shares of power production are calculated after the deduction of liabilities to supply concessionary power and similar.

Voting shares are generally the same as the shareholding percentage, though legislation and agreements may require unanimity for all or some decisions. The regulatory associations each issue a number of regulations. The members' shareholdings are linked to the individual regulations. The stated voting share indicates the share of votes at the Annual General Meeting.

Indirect shareholdings: Øvre Otta DA is owned by Opplandskraft DA. The stated shareholding is the Group's indirect shareholding. Bagn Kraftverk DA is owned by Storbrofoss Kraftanlegg DA. The stated shareholding is the Group's indirect shareholding.

The Group is liable for its share of the liabilities in the joint operations.

## Note 4.1 Other liabilities and obligations

### Key accounting policies

***Liabilities to the land owner***

The Group is obliged through various agreements to pay compensation and deliver free power to land owners in consideration for using the waterfall and the land to generate hydropower. The liabilities for annual compensation and free power are classified as long-term liabilities in the line item Other obligations. The contra item is waterfall rights, which is classified as an intangible asset. Waterfall rights are not depreciated if there is no right of reversion to state ownership and the assets are deemed to be perpetual. .

*Free power – settled in cash*

Free power contracts entered into with the land owner that are dependent on the power price and are settled in cash are initially recognised at fair value and subsequently measured at fair value through profit or loss.

*Cash compensation*

The Group treats perpetual cash compensation with fixed annual amounts as financial liabilities that are initially recognised at fair value and subsequently measured at amortised cost.

*Free power – settled in kind*

The Group believes its contracts relating to physical delivery of free power are covered by the "own use" exemption. The Group recognises a provision equating to the present value of the full cost.

## Note 4.1 Other liabilities and obligations *(continued)*

*Concessionary power*
The Group is awarded perpetual licences for developing and operating hydropower plants, in return for which the Group is obliged to supply concessionary power to local and county authorities each year. This obligation is covered by both physical deliveries and a financial settlement scheme whereby the Group pays the difference between the spot and concessionary power price to the party entitled to receive concessionary power. At the end of 2018, the total annual volume of concessionary power with financial settlement was 129 GWh (129 GWh). Concessionary power is not recognised as a financial liability in the statement of financial position.

*Licence fees*
Licence fees are not recognised as a financial liability in the statement of financial position. Paid licence fees are expensed as incurred.

***Other liabilities***
Other liabilities are recognised at fair value and subsequently measured at amortised cost.

| NOK million | 2018 | 2017 |
|---|---|---|
| **FINANCIAL LIABILITIES TO LANDOWNERS** | | |
| Free power - settled in cash | 131 | 92 |
| Compensation to landowners | 1,105 | 563 |
| **Financial liabilities to landowners** | **1,235** | **654** |
| **OTHER FINANCIAL LIABILITIES** | | |
| Other financial liabilities | 40 | 34 |
| **Other financial liabilities** | **40** | **34** |
| **PROVISIONS FOR OBLIGATIONS TO LANDOWNERS** | | |
| Free power - settled in kind | 19 | 65 |
| **Provisions for obligations to landowners** | **19** | **65** |
| **Other liabilities and obligations** | **1,294** | **753** |

Other financial liabilities mainly relate to liabilities regarding business transfers where the Group is committed to covering a share of the pension costs of former employees in various general partnerships (DAs) where the Group is a co-owner but where the employees have been transferred to Eidsiva Energi.

## Note 4.2 Guarantees

The Group purchases bank guarantees to secure certain liabilities. At the reporting date, these guarantees comprised NOK 26 million in employees' tax deduction guarantees (NOK 21 million), NOK 34 million in rental guarantees (NOK 51 million) and NOK 1 million in contract and payment guarantees (NOK 0.5 million).

## Note 5.1 Financial instruments

### Key accounting policies

Financial instruments are recognised when the Group becomes party to contractual provisions of the instrument. The Group early-adopted IFRS 9 in 2017.

***Classification and measurement***
Financial assets and liabilities are classified in three categories: amortised cost, fair value through other comprehensive income and fair value through profit or loss. The classification is dependent on the method of initial recognition and the valuation is based on the Group's business model for management of its financial instruments and the characteristics of the cash flows for the individual financial instrument.

Financial instruments are not reclassified after initial recognition unless the Group changes its model for management of its financial assets.

***Amortised cost***
Financial assets that the Group holds to collect contractual cash flows are recognised at fair value and subsequently measured at amortised cost. The main instruments in this category are trade receivables, other receivables and bank deposits.

Financial liabilities are recognised at fair value and as a main rule subsequently measured at amortised cost. Financial liabilities such as trade payables, bond loans, commercial papers and other loans are classified at amortised cost, with the exception of two loans that are measured at fair value with subsequent changes in value through profit or loss.

The effective interest method is used to calculate amortised cost.

***Fair value through other comprehensive income***
The Group has entered into combined interest and currency swaps to convert repayments of principal amounts on loans in foreign currency to NOK. The currency portion of the derivative is designated as a hedgig instrument in a cash flow hedge, with changes in fair value through other comprehensive income to the extent that the hedge is effective. Hedge accounting is discussed in more detail in Note 5.6 Derivatives and hedging.

For financial liabilities, changes in fair value attributable to changes in inherent credit risk are recognised through other comprehensive income, while the remaining change in value is recognised through profit or loss.

***Fair value through profit or loss***

Financial assets are initially recognised at fair value with subsequent changes through profit or loss, apart from the cases mentioned in the two sections above.

Financial liabilities that are not classified at amortised cost or that are not designated as hedging instruments are initially recognised at fair value and subsequently at fair value through profit or loss. This applies to financial liabilities held for trading purposes and mainly power derivatives.

***Impairment***

The Group recognises provisions for expected credit losses for financial assets that are not classified at fair value.

***Derecognition of financial instruments***

A financial asset is derecognised when the rights to receive cash flows from the asset have expired, or the Group has transferred its rights to collect cash flows from the asset and the Group either has transferred all substantive risks and rewards relating to the instrument, or the Group has not transferred or retained all substantive risks and rewards relating to the instrument but has transferred control of the asset.

A financial liability is derecognised when it has been redeemed, cancelled or matures. When an existing financial liability is replaced by another liability to the same lender on materially different terms, or the provisions for an existing liability have changed significantly, this is treated as a cancellation of the original liability and a new liability is recognised. The difference between the carrying amounts is recognised in profit or loss.

***Offsetting of financial instruments***

Financial assets and financial liabilities are offset and the net amount is reported in the statement of financial position if there is a legally enforceable right to offset, and there is an intention to settle net before the assets and the liabilities are realised.

| NOK million | Assets and liabilities at fair value through profit and loss | Derivatives for hedging purposes | Assets and liabilities at amortised cost | Total |
|---|---|---|---|---|
| **2018** | | | | |
| **FINANCIAL ASSETS** | | | | |
| Non-current receivables | - | - | 786 | 786 |
| Shares and other financial assets | 2 | - | 200 | 202 |
| Non-current derivatives | - | 928 | - | 928 |
| Current derivatives | 1 | - | - | 1 |
| Trade receivables | - | - | 472 | 472 |
| Other current receivables | - | - | 1,186 | 1,186 |
| Cash and cash equivalents | - | - | 2,993 | 2,993 |
| **Financial assets** | **3** | **928** | **5,638** | **6,569** |

# Note 5.1 Finansielle instrumenter *(continued)*

| NOK million | Assets and liabilities at fair value through profit and loss | Derivatives for heding purposes | Assets and liabilities at amortised cost | Total |
|---|---|---|---|---|
| **2018 FINANCIAL LIABILITIES** | | | | |
| Current interest-bearing debt | 818 | - | 2,234 | 3,052 |
| Non-current interest-bearing debt | - | - | 18,533 | 18,533 |
| Current derivatives | 350 | - | - | 350 |
| Non-current derivatives | 11 | 82 | - | 93 |
| Other liabilities | 131 | - | 1,144 | 1,275 |
| Trade payables | - | - | 396 | 395 |
| Other current non-interest-bearing liabilities | - | - | 2,060 | 2,060 |
| **Financial liabilities** | **1,310** | **82** | **24,367** | **25,758** |
| **2017 FINANCIAL ASSETS** | | | | |
| Non-current receivables | - | - | 513 | 513 |
| Shares and other financial assets | 19 | - | 403 | 421 |
| Non-current derivatives | - | 812 | - | 812 |
| Current derivatives | 72 | - | - | 72 |
| Trade receivables | - | - | 352 | 352 |
| Other current receivables | - | - | 862 | 862 |
| Cash and cash equivalents | - | - | 1,946 | 1,946 |
| **Financial assets** | **90** | **812** | **4,075** | **4,978** |

| NOK million | Assets and liabilities at fair value through profit and loss | Derivatives for heding purposes | Assets and liabilities at amortised cost | Total |
|---|---|---|---|---|
| **2017 FINANCIAL LIABILITIES** | | | | |
| Current interest-bearing debt | 783 | - | 1,414 | 2,197 |
| Non-current interest-bearing debt | 868 | - | 16,562 | 17,430 |
| Current derivatives | 27 | - | - | 27 |
| Non-current derivatives | 25 | 115 | - | 140 |
| Other liabilities | 91 | - | 597 | 688 |
| Trade payables | - | - | 409 | 409 |
| Other current non-interest-bearing liabilities | - | - | 1,919 | 1,919 |
| **Financial liabilities** | **1,794** | **115** | **20,902** | **22,811** |

## Discussion of key matters

In 2018, changes in value of loans at fair value including changes in fair value attributable to changes in inherent credit risk amounted to NOK -40 million (NOK -56 million). Changes in fair value attributable to changes in inherent credit risk in 2018 and 2017 were immaterial.

# Note 5.2 Interest-bearing debt

| NOK million | Loan amounts | Currency | Due date | 31.12.2018 | 31.12.2017 |
|---|---|---|---|---|---|
| **E-CO ENERGI HOLDING AS** | | | | | |
| Certificate on the Norwegian market | 500 | NOK | 2018 | - | 500 |
| Bond issue on the Norwegian market | 500 | NOK | 2018 | - | 500 |
| Bond issue on the Norwegian market | 100 | NOK | 2019 | 100 | 100 |
| Private placement on the American market | 50 | USD | 2019 | 433 | 410 |
| Bond issue on the Norwegian market | 500 | NOK | 2022 | 500 | 500 |
| Private placement on the American market | 75 | USD | 2023 | 649 | 615 |
| Private placement on the American market | 290 | NOK | 2024 | 290 | 290 |
| Private placement on the American market | 25 | USD | 2026 | 216 | 205 |
| The Nordic Investment Bank | 2,000 | NOK | 2027-2030 | 2 000 | 200 |
| Private placement on the American market | 910 | NOK | 2027 | 910 | 910 |
| Private placement on the Japanese market | 5,000 | JPY | 2028 | 394 | 363 |
| Bond issue on the Norwegian market | 250 | NOK | 2029 | 250 | 250 |
| Private placement on the Japanese market | 5,000 | JPY | 2029 | 394 | 363 |
| Private placement on the American market | 723 | NOK | 2029 | 723 | 723 |
| Bond issue on the Norwegian market | 200 | NOK | 2030 | 200 | 200 |
| Loan from Eidsiva Vannkraft AS | 96 | NOK | 2030 | 96 | 248 |
| Bond issue on the Norwegian market | 200 | NOK | 2031 | 200 | 200 |
| Private placement on the American market | 125 | USD | 2031 | 1,082 | 1,025 |
| Private placement on the German market | 30 | EUR | 2031 | 297 | 295 |
| Private placement on the American market | 848 | NOK | 2032 | 848 | 848 |
| Private placement on the American market | 600 | NOK | 2033 | 600 | 600 |
| Subordinated loan from the City of Oslo | 2,347 | NOK | 2037 | 2,347 | 2,347 |
| **Interest-bearing debt translated to NOK** | | | | **12,528** | **11,692** |
| Carrying amount of interest-bearing debt related to fair value hedges | | | | 172 | 216 |
| **Interest-bearing debt, balance at 31 December 2018** | | | | **12,700** | **11,908** |
| Hereof current interest-bearing debt | | | | 533 | 1,000 |
| Hereof non-current interest-bearing debt | | | | 12,168 | 10,908 |

# Note 5.2 Interest-bearing debt *(continued)*

| NOK million | Loan amounts | Currency | Due date | 31.12.2018 | 31.12.2017 |
|---|---|---|---|---|---|
| **HAFSLUND AS** | | | | | |
| Bond issue on the Norwegian market | 769 | NOK | 2018 | - | 769 |
| Bond issue on the Norwegian market | 500 | NOK | 2019 | 500 | 500 |
| Certificate on the Norwegian market | 500 | NOK | 2019 | 500 | - |
| The Nordic Investment Bank | 1,322 | NOK | 2019-2030 | 1,322 | 1,742 |
| Bond issue on the Norwegian market | 500 | NOK | 2019 | 500 | 500 |
| Bond issue on the Norwegian market | 600 | NOK | 2019 | 600 | 600 |
| Bond issue on the Norwegian market | 305 | NOK | 2019 | 305 | 305 |
| Bond issue on the Norwegian market | 750 | NOK | 2020 | 750 | 750 |
| Bond issue on the Norwegian market | 300 | NOK | 2020 | 300 | 300 |
| Bond issue on the Norwegian market | 400 | NOK | 2020 | 400 | - |
| Bond issue on the Norwegian market | 750 | NOK | 2021 | 750 | 750 |
| Bond issue on the Norwegian market | 400 | NOK | 2022 | 400 | 400 |
| Bond issue on the Norwegian market | 300 | NOK | 2023 | 300 | 300 |
| Bond issue on the Norwegian market | 450 | NOK | 2024 | 450 | 450 |
| Bond issue on the Norwegian market | 293 | NOK | 2024 | 293 | 293 |
| **Interest-bearing debt translated to NOK** | | | | **7,370** | **7,659** |
| Fair value adjustment loan portfolio | | | | 13 | 61 |
| **Interest-bearing debt** | | | | **7,383** | **7,720** |
| Hereof current interest-bearing debt | | | | 2,519 | 1,197 |
| Hereof non-current interest-bearing debt | | | | 4,864 | 6,523 |

# Note 5.2 Interest-bearing debt *(continued)*

| NOK million | Loan amounts | Currency | Due date | 31.12.2018 | 31.12.2017 |
|---|---|---|---|---|---|
| **HAFSLUND E-CO AS** | | | | | |
| Subordinated loan from Oslo Energi Holding AS | 1,500 | NOK | | 1,500 | - |
| **Interest-bearing debt translated to NOK** | | | | **1,500** | **-** |
| Fair value adjustment loan portfolio | | | | - | - |
| **Interest-bearing debt** | | | | **1,500** | **-** |
| Hereof non-current interest-bearing debt | | | | 1,500 | - |
| | | | | | |
| **HAFSLUND E-CO GROUP** | | | | | |
| Balance at 31 December, current interest-bearing debt | | | | 3,052 | 2,197 |
| Balance at 31 December non-current interest-bearing debt | | | | 18,533 | 17,430 |

## Note 5.2 Interest-bearing debt *(continued)*

Loans denominated in foreign currency are hedged in NOK by entering into interest and currency swaps which are subject to fixed or floating interest in NOK. The table above shows the value of the loan translated at the balance sheet rate, before the effect of fair value adjustments of loans measured at fair value, interest and currency swaps and any hedge accounting. Hedge accounting is performed for the loans in E-CO Energi Holding only, and the value of hedge accounting recognised in the statement of financial position for the loan as a result of fair value hedging is shown in a separate line in the table for E-CO Energi Holding.

As shown in the table above, the Group has two subordinated loans from the City of Oslo and Oslo Energi Holding AS (wholly owned by the City of Oslo) respectively. These loans are discussed in more detail in Note 9.1 Related party transactions.

See also Note 5.4 Financial risk management and Note 5.6 Derivatives and hedging.

| NOK million | 2018 | 2017 |
|---|---|---|
| **CHANGES IN INTEREST-BEARING DEBT** | | |
| Short-term interest-bearing debt at 1 January | 2,197 | 2,412 |
| New current borrowings | 1,800 | 2,250 |
| Repayment of current interest-bearing debt | -3,497 | -4,162 |
| Transfers from non-current interest-bearing debt | 2,552 | 1,697 |
| Other changes to current interest-bearing debt | | |
| **Current interest-bearing debt at 31 December** | **3,052** | **2,197** |
| | | |
| **Non-current interest-bearing debt at 1 January** | **17,430** | **17,211** |
| New non-current borrowings | 3,700 | 3,650 |
| Repayment of non-current interest-bearing debt | -151 | -500 |
| Transfers to current interest-bearing debt | -2,552 | -1,697 |
| Effect of change in foreign currency | 189 | -104 |
| Effects of fair value adjustment | -43 | -74 |
| Other changes in long-term interest-bearing debt | -41 | -1,057 |
| **Non-current interest-bearing debt at 31 December** | **18,533** | **17,430** |

# Note 5.3 Maturity structure, financial liabilities

| NOK million | Within 12 months | 1 to 3 years | More than 3 years | 31.12.2018 |
|---|---|---|---|---|
| **E-CO ENERGI HOLDING AS** | | | | |
| Interest and currency derivatives | -124 | - | -590 | -714 |
| Non-current interest-bearing debt | - | - | 12,168 | 12,168 |
| Trade payables and other current liabilities | 810 | - | - | 810 |
| Current interest-bearing debt | 533 | - | - | 533 |
| **E-CO Energi Holding AS** | **1,219** | **-** | **11,578** | **12,797** |
| **HAFSLUND AS** | | | | |
| Non-current interest-bearing debt | - | 2,791 | 2,073 | 4,864 |
| Trade payables and other current liabilities | 1,597 | - | - | 1,597 |
| Current interest-bearing debt | 2,519 | - | - | 2,519 |
| **Hafslund AS** | **4,116** | **2,791** | **2,073** | **8,980** |
| **HAFSLUND E-CO AS** | | | | |
| Non-current interest-bearing debt | - | - | 1,500 | 1,500 |
| Trade payables and other current liabilities | 49 | - | - | 49 |
| Current interest-bearing debt | - | - | - | - |
| **Hafslund E-CO AS** | **49** | **-** | **1,500** | **1,549** |
| **Group at 31 December 2018** | **5,384** | **2,791** | **15,151** | **23,326** |
| **Current interest-bearing debt, balance at 31 December 2018** | | | | **3,052** |
| **Non-current interest-bearing debt, balance at 31 December 2018** | | | | **18,533** |
| **Total** | | | | **21,584** |

| NOK million | Within 12 months | 1 to 3 years | More than 3 years | 31.12.2017 |
|---|---|---|---|---|
| **E-CO ENERGI HOLDING AS** | | | | |
| Interest and currency derivatives | - | -100 | -424 | -524 |
| Non-current interest-bearing debt | - | 510 | 10,397 | 10,907 |
| Trade payables and other current liabilities | 649 | - | - | 649 |
| Current interest-bearing debt | 1,000 | - | - | 1,000 |
| **E-CO Energi Holding AS** | **1,649** | **410** | **9,973** | **12,032** |
| **HAFSLUND AS** | | | | |
| Non-current interest-bearing debt | - | 3,210 | 3,313 | 6,523 |
| Trade payables and other current liabilities | 1,678 | - | - | 1,678 |
| Current interest-bearing debt | 1,197 | - | - | 1,197 |
| **Hafslund AS** | **2,875** | **3,210** | **3,313** | **9,398** |
| **Group at 31 December 2017** | **4,524** | **3,620** | **13,286** | **21,430** |
| **Current interest-bearing debt, balance at 31 December 2017** | | | | **2,197** |
| **Non-current interest-bearing debt, balance at 31 December 2017** | | | | **17,430** |
| **Total** | | | | **19,627** |

## Note 5.3 Maturity structure, financial liabilities *(continued)*

The tables on the previous page show undiscounted cash flows for each interval. The effect of combined interest rate and currency derivatives that swap principal payments in foreign currency to Norwegian kroner is included in the table regardless of whether the derivative is a liability or asset, so that the table shows the principal amount actually paid.

The Group's loans are divided into floating and fixed interest rates as follows:

| NOK million | Floating | Fixed | 31.12.2018 |
|---|---|---|---|
| E-CO Energi Holding AS | 8,930 | 3,771 | 12,701 |
| Hafslund AS | 5,115 | 2,268 | 7,383 |
| Hafslund E-CO AS | 1,500 | | 1,500 |
| **Group 31.12.2018** | **15,545** | **6,039** | **21,584** |

| NOK million | Floating | Fixed | 31.12.2017 |
|---|---|---|---|
| E-CO Energi Holding AS | 7,726 | 4,181 | 11,907 |
| Hafslund AS | 4,635 | 3,085 | 7,720 |
| Hafslund E-CO AS | | | 0 |
| **Group 31.12.2017** | **12,361** | **7,266** | **19,627** |

All the Group's loans in foreign currency are in principle fixed-rate loans. These are swapped to NOK with floating interest rates. This amounts to NOK 3 503 million at 31 December 2018.

## Note 5.4 Financial risk management

Hafslund E-CO's business is exposed to risk in a number of areas. The most important of these are of a market, regulatory, financial, operational, reputational and political nature. Risk management is an integral part of the Group's business activities and is designed to secure achievement of strategic and operational goals. Guidelines and frameworks have been established for the management of risk in the business areas. The Group's overall risk is assessed by the Audit Committee and the Board of Directors. The purpose of risk management is to take the right risk based on the Group's risk capacity and ability, expertise, solidity and development plans.

### Market risk

As a power producer, Hafslund E-CO is exposed to fluctuations in market prices and volume uncertainty, and the Group manages this risk through market participation. Power price fluctuations, together with factors that affect production volumes, will significantly impact the profitability of Hafslund's production operations. The Group's risk management derives from the utilisation of water resources in the reservoirs and from entering into physical and financial contracts. A strategy, systems and reporting routines have been established to manage risks relating to power generation. Exposure must always be kept within adopted frameworks and risk management is followed up through reporting to management and the Board.

Prices for part of the future hydropower production are hedged within adopted frameworks. The scope of hedging may vary, based on an overall assessment of market prices and future developments that could impact

## Note 5.4 Financial risk management *(continued)*

power production. The company also takes up active positions in the energy market. The Group's hedging strategy takes account of resource rent taxation, where an increase in the spot price of power is expected to have a neutral or positive effect on expected cash flows after tax. Risk management includes reporting of expected outcome of financial results.

Instruments that can be used to hedge future power production include bilateral price hedging agreements, futures, forward contracts, EPADs (Electricity Price Area Differentials) and options. Hafslund E-CO achieves area prices for physical power sales. Use of hedging instruments with other price references could reduce the effectiveness of hedging due to deviations from the area price. Where appropriate, the Group can use EPADs to hedge price variances.

The currency market is used to manage currency risk deriving from hedging where the value of hedged production can be fully or partly hedged between EUR and NOK.

As operational risk management objective related to power price risk, Hafslund E-CO employs, among others Value at Risk (VaR). VaR describes the maximum loss that can be expected for a power portfolio for a given time period within a confidence interval. Risk functions in the production business and the risk management function in the Group follow up the risk exposure. Further, risk exposure reports are reviewed by Group management.

The exposure and sensitivity of the Group's financial power contracts to a ± 30 per cent change in the power price is as follows:

| Financial power contracts (amounts in NOK million) | 31.12.2018 | +30 % | -30 % |
|---|---|---|---|
| Forward contracts | -343 | -596 | 596 |
| **Total financial power contracts/ Total effect on consolidated net profit** | **-343** | **-596** | **596** |

### Interest rate risk

Hafslund E-CO is mainly exposed to interest rate risk through its financing activities in NOK and foreign currency (Note 5.2). The Group's operating revenues and cash flows from operations are also sensitive to interest rate fluctuations to a limited degree. The Group is exposed to fluctuations in interest rates due to the fact that some of its interest-bearing debt is subject to floating interest rates. This exposure is primarily managed using instruments that balance the weighting of financing at floating and fixed interest rates.

Under the current regulatory regime, the permitted return in the Networks business is based on factors such as the annual average five-year swap interest rate plus an average credit spread for the year for bonds with a five-year term issued by power companies with good creditworthiness. Hafslund AS endeavours to reduce interest rate risk by correlating the interest rate exposure in the networks operations with interest on borrowings.

## Note 5.4 Financial risk management *(continued)*

Based on the Group's interest rate exposure at the reporting date, a change in interest rates of ± 0.5 percentage points over the entire curve would result in a change in the Group's direct borrowing costs (adjusted for the tax effect) of approximately NOK 60 million (NOK 46 million). A significant share of the Group's debt portfolio is quoted with NIBOR as the reference interest rate. This means that a future annulment of NIBOR would impact the Group's interest rate exposure.

Hafslund E-CO is exposed to a limited scope of indirect interest rate risk in relation to currency and power derivatives. No correlation has been observed between the interest rate level and prices in the power market.

At the reporting date, Hafslund E-CO had subordinated loans from Oslo Energi Holding AS of NOK 1,500 million and from the City of Oslo of NOK 2,347 million (NOK 2,347 million). The average interest rate for 2018 was NOK 5.03 and 5.45 per cent respectively. If the consolidated profit for the year after interest is a loss, the interest charge is reduced by the loss amount or to zero. This reduction is final and the interest amount is not repaid at a later time. These loans do not have the same interest rate exposure as the Group's other loans.

### Currency risk

Loans in foreign currency are hedged in NOK by entering into interest rate and currency swap agreements at the time of initial borrowing. Monetary items and borrowings in foreign currency are measured at the rate at the balance sheet date. Currency losses or gains on translation to balance sheet rates are recognised in profit or loss as a currency gain or currency loss, unless the item is part of an accounting hedge and the hedge is effective (see Note 5.6). Ineffectiveness is recognised in profit or loss. The Group has no material receivables or investments in foreign currency.

The Nordic power markets use EUR as a trading and clearing currency. This means that the Group receives most of its power revenues from physical and financial trading in EUR, while most of the Group's costs are incurred in NOK. The Group uses forward exchange contracts to reduce/hedge the consequences of mismatches in foreign currency revenues and costs in NOK. The hedging horizon for foreign currency is limited to five years. Future sales of power are hedged using power derivatives. Spot sales of power are recognised at the transaction rate. Other transactions denominated in foreign currency are also recognised using the transaction rate. Power production is mainly sold via the Nord Pool Spot exchange or directly to Hafslund Strøm AS. Power is sold in EUR, and the resulting revenues are converted to NOK on an ongoing basis.

The Group has entered into combined interest rate and currency swaps to reduce currency exposure on borrowings in foreign currency. Fluctuations in foreign currency against NOK will therefore not materially impact the Group's borrowing costs.

### Credit risk

The Group is exposed to credit risk mainly through trade and other current receivables within its core activities (note 5.1) as well as counterparty risk on entering into financial derivatives (note 5.6).

The Group's main counterparties for physical power sales are Nord Pool Spot and Hafslund Strøm AS. The Group has entered into agreements

## Note 5.4 Financial risk management *(continued)*

that permit gains to be offset against losses (ISDA agreements) with all counterparties for financial derivatives. Trading in power derivatives is primarily settled through NASDAQ OMX Commodities.

Network rental from customers are mainly paid to Hafslund Tellier AS (previously owned by Hafslund, now owned by Fortum), which invoices and collects network rental on behalf of Hafslund Nett. This entails a certain concentration risk. Following the introduction of re-invoicing in 2016, invoices for network rental are sent to the power supplier, who includes the network rental in a joint invoice for electricity and network rental to the customer. These invoices account for the majority of Hafslund Nett's receivables. All power suppliers who perform re-invoicing must establish a bank guarantee for timely repayment of network rental. Networks' trade receivables also include customers of power suppliers that do not offer re-invoicing, customers who receive concessionary power, and invoicing for other services.

Credit risk is limited through diversification and by determining a lower limit for approving the creditworthiness of counterparties. Interest rate and currency derivatives are only entered into with banks with a minimum "investment grade" rating. Upper limits are also set for total credit exposure through investments and derivative positions for individual counterparties. The Group assesses credit risk for its actual exposures on an ongoing basis. Counterparties in new exposures are subject to credit checks.

### Liquidity risk

Liquidity risk is the risk that the Group will not be able to service its financial liabilities as they mature. The Group is exposed to liquidity risk to the extent that cash flows from operations do not correspond with financial liabilities. Hafslund E-CO's cash flows vary in line with factors such as market prices, seasonal fluctuations and investment levels.

The Group's strategy for managing liquidity risk is to maintain sufficient liquid funds at all times so that financial liabilities can be satisfied on maturity, including for extraordinary events, without risking unacceptable financial or reputational loss.

The Group's interest-bearing debt and related maturity dates are presented in Note 5.2. The maturity structure for other financial liabilities, including derivatives and other current liabilities are presented in Note 5.3. Liquidity risk is minimised by analysing expected inflows and outflows and assumption of current and non-current borrowings. To minimise refinancing risk, i.e. the risk of not being able to refinance a loan or cover a short-term liquidity requirement on normal commercial terms, the Group has established long-term, committed drawdown facilities in order to secure availability of liquidity, including in periods when it may be difficult to obtain financing in the markets.

At the reporting date, unused drawdown facilities amounted to NOK 4.0 billion (NOK 4.5 billion).To reduce liquidity risk, the Group also holds a liquidity reserve in the form of bank deposits and placements in money market funds. As additional security against turbulence in the finance markets and potential losses of financing sources, the Group has established (unused) bank credit lines of NOK 300 million (NOK 100 million).

## Note 5.5 Fair value

### Key accounting policies

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

***Fair value hierarchy: Fair value measurements are classified at the following levels:***

- Level 1: Valuation is based on listed prices in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than listed prices covered by Level 1 that are observable for the asset, either directly or indirectly.
- Level 3: Valuation is based on non-observable inputs for the asset or liability.

The Group endeavours to maximise the use of observable data where possible.

### Key estimates and assumptions

When there is no listed market price in an active market, fair value is calculated by discounting future cash flows. Future cash flows are discounted based on the market interest curve, which is in turn derived from available interest swap rates.

The reasonableness of the estimated present value of forward exchange contracts, interest rate and currency swaps, as well as interest rate swaps, assess for reasonableness against valuations from contract counterparties.

Loans at fair value are measured by discounting the loans' cash flows. The discount rate applied is the interest rate curve for Norwegian swap interest rates plus Hafslund's credit spreads. Changes in credit spreads during 2018 were immaterial compared to the fair value of the loan portfolio.

# Note 5.5 Fair value *(continued)*

| NOK million | Level 1 | Level 2 | Level 3 | Total fair value at 31.12.2018 | Balance at 31.12.2018 |
|---|---|---|---|---|---|
| **FINANCIAL ASSETS MEASURED AT FAIR VALUE** | | | | | |
| Interest and currency derivatives | - | 929 | - | 929 | 929 |
| **Total financial assets measured at fair value** | **-** | **929** | **-** | **929** | **929** |
| **FINANCIAL LIABILITIES MEASURED AT FAIR VALUE** | | | | | |
| Interest and currency derivatives | - | 93 | - | 93 | 93 |
| Power derivatives | - | 350 | - | 350 | 350 |
| Compensation to landowners and free power | - | - | 131 | 131 | 131 |
| Interest-bearing debt | - | 818 | - | 818 | 818 |
| **Total financial liabilities measured at fair value** | **-** | **1,261** | **131** | **1,392** | **1,392** |

The Group has two loans measured at fair value through profit or loss. Other loans are measured at amortised cost. The fair value of these loans is shown in the table below. The amortised cost of other financial liabilities measured at amortised cost approximately equal to their fair value. Financial assets measured at amortised cost primarily comprise of trade receivables not considered as IFRS 15-receivables and other cost where amortised cost is considered to be approximately equal to fair value, see note 2.2 and 5.10.

| NOK million | Level 1 | Level 2 | Level 3 | Total fair value at 31.12.2017 | Balance at 31.12.2017 |
|---|---|---|---|---|---|
| **FINANCIAL ASSETS MEASURED AT FAIR VALUE** | | | | | |
| Interest and currency derivatives | - | 830 | - | 830 | 830 |
| Power derivatives | - | 54 | - | 54 | 54 |
| **Total financial assets measured at fair value** | **-** | **884** | **-** | **884** | **884** |
| **FINANCIAL LIABILITIES MEASURED AT FAIR VALUE** | | | | | |
| Interest and currency derivatives | - | 140 | - | 140 | 140 |
| Power derivatives | - | 28 | - | 28 | 28 |
| Compensation to landowners and free power | - | - | 91 | 91 | 91 |
| Interest-bearing debt | - | 1,606 | - | 1,606 | 1,606 |
| **Total financial liabilities measured at fair value** | **-** | **1,774** | **91** | **1,865** | **1,865** |

Please see note 5.2 Interest-bearing debt for more information about the Group's interest-bearing debt.

## Discussion of key matters

There were no changes in the measurement of fair values during the reporting period that resulted in transfers between levels 1 and 2 and no transfers in or out of level 3.

# Note 5.5 Fair value *(continued)*

| NOK million | Level 1 | Level 2 | Level 3 | Total fair value at 31.12.2018 | Balance at 31.12.2018 |
|---|---|---|---|---|---|
| **FINANCIAL LIABILITIES MEASURED AT AMORTISED COST** | | | | | |
| Other current non-interest-bearing liabilities | - | - | 719 | 719 | 719 |
| Trade payables | - | - | 395 | 395 | 395 |
| Other liabilities | - | - | 1,163 | 1,163 | 1,163 |
| Interest-bearing debt | - | 16,912 | - | 16,912 | 16,918 |
| **Total financial liabilities measured at amortised cost** | **-** | **16,912** | **2,277** | **19,189** | **19,195** |

| | |
|---|---|
| Interest-bearing debt measured at amortised cost | 16,918 |
| Interest-bearing debt measured at fair value | 818 |
| Subordinated loan, measured at amortised cost, fair value not estimated | 3,847 |
| **Interest-bearing debt at 31 December 2018** | **21,584** |

| | |
|---|---|
| Non-current interest-bearing debt | 18,533 |
| Current interest-bearing debt | 3,052 |
| **Interest-bearing debt at 31 December 2018** | **21,584** |

| NOK million | Level 1 | Level 2 | Level 3 | Total fair value at 31.12.2017 | Balance at 31.12.2017 |
|---|---|---|---|---|---|
| **FINANCIAL LIABILITIES MEASURED AT AMORTISED COST** | | | | | |
| Other current non-interest-bearing liabilities | - | - | 560 | 560 | 560 |
| Trade payables | - | - | 409 | 409 | 409 |
| Other liabilities | - | - | 662 | 662 | 662 |
| Interest-bearing debt | - | 15,961 | - | 15,961 | 15,674 |
| **Total financial liabilities measured at amortised cost** | **-** | **15,961** | **1,631** | **17,592** | **17,305** |

| | |
|---|---|
| Interest-bearing debt measured at amortised cost | 15,674 |
| Interest-bearing debt measured at fair value | 1,606 |
| Subordinated loan, measured at amortised cost, fair value not estimated | 2,347 |
| **Interest-bearing debt at 31 December 2017** | **19,627** |

| | |
|---|---|
| Non-current interest-bearing debt | 17,430 |
| Current interest-bearing debt | 2,197 |
| **Interest-bearing debt at 31 December 2017** | **19,627** |

## Note 5.6 Derivatives and hedging

### Key accounting policies

The Group has derivatives relating to revenue hedging of future power production, and to exchange interest rate terms and hedging of currency exposure in connection with borrowings.

The Group has entered into financial hedging agreements for power revenues in EUR, and also uses forward exchange contracts to hedge settlements from EUR to NOK. The Group does not use hedge accounting for power hedging or forward exchange contracts. This means that unrealised changes in value are recognised through profit or loss under Other operating revenue.

The Group has entered into two interest rate swaps that exchange the interest rate terms on bond loans in NOK from fixed to floating interest rates. The interest rate swaps are used to balance interest rate exposure for the Group's loan portfolio. Interest rate swaps entered into to exchange terms from fixed to floating interest rates for bond loans in NOK are treated as fair value hedges.

The Group has a policy of reducing currency risk for all new borrowings in foreign currency by exchanging payments of principal amounts and fixed interest rates in foreign currency to NOK in a 1:1 ratio using combined interest rate and currency swaps. The combined agreements also exchange interest rate terms from fixed to floating rates so that the Group receives fixed interest payments in foreign currency and pays floating interest in NOK. The change from fixed to floating interest rates in foreign currency is treated as a fair value hedge, while the change from payment of floating interest and principal amounts in foreign currency to NOK is treated as a cash flow hedge.

For one of its loans denominated in foreign currency, the Group has entered into a combined interest rate and currency swap that exchanges the terms from principal amounts and fixed interest rates in foreign currency to floating interest rates and principal amounts in NOK, as well as an interest rate swap that exchanges the interest rate terms from floating interest rate in NOK to fixed interest rate in NOK. The accounting treatment of the combined interest rate and currency swap is described in the section above, while the Group does not apply hedge accounting for the interest rate swap.

Derivatives are both initially and subsequently recognised at fair value in the balance sheet. The accounting treatment of associated gains and losses depends on whether the derivatives are designated as hedging instruments and whether the hedging relationship is deemed to be a cash flow hedge or a fair value hedge. In both cases, the ineffective portion of the hedge is recognised through profit or loss, with forward exchange contracts presented as other operating revenues and changes in value of derivatives relating to the Group's financing as finance costs. Derivatives that the Group has not designated for hedge accounting are measured and presented at fair value with changes in value through profit or loss. All derivatives are presented under Derivatives in the balance sheet, split between assets and liabilities and non-current and current items.

## Note 5.6 Derivatives and hedging *(continued)*

### Hedge accounting

The criteria for entering into a hedging relationship are determined in the Group's risk management strategy and involve a qualitative and forward-looking approach to assessing hedge effectiveness. Both the hedged item and the hedging instrument are designated and documented when hedging relationships are established and sources of ineffectiveness are identified. The Group only designates contracts with external parties as hedging instruments.

The Group has the following hedging relationships:
(nominal value: + indicates the principal amounts paid by the Group, and - indicates the principal amounts received by the Group):

NOK million

| Reference | Hedged item | Currency | Nominal amount | Due date | Interest rate | Line-item in balance sheet* |
|---|---|---|---|---|---|---|
| A | Fixed rate loan | NOK | 500 | 2018 | 5,15 % | Interest-bearing debt |
| B | Fixed rate loan | USD | 50 | 2019 | 5,19 % | Interest-bearing debt |
| C | Fixed rate loan | NOK | 500 | 2022 | 4,35 % | Interest-bearing debt |
| D | Fixed rate loan | USD | 75 | 2023 | 4,77 % | Interest-bearing debt |
| E | Fixed rate loan | USD | 25 | 2026 | 4,95 % | Interest-bearing debt |
| F | Fixed rate loan | JPY | 5 000 | 2028 | 1,51 % | Interest-bearing debt |
| G | Fixed rate loan | JPY | 5 000 | 2029 | 1,38 % | Interest-bearing debt |
| H | Fixed rate loan | NOK | 250 | 2029 | 4,40 % | Interest-bearing debt |
| I | Fixed rate loan | USD | 125 | 2031 | 3,14 % | Interest-bearing debt |
| J | Fixed rate loan | EUR | 30 | 2031 | 2,29 % | Interest-bearing debt |

* The first year's instalment is classified as current interest-bearing debt. The remainder is classified as non-current interest-bearing debt.

## Note 5.6 Derivatives and hedging *(continued)*

NOK million

| Reference | Interest rate swap agreements | Currency | Nominal amount | Due date | Interest rate | Line-item in balance sheet |
|---|---|---|---|---|---|---|
| A | Interest rate swap | NOK | 500 | 2018 | 3M NIBOR + 1.035% | Derivatives |
| B | Combined interest rate and currency swap | USD | -50 | 2019 | 5,19 % | Derivatives |
| B | Combined interest rate and currency swap | NOK | 309 | 2019 | 6M NIBOR + 0.4 % | Derivatives |
| C | Interest rate swap | NOK | -500 | 2022 | 4,35 % | Derivatives |
| C | Interest rate swap | NOK | 500 | 2022 | 3M NIBOR + 2.8 % | Derivatives |
| D | Combined interest rate and currency swap | USD | -75 | 2023 | 4,77 % | Derivatives |
| D | Combined interest rate and currency swap | NOK | 429 | 2023 | 3M NIBOR +0.86% | Derivatives |
| E | Combined interest rate and currency swap | USD | -25 | 2026 | 4,95 % | Derivatives |
| E | Combined interest rate and currency swap | NOK | 143 | 2026 | 3M NIBOR +0.86% | Derivatives |
| F | Combined interest rate and currency swap | JPY | -5,000 | 2028 | 1,51 % | Derivatives |
| F | Combined interest rate and currency swap | NOK | 301 | 2028 | 6M NIBOR +0.92% | Derivatives |
| G | Combined interest rate and currency swap | JPY | -5,000 | 2029 | 1,38 % | Derivatives |
| G | Combined interest rate and currency swap | NOK | 296 | 2029 | 6M NIBOR +0.87% | Derivatives |
| H | Interest rate swap | NOK | -250 | 2029 | 4,40 % | Derivatives |
| H | Interest rate swap | NOK | 250 | 2029 | 3M NIBOR + 2.4 % | Derivatives |
| I | Combined interest rate and currency swap | USD | -125 | 2031 | 3,14 % | Derivatives |
| I | Combined interest rate and currency swap | NOK | 1,036 | 2031 | 3M NIBOR +1.524% | Derivatives |
| J | Combined interest rate and currency swap | EUR | -30 | 2031 | 2,29 % | Derivatives |
| J | Combined interest rate and currency swap | NOK | 237 | 2031 | 6M NIBOR +1.1% | Derivatives |

## Note 5.6 Derivatives and hedging *(continued)*

The Group's hedging instruments are presented under Derivatives, and are recognised in the statement of financial position at the following amounts:

| NOK million | Fair value hedging instrument | | Change in fair value used to measure inefficiency in the period |
|---|---|---|---|
| **31 DECEMBER 2018** | **Assets** | **Liabilities** | |
| Combined interest rate and currency swaps | 906 | 82 | 153 |
| Interest rate swaps | 22 | - | -4 |
| **Total** | **928** | **82** | **149** |
| **31 DECEMBER 2017** | **Assets** | **Liabilities** | |
| Combined interest rate and currency swaps | 786 | 115 | -167 |
| Interest rate swaps | 26 | - | -11 |
| **Total** | **812** | **115** | **-178** |

### Cash flow hedging

On assumption, new borrowings in foreign currency are hedged in NOK by entering into combined interest rate and currency swaps, where payments of fixed interest rates and principal amounts in foreign currency are exchanged to payment of floating interest rates and principal amounts in NOK. Exchanges from fixed to floating interest rates in foreign currency are treated as fair value hedges. Payments of principal amounts and floating interest rates in foreign currency are consistently hedged in NOK in the ratio 1:1 to limit the Group's currency exposure.

#### *Currency risk*

The Group is exposed to currency risk on payments of principal amounts and floating interest in foreign currency. Currency risk and variability of cash flows are reduced by exchanging from foreign currency to NOK through combined interest rate and currency swaps. Under such arrangements, cash flows for payments of principal amounts and floating interest rates in foreign currency are designated as hedged items, and cash flows from the derivative are accordingly designated as hedging instruments. The basis spread is excluded from the designated hedging instrument.

There is an economic relationship between the hedged item and the hedging instrument due to the fact that the critical terms for exchanging from foreign currency to NOK coincide. Hedge effectiveness is assessed on a qualitative basis.

Each reporting period, a fair value calculation of the currency portion of the derivative is carried out, and changes in value of the effective portion of the hedge are recognised in other comprehensive income until the period when changes in value of the hedged item affect profit or loss. The ineffective portion of the hedge is expensed under finance costs.

Ineffectiveness in the hedge could arise from the fair value of credit risk affecting the hedging instrument, but not the hedged item.

## Note 5.6 Derivatives and hedging *(continued)*

The hedged item and hedging instrument affect the consolidated statement of financial position and profit or loss as follows:

| NOK million | Foreign currency loans at the exchange rate on the balance sheet date | Change in fair value of hedged item, recognised in profit or loss | Change in fair value of hedging instrument, recognised in profit or loss | Line-item in profit or loss |
|---|---|---|---|---|
| **31 December 2018** | 3,465 | 190 | -190 | Other finance income/costs |
| **31 December 2017** | 3,275 | -102 | 102 | Other finance income/costs |

| Movements in cash flow hedging reserve: | Hedging reserve |
|---|---|
| **1 January 2017** | **-64** |
| Change in fair value through other comprehensive income 2017 | -4 |
| Deferred tax | 1 |
| **31 December 2017** | **-67** |
| Change in fair value through other comprehensive income 2018 | 14 |
| Deferred tax | -4 |
| **31 December 2018** | **-57** |

The ineffective portion of the cash flow hedge recognised through profit or loss was immaterial in 2017 and 2018.

### Fair value hedge accounting

The Group's loan portfolio includes loans with both fixed and floating interest rate terms, and the Group has used derivatives to exchange interest terms for some loans from fixed to floating rates. This applies to both bond loans taken out in NOK for which interest rate swaps have been entered into, and loans in foreign currency for which combined currency and interest rate swaps have been agreed. The purpose of exchanging from fixed to floating interest is to balance the Group's interest exposure.

***Interest rate exposure***

Bond loans taken out in NOK for which interest rate swaps from fixed to floating interest have been entered into are recognised as fair value hedges. Interest hedges from fixed to floating interest in foreign currency from combined currency and interest rate swaps are designated and valued in the same way. The hedged risk arises from changes in value in fixed interest payments that mainly derive from changes in OIS/NIBOR interest rates. In accounting terms, changes in value in the hedged risk offset changes in value in the hedging instrument in profit or loss.

There is an economic relationship between the hedged item and hedging instrument due to the fact that the key terms for exchanging from fixed to floating interest rates coincide. Hedge effectiveness is assessed on a qualitative basis.

Ineffectiveness in the hedge could arise from differing settlement times for interest payments/establishment of interest rates between the hedged item and the hedging instrument, as well as the fair value of credit risk affecting the hedging instrument, but not the hedged item.

The ineffective portion of the fair value hedge recognised through profit or loss under financial expenses was immaterial in 2017 and 2018.

## Note 5.7 Capital management

Hafslund E-CO's capital management is intended to ensure that the Group has financial flexibility in the short and long term and maintains a high credit rating. The Group aims to achieve cash flows that ensures competitive returns for the owner through dividends without disadvantaging the Group's creditors.

In addition to cash and cash equivalents, the Group's liquidity reserve consists of unused long-term drawdown facilities. Hafslund E-CO has access to diversified loan sources and primarily uses bond loans, banks and international private placement markets.

The Group has long-term financing that ensures financial room to manoeuvre even when it is difficult to gain financing in the markets. The loan portfolio comprises a balanced mix of loans with a maturity structure between 0 and 19 years, an average term of 9 years. The maturity structure of the Group's interest-bearing debt and other financial liabilities are shown in notes 5.2 and 5.3.

At the end of 2018, the Group had unused drawdown facilities deemed sufficient to cover the Group's refinancing requirements over the next 12 months. External borrowing has been centralised at parent company level in each of the Hafslund and E-CO Energi subgroups, and the capital needs of the respective subsidiaries are normally covered through internal loans, primarily through corporate cash pooling systems, in combination with equity. The capital structure in the subsidiaries is adapted to commercial considerations, as well as legal and tax-related considerations.

The Group attaches importance to ensuring a balanced and reasonable capital composition that maintains reasonable equity based on the risk and scope of the business.

The Group's loan covenants prohibit the pledging of assets as loan security. Some loan agreements also stipulate that material assets cannot be disposed of without approval, while some have an ownership clause requiring more than 50 per cent of shares issued by Hafslund AS or E-CO Energi Holding AS to be directly or indirectly owned by the City of Oslo. This means that, in accordance with stipulated terms, lenders can demand that the loans be redeemed if the City of Oslo's direct or indirect shareholding in these companies falls to 50 per cent or below. The Group's loan agreements do not impose any other covenants.

The Group does not have an official credit rating, but actively monitors quantitative and qualitative factors that affect the Group's creditworthiness. Hafslund AS aims to maintain a credit profile corresponding to a credit rating of BBB+. E-CO Energi does not have any specific rating targets but aims to maintain a solid investment grade credit rating. Hafslund E-CO monitors its asset management by following the development of its equity ratio, net interest-bearing debt and cash flows from operations. The Group's capital consists of net interest-bearing debt and equity.

The Group is not subject to any external requirements with regards to the management of its capital structure other than with regards to market expectations and the owner's dividend requirements.

## Note 5.7 Capital management *(continued)*

| NOK million | 2018 | 2017 |
|---|---|---|
| **NET INTEREST-BEARING DEBT** | | |
| Current interest-bearing debt | 3,052 | 2,197 |
| Non-current interest-bearing debt | 18,348 | 17,155 |
| Non-current interest-bearing assets | 67 | 10 |
| Money market funds | 200 | 403 |
| Cash and cash equivalents | 2,993 | 1,946 |
| **Net interest-bearing debt** | **18,139** | **16,993** |
| | | |
| **Unused drawing rights** | **4,302** | **4,602** |
| | | |
| **EQUITY SHARE (%)** | | |
| Equity | 16,501 | 17,126 |
| Assets | 49,180 | 45,781 |
| **Equity share (%)** | **34 %** | **37 %** |

Fair value adjustment on loans amounted to NOK 185 million in 2018 (NOK 276 million). This is not included in net interest-bearing debt.

## Note 5.8 Share capital and shareholder information

| NOK million | Number of shares | Share capital | Other paid in capital | Paid in capital |
|---|---|---|---|---|
| **PAID IN CAPITAL** | | | | |
| As of 31 December 2018 | 100,000 | 100 | 15,295 | 15,395 |

| NOK million | 2018 |
|---|---|
| **DIVIDEND** | |
| Dividend paid out in the period | 998 |

Hafslund E-CO AS has no treasury shares. All shares are owned by the City of Oslo. All shares are owned by the City of Oslo. NOK 650 million of the dividend was paid from E-CO Energi Holding AS to the City of Oslo.

## Note 5.9 Non-current receivables

### Key accounting policies

All non-current receivables mature more than one year from the balance sheet date. The fair value of non-current receivables corresponds to their book value.

| NOK million | 2018 | 2017 |
|---|---|---|
| **OTHER NON-CURRENT RECEIVABLES** | | |
| Other non-current interest-bearing receivables | 67 | 10 |
| Other non-current non-interest-bearing receivables | 181 | 218 |
| Net pension funds | 538 | 285 |
| **Other non-current receivables** | **786** | **513** |

## Note 5.10 Trade and other receivables

### Key accounting policies

Accounts receivables contain both receivables that arise as a result of contracts with customers and other types of receivables. Receivables arising from contracts with customers are recognised at the agreed amount, reduced by expected credit loss. Other receivables and accruals are recognised at fair value and measured in subsequent periods at amortised cost.

### Key estimates and assumptions

Inaccurate assessment of the customers' ability to pay could result in losses on receivables that subsequently must be written down through profit or loss. The Group estimates and recognises a provision for expected losses based on historic figures. The Group deems the credit risk to be acceptable.

| NOK million | 2018 | 2017 |
|---|---|---|
| **TRADE RECEIVABLES** | | |
| Trade receivables | 494 | 364 |
| Provisions loss on receivables | -23 | -13 |
| **Trade receivables** | **472** | **352** |
| **OTHER NON-INTEREST-BEARING CURRENT RECEIVABLES** | | |
| Other non-interest-bearing current receivables | 442 | 142 |
| Accrued non-invoiced income | 704 | 637 |
| Accrued other income/pre-paid expenses | 40 | 84 |
| **Other non-interest-bearing current receivables** | **1,186** | **862** |

See note 2.2 for further discussion of operating revenue and contract balances.

## Note 5.11 Cash and cash equivalents

### Key accounting policies

Cash and cash equivalents include the Group's liquid assets and comprise bank deposits and other short-term, highly liquid investments with original maturities of three months or less.

| NOK million | 2018 | 2017 |
|---|---|---|
| **CASH AND CASH EQUIVALENTS** | | |
| Bank deposits | 2,379 | 1,705 |
| Witholding tax (restricted assets) | 17 | 13 |
| Other restricted assets | 597 | 228 |
| **Cash and cash equivalents** | **2,993** | **1,946** |
| **OTHER LIQUID FINANCIAL ASSETS** | | |
| Money market funds | 200 | 403 |
| **Other liquid financial assets** | **200** | **403** |

### Discussion of key matters

The Group's available cash and cash equivalents mainly consist of bank deposits. Hafslund E-CO AS also has a bank overdraft facility of NOK 200 million, while E-CO Energi Holding AS has an overdraft facility of NOK 100 million. Both overdraft facilities were unused at the reporting date.

Hafslund AS has syndicated drawdown facilities totalling NOK 2,502

## Note 5.11 Cash and cash equivalents *(continued)*

million. Facility A is for NOK 504 million maturing in December 2020 and Facility B is for NOK 1,998 million maturing in December 2022. Both the facilities have an option for a one-year prolongation. E-CO Energi Holding AS has entered into a syndicated NOK 1,500 million drawdown facility maturing in July 2022. The drawdown facilities are used as a back-stop for loan maturities and as a general liquidity reserve. All the drawdown facilities were unused at the reporting date.

Hafslund E-CO AS and E-CO Energi Holding AS have a corporate cash pooling system with Nordea and DNB, respectively. A corporate cash pooling system entails joint and several liability among the participating companies. Hafslund E-CO AS and E-CO Energi Holding AS' accounts constitute single, direct accounts for transactions with its banks, while deposits into and withdrawals from the respective subsidiaries' accounts are treated as intercompany balances with respectively Hafslund E-CO AS and E-Co Energi Holding AS.

Of the Group's other restricted funds, NOK 489 million is pledged as security for power trading activities. Hafslund AS purchases bank guarantees as security for tax deductions and other liabilities. Please refer to Note 4.2 Guarantees for further information.

## Note 5.12 Trade and other current non-interest-bearing liabilities

### Key accounting policies

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. The main rule is that trade and other current payables are classified as current if they fall due within one year. Trade and other current payables are measured at fair value in the balance sheet on initial recognition and subsequently at amortised cost.

### Key estimates and assumptions

All forms of accruals/provisions involve a degree of estimate uncertainty and judgement. Provisions are recognised in other current liabilities based on management's best estimates.

| NOK million | 2018 | 2017 |
|---|---|---|
| **TRADE PAYABLES** | | |
| Trade payables | 395 | 409 |
| **Trade payables** | **395** | **409** |
| **OTHER CURRENT NON-INTEREST-BEARING LIABILITIES** | | |
| Public taxes and charges payable | 1,127 | 1,018 |
| Accrued interest | 371 | 305 |
| Accrued energy and transmission costs | 7 | 2 |
| Other accrued costs | 373 | 363 |
| Other short-term liabilities | 182 | 231 |
| **Other current non-interest-bearing liabilities** | **2,060** | **1,919** |

## Note 5.13 Financial items

### Key accounting policies

Interest income and interest expenses on loans and receivables are calculated using the effective interest method. Currency gains and losses that derive from operational hedging of power sales are reported under operating revenues or operating expenses, respectively. Value adjustments of receivables and liabilities in foreign currency are recognised as currency gains/losses under financial income/financial expenses, respectively.

| NOK million | 2018 | 2017 |
|---|---|---|
| **INTEREST INCOME** | | |
| Interest income | 34 | 14 |
| Other financial income | 9 | 13 |
| **Interest income** | **43** | **27** |
| **INTEREST EXPENSE** | | |
| Interest expense | -635 | -535 |
| Capitalised interest expense | 63 | 24 |
| **Interest expense** | **-573** | **-510** |
| **OTHER FINANCE INCOME/COSTS** | | |
| Currency gains or losses | 13 | 21 |
| Change in loans recognised at fair value | 48 | 75 |
| Other financial income or cost | -36 | -64 |
| **Other finance income/costs** | **25** | **32** |
| **Net financial items** | **-505** | **-451** |

## Note 6.1 Income taxes

### Key accounting policies

In addition to general income tax, Hafslund E-CO's power production business is subject to special rules governing taxation of power companies. The Group therefore also incurs natural resource tax, property tax and resource rent tax.

The tax expense comprises taxes payable and changes in deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In such cases, the tax is also recognised in other comprehensive income or directly in equity. The tax expense is calculated on the basis of tax rates, legislation and rules enacted at the balance sheet date. Deferred tax is calculated on all temporary differences between the tax values and accounting values of assets and liabilities. Deferred tax assets are only recognised in the balance sheet to the extent that it is probable that future taxable income will be available against which the temporary tax-reducing differences can be utilised.

Deferred tax is calculated based on temporary differences on investments in subsidiaries and associates except when the Group controls the timing of the reversal of the temporary differences, and it is probable that they will not be reversed in the foreseeable future. Deferred tax benefits and deferred tax liabilities are offset where there is a legally enforceable right to do so.

The deferred tax assets related to tax losses carried forward are recognised in the statement of financial position to the extent that it is probable that the Group can utilise tax losses carried forward against future taxable income.

## Note 6.1 Income taxes *(continued)*

***General income tax***

The tax expense for general income tax comprises taxes payable and changes in deferred tax. Income tax payable is calculated at 23 per cent (24 per cent) of the taxable profit/loss. Deferred tax is calculated based on temporary differences between tax values and accounting values of assets and liabilities, as well as tax losses carried forward, applying a tax rate of 22 per cent (23 per cent).

Deferred tax assets are recognised at their nominal value and classified as non-current assets in the statement of financial position. Deferred tax liabilities are recognised at their nominal value and classified as non-current liabilities in the statement of financial position. Deferred tax assets that cannot be offset against deferred tax liabilities, including benefits relating to tax losses carried forward and negative resource rent income, are recognised in statement of financial position when it is highly probable that the Group will have sufficient taxable profits in later periods against which to utilise the deferred tax asset.

***Resource rent tax***

Resource rent tax is profit-dependent and comprises 35.7 per cent (34.3 per cent) of net resource rent income for each power plant. Resource rent income is calculated based on each power plant's production for each hour, multiplied by the spot price in the corresponding hour. Actual achieved prices are used for deliveries of concessionary power. The calculated income is reduced by actual operating expenses, capital allowances and tax-free allowances to arrive at net resource rent income. Tax-free allowances are determined on the basis of the average tax-written-down value of the operating assets for the year for the power plant multiplied by a normative interest rate.

Negative resource rent income that has arisen for power plants since 2007 can be offset against positive resource rent income in other power plants. Negative resource rent income arising before 2007 can be carried forward with interest against positive resource rent tax only against the same power plant. Negative resource rent income is included in the basis used to calculate deferred tax liabilities/assets connected to resource rent taxation together with deferred tax liabilities/assets relating to temporary differences connected to operating assets used in power production to the extent that it is probable that this can be utilised.

Resource rent tax in profit or loss comprises resource rent tax payable for the year plus changes in deferred resource rent tax. Deferred resource rent tax is calculated in the same way as deferred tax for ordinary income tax, with a nominal resource rent tax rate of 37 per cent as adopted in the state budget for 2019.

***Natural resource tax***

Natural resource tax is a profit-independent tax that is calculated on the basis of individual power plants' average power production over the last seven years. The tax rate is set at 1.3 øre (1.3 øre) per kWh. Natural resource tax can be offset against general income tax, while non-settled natural resource tax is classified as an interest-bearing receivable (tax prepayment).

Natural resource tax is classified as either a current or non-current prepayment based on the probability that it will be settled within or after 12

## Note 6.1 Income taxes *(continued)*

months. If it is probable that the natural resource tax represents a final payment, where offset is not likely, it is expensed in the income statement.

### *Property tax*

The Group is also subject to property tax and comprises up to 0.7 per cent of the official property valuation. Property tax is recognised as an operating expense in the income statement. Please see Note 2.5 Property tax and licence fees.

### Key estimates and assumptions

Management assesses the positions adopted in the tax returns wherever the tax laws are subject to interpretation on an ongoing basis. Provisions are recognised for expected tax payments based on management assessments where such is deemed necessary.

| Tax expense | 2018 | 2017 |
|---|---|---|
| Income tax payable | 1,063 | 552 |
| Resource rent tax payable | 1,346 | 655 |
| Natural resource tax | 143 | 174 |
| Natural resource tax offset against income tax | -143 | -115 |
| Natural resource tax carried forward | - | -59 |
| Deferred tax on actuarial gains and losses directly to equity | -78 | - |
| Change in deferred tax liability/(asset) | -38 | 35 |
| Too little (much) tax set aside in previous years | 9 | -13 |
| **Tax expense for the year** | **2,303** | **1,228** |

| Reconciliation of nominal tax rate against effective tax rate | 2018 | 2017 |
|---|---|---|
| **Profit before tax** | **3,908** | **2,970** |
| 23 % (24 %) of profit before tax | 899 | 713 |
| 23 % (24 %) of permanent difference, dividends | 67 | -31 |
| 23 % (24 %) of profit from equity accounted investees | 7 | -8 |
| 23 % (24 %) effect of temporary differences that are not offset | -6 | - |
| 23 % (24 %) of actuarial gains and losses | -58 | - |
| Resource rent tax payable | 1,346 | 655 |
| Change in deferred tax, negative resource rent tax carried forward | -50 | -64 |
| Effect of provision for tax case, AMS meters (1) | 12 | - |
| Effect of non-recognised deferred tax liability/(asset) at 1 January 2018 [1)] | -8 | - |
| Deferred resource rent tax (35,7%) | 62 | -80 |
| Change in tax rate from 23 % to 22 % | -65 | -54 |
| Change in tax rate from 35,7 % to 37 % | 8 | 4 |
| Too little (much) tax set aside previous year | 9 | 4 |
| Other corrections, tax returns | 83 | 86 |
| Total tax expense | **2,303** | **1,228** |
| **Effective tax rate** | **59 %** | **41 %** |

[1]See note 9.2.

| Deferred tax<br>General income tax | 31.12.2018 | 31.12.2017 |
|---|---|---|
| Current assets | 5 | 33 |
| Non-current assets | 13,034 | 11,821 |
| Current liabilities | -111 | -93 |
| Provisions | -1 694 | -843 |
| Pensions | 403 | 152 |
| **Total** | **11,637** | **11,069** |
| Correction, basis for deferred tax provision AMS meters [1] | -801 | - |
| Tax losses carried forward | -415 | -475 |
| Negative temporaty difference, not offset | 77 | - |
| **Total** | **10,499** | **10,594** |
| Tax rate | 22 % | 23 % |
| Total deferred tax liability/(asset) | 2,310 | 2,403 |
| **Resource rent tax** | | |
| Non-current assets | 5,410 | 5,199 |
| Other temporary differences | 27 | 22 |
| Negative resource rent tax, including iterest | -1,382 | -1,615 |
| **Total** | **4,056** | **3,606** |
| Tax rate | 37 % | 36 % |
| **Total deferred tax liability/(asset)** | **1,501** | **1,287** |
| **Total deferred general income tax liability (asset) and resource rent tax** | **3,810** | **3,690** |
| **Deferred tax libility/(asset) - balance at 31 December** | | |
| Deferred tax | 4,380 | 4,383 |
| Deferred tax asset - recognised | -319 | -293 |
| Deferred tax asset - not recognised | -250 | -399 |

[1]See note 9.2.

The change in the effective general corporate taxation rate is primarily attributable to lower deferred tax liabilities at the reporting date following a reduction in the tax rate from 23 per cent to 22 per cent from 2019.

## Note 7.1 Remuneration to senior executives and board members

Hafslund E-CO AS was established on 4 July 2018 with the subsidiaries Hafslund AS and E-CO Energi Holding AS, which together form the new Group.

The overview below shows the remuneration of senior executives in the Hafslund E-CO Group for the whole of 2018, divided between the period before and after the establishment of Hafslund E-CO AS. Since the integration between Hafslund and E-CO Energi is a combination under common control, remuneration for the persons who have been in the corporate management of Hafslund E-CO during the period is shown, both in the role of the group management in Hafslund E-CO and for any role in the corporate management of Hafslund or E-CO Energi before the integration.

Board remuneration and remuneration for work in the audit committee apply to Hafslund E-CO AS.

# Note 7.1 Remuneration to senior executives and board members *(continued)*

## Remuneration to senior executives and board members of Hafslund E-CO AS in 2018

| From date | Up to and including date | Name | Position | Salaries, holiday pay and fees | Bonus[1] | Benefits in kind | Pension costs | Borrowings 31.12.18 |
|---|---|---|---|---|---|---|---|---|
| 04.07.2018 | 31.12.2018 | Finn Bjørn Ruyter | CEO | 2,159,533 | 555,084 | 113,094 | 293,760 | 485,000 |
| 01.09.2018 | 31.12.2018 | Tore Olaf Rimmereid | Deputy CEO and SVP Corporate Strategy | 858,071 | 229,167 | 55,479 | 189,726 | - |
| 01.08.2018 | 31.12.2018 | Heidi Ulmo | CFO (Chief Financial Officer) - parental leave | 929,616 | 103,979 | 94,558 | 142,954 | 220,000 |
| 01.08.2018 | 31.12.2018 | Martin S. Lundby (acting from 1.8.2018) | CFO (Chief Financial Officer) - acting | 625,000 | 187,500 | 33,599 | 30,045 | 345,000 |
| 01.09.2018 | 31.12.2018 | Alf Inge Berget | SVP Power Generation and Managing Director of E-CO Energy AS | 836,743 | 212,685 | 109,243 | 183,890 | - |
| 01.09.2018 | 31.12.2018 | Kristin Lian | SVP Networks and Managing Director of Hafslund Nett AS | 844,274 | 201,041 | 53,522 | 91,376 | 260,000 |
| 01.09.2018 | 31.12.2018 | Toril Benum | SVP New Energy | 666,667 | 166,667 | 59,003 | 75,213 | 590,000 |
| 01.09.2018 | 31.12.2018 | Siw Hellesen | SVP HR and Organisational Development | 663,549 | 158,333 | 50,796 | 72,618 | 585,000 |
| 01.09.2018 | 31.12.2018 | Per-Arne Torbjørnsdal | SVP Corporate Communications and Public Affairs | 604,141 | 166,667 | 60,441 | 162,582 | - |
| 01.09.2018 | 31.12.2018 | Anders Østby | SVP Power Market | 626,667 | 156,667 | 53,456 | 62,882 | 595,000 |
| 23.10.2018 | 31.12.2018 | Alexandra Bech Gjørv | Chair | 187,500 | - | - | - | - |
| 04.07.2018 | 23.10.2018 | Hilde Tonne | Chair, interim | 75,000 | - | - | - | - |
| 04.07.2018 | 31.12.2018 | Bente Sollid Storehaug | Board member | 93,750 | - | - | - | - |
| 04.07.2018 | 31.12.2018 | Bjørn Erik Næss[2] | Board member | 93,750 | - | - | - | - |
| 04.07.2018 | 31.12.2018 | Bård Vegar Solhjell | Board member | 93,750 | - | - | - | - |
| 04.07.2018 | 31.12.2018 | Mari Thjømøe[2] | Board member | 93,750 | - | - | - | - |
| 04.07.2018 | 31.12.2018 | Arvid Amundsen | Board member (employee representative) | 423,349 | - | 5,286 | 24,610 | - |
| 04.07.2018 | 31.12.2018 | Per Luneborg[2] | Board member (employee representative) | 418,834 | - | 1,681 | - | - |
| 10.08.2018 | 31.12.2018 | Johnny Kjønås | Board member (employee representative) | 594,697 | - | 1,681 | 70,356 | - |

*[1] Applies to bonus achievement for the relevant period. Bonus to senior executives is a maximum of 25 % of fixed salary.*
*[2] Includes remuneration for work in the Audit Committee*

# Note 7.1 Remuneration to senior executives and board members *(continued)*

## Remuneration to senior executives before Hafslund E-CO AS was established.

| From date | Up to and including date | Name | Position | Salaries, holiday pay and fees | Bonus[3] | Benefits in kind | Pension costs | Borrowings 31.12.18 |
|---|---|---|---|---|---|---|---|---|
| 01.01.2018 | 3.7.2018 | Finn Bjørn Ruyter[1] | CEO Hafslund AS | 1,980,334 | 926,080 | 113,440 | 278,789 | 485,000 |
| 01.01.2018 | 31.8.2018 | Tore Olaf Rimmereid[2] | CEO E-CO Energi AS | 2,076,996 | 1,554,270 | 81,053 | 160,920 | - |
| 01.01.2018 | 31.7.2018 | Heidi Ulmo | CFO Hafslund AS | 1,637,938 | 396,770 | 161,405 | 199,931 | 220,000 |
| 18.06.2018 | 31.7.2018 | Martin S. Lundby (acting from 18.6.2018) | CFO Hafslund AS | 156,800 | 97,789 | 11,111 | 8,961 | 345,000 |
| 01.01.2018 | 31.8.2018 | Alf Inge Berget | COO E-CO Energi AS | 1,266,795 | 220,315 | 478,524 | 214,549 | - |
| 01.01.2018 | 31.8.2018 | Kristin Lian | SVP Networks and CEO Hafslund Nett AS | 1,491,103 | 436,370 | 124,638 | 143,568 | 260,000 |
| 01.01.2018 | 31.8.2018 | Per-Arne Torbjørnsdal[2] | SVP Corporate Strategy and Communication E-CO Energi AS | 1,266,337 | 1,108,252 | 150,987 | 210,987 | - |

[1]*The CEO's bonus was a maximum of 50 % of fixed salary for the relevant period.*
[2]*Bonus includes "stay on bonus" of NOK 1,150,000 for Rimmereid and NOK 820,000 for Torbjørnsdal.*
[3]*Applies to bonus achievement for the relevant period.*

The CEO was employed on 4 July 2018 on new terms and conditions. New terms for remuneration paid to senior executives and Board members have been established in accordance with the City of Oslo's guidelines for salaries paid to executive management.

Group management comprises former employees of Hafslund AS, Hafslund Nett AS, E-CO Energi AS and E-CO Energi Holding AS. Hafslund AS and Hafslund Nett AS offered identical terms for remuneration paid to senior executives. E-CO Energi AS and E-CO Energi Holding AS also offered equal terms for remuneration paid to senior executives.

As of 31 December 2018, Group management comprised the following:

| Name | Position and employer as of 31 December 2018 | Start date | Previous employer |
|---|---|---|---|
| Finn Bjørn Ruyter | President and CEO, Hafslund E-CO AS | 4 July 2018 | Hafslund AS |
| Tore Olaf Rimmereid | Deputy CEO and SVP Corporate Strategy, Hafslund E-CO AS | 1 September 2018 | E-CO Energi AS |
| Heidi Ulmo | CFO (on parental leave) Hafslund E-CO AS | 1 September 2018 | Hafslund AS |
| Martin S. Lundby | CFO (Acting), Hafslund E-CO AS | 1 August 2018 | Hafslund Nett AS |
| Kristin Lian | SVP Networks and Managing Director, Hafslund Nett AS | 1 September 2018 | Hafslund Nett AS |
| Alf Inge Berget | SVP Power Generation and Managing Director, E-CO Energi AS | 1 September 2018 | E-CO Energi AS |
| Toril Benum | SVP New Energy, Hafslund E-CO AS | 1. september 2018 | Hafslund Nett AS |
| Siw Hellesen | SVP HR and Organisational Development, Hafslund E-CO AS | 1 September 2018 | Hafslund Nett AS |
| Per-Arne Torbjørnsdal | SVP Corporate Communications and Public Affairs, Hafslund E-CO AS | 1 September 2018 | E-CO Energi AS |
| Anders Østby | SVP Power Market, Hafslund E-CO AS | 1 September 2018 | Hafslund Produksjon AS |

## The Board's Compensation Committee

The Board of Hafslund E-CO AS has a dedicated Compensation Committee. The Compensation Committee advises the Board on all matters pertaining to the company's remuneration paid to the CEO. The Committee keeps up to date on and proposes guidelines for determination of remuneration paid to senior executives in the business. In addition, the Committee functions as the advisory body for the CEO regarding compensation schemes that essentially cover all employees, including Hafslund E-CO's bonus system and pension plan.

## Declaration on the determination of salaries and other remuneration

Remuneration paid to senior executives at Hafslund E-CO complies with guidelines and the declaration on determination of salaries and other remuneration paid to senior executives.

The Board issues a declaration on the determination of salaries and other remuneration paid to the CEO and Group management. This is included below.

## Guidelines for remuneration paid to senior and other executives in the Hafslund E-CO Group.

Remuneration paid to the CEO, Group management and other management in the Hafslund E-CO Group must be based on these guidelines. Senior executives are defined as managers at level 0 and 1. The guidelines must be consistent with the City of Oslo's guidelines for compensation schemes for senior executives in limited companies that are majority-owned by the municipality.

## Note 7.1 Remuneration to senior executives and board members *(continued)*

### The Board of Directors

The Board adopts the CEO's terms and conditions of employment, and oversees the general terms and conditions of other senior Group executives. These terms are evaluated and adopted by the Board each year.

If the CEO wishes to offer members of Group management or other senior executives remuneration not covered by these guidelines, this must be presented to the Board for approval. In such cases, the Board must justify and minute why the guidelines have been deviated from in each case.

The Board also determines the terms for the company's incentive scheme for managers and key individuals based on a recommendation from administration and the Compensation Committee.

### Terms and conditions, CEO

Remuneration paid to the CEO must be competitive in relation to responsibilities and the industry in general. The remuneration must furthermore incentivise long-term value creation through development of the enterprise and profit improvements and reflect the employee's experience and level of expertise. The remuneration comprises a fixed salary, bonus, an interest-free and instalment-free loan and a pension plan in accordance with the Group's prevailing schemes for Group management, in addition to a branded electric car. The bonus scheme is capped at 25 per cent of the fixed salary. The bonus is determined annually based on Group targets and objective individual targets. The CEO receives benefits in kind on a par with other senior Group executives. The retirement age is 70, and the CEO is a member of the Group's mandatory occupational pension plan (OTP) which provides 5 per cent of salary between 1 and 7.1 times the National Insurance Scheme's basic amount (G) and 8 per cent of salary between 7.1 and 12 G. Pension compensation providing a gross additional income of 16 per cent will be paid for basic salary over 12 G on the condition that the CEO is a member of the defined contribution scheme. The CEO has the right to terminate his employment with an early retirement plan (AFP), in accordance with the prevailing regulations at any point in time. The CEO has a disability pension plan providing compensation of 66 per cent of salary over 12 G and is also covered by a collective accident insurance plan. The CEO has a six-month notice period. On leaving the company, he is entitled, on certain conditions, to continue receiving salary payments for 12 months (after the end of the notice period). Severance pay is reduced by any salary received from a new employer during the severance pay period. In such cases, severance payments are reduced by 66 per cent of the lower of the monthly severance pay and the new salary.

### Terms and conditions, other Group management

Remuneration for other Group management comprises a fixed salary, bonus, interest-free and instalment-free loans and pension under the Group's prevailing schemes for Group management. The bonus scheme is capped at 25 per cent of the fixed salary. The bonus is determined annually based on Group targets, company targets/business targets, objective individual targets and subjective individual assessments. Group management receives benefits in kind on a par with other senior Group executives. Group management receives a pension in accordance with the prevailing plans for employees. Group

## Note 7.1 Remuneration to senior executives and board members *(continued)*

management covered by the defined contribution plan receive pension compensation providing a gross additional income of 16 per cent for salary over 12 G. The plan is similar to the plan for other employees in the Group with salaries over 12 G and a defined contribution plan. Group management receives a disability pension providing compensation of 66 per cent of salary between 12 and 30 G. Group management has a six-month notice period. On leaving the company, Group management is entitled, on certain conditions, to continue receiving salary payments for up to 12 months (after the end of the notice period). Severance pay is reduced by any salary received from a new employer during the severance pay period. In such cases, severance payments are reduced by 66 per cent of the lower of the monthly severance pay and the new salary.

***Fixed salary***
Group management's fixed salary is based on the duties performed and level of responsibility, as well as the employee's expertise and length of service in the position. Salaries should be competitive in relation to responsibilities and industry levels.

***Annual bonus***
An annual bonus system has been established to incentivise additional effort and value creation. Bonuses will be paid based on the added value generated by the employee or groups of employees. The bonus scheme for the CEO and other Group management is capped at 25 per cent. The bonus is established annually and Group targets are determined by the Board. Measurement criteria in addition to the Group targets for individual employees, as well as the weighting of targets, are set by the employee's line manager based on:

- Group targets x per cent of maximum bonus.
- Company targets/enterprise targets x per cent of maximum bonus.
- Individual objective targets x per cent of maximum bonus
- Subjective individual assessment up to x per cent of maximum bonus.

The targets and the weighting must be adapted to the needs of the individual company/enterprise.

The annual bonus will be paid out after the presentation of the consolidated annual financial statements. The disbursed bonus is not included in the calculation basis for holiday pay or pension benefits. Should legislation require such benefits to be calculated based on salary including bonus, the bonus will be reduced by as the amount necessary to limit the bonus including other benefits to the total value determined in accordance with the above provisions. Board fees from work performed for Group companies can be deducted from the annual paid bonus.

***Pensions***
Senior and other executives have a pension plan in accordance with the prevailing pension plan for the Group. Group employees who are members of the mandatory occupational pension are covered by an additional pension plan for salaries over 12 G. Pension compensation providing a gross additional income of 16 per cent will be paid for salary over 12 G. The retirement age for managers is 70. Managers are entitled to take early retirement in accordance with the prevailing AFP

## Note 7.1 Remuneration to senior executives and board members *(continued)*

agreement at any one time. Group management has a disability pension providing compensation of 66 per cent of salary between 12 and 30 G.

***Period of notice and severance pay***
Senior and other executives have a notice period of six months. In specific cases and depending on the position, salary payments may continue for 6 to 12 months beyond the ordinary notice period. Severance pay is not included in the basis for calculation of holiday pay or pension benefits. If the employee should begin a new job while receiving such pay, severance payments will be reduced by 66 per cent of the lower of the monthly severance payments and the new monthly salary. If a manager takes up a new position before the end of the notice period, the reduction mechanism applies to the entire severance pay period.

In accordance with section 15 of the Norwegian Working Environment Act, severance pay entitles the employer to terminate the employment relationship at any time without further justification on full payment of severance pay.

***Borrowings***
Interest-free loans can be awarded for car purchases. Such loans are written down over 10 years in accordance with adopted guidelines. In addition, an annual operating subsidy can be awarded, as determined by the administration. The employee must pledge satisfactory security on property.

***Benefits in kind***
Benefits in kind mainly relate to expenses for broadband (home office), mobile phones and newspapers.

***Holidays***
Senior executives are entitled to holidays in line with the provisions of the Norwegian Annual Holidays Act and the Group's prevailing internal guidelines. Holiday pay is calculated based on basic salary. Additional benefits are not included in the calculation basis.

## Note 7.2 Pensions

Hafslund E-CO is obliged to have pension schemes for its employees according to the Occupational Pensions Act. The Group's pension schemes, which includes both defined benefit and defined contribution plans, satisfies the requirements of the law. As of 31 December 2018, 638 employees were covered by the Group's pension schemes, including 253 in public defined benefit plans, 43 in private defined benefit plans and 342 employees in defined contribution plans. The defined benefit plans entitle employees to defined future benefits. These are essentially depending on the number of years of service and the salary level at retirement age. The pension schemes are either organised in the Hafslund pension fund, E-CO Energi pension fund or in an insurance company. In addition, some pensions are provided directly from the companies.

*[1]Includes Hafslund E-CO AS, E-CO Energi AS, Hafslund Produksjon AS. (Also includes Hafslund Hovedgård that was de-merged 1 January 2019).*

# Note 7.2 Pensions *(continued)*

| NOK million | 31.12.2018 | 31.12.2017 |
|---|---|---|
| **Liability recognised** | | |
| Present value of accrued pension liabilities for funded defined benefit plans | 2,942 | 3,035 |
| Fair value of pension assets | -3,435 | -3,263 |
| **Actual net pension liabilities for funded defined benefit plans** | -494 | -228 |
| Present value of pension liabilities for unfunded plans | 69 | 75 |
| **Net pension liabilities recognised (incl. Employer's National Isurance contributions)** | **-423** | **-153** |
| Net pension liabilities recognised | -114 | -132 |
| Net pension assets recognised | 537 | 285 |
| | | |
| **Changes in the defined benefit pension liabilities during the year:** | | |
| Pension liabilities at 1 January | 3,110 | 3,520 |
| Employer's National Insurance contribution | 15 | 14 |
| Present value of accrued pension entitlements for the year | 20 | 16 |
| Interest cost | 71 | 66 |
| Changes in estimates | -52 | 53 |
| Benefits paid | -159 | -139 |
| Liabilities on disposal and acquisition of business | 3 | -420 |
| **Pension liabilities at 31 December** | **3,007** | **3,111** |

| NOK million | 31.12.2018 | 31.12.2017 |
|---|---|---|
| **Change in fair value of pension assets during the year** | | |
| Fair value of pension assets at 1 January | 3,262 | 3,568 |
| Interest income | 76 | 69 |
| Changes in estimates | 237 | 79 |
| Total contributions | 2 | 67 |
| Total payments from fund | -149 | -136 |
| Pension assets on settlements and acquisitions | 8 | -385 |
| **Fair value of pension assets at 31 December** | **3,436** | **3,262** |
| | | |
| **Movement in actuarial gains and losses recognised in other comprehensive income** | | |
| Accumulated amount recognised in other comprehensive income 1 Jauary, adjusted for deferred tax liabilities | 412 | 384 |
| Recognised in other comprehensive income in the period in accordance with the actuarial calculation before tax | 290 | 33 |
| Additions/disposals of subsidiaries during the period | - | -7 |
| **Accumulated amount recognised in other comprehensive income** | **701** | **410** |
| Deferred tax liabilities related to actuarial losses recognised in other comprehensive income during the period | -66 | 2 |
| **Accumulated amount after tax recognised in other comprehensive income** | **635** | **412** |

# Note 7.2 Pensions *(continued)*

| The following financial assumptions have been applied: | 2018 | 2017 |
|---|---|---|
| Discount rate | 2,6 % | 2,3 % |
| Ytield | 2,6 % | 2,3 % |
| Annual salary increase | 2,8 % | 2,3 % |
| Adjustment of National Insruance Scheme's basic amount (G) | 2,5 % | 2,3 % |
| Adjustment of current pensions, public plan | 1,8 % | 1,5 % |

The discount rate is calculated on the basis of a complete interest rate curve that takes into account the fact that pension payments will mature at different points in time in the future. The curve is calculated based on prices of the OMF interest rate (covered bonds) on 31 August 2018 as calculated by the Norwegian Accounting Foundation. Annual salary growth is calculated based on historical observations. Salary growth is on average set at 2.8 per cent over the period of service for the individuals included in the pension funds.

Demographic assumptions used in the calculations are based on the IR73 disability rate table converted to intensity method and the K2013BE mortality table.

| NOK million | 2018 | 2017 |
|---|---|---|
| Accrued pension benefits for the year | 33 | 29 |
| Net interest costs | -6 | 2 |
| Employer's National Insurance contribution | 3 | 3 |
| **Pension costs** | **28** | **34** |
| **Pension costs defined contribution plans** | **18** | **27** |
| **Total pension costs** | **46** | **61** |

Sensitivity of pension liabilities to changes in the weighted financial assumptions:

| | | Impact on pension liabilities | |
|---|---|---|---|
| | Change | Increase in assumption | Decrease in assumption |
| Discount rate | 0,5 % | -7 % | 7 % |
| Salary increase | 0,5 % | 2 % | -1 % |
| Adjustment of National Insruance Scheme's basic amount (G) | 0,5 % | 5 % | -5 % |
| Life expectancy | 1 year | 4 % | -4 % |

## Note 7.2 Pensions *(continued)*

Pension funds are invested in bonds and money market placements issued by the Norwegian state, Norwegian municipalities, financial institutions and enterprises. Foreign currency bonds are hedged. Investments have been made both in Norwegian and foreign shares. Any estimate deviations are distributed proportionally across the individual asset classes.

### Pension assets comprise:

| NOK million | 31.12.2018 | | 31.12.2017 | |
|---|---|---|---|---|
| Equity instruments | 1,348 | 39 % | 1,589 | 46 % |
| Interest-bearing instruments | 1,993 | 58 % | 1,764 | 51 % |
| Property | 95 | 3 % | 85 | 3 % |
| **Fair value pension assets** | **3,435** | **100 %** | **3,438** | **100 %** |

### In 2018, plan contributions were invested as follows:

| NOK million | Level 1 Listed prices | Level 2 Observable prices | Level 3 Non-observable prices | Total |
|---|---|---|---|---|
| Equity instruments | - | 1,056 | 292 | 1,348 |
| Interest-bearing instruments | - | 1,993 | - | 1,993 |
| Property | - | - | 95 | 95 |
| **Total** | - | **3,049** | **387** | **3,435** |

### In 2017, plan contributions were invested as follows:

| NOK million | Level 1 Listed prices | Level 2 Observable prices | Level 3 Non-observable prices | Total |
|---|---|---|---|---|
| Equity instruments | - | 1,272 | 316 | 1,589 |
| Interest-bearing instruments | - | 1,764 | - | 1,764 |
| Property | - | - | 85 | 85 |
| **Total** | - | **3,036** | **401** | **3,438** |

## Note 8.1 Consolidated companies

### Key accounting policies

The consolidated financial statements include Hafslund E-CO AS and its subsidiaries. All enterprises over which the Group exercises control are deemed to be subsidiaries.

The Group exerts control over an enterprise if and only if Hafslund E-CO can claim the following:

- Power over the investee,
- Exposure, or rights, to variable returns from its involvement with the investee, and
- The ability to use its power over the investee to affect the amount of the investor's returns.

Hafslund E-CO normally deems that it has control when the Group holds at least 50 per cent of the voting rights in an enterprise.

If necessary, the subsidiaries' financial statements are adjusted so that they are consistent with the Group's accounting policies. Intercompany sales and balances, and gains and losses deriving from intercompany transactions, are eliminated.

Subsidiaries are consolidated from the time the Group achieves control and are de-consolidated from the time control ceases.

| SUBSIDIARIES OWNED DIRECTLY BY HAFSLUND E-CO AS | Registered office | Shareholding | Voting rights |
|---|---|---|---|
| Hafslund AS | Oslo | 100 % | 100 % |
| E-CO Energi Holding AS | Oslo | 100 % | 100 % |

| COMPANIES CONTROLLED BY SUBSIDIARIES | Registered office | Shareholding | Voting rights |
|---|---|---|---|
| Hafslund Nett AS | Oslo | 100 % | 100 % |
| Hafslund Handel AS | Oslo | 100 % | 100 % |
| E-CO Energi AS | Oslo | 100 % | 100 % |
| Hafslund Produksjon Holding AS | Oslo | 90 % | 90 % |
| Hafslund Produksjon AS[1] | Askim | 100 % | 100 % |
| Mork Kraftverk AS | Oslo | 67 % | 67 % |
| Oslo Lysverker AS | Oslo | 100 % | 100 % |
| Oppland Energi AS | Lillehammer | 61 % | 61 % |
| Sarp Kraftstasjon AS[1] | Askim | 100 % | 100 % |
| Hallingfisk AS | Hol | 68 % | 68 % |

*[1] Hafslund Produksjon AS and Sarp Kraftstasjon AS are 100 per cent owned by Hafslund Produksjon Holding AS of which E-CO Energi Holding AS owns 90 per cent.*

## Note 9.1 Related party transactions

All subsidiaries, associates and joint arrangements as specified in Notes 8.1 Consolidated companies, 3.5 Equity-accounted investees and 3.6 Joint arrangements are deemed to be related parties of the Group. The Group's management and Board are also defined as related parties, as specified in Note 7.1 Remuneration to senior executives and Board members. Transactions with subsidiaries are eliminated in the consolidated financial statements and are not disclosed in this note.

The City of Oslo owns 100 per cent of Hafslund E-CO AS. The City of Oslo wholly and directly owned both Hafslund AS and E-CO Energi Holding AS before these companies were integrated in 2018. For information about the integration, please see Note 1.4 Transactions and events in 2018.

***Subordinated loan from the City of Oslo***
The Group has a subordinated loan from the City of Oslo with an outstanding balance as of 31 December 2018 of NOK 2,347 million (NOK 2,347 million). At the same date, accrued interest on the loan amounted to NOK 128 million (NOK 119 million).

***Subordinated loan from Oslo Energi Holding AS***
The Group has a subordinated loan from Oslo Energi Holding AS, a company wholly owned by the City of Oslo, with an outstanding balance as of 31 December 2018 of NOK 1,500 million (NOK 0 million). At the same date, accrued interest on the loan totalled NOK 37 million. The loan was put in place in connection with the establishment of Hafslund E-CO and was established, among other things, to cover any expenses related to the judicial review of the settlement price for the shares in former Hafslund ASA. The loan has no instalments and matures on 31 December 2037.

On 11 February 2019, the District Court of Oslo pronounced a ruling on the determination of the settlement sum for minority shareholders in the former Hafslund ASA. The District Court established a market value for the shares in Hafslund ASA of NOK 147.13 per share, compared with the compulsory purchase price of NOK 96.76 per share as of 3 August 2017. Oslo Energi Holding AS has decided to appeal the District Court's ruling. If the District Court's settlement sum is deemed to be final, Hafslund-ECO will have to pay back around NOK 0.5 billion of the subordinated loan to Oslo Energy Holding AS. The remaining amount due to minority shareholders will be covered by funds already provided for in Oslo Energi Holding AS. The ruling will therefore have a liquidity effect of around NOK 0.5 billion for Hafslund E-CO, but will not affect the company's key financial ratios, as the outstanding amount of the subordinated loan will be reduced accordingly.

***Receivables on Fredrikstad Energi AS***
The Group has a long-term receivable from the associate Fredrikstad Energi AS in the form of a bond listed on the Nordic ABM. The loan matures on 19 December 2114. Fredrikstad Energi AS can redeem the loan the first time on 29 December 2025 (call date) and then every 5 years until maturity. The interest rate is 7 per cent until the call date in 2025 and thereafter 1-year NOK swap rate plus margin of 3.5 per cent. As of 10 years after the call date in 2025, the margin is increased to 4.5 per cent. The loan has a condition of so-called bypassed coupon payment if the interest coverage ratio falls below 2.5 per cent.

***Other transactions***
Hafslund E-CO buys from and sells to related parties as part of normal business operations. In 2018, the Group purchased and sold goods and services to the City of Oslo. Examples of sales to the City of Oslo municipality are network rent.

## Note 9.2 Contingencies

### Hafslund Energy Trading

Hafslund Energy Trading LLC ("HET"), which is owned by Hafslund Produksjon Holding, performed power trading activities in California (USA) between 1999 and 2001. During this period, there was a power crisis and since 2001 HET and public authorities in California ("California Parties") have been in dispute, with the latter claiming that HET must repay the capital, which HET contests. The parties have been in settlement negotiations, but have failed to reach a settlement. HET does not perform any activities and has limited capital. The Group believes that the probability of the Norwegian parent company being held liable is low and has consequently not recognised a provision in the financial statements.

### Tax treatment of expenses relating to the installation of new electricity meters

Hafslund Nett, which is owned by Hafslund AS, has received a notice of reassessment from the Central Tax Office for the 2016 tax year. The notice relates to the tax treatment of costs of replacing old electricity meters with new automatic meters (AMS meters) and has been recognised in the financial statements for 2018.

The tax office's notice is essentially based on the Norwegian Tax Administration's tax ruling 12/12 of 8 May 2012. The tax ruling was issued to Hafslund Nett AS, but the company has not used this as a basis for its calculation. The ruling is therefore not binding for the company, see section 6-1 (3) of the Norwegian Tax Administration Act. In the company's view, the tax ruling is based on a partially incorrect understanding of the function of the new AMS meters, and an incorrect legal interpretation of the conditions for regarding groups of operating assets as inventories, see section 14.40 (2) of the Norwegian Tax Act.

Hafslund Nett does not accept the notice, and has appealed to the Tax Appeal Board, on the premise that the company has not changed its view or practice of directly deducting all costs of procurement and installation of AMS meters. Hafslund Nett AS has still prepared the 2018 accounts based on the tax authorities' opinion. The company has recognized NOK 188 million as taxes payable due to tax capitalisation related to the AMS project for 2017 and 2018. At the same time deferred tax is reduced by NOK 176 million, so that the effect on the tax expense is an increase of NOK 12 million.

## Note 9.3 Events after the reporting period

The financial statements are deemed to be approved for publication once they have been approved by the Board of Directors. After this point, the General Meeting and regulatory authorities may refuse to approve the financial statements, but may not change them. Events that take place before the financial statements are deemed to be approved for publication and related to matters that were known at the reporting period end date, will be included in the information basis for determining accounting estimates and therefore be fully reflected in the financial statements. Events relating to matters that were not known at the balance sheet date are disclosed if they are material.

At the time of the presentation of the financial statements, there were no known material events after the reporting period that were expected to have an impact on the Group's income statement for 2018 or its statement of financial position as of 31 December 2018.

The boards of Eidsiva Energi and Hafslund E-CO agree on a draft agreement for merging the companies, as well as the principles for the exchange ratio. Negotiated draft agreements are in line with the letter of intent between the parties from November 2018 and will be submitted for resolution by the companies' owners during the second quarter of 2019. Given owner acceptance in both companies and necessary regulatory approval, the transactions are expected to be completed in the third quarter of 2019. The transactions will result in substantial changes in the Group's structure.

The financial statements have been prepared in accordance with the going concern assumption. It is the Boards view that the Group satisfied these prerequisites at the time the financial statements were approved for publication.

## Note 9.4 Business disposals in 2017

### Disposal of subsidiaries in 2017 – Hafslund AS

On 3 July 2017, the City of Oslo made a voluntary offering for all the shares in Hafslund ASA through its wholly owned company Oslo Energi Holding AS. After the compulsory purchase of non-controlling interests, the shares were de-listed from the Oslo Stock Exchange. On 4 August 2017, Hafslund ASA carried through a spin-off pursuant to company law with continuity of shareholders' shares and rights, in which all assets, rights and liabilities, apart from those assets, rights and liabilities associated with Hafslund Produksjon, were spun off to the new company Hafslund AS. The former company Hafslund ASA changed name to Hafslund Produksjon Holding AS, in which E-CO Energi Holding AS now has a 90 per cent shareholding, and an external party 10 per cent.

Immediately after the spin-off, Hafslund AS sold 100 per cent of the shares in the subsidiary Hafslund Marked AS and 50 per cent of the shares in the subsidiary Hafslund Varme AS to Fortum.

The residual 50 per cent shareholding in Hafslund Varme AS, and receivables due from Fortum following the disposal of the shares in Hafslund Varme AS and Hafslund Marked AS, were distributed as a non-cash distribution to Oslo Energi Holding AS as of 30 September 2017.

Please see Hafslund AS's consolidated financial statements for 2017 for a more detailed discussion of the transaction involving the divestment of several businesses in the former listed company Hafslund ASA.

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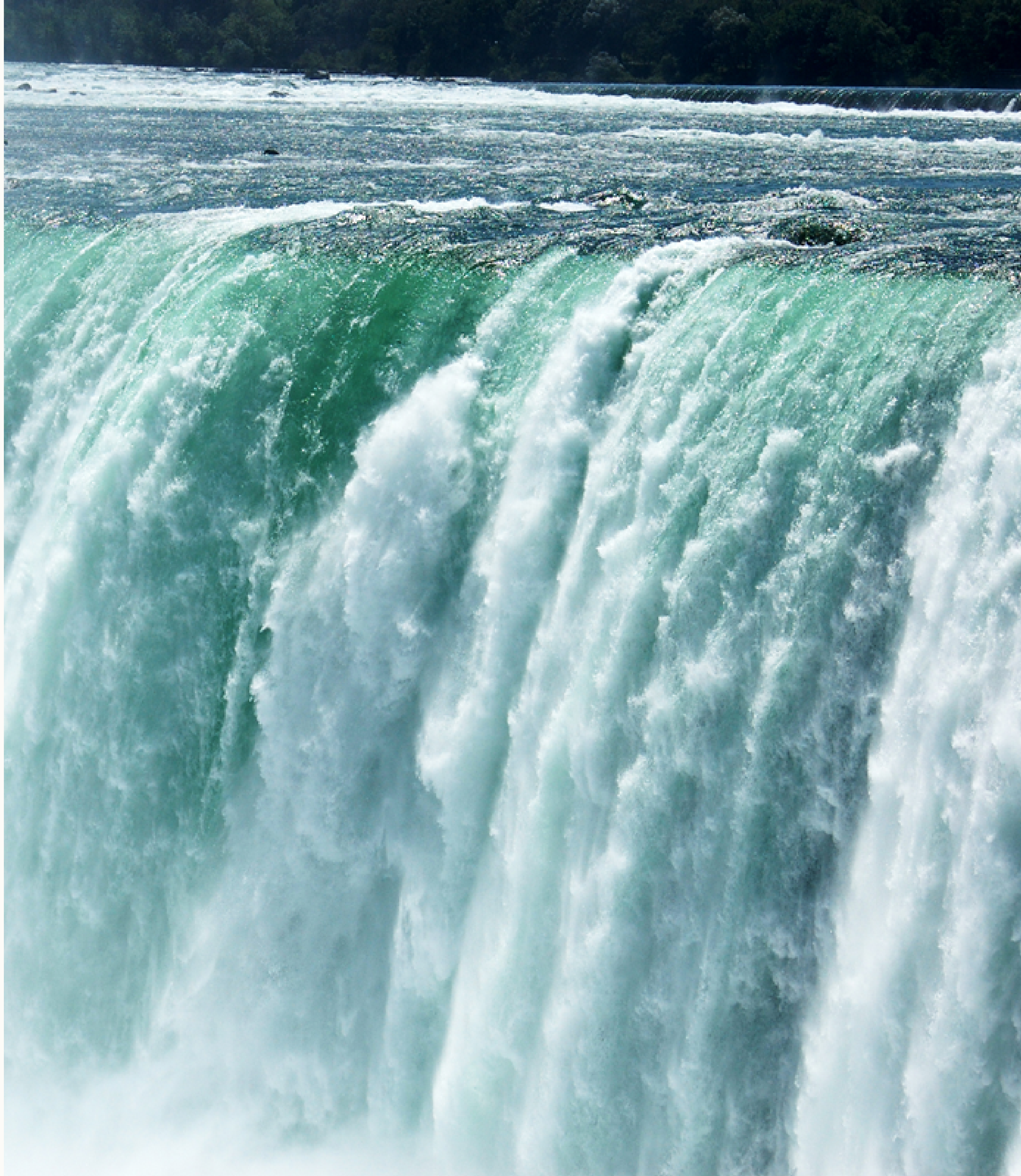

# Income statement - 4 July – 31 December 2018

| NOK million | Note | 2018 |
|---|---|---|
| **Revenue and other income** | | **20** |
| Salary and other personnel expenses | 10 | -23 |
| Other operating expenses | 12 | -10 |
| **Operating profit** | | **-13** |
| Interest  and other financial income | 8 | 1 442 |
| Interest expenses | 8 | -44 |
| **Net financial items** | 8 | **1 398** |
| **Profit before tax** | | **1 385** |
| Income taxes | 15 | -63 |
| **Profit for the year** | | **1 323** |

# **Balance sheet** – 31 December 2018

| NOK million | Note | 2018 |
|---|---|---|
| **ASSETS** | | |
| Shares in subsidiaries | 3 | 16,895 |
| Other non-current assets | | 2 |
| **Non-current assets** | | **16,897** |
| | | |
| Trade receivables | 14 | 19 |
| Other current non-interest receivables | 14 | 1,428 |
| Cash and cash equivalents | 7 | 5 |
| **Current assets** | | **1,452** |
| **Assets** | | **18,349** |

| NOK million | Note | 2018 |
|---|---|---|
| **EQUITY AND LIABILITIES** | | |
| Paid in capital | 9 | 15,395 |
| Other equity | 9 | 36 |
| **Equity** | 9 | **15,430** |
| | | |
| Non-current interest-bearing debt | 4 | 1,500 |
| Pension liabilities | 11 | 4 |
| **Non-current liabilities** | | **1,504** |
| | | |
| Trade payables | 5 | 4 |
| Other current non-interest-bearing liabilities | 5 | 1,329 |
| Current tax liabilities | 15 | 62 |
| Current interest-bearing debt | 6 | 19 |
| **Current liabilities** | | **1,415** |
| **Equity and liabilities** | | **18,349** |

# Cash flow statement - 4 July – 31 December 2018

| NOK million | Note | 2018 |
|---|---|---|
| **CASH FLOWS FROM OPERATING ACTIVITIES** | | |
| Operating profit | | -13 |
| Changes in working capital, etc. | | 18 |
| Taxes paid | | - |
| Interest paid | | - |
| **Net cash flows from operating activities** | | **5** |
| **CASH FLOWS FROM INVESTING ACTIVITIES** | | |
| **Net cash flows from investing activities** | | **-** |
| **CASH FLOWS FROM FINANCING ACTIVITIES** | | |
| Increase in interest-bearing debt | | - |
| Repayment of interest-bearing debt | | - |
| **Net cash flows from financing activities** | | **-** |
| Net cash flows | | 5 |
| Cash and cash equivalents per 4 July 2018 | | - |
| **Cash and cash equivalents per 31. December 2018** | 7 | **5** |

*Oslo, 10 April 2019*

## The Board of Directors of Hafslund E-CO AS

Alexandra Bech Gjørv
*Board Chair*

Bente Sollid Storehaug

Bjørn Erik Næss

Bård Vegar Solhjell

Mari Thjømøe

Arvid Amundsen

Per Luneborg

Johnny Kjønås

Finn Bjørn Ruyter
*CEO*

## Note 1 Accounting policies

On 20 July 2018 the Oslo City Council decided to combine the ownership of Hafslund AS and E-CO Energi Holding AS under joint board and management. Hafslund E-CO AS was established on 4 July 2018. The income statement covers the period 4 July – 31 December 2018. The financial statements of Hafslund E-CO AS have been prepared in accordance with the Norwegian Accounting Act and generally accepted accounting practice in Norway (NGAAP). The company is headquartered in Oslo.

### Revenue recognition

Hafslund E-CO's operating revenues consist mainly of services provided to group companies and are recognized as revenue when the service is delivered. Interest income consists of interest revenues from group companies and is recognised as income when it is earned. Dividends that are allocated in the subsidiaries are recognised in the same year as the dividend is allocated.

### Classification

Assets intended for permanent ownership or use are classified as non-current assets. Receivables that are repaid within one year, as well as assets that are not intended for permanent ownership or use for the business, are classified as current assets. Debt with maturity later than one year after the end of the financial year is classified as non-current debt. Other debt is classified as short-term.

### Measurement principles

***Trade and other receivables***

Trade and other receivables are measured at nominal value less provisions for expected losses. Provisions for losses are made based on an individual assessment of the individual receivables. In addition, an unspecified provision is made to cover assumed losses for other accounts receivables. The majority of the company's trade receivable are receivables from companies in the same group.

***Investments in subsidiaries***

Investments in subsidiaries are measured in accordance with the cost method. Investments in subsidiaries are written down to fair value when impairment is due to reasons that cannot be assumed to be temporary and it must be considered necessary in accordance with generally accepted accounting practice. Impairment losses are reversed when the basis for impairment is no longer present. Dividends received and other profit distributions from subsidiaries are recognised as financial income.

***Pensions***

See consolidated financial statements note 7.2 Pensions. Hafslund E-CO AS has applied NRS 6A, which refers to IAS 19, regarding the accounting treatment of pension costs.

***Income taxes***

The tax expense is based on the profit or loss before tax. The tax expense comprises taxes payable and changes in deferred tax liabilities/deferred tax assets. Taxes payable is calculated based on the taxable profit for the year. Deferred tax recognised in the balance sheet is calculated in accordance with the offset method, with full provision for net tax-increasing temporary differences based on tax rates and nominal amounts at the balance sheet date. Deferred tax assets relating to net tax-reducing temporary differences and tax losses carried forward are recognised based on an assessment of the probability of there being sufficient future earnings or ability to utilise tax positions that can be offset through Group contributions.

***Interest-bearing liabilities***
Liabilities are measured at nominal value. Borrowing costs for the admission of borrowings are recognised directly in the income statement.

***Basis of preparation of statement of cash flow***
The cash flow statement has been prepared in accordance with the indirect method. This means that the starting point of the statement is the Company's operating profit in order to be able to present cash flows from ordinary operating activities, investing activities and financing activities, respectively.

## Note 2 Transactions and events in 2018

When Hafslund E-CO AS was established on 4 July 2018, the company took over the shares in Hafslund AS and E-CO Energi Holding AS. The shares are measured at book values (continuity). See also note 3 Shares in subsidiaries.

## Note 3 Shares in subsidiaries

| NOK million | Date of acquisition | Registered office | Shareholding/ voting rights | Recognised value |
|---|---|---|---|---|
| **SHARES IN SUBSIDIARIES** | | | | |
| E-CO Energi Holding AS | 2018 | Oslo | 100 % | 10,468 |
| Hafslund AS | 2018 | Oslo | 100 % | 6,427 |
| **Shares in subsidiaries** | | | | **16,895** |

## Note 4 Long-term interest-bearing debt

| NOK million | Loan amount | Currency | Due date | 31.12.2018 |
|---|---|---|---|---|
| **HAFSLUND E-CO AS** | | | | |
| Subordinated loan from Oslo Energi Holding AS | 1,500 | NOK | 2037 | 1,500 |
| **Long-term interest-bearing debt** | | | | **1,500** |

Long-term interest-bearing debt comprises a subordinated loan from Oslo Energi Holding AS, entered into in connection with the establishment of Hafslund E-CO AS and the Company's takeover of the shares in E-CO Energi Holding AS and Hafslund AS, respectively.

Oslo Energi Holding AS is 100 per cent owned by the City of Oslo and is therefore a related party to Hafslund E-CO AS.

In the event of a liquidation of Hafslund E-CO AS, the loan shall be subordinated to all the Company's other obligations but shall be equal to any other subordinated loans and shall be covered before the share capital. The loan is interest-only and is due for payment on 31 December 2037. Actual interest rate for the period 4 July – 31 December 2018 was 5.03 per cent.

Oslo Energi Holding AS has the right to terminate the debt for redemption if the City of Oslo's ownership interest in Hafslund E-CO AS is reduced to below 50.1 per cent.

There are conditions attached to repayment of the loan in connection with Oslo Energi Holding's compulsory redemption of shareholders of the former Hafslund ASA. See note 9.1 to the consolidated financial statements.

For information on financial risk management, see note 5.4 to the consolidated financial statements.

## Note 5 Trade payables and other current liabilities

| NOK million | 2018 |
|---|---|
| **TRADE PAYABLES** | |
| Trade payables | 4 |
| **Trade payables** | **4** |
| | |
| **OTHER CURRENT LIABILITIES** | |
| Public taxes and charges payable | 4 |
| Accrued interest | 37 |
| Other short-term liabilities | 4 |
| Dividend accrued | 1,284 |
| **Other current liabilities** | **1,329** |

## Note 6 Current interest-bearing debt

Current interest-bearing debt consists of a drawing on the account in the group account system of NOK 19 million.

## Note 7 Cash and cash equivalents

| NOK million | 2018 |
|---|---|
| **CASH AND CASH EQUIVALENTS** | |
| Cash and cash equivalents group account | 5 |
| **Cash and cash equivalents** | **5** |

## Note 8 Financial items

| NOK million | 2018 |
|---|---|
| **INTEREST INCOME** | |
| Interest income | 18 |
| Other financial income | 1,423 |
| **Interest income** | **1,442** |
| **INTEREST EXPENSE** | |
| Interest expense | -44 |
| **Interest expense** | **-44** |
| | |
| **Net financial items** | **1,398** |

Other financial income consists mainly of group contributions of NOK 310 million from E-CO Energi Holding AS and dividends of NOK 723 million from E-CO Energi Holding AS and NOK 390 million from Hafslund AS.

Interest expense consists mainly of interest expense of NOK 36.5 million for the period 4 July - 31 December 2018 on the subordinated loan from Oslo Energi Holding AS.

## Note 9 Equity

| NOK million | Number of shares | Share capital | Other paid in capital | Other equity | Total equity |
|---|---|---|---|---|---|
| **Equity at 4 July 2018** | **100,000** | **100** | **15,295** | **-** | **15,395** |
| | | | | | |
| Actuarial gains and losses | | | | -3 | -3 |
| Profit for the year | | | | 1,323 | 1,323 |
| Dividends 2018 | | | | -1,284 | -1,284 |
| **Equity at 31 December 2018** | **100,000** | **100** | **15,295** | **36** | **15,430** |

The nominal value of the shares is NOK 1,000. The City of Oslo owns all the shares.

## Note 10 Salaries and other payroll costs

| NOK million | 2018 |
|---|---|
| **SALARIES AND OTHER PAYROLL COSTS** | |
| Wages and salaries | 20 |
| Employers' national insurance contributions | 3 |
| Pension costs | -1 |
| Other personnel costs | 1 |
| **Salaries and other payroll costs** | **23** |

Hafslund E-CO AS has 23 full time equivalents employed as of 31 December 2018.

## Note 11 Pensions

Hafslund E-CO AS is obliged to operate pension plans for its employees in accordance with the Norwegian Act on Occupational Pension Plans. The company operates pension plans that satisfy the requirements of this Act and the plans cover both defined benefit and defined contribution plans. As of 31 December 2018, the company's pension plans covered a total of 25 employees, 5 of whom were in a public plan, 4 was in a private plan and 16 were in a defined contribution plan. The defined benefit plans provide the right to defined future benefits. These are mainly dependent on the number of years of service and salary level upon reaching retirement age. The pension plans are funded either through Hafslund's pension fund, E-CO Energi's pension fund or through insurance companies or directly by the companies.

The discount rate is calculated on the basis of an interest rate curve that takes into account that pension payments will mature at different times in the future. The curve is calculated based on prices from the Norwegian Covered Bonds market as of 31 August 2018, as calculated by the Norwegian Accounting Standards Board. Annual salary growth is calculated on the basis of a curve based on historical observations. For further details, see note 7.2 to the consolidated financial statements.

| NOK million | 31.12.2018 |
|---|---|
| **Liability recognised** | |
| Present value of accrued pension liabilities for funded defined benefit plans | 60 |
| Fair value of pension assets | -60 |
| **Actual net pension liabilities for funded defined benefit plans** | - |
| Present value of pension liabilities for unfunded plans | 2 |
| **Net pension liabilities recognised (incl. Employer's National Isurance contributions)** | **2** |
| Net pension liabilities recognised | -2 |
| Net pension assets recognised | - |

| The following financial assumptions have been applied | 2018 |
|---|---|
| Discount rate | 2,60 % |
| Yield | 2,60 % |
| Annual salary increase | 2,75 % |
| Adjustment of National Insruance Scheme's basic amount (G) | 2,50 % |
| Adjustment of current pensions, public plan | 1,75 % |

## Note 11 Pensions *(continued)*

| NOK million | 31.12.2018 |
|---|---|
| Accrued pension benefits for the year | - |
| Net interest costs | - |
| Employer's National Insurance contributions | - |
| Net liability on curtailment, through income statement | 2 |
| **Pension costs defined benefit plans** | **2** |
| **Pension costs defined contribution plans** | **-1** |
| **Total pension costs** | **1** |

## Note 12 Other operating costs

| NOK million | 2018 |
|---|---|
| **OTHER OPERATING COSTS** | |
| Purchase of external services | 7 |
| Other items | 2 |
| **Other operating costs** | **10** |
| | |
| **AUDITOR'S FEES (NOK' 000)** | |
| Mandatory audit | 75 |
| Other assurance services | - |
| Tax consultancy services | - |
| Other non-audit fees | - |
| **Total auditor's fees** | **75** |

## Note 13 Guarantees

As security for certain obligations, the Group purchases bank guarantees. Reference is made to note 4.2 to the consolidated financial statements.

## Note 14 Trade receivables and other current receivables

| NOK million | 2018 |
|---|---|
| **TRADE RECEIVABLES** | |
| Trade receivables | 19 |
| **Trade receivables** | **19** |
| **OTHER NON-INTEREST-BEARING CURRENT RECEIVABLES** | |
| Other non-interest-bearing current receivables | 1,428 |
| **Other non-interest-bearing current receivables** | **1,428** |

Other non-interest-bearing short-term receivables consist mainly of group contributions of NOK 310 million from E-CO Energi Holding AS and dividends of NOK 723 million from E-CO Energi Holding AS and NOK 390 million from Hafslund AS.

## Note 15 Income taxes

| Tax expense | 2018 |
|---|---|
| Income tax payable | 62 |
| Tax on group contribution | 1 |
| **Tax expense in the income statement** | **63** |

| Reconciliation of tax rate | 2018 |
|---|---|
| **Profit before tax** | **1,385** |
| 23 % (24 %) of profit before tax | 319 |
| 23 % (24 %) of permanent differences, dividends | (257) |
| 23 % (24 %) actuarial gains and losses | 1 |
| **Total tax expense** | **63** |

| Deferred tax<br>General income tax | 31.12.2018 |
|---|---|
| Pensions | -2 |
| **Total** | **-2** |
| Tax rate | 22 % |
| Deferred tax liability/(asset) | - |

## Note 16 Related party transactions

Hafslund E-CO AS has a subordinated loan of NOK 1.5 billion from Oslo Energi Holding AS, a company which is 100 per cent owned by the City of Oslo. The loan was established in 2018, is interest-only and is due for payment on 31 December 2037. Further information about the loan and its conditions is included in note 4 Long-term interest-bearing debt.

## Note 17 Events after the reporting period

Reference is made to note 9.3 to the consolidated financial statements.

# Statement pursuant to §5-5 of Norway's Securities Trading Act

We declare to the best of our knowledge that:

- The consolidated financial statements for 2018 have been prepared in accordance with IFRSs as adopted by the EU, including additional disclosures pursuant to the Norwegian Accounting Act.
- The parent company's 2018 annual financial statements have been prepared in accordance with the Norwegian Accounting Act and generally accepted accounting practice in Norway.
- The accounting information provides a true and fair view of the company's and the Group's assets, liabilities and financial position and performance as a whole.
- The Report from the Board of Directors provides a true and fair picture of the development, performance and position of the company and the Group, as well as a description of the most important risk factors and uncertainties facing the business.

*Oslo, 10 April 2019*

**The Board of Directors of Hafslund E-CO AS**

Alexandra Bech Gjørv
*Board Chair*

Bente Sollid Storehaug

Bjørn Erik Næss

Bård Vegar Solhjell

Mari Thjømøe

Arvid Amundsen

Per Luneborg

Johnny Kjønås

Finn Bjørn Ruyter
*CEO*

# Auditor's Report

To the General Meeting of Hafslund E-CO AS

## *Independent Auditor's Report*

### *Report on the Audit of the Financial Statements*

#### *Opinion*

We have audited the financial statements of Hafslund E-CO AS, which comprise:

- The financial statements of the parent company Hafslund E-CO AS (the Company), which comprise the balance sheet as at 31 December 2018, 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 Hafslund E-CO AS and its subsidiaries (the Group), which comprise the financial position as at 31 December 2018, the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion:

- The financial statements 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.
- 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.

#### *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.

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*T: 02316, org. no.: 987 009 713 VAT, www.pwc.no*
*State authorised public accountants, members of The Norwegian Institute of Public Accountants, and authorised accounting firm*

### *Other information*

Management is responsible for the other information. The other information comprises information in the annual report, except the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information 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 Managing Director for the Financial Statements*

The Board of Directors and the Managing Director (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 the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway, and for the preparation and fair presentation of the consolidated financial statements of the Group in accordance with International Financial Reporting Standards as adopted by the EU, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's and the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern. 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 consolidated 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 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.

For further description of Auditor's Responsibilities for the Audit of the Financial Statements reference is made to https://revisorforeningen.no/revisjonsberetninger



Independent Auditor's Report - Hafslund E-CO AS

## *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 concerning the financial statements, the going concern assumption and the proposed allocation of the result 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, 10 April 2019
**PricewaterhouseCoopers AS**

Thomas Fraurud
State Authorised Public Accountant
(This document is signed electronically)

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

Hafslund ECO