

**Statnett**

Annual Report 2018

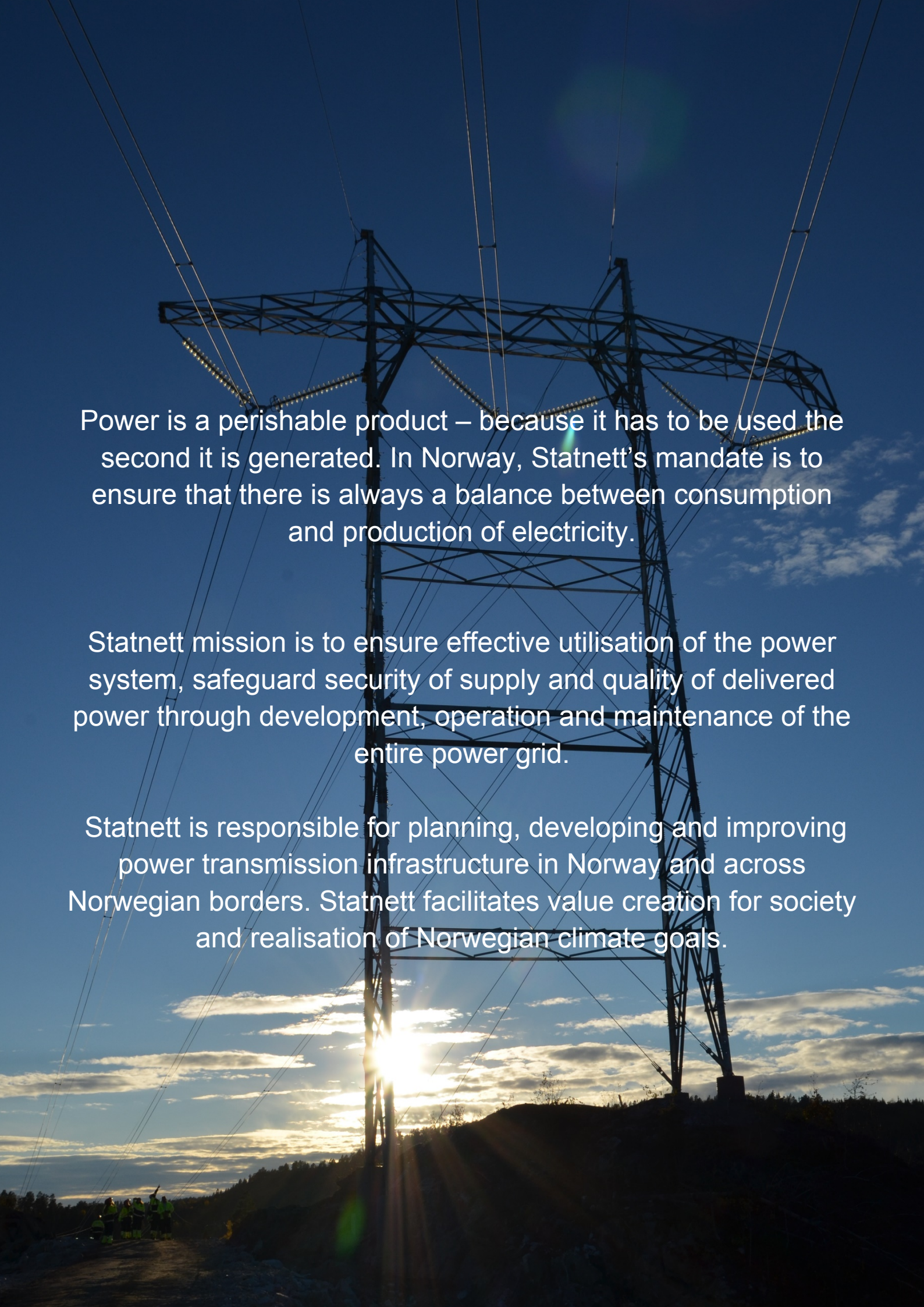
The future is electric



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Power is a perishable product – because it has to be used the second it is generated. In Norway, Statnett's mandate is to ensure that there is always a balance between consumption and production of electricity.

Statnett mission is to ensure effective utilisation of the power system, safeguard security of supply and quality of delivered power through development, operation and maintenance of the entire power grid.

Statnett is responsible for planning, developing and improving power transmission infrastructure in Norway and across Norwegian borders. Statnett facilitates value creation for society and realisation of Norwegian climate goals.

# This is Statnett

Statnett is responsible for developing and operating the transmission grid, and has overall responsibility for security of supply and effective utilisation of the Norwegian power system. Statnett has contributed to making Norway one of the world's most electrified societies. The company is also facilitating further decarbonisation in Norway and at our trading partners.

## Social mandate

Statnett's mandate is to be the Transmission System Operator (TSO) for the Norwegian power system. Statnett is responsible for developing, operating and maintaining the transmission grid in Norway in the best interests of society. Our activities affect users of the transmission grid and a wide variety of stakeholders in all areas of society.

The most important areas in which we contribute are:

- **Security of supply**  
Statnett shall safeguard security of supply in Norway through operations, monitoring and emergency preparedness.
- **Value creation**  
Statnett shall facilitate value creation for both our customers and society as a whole.
- **Electrification**  
Statnett shall facilitate use of electricity in new areas and more renewable production to enable Norway to achieve its climate goals.

## Main roles

Statnett's mandate is operationalised through three integrated primary roles:

- **System manager**  
Responsible for safeguarding security of supply and ensuring instantaneous balance between power production and consumption at all times.

- **Grid owner**  
Owner of the Norwegian transmission grid and connections with other countries' power systems.
- **Power system planning**  
Responsible for planning of the transmission grid in the Norwegian power system, including interconnectors abroad.

The roles of power system planner and system manager require neutrality, transparency and trust, and impact all players in the power market. The role of owner of the transmission grid also requires Statnett to work closely with the authorities and other stakeholders in planning the power system to ensure that the right capacity is available at the right time.

## Ownership

Statnett is a state-owned enterprise established in accordance with the Act relating to state-owned enterprises and is owned by the state through the Ministry of Petroleum and Energy (OED). The Norwegian Water Resources and Energy Directorate (NVE) is responsible for supervision in accordance with watercourse and energy legislation. Statnett is organised as a group.

In Norway, power transmission is a monopoly franchise. State-ownership of Statnett is intended to contribute to rational socio-economic operation and development of the transmission grid. Statnett is responsible for critical infrastructure and performs assignments of major importance for civil security. State-ownership helps ensure that Statnett is regarded as a neutral player in the market. Our revenues are regulated by NVE, which sets an upper limit for how much we can charge for our services. This regulation is based on the premise that over time, Statnett's income will cover its costs and provide a reasonable return on invested capital assuming efficient operations, utilisation and development of the grid.

Financial key figures	2018	2017	2016	2015	2014
Investments	12,377	9,235	7,695	5,820	6,037
Equity	16,194	14,011	13,867	13,605	12,629
Total assets	70,281	58,721	50,743	45,547	41,107
Operating revenues	9,138	7,401	6,678	5,906	5,563
Profit after tax	2,213	813	645	1,103	829



## Our strategic foundation

The Group's strategy is based on the assumption that the electrification of society will continue. Statnett's primary objective is to develop a smart and future-proof power system, while maintaining security of supply and offering high available grid capacity to the market. We shall also be a leader in HSE and maintain our position as one of Europe's most cost-effective TSOs. Statnett also aims to ensure that the tariff for general consumption is levelled out after the next five-year period.

Our principal strategy is based on a vision of being efficient, smart and safe. Important requirements in this context include:

- **Choosing smart solutions.** This means digitalising and automating wherever possible and using data to respond more quickly and precisely when the balance is threatened. We are also developing efficient and automated market instruments and system solutions that make it easier for the system to maintain balance, in both the short and long term. We will also increasingly collaborate on integrated solutions across grid levels in the power system.
- **Developing a more cost-effective system.** This will help ensure that customers do not pay more than necessary for a secure power supply. Together, digitalisation, efficient markets and cost reductions must provide maximum security of supply for the money.
- **Remaining one of the best-performing TSOs in HSE in Europe.** Operating and developing a power system entails a risk for both employees and third parties. Statnett must have full control of HSE issues.

## Corporate social responsibility

Security of supply, value creation and electrification are defined as key areas of our corporate social responsibility mandate and are discussed in more detail in our report on corporate social responsibility. By exercising our corporate social responsibility, we support Statnett's strategy of maintaining efficient, smart and safe operations, and minimise the climate and environmental footprint from our operations. We set environmental requirements in all our contracts, and when making decisions accord the same importance to climate and environmental aspects as we do to technical and economic considerations. Corporate social responsibility is also a question of taking account of social considerations and ensuring proper working conditions. This helps to create trust and acceptance of the work we perform.

## Socio-economic development of the power grid

The Norwegian Energy Act and Statnett's Articles of Association require the power grid to be developed in a socio-economically optimal manner. This applies both to decisions made by Statnett and decisions made by the authorities when issuing permits for projects. Socio-economic analyses ensure that decision-makers receive expertly prepared documentation and comparable decision-making criteria. Provided the above, Statnett focuses on commercial profitability and cost-effective solutions.

### Grid levels in the power market

In Norway, there are separate grid levels.

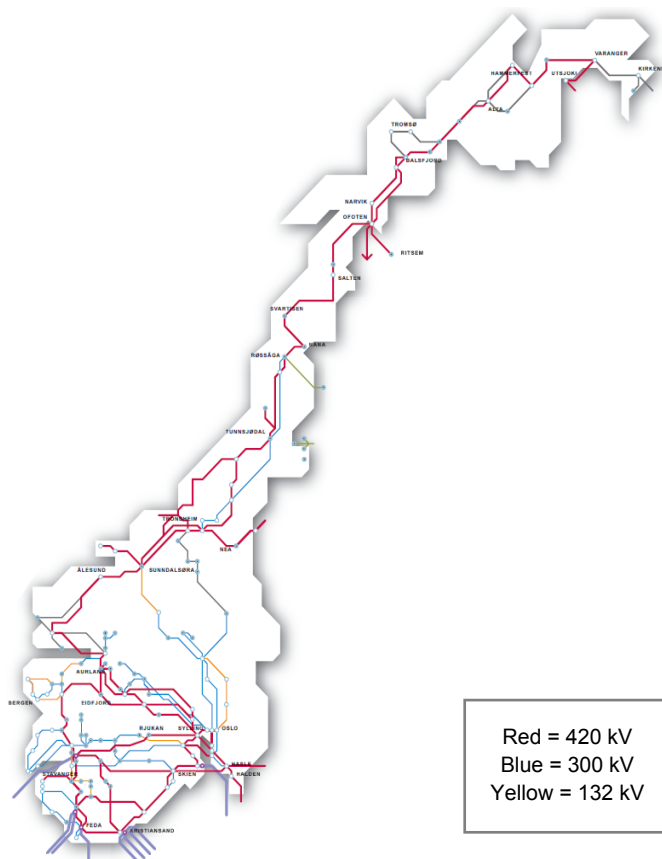
**The transmission grid** links major producers and consumers in a nationwide system, which also includes interconnectors abroad. The transmission grid is high voltage, normally 300 kV or 420 kV, though in some areas of Norway it can be 132 kV. Statnett operates the transmission grid in Norway.

**The distribution grid** comprises the local power grids that normally distribute power to smaller end users. The distribution grid has voltages up to 132 kV. The distribution grid can also cover production and consumption radials.

## Operations and development

Statnett operates around 11,000 km of high-voltage power lines and 166 substations and 1,400 km of subsea and land cables the length and breadth of Norway. The power system is developed and managed by Statnett's nationwide organisation, which is also responsible for emergency preparedness. The grid is monitored by a national control centre and two regional centres. Statnett is also responsible for interconnectors with Sweden, Denmark, Finland, the Netherlands and Russia. Statnett uses a countrywide communications network, based on 10,000 km of optical fibre, to monitor and control its facilities.

Statnett engages in multiple construction activities and has many ongoing projects throughout Norway. Statnett has completed almost 1,200 km new or upgraded lines and more than 90 new or upgraded substations since 2014. Statnett is also constructing cables to Germany and the United Kingdom.



### Operational key figures

#### Power lines divided into voltage level<sup>1)</sup>

Voltage level	Unit	2018	2017	2016	2015
AC 132	km	2,411	2,411	2,468	2,686
AC 300	km	4,180	4,387	4,601	4,595
AC 420	km	4,132	3,803	3,276	3,138

<sup>1)</sup> In 2017 Statnett also operated power lines at following voltage level: 22 kV: 38 km, 66 kV: 35 km, 150 kV: 11 km, 220 kV: 87 km, 250 kV: 56 km, 350 kV: 28 km.

#### Transmission lines and cables in operation<sup>2)</sup>

	Unit	2018	2017	2016	2015	2014
Power lines in operation	km	10,947	10,855	10,600	10,295	10,149
Underground cables and subsea cables in operation <sup>1)</sup>	km	1,423	1,287	1,282	1,268	1,212
Power lines commissioned	km	225	232	157	137	140
Upgraded existing power lines	km	119	155			
New operational power lines	km	141	189	149	162	49
Demolished facilities	km	50	54	25	80	47
Number of commissioned field circuit breaker	Number	67	50	61	63	85
Greenhouse gas emissions	CO <sub>2</sub> -equivalents	62,832	55,576	51,794	41,465	35,220

<sup>2)</sup> The principles for reporting were amended in 2016. Values have been updated for all years. The figures show installed running metres of cable, not route kilometres.

## Balancing the power system

In Norway, Statnett has the task of coordinating power production and consumption so that the power system is always in balance. This is called instantaneous balance. The power trading market determines how much power will be produced and at which price. This market brings together power producers and power suppliers (who purchase power on behalf of electricity customers). However, buyers and sellers never produce and use the exact volumes agreed upon in advance. Statnett's job is to provide for the final balance and to make sure that the power system stays within the limits of the laws of physics so that the electricity can be transmitted.

## Customers

Everyone who is connected to the transmission grid is a customer of Statnett. Those are composed of power producers, power consumers and distribution grids. Statnett is obliged to ensure operationally viable connection of new or increased consumption or production. If connection to the existing grid is not operationally viable, this triggers a duty to investigate and a duty to invest. Customers must wait to be connected to the grid or for outtake/input to increase until connection becomes operationally viable.

In most cases, customers are connected to regional grids and enter into a connection agreement with distribution system operators other than Statnett. However, in such cases local distribution system operators must clarify with Statnett whether there is sufficient capacity in the transmission grid.

## Publication of reports and investigations

To satisfy society's needs, Statnett performs a number of analyses and investigations to provide a basis for potential further measures. These may include choice-of-concept studies, analyses related to specific projects, or background work. Statnett also prepares a Grid Development Plan and Power System Assessment every other year.

Statnett wishes to make it easier for customers to receive the necessary information about connection to the transmission grid, please visit [www.statnett.no](http://www.statnett.no).

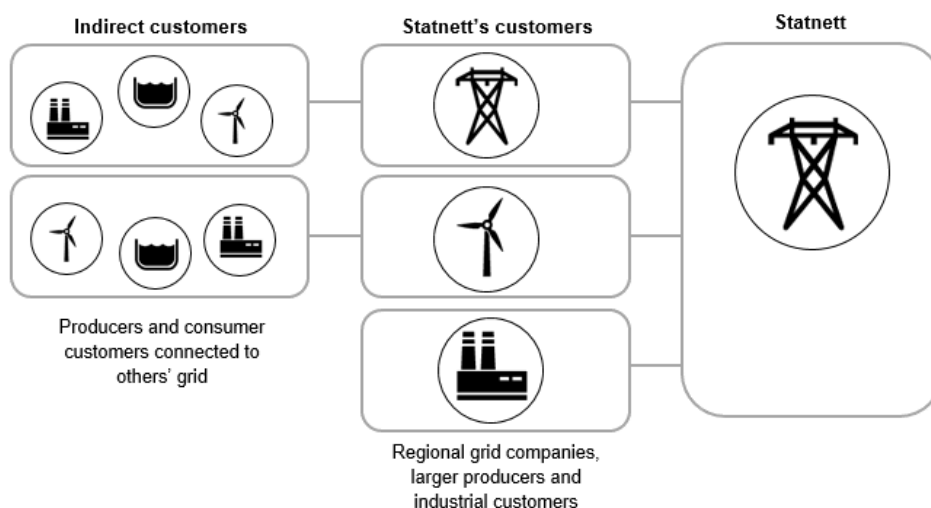
Published reports can be viewed at [www.statnett.no](http://www.statnett.no).

## Values

Statnett's set of values establishes a framework for expected behaviours based on teamwork, dialogue and transparency. Statnett's values:

- Long-term perspective
- Respect
- Community

Please visit [www.statnett.no](http://www.statnett.no) for further information about Statnett.



# Highlights in 2018

## Investments in recent years have resulted in a robust grid

Statnett is currently making a number of major investments in time-critical capacity improvements. In 2018, we made record-high investments, but investment levels are expected to decrease moving forward. In the next five years, we intend to invest a total of NOK 30–40 billion.

## Commissionings in the Western Corridor

The Western Corridor is the term used for the transmission grid in South-West Norway, which is currently being upgraded to 420 kV. The corridor stretches from Kristiansand in the south to Sauda in the north. The Kristiansand–Ertsmyra section, which represents an important part of the southern end of the project, was commissioned in September. The 420 kV power line from Sauda to Saudal was commissioned in October. This is the first section to be upgraded at the northern end of the construction area. The Western Corridor is due to be completed in 2021, and will facilitate more renewable energy, increased security of supply in South-West Norway and full utilisation of interconnectors.

## Commissioning of first section of the Namsos–Surna power line

The first section of the 420 kV power line between Namsos and Surna was commissioned in September. This section is being implemented in two stages. The entire first construction stage is due to be completed during 2019, and, in accordance with the official licence, the second stage is scheduled to be completed by 2028. The Namsos to Surna section is being built to facilitate wind power development, increase the grid's north–south capacity through Central Norway and improve the region's security of supply.

## Commissioning of the Ofoten–Balsfjord power line

The Ofoten–Balsfjord power line entered operation in 2017. The substations in Balsfjord, Bardufoss and Kvandal were completed in 2018. This means that the entire project has now been put into operation at 420 kV. The power line is needed to maintain security of supply across the entire region north of Ofoten and will contribute to the construction of new renewable energy.

## Installation of new cables in the Inner Oslo Fjord

The last of the two new 420 kV subsea cable sets in the Inner Oslo Fjord were commissioned in August. The cables are one of Eastern Norway's most important power connections and will significantly boost security of supply for Greater Oslo. The first cables were completed in the summer of 2017.

## Interconnector with Germany (NordLink)

The first section of the subsea power cable between Norway and Germany was completed in the Norwegian sector in 2018. Work also started on the subsea cable in the Danish and German sectors. Testing of the converter station at Ertsmyra has started and the station is expected to be completed in 2019. The cable is due to enter test operation at the end of 2020. The exchange capacity will boost value-creation and security of supply and aid the transformation to a more climate-friendly European energy system.

## Interconnector with the UK (North Sea Link)

The first section of the subsea power cable between Norway and the United Kingdom was laid in 2018. Construction work for the converter stations in Kvilldal and in Blyth in northern England has started. The cable is due to be commissioned in 2021. The exchange capacity will boost value-creation and security of supply and will aid the transformation to a more climate-friendly European energy system.

## Grid asset transactions

In 2018, Statnett took over the infrastructure on the Fana–Kollsnes–Mongstad section from BKK, and Honna substation from Agder Energi. Hjortland substation has been sold to Suldal Elverk. An agreement has been entered into to transfer the regional grid to Helgeland Kraft Nett AS effective 2019. Statnett will operate this infrastructure until 2023. The transfers have been made to satisfy the expected legislation change as a result of the EU's Third Energy Package. The agreements are also consistent with Statnett's strategy of owning and developing the transmission grid and selling the distribution grids to distribution system operators who focus on operating and developing the lower-voltage grid.



### New operating centre system

The operating centre system (e-Terra) entered operation in December. The system replaces its predecessor SPIDER. Statnett's operating centres use the system to manage and monitor the status of the power system based on measurements and data retrieved from Statnett's facilities, as well as from producers and consumers.

### Collaboration on shared digital platform

In 2018, Statnett, Lyse and DigitalNorway carried out a feasibility study to evaluate the need for better digital collaboration between Norwegian grid operators. In November, work started to establish a shared information model for the industry. The project is coordinated by Energy Norway, with DigitalNorway contributing knowledge gained from other industries.

### Nordic Balancing Model

In March, the five Nordic system operators Svenska kraftnät, Fingrid, Kraftnät Åland, Energinet and Statnett entered into a collaboration agreement to develop a model for future balancing of the Nordic power system (mACE). A changing power system is resulting in more variable renewable power production and influencing consumption patterns. The concept is intended to satisfy the growing need for flexibility and ensure better control of imbalances.

### Establishment of Fifty AS

In February, Svenska kraftnät and Statnett established the jointly owned company Fifty AS. The company has developed the market system Fifty MMS for its owners and will develop digital solutions to support balancing of the Nordic power system (mACE).

### Drones used to survey Statnett infrastructure

Statnett is researching the use of drones to monitor substation and power line infrastructure. We are collaborating with IT developers, drone companies and research partners on ways to use artificial intelligence to collect and process sensor data as a basis for smart infrastructure management of the future. This will improve the cost-efficiency of our operations and reduce risks for our employees.

### Operational challenges as a result of the weather

Norway experienced unusual weather conditions in 2018 in the form of a cold and snowy winter and a hot and extremely dry summer. Reservoir levels reached record lows, and many power lines had reduced capacity as temperatures approached 30 degrees Celsius. With many people fearing a power crisis, autumn saw heavy precipitation, with floods in some places. The power system ran smoothly throughout the year, and experienced a record low number of outages in parallel with record-high construction project activities. In 2018, we constructed more power lines than ever before. In July alone, we constructed 35 km, compared with 34 km in the whole of 2010.

### New loan facility

In 2017, Statnett placed its first major bond in the Euro Market following significant investments in the new grid. In March 2018, we placed our second major bond in the same market. Each loan is for EUR 500 million, which equates to around NOK 4.8 billion. In addition, Statnett placed a bond for SEK 1.5 billion in November.

# Financial framework conditions

## Revenues and results

Changes in revenues and results over the last five years are primarily attributable to higher grid capital due to an increase in the number of commissioned facilities, as well as a slightly lower NVE interest rate during the period. Statnett has recorded significant higher/lower revenues since 2009. This has resulted in major fluctuations in recognised operating revenues and operating results. Revenues and results adjusted for higher/lower revenues show that underlying activities are more stable than reported in the accounting figures.

Statnett's formulated strategy includes instructions for establishing the annual tariff for the transmission grid. In accordance with NVE's guidelines, Statnett aims to facilitate constant and predictable tariffs over time and has elected to repay accumulated higher revenue over several years. At the reporting date, Statnett's accumulated higher revenue amounted to NOK 59 million.

## The investment level affects revenues and the balance sheet

Only completed investments are included in the basis for Statnett's regulated income. Statnett's equity reported in the financial statements includes accumulated higher/lower revenues. To establish Statnett's actual equity, equity is adjusted for accumulated higher/lower revenues after tax.

Net interest-bearing liabilities have risen in line with investment levels. In 2014, Statnett received an equity injection of NOK 3.25 billion, with the aim of securing a minimum 25 per cent equity ratio. Due to the low higher revenue, the equity ratio at the end of 2018 was 23 percent both before and after adjustments for higher/lower revenues.

## Operating revenues regulated activities

Statnett's reported revenues in the financial statements comprise grid rental from customers in the transmission grid and congestion revenues. Congestion revenues arise when power is transmitted from areas with a low power price to areas with a high power price in the Nordic region and between Norway and the Netherlands. The grid rental (tariff) is established ahead of each calendar year.

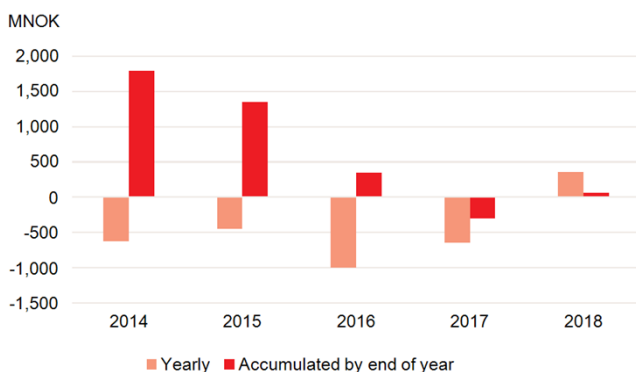
## Permitted income, regulated activities

Since grid activities are a natural monopoly, revenues are regulated and controlled by the Norwegian Water Resources and Energy Directorate (NVE), which establishes an annual revenue cap (permitted income). Permitted income is intended to cover costs of developing and maintaining the grid and provide a reasonable return on investments, provided the transmission grid is planned, constructed, operated, utilised and maintained in a cost-effective manner.

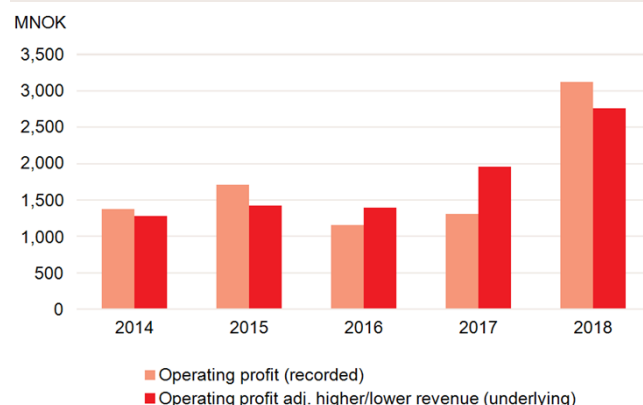
## Higher/lower revenue

Actual accounting income from regulated activities in each financial year will differ from the final permitted income, which NVE establishes after the end of the year. These differences are known as higher or lower revenue, which in accordance with NVE regulations are equalised over time through adjustment of future grid rentals. Consequently, higher/lower revenues represent temporary amounts in Statnett's financial statements, which in accordance with IFRSs are not recognised in the balance sheet.

Development higher/lower revenue, Group



Operating profit, Group



# Key Figures and Alternative Performance Measures\*

Key figures (MNOK)	2018	2017	2016	2015	2014
<b>Accounting result</b>					
Operating revenues	9,138	7,401	6,678	5,906	5,563
Depreciation and amortisation <sup>1)</sup>	-1,941	-2,273	-2,120	-1,516	-1,150
Driftsresultat før avskrivninger og amortisering (EBITDA)	5,061	3,585	3,272	3,230	2,528
EBIT	3,120	1,312	1,152	1,714	1,378
Profit before tax	2,701	976	783	1,410	1,120
Profit for period <sup>2)</sup>	2,213	813	645	1,103	829
<b>Adjustments</b>					
Change in accumulated higher/lower revenue (+/-) before tax	362	-646	-1,003	-444	-623
Change in accumulated higher/lower revenue (+/-) after tax	279	-491	-752	-324	-455
Accumulated higher/lower revenue (+/-)	59	-303	343	1,346	1,790
<b>Underlying result (adjusted for change in higher/lower revenue) <sup>2)</sup></b>					
Operating revenues	8,776	8,047	7,681	6,350	6,186
EBITDA	4,699	4,231	4,275	3,784	3,151
Underlying operating profit (EBIT)	2,758	1,958	2,155	2,158	2,001
Profit before tax	2,339	1,622	1,786	1,854	1,743
Underlying profit for the year	1,934	1,304	1,398	1,427	1,284
<b>Key figures balance sheet</b>					
Investments (additions, facilities under construction including interest on construction loans)	12,377	9,235	7,695	5,820	6,037
Property, plant and equipment	40,948	35,653	33,861	30,215	27,515
Long-term and current interest-bearing liabilities including hedging effect	45,737	39,189	32,633	28,289	24,643
Market value interest and currency swaps relating to loans	3,451	2,701	2,844	4,833	2,942
Interest-bearing liabilities adjusted for effect of interest and currency hedging	42,286	36,488	29,789	23,257	21,701
Equity	16,194	14,011	13,867	13,605	12,629
Equity adjusted for higher/lower revenue after tax	16,149	14,241	13,610	12,622	11,322
Total assets	70,281	58,721	50,743	45,547	41,107
Capital employed <sup>3)</sup>	55,507	49,299	41,322	35,859	31,271
<b>Key financial ratios</b>					
Return on capital employed before tax, adjusted for higher/lower revenue <sup>4)</sup>	5.3 %	4.3 %	5.6 %	6.4 %	6.9 %
Return on equity after tax <sup>5)</sup>	14.7 %	5.8 %	4.7 %	8.4 %	6.7 %
Equity ratio	23.0 %	23.9 %	27.3 %	29.9 %	30.7 %
Equity ratio after tax, adjusted for higher/lower revenue	23.0 %	24.3 %	26.8 %	27.7 %	27.5 %

<sup>1)</sup> Depreciation, amortisation and impairments per statement of total comprehensive income less impairments disclosed in Note 9 plants under construction.

<sup>2)</sup> The underlying result is based on regulated permitted revenue, while the accounting result will vary depending on established tariffs and congestion revenues. The difference is known as higher/lower revenue (see Note 2).

<sup>3)</sup> Capital employed = Property, plant and equipment + Facilities under construction + Trade and other current receivables + Trade and other current payables.

<sup>4)</sup> Return on capital employed before tax, adjusted for higher/lower revenue = EBIT, adjusted for higher/lower revenue / Average capital employed last two years.

<sup>5)</sup> Return on equity after tax = Net result for the year / Average equity last two years.

\* To provide a better understanding of Statnett's underlying result we also present a number of alternative performance measures. Alternative performance measures are defined in ESMA's guidelines as a financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined or specified in the applicable financial reporting framework. Statnett's alternative performance measures are adjusted for higher/lower revenue and supplement the figures in the IFRS financial statements. In addition to annual higher/lower revenue, reported accumulated higher/lower revenue also include applied interest and any prior-year adjustments.

Changes in selected key financial and operational ratios used by management to monitor alternative performance measures over time are also shown.



# A Word from the CEO on 2018

## *On the right track*

**Statnett’s overarching strategy is to construct a stronger and smarter grid. This will help us safeguard security of supply in a more demanding and more variable climate and will facilitate major reductions in Norwegian CO<sub>2</sub> emissions. Events in 2018 demonstrate just how important this strategy is.**

The weather is important for a company such as Statnett. It influences electricity consumption and renewable power production, and therefore also transmission needs. The weather also impacts the load on the grid. In 2018, we got an inkling that more extreme weather may be on the way and that we may have to take extra measures to safeguard security of supply. The year started with a long, cold and

*“In 2018, we got an inkling that more extreme weather may be on the way and that we may*

snowy winter. From May, we experienced an unusually hot and dry summer. The heat significantly reduced transmission capacity on some of our power lines, while droughts resulted in forest fires in some areas. Both necessitated major changes to our grid operations.

Low reservoir levels resulted in significant power price increases in the summer. A dry and cold autumn would have triggered further increases, but at the end of July the weather changed, and August was the second-wettest August in Norway since 1900. Parts of Western Norway experienced floods and periods of extremely low power prices. It proved difficult to export the large power surplus from the area. High levels of precipitation during the autumn saw reservoir levels return to more normal levels.

In 2010, Statnett started work on significant reinforcement of the transmission grid. A stronger grid is important for two reasons. Firstly, it increases security of supply, partly by enabling the power system to handle extreme weather situations more efficiently. Secondly, a stronger grid also allows us to receive and deliver more renewable power. This will be necessary to realise an emission-free, electric future. Norway needs 30–50 TWh to replace fossil power sources in transport, heating, industry and the offshore sector. That only covers areas that can be electrified without converting to hydrogen. If the rest of the fossil

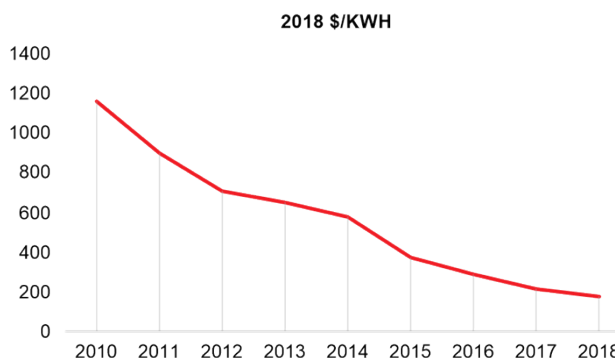
power usage would be replaced with hydrogen created by electrolysis the need would increase by another 40 TWh.

The UN’s Climate Panel (IPCC) has called for an urgent reduction in CO<sub>2</sub> emissions. We now have the tools to do this. The Norwegian authorities have made electrification of the transport sector a targeted policy goal. Technology developments are making this strategy increasingly profitable, regardless of climate policy.

The cost of electric car batteries fell by 85 per cent between 2010 and 2018. Better and cheaper hydrogen solutions can contribute by electrifying heavy transport. Such solutions are accelerating the pace of and facilitating electrification in areas that few people imagined possible just a few years ago.



Change in prices of battery packs



Source: Bloomberg New Energy Finance

*“We are now changing our organisation to further improve the efficiency of our construction activities.”*

10 TWh. Norway has Europe’s best onshore wind resources and highly flexible hydropower that can compensate for fluctuations in wind power. This could trigger significant construction of wind power moving forward. Wind power and hydropower provide us with the resources we need for electrification and increased value creation. In 2018, Statnett experienced a significant increase in interest from major new consumers wishing to connect to the grid. A strong grid is required to exploit Norway’s renewable resources.

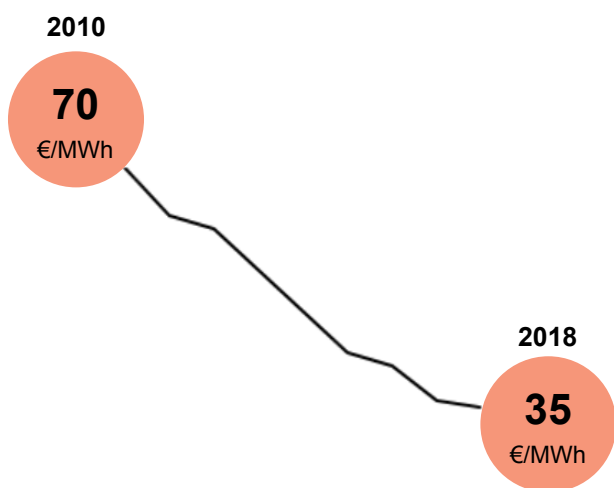
The cost of renewable power is also rapidly falling and Norwegian wind power is increasingly becoming profitable without subsidies. At the end of 2018, 8 TWh of wind power was under construction in Norway, and licences had been granted for a further

Each year, Statnett invests NOK 7–8 billion in the Norwegian transmission grid. It is important to ensure that these investments are implemented in a cost-effective manner. In recent years, we have reduced construction costs, and are now changing our organisation to further improve the efficiency of our construction activities. In the current ten-year period, the results of the ongoing efficiency work will have a positive tariff effect for general consumption of around NOK 5 billion, equating to 10 per cent of permitted income. We are also implementing extensive digitalisation measures to be able to operate and maintain the grid more cheaply and extend the service life of existing infrastructure. New digital solutions can also help us to leverage transmission capacity more efficiently without compromising security of supply.

We have successfully reduced the number of serious personal injuries, but if we are to achieve our ambitious HSE goals, we have to improve even more. Unfortunately, we have experienced an increase in work-related crime in connection with our projects. We will combat such criminality with all means available.

The power market has served Norway well since it was developed more than 25 years ago. This market is becoming even more important as more wind power is commissioned each year. Market prices that reflect capacity limitations in the grid are important for effective utilisation of transmission capacity and production resources. Along with investment contributions and other tariff signals, the market also contributes to more rational location of new production and major new consumption. Profitable socio-economic development of the power system requires that market players receive the right price signals. It is particularly important that new power production and major new consumption cover the costs they incur for the grid.

Reduction in wind power prices



Source: Norwea/Statnett

Auke Lont

# Group management



From the left: Bente Monica Haaland, Håkon Borgen, Elisabeth Vike Vardheim, Auke Lont, Øivind Kristian Rue, Peer Olav Østli, Knut Hundhammer. Please visit [www.statnett.no](http://www.statnett.no) for further information about Group management.

## Auke Lont

### President and CEO

Employed in 2009

Education/qualifications: Master's in Econometrics from Vrije University in Amsterdam

Previous experience: CEO of ECON and Naturkraft, and various management positions at Statoil

Directorships: Director at Bane NOR SF and Spekter

## Øivind Kristian Rue

### Executive Vice President Markets and Operations

Employed and a member of Group management since 2000

Education/qualifications: Cand. polit. degree from the University of Oslo

Previous experience: Director of Saga Petroleum AS, Assistant Director General of the Ministry of Trade and Industry and several management positions at Statnett

Directorships: Director of Fifty AS

## Håkon Borgen

### Executive Vice President Technology and Development

Employed in 1995 and a member of Group management since 2004

Education/qualifications: Master's in Engineering from the Norwegian University of Science and Technology (NTNU) and Technische Hochschule Darmstadt (THD) in Germany

Previous experience: Several management positions at Statnett and BKK

Directorships: Chair of NordLink Norge AS

## Elisabeth Vike Vardheim

### Executive Vice President Construction

Employed in 2007 and a member of Group management since 2014

Education/qualifications: Master's in Engineering from NTNU, Degree in Business Administration, Master's in Board Governance from the Norwegian Business School (BI)

Previous experience: Several management positions at Statnett, public sector, construction projects/ organisation

Directorships: Chair of Statnett Transport AS

## Peer Olav Østli

### Executive Vice President ICT

Employed and a member of Group management since 2007

Education/qualifications: Master's in Computer Science and postgraduate studies in management from Henley Business School in the UK

Previous experience: Management positions at Telenor, Schibsted Nett and Scandinavia Online AB, Head of Technology at NRK

Directorships: Chair of Elhub AS and Fifty AS, and member of DigitalNorway – Toppindustrisenteret AS

## Bente Monica Haaland\*

### Executive Vice President Strategy and Communication

Employed in 1993 and a member of Group management since 2014

Education/qualifications: Master's of Engineering from the University of Aberdeen and Master's in Management from the Norwegian Business School (BI)

Previous experience: Management positions at Statnett, Statkraft and Eclipse Energy Group

Directorships: Member of the Renewables Grid Initiative (RGI)

## Knut Hundhammer

### Executive Vice President CFO and Chief of Staff

Employed and a member of Group management since 2011

Education/qualifications: Norwegian Military Academy and MBA from Wharton School of Business in the USA

Previous experience: Company Commander in the Norwegian Armed Forces, Consultant at McKinsey & Co, SVP Leif Høegh & Co, CFO of Finansbanken ASA, President of Klavenes Gruppen and President of the Norwegian Defence and Security Industries Association

\*Hired to DigitalNorway from 1 May, and has taken on new tasks in the Group from 2019. Knut Hundhammer has been acting manager in 2018, and is from 2019 heading the division.



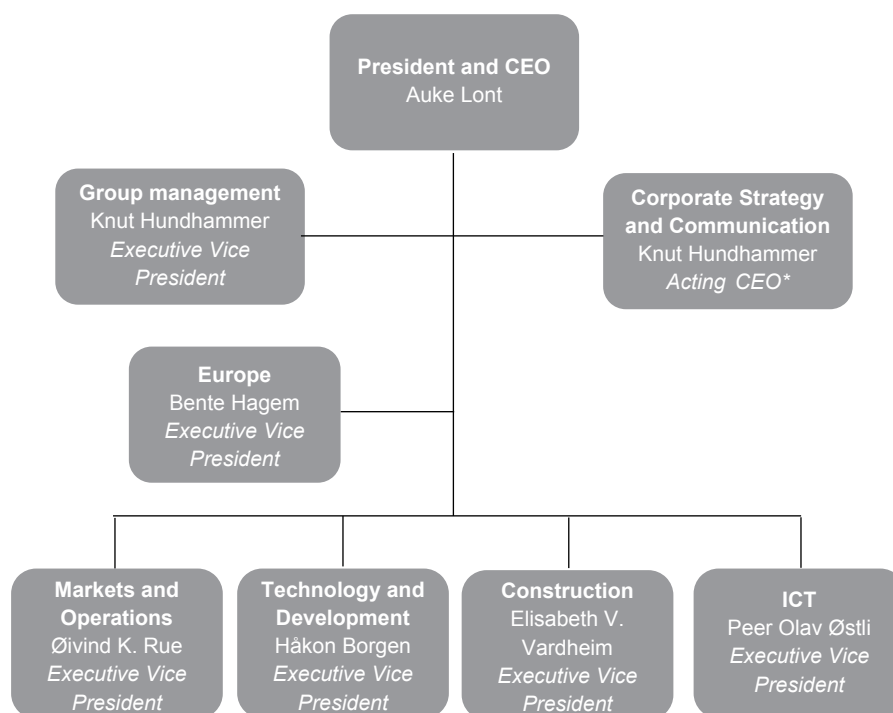
## Organisational structure

Statnett is headquartered in Oslo and has administrative offices in Alta, Trondheim, Sandnes and Sunndalsøra.

The Group's activities are organised into four divisions, in addition to a Corporate Staff and a Corporate Strategy and

Communication staff. The European Affairs unit reports directly to the CEO.

Please visit [www.statnett.no](http://www.statnett.no) for further information about Statnett's organisation.



\*Bente Monica Haaland hired to DigitalNorway from Statnett SF from 1 May, Knut Hundhammer is Acting Manager

Operational key figures	2018	2017	2016	2015	2014
Number of full-time equivalents	1,461	1,415	1,326	1,226	1,119
Absence due to illness %	3.2	3.4	3.2	3.3	3.1
LTIFR, own employees	1.9	1.6	3.6	4.9	1.9
LTIFR, including contractors	5.6	3.6	5.6	6.4	4.4

# Risk management and internal control

**Statnett manages critical infrastructure and to reflect this, adopts a holistic approach to risk management.**

Statnett's risk management encompasses all our activities – including strategic, marketing, operational and financial matters. Holistic risk management ensures that risks relating to HSE, supply of electrical power, finances and reputation are maintained at an acceptable level.

Statnett has a risk-based internal control system founded on COSO framework guidelines. Our internal control system is designed to ensure effective control and compliance with external and internal requirements, and help us achieve our goals. Efficient internal control increases efficiency and improves Statnett's work processes and ensures that controls are implemented at the right level where risk is the highest.

Statnett continually works on improving risk assessment and internal control. During 2018, we performed extensive work to assess compliance with external requirements. This will provide a basis for further improvements and efficiency gains in our internal control system. We are also coordinating risk and goal management to help improve the efficiency of management.

## Health, safety and the environment

Statnett's overriding priority is to carry out our activities in a responsible manner. HSE risk is managed through efficient and documented instructions, procedures and various emergency preparedness plans that are regularly revised, in particular through continuous development of our safety culture. Implementing risk management in early phases of projects is important, and we carry out risk analyses in the planning and execution phases of projects and during actual operations. Statnett also has a non-conformance system for reporting undesired incidents, near misses and injuries. All non-conformances are continually assessed to prevent recurrences, reduce any consequences and implement necessary measures.

In 2018, we implemented several risk-reducing measures to manage environmental risk. These included improving the frameworks for systematic environmental work and introducing a reporting system designed to provide a better overview and improve the quality of environmental and climate data.

Statnett will further enhance the company's HSE culture moving forward. Simplification and further development of systematic HSE initiatives, together with digitalisation of tools and systems, will play a key role in this context. We

perform various analyses of trends in work operations to help identify causes of and prevent further accidents.

## Security of operations and supply

Statnett's goal is to deliver a secure supply of electrical power and high available grid capacity to the market. This requires risk levels to be acceptable in relation to a constantly evolving threat and risk profile. Power outages can arise if Statnett operates on a N-0 basis. This means that failure of a single individual component can result in a power outage. In situations with normal security of operations, multiple simultaneous faults could also cause outages. Weather-related incidents, terrorist attacks on physical infrastructure and attacks against (hacking of) operating systems also pose a risk to security of supply.

Some regions are still deemed to be particularly vulnerable. The most important risk-reducing measures in this context are efficient operations and regular maintenance of our infrastructure, including adaptation of the operating scenario for ongoing operations, trouble-shooting and component replacement. In addition, Statnett focuses on new expertise and continuous employee development in operations and at our operating centres. We also attach importance to risk and vulnerability analyses, emergency preparedness plans and drills and digital security. Statnett's investment projects represent further important long-term measures.

## Climate

Climate risk, including physical and regulatory climate risk, describes the potential impact of climate changes and the transition to a low-emission society on Statnett. The former covers the physical impact of climate changes on our transmission infrastructure, while the latter encompasses the consequences of climate-policy measures on our activities. Physical damage to infrastructure, and adverse financial, environmental and reputation impacts are among the consequences we assess.

Statnett has initiated several risk-reducing climate initiatives to address extreme weather conditions and a heightened focus on the climate and resulting more stringent legal requirements in Europe and Norway. The European power system must be updated from a climate perspective and Statnett is ramping up its requirements for securing network infrastructure of all voltage levels. In 2018, we formulated a new environmental and climate strategy, and identified measures to enable us to pioneer new climate measures. One of our initiatives in this area is our first fossil-free construction project on the Smestad–

Sogn power line. We will perform further work on climate risk and facilitation of climate-friendly solutions in 2019.

## Finance

The annual revenue cap including permitted increments is determined by the NVE. The annual revenue cap is intended to enable Statnett to cover its actual costs of network activities and achieve a return on its investments, assuming efficient operations, utilisation and development of the grid. This means that our financial results are impacted by the NVE regulated rate of return, which pursuant to legislation is intended to equate to a reasonable return, while efficiency scores set by NVE are used to adjust the revenue cap.

A constant focus on cost-efficiency improvements is a further important risk-reducing measure. Between 2013 and 2018, Statnett achieved a 15 per cent improvement in efficiency. We have set ourselves a goal of becoming one of Europe's most efficient TSOs by 2022.

The Group is exposed to interest rate risk through the NVE regulated rate of return, our loan portfolio, liquidity portfolio and financial hedging activities. Statnett reduces interest rate risk and fluctuations in results by entering into interest swaps for associated liabilities. This means that fluctuations in market interest rates on the income side (NVE regulated rate of return) will largely be offset by variations in market interest rates on the cost side. Operational risk, project implementation risk and network faults can also affect Statnett's financial position, and are managed through measures to control security of operations and supply.

Statnett has access to multiple loan markets and has a diversified loan maturity structure. Access to loans is supported by a credit rating for long-term borrowings of A+ and A2 from Standard & Poor's and Moody's Investor Service, respectively. Statnett's available liquidity is intended to secure financing of operations and investments on a 12-month rolling basis, including without new borrowings. Available liquidity facilities include a drawdown facility of NOK 8 billion maturing in January 2024. This

reduces the risk of Statnett being unable to refinance its borrowings in periods of scarce supply of capital.

Statnett's revenues are mainly denominated in NOK, while some of the Group's costs are incurred in foreign currency. Foreign exchange risk is minimised by hedging exposure for major procurements in investment projects using forward foreign exchange contracts or similar, and through the company's revenue regulation. All Statnett's foreign-currency borrowings are converted to NOK using currency swaps.

Statnett is exposed to credit risk through investment of surplus liquidity in banks and interest funds. The Group has frameworks establishing requirements for creditworthiness and maximum exposure for each individual placement of surplus liquidity. Statnett also assumes credit risk through its role as Settlement Officer in the regulatory market. This risk is managed by means of established routines for pledging of security for participants in this market.

Statnett is exposed to counterparty risk through its derivatives counterparties. Statnett enters into CSA agreements to reduce this risk.

The Board has drawn up principles for financial risk management through the company's adopted finance policy. The finance policy establishes specific frameworks for financial management, including for credit risk, settlement risk and counterparty risk. Internal control routines are established and performed independently.

## Reputation

Statnett focuses on managing the Group's internal and external reputation risk. Statnett adopts a preventive approach by presenting a consistent and holistic message in line with our social mandate so as to present a realistic image of our business. Transparent communications and early and inclusive dialogue will help build trust in our business, including for specific projects.



# Statnett's Board of Directors



From the left: Maria Sandsmark, Egil Gjesteland, Einar Anders Strømsvåg, Tove Elisabeth Pettersen, Jon Fredrik Baksaas, Steinar Jøråndstad, Synne Larsen Homble, Ole Bjørn Kirstihagen and Pernille Dørstad. Please visit [www.statnett.no](http://www.statnett.no) for further information.

## Jon Fredrik Baksaas

Board member since 2018, Chair since 2018  
 Directorships: LM Ericsson AB, Handelsbanken AB and Cloudberry Partners AS  
 Previous experience: International telecoms adviser and adviser for technology start-ups in Norway, CEO of Telenor 2002–2015, various key positions at Telenor since 1989, other work experience from Aker, Stolt-Nielsen Seaway and Det norske Veritas

## Synne Homble

Board member since 2013, Deputy Chair since 2015  
 Chair of the Compensation Committee  
 Previous experience: Chief Officer Mobility and Strategy in the NSB Group, Executive Vice President of Cermag Group AS / Cermag ASA, attorney in the law firm Wikborg Rein and member of the Norwegian National Contact Point for the OECD

## Einar Anders Strømsvåg

Board member since 2015  
 Chair of the Audit Committee  
 Directorships: Chair of Western Norway Regional Health Authority  
 Previous experience: Senior Advisor and several management positions at Equinor, including Director of Internal Audit.

## Pernille Dørstad

Employee-elected Board member since 2018, employee since 2014  
 Member of the Audit Committee  
 Directorships: Statnett SF's Pension Fund, private sector and other organisations  
 Previous experience: Senior Engineer Buildings and Construction, various positions in construction projects at Equinor, Project Manager at Kværner, Chief Employee Representative and Chair at Tekna Statnett industry group.

## Tove Elisabeth Pettersen

Board member since 2018  
 Member of the Audit Committee  
 Previous experience: Chief Corporate Affairs Officer at Bane NOR SF and Senior Vice President at Hafslund ASA

## Maria Sandsmark

Board member since 2013  
 Member of the Compensation Committee and the Project Committee  
 Previous experience: Researcher at Møreforskning Molde AS, Associate Professor at Molde University College and Consultant at ECON Analyse

## Egil Gjesteland

Board member since 2012  
 Chair of the Project Committee  
 Directorships: Egypt Solar BV and South Africa Solar BV  
 Previous experience: Owner of Gjesteland Consulting, IT Director and Project Director for a number of Equinor's oil and gas projects

## Steinar Jøråndstad

Employee-elected Board member since 2004, employee since 1981  
 Member of the Project Committee  
 Previous experience: Team Coordinator in Statnett's division for Systems Operations and Markets, Head of the nationwide Electrician and IT Workers Union and member of the Working Environment Committee at Statnett

## Ole Bjørn Kirstihagen

Employee-elected Board member since 2018, employee since 1986  
 Member of the Compensation Committee  
 Previous experience: Procurement and operations for Statnett's operating centres, Operator at Norsk Hydro's operating centre, Chief Employee Representative and Chair of NITO Statnett

# Corporate social responsibility

“Corporate social responsibility” (CSR) is taken to refer to the responsibility Statnett is expected to demonstrate with regard to the people, society and the environment affected by the company’s business.

Statnett’s work to shoulder this corporate social responsibility is to support the way in which the company handles its social mandate. This entails integrating social and environmental considerations into the Group’s development and operations in a manner that extends beyond the requirements which derive from the prevailing laws and regulations.

Statnett’s social mandate is to safeguard the power supply, contribute to value creation in society through an efficient, well-functioning power system, and prepare conditions for the use of electricity such that Norway can achieve its climate goals. This social mandate is to be dealt with in a responsible, socio-economically rational manner.

## How CSR is administrated

State-owned businesses are obliged to work systematically with CSR, and to take the lead in this area. The White Paper on state ownership (White Paper 27 (2013–2014) Diverse, value-generating ownership) sets out specific expectations with regard to CSR in four core areas: climate and the environment, human rights, workers’ rights and anti-corruption.

The Board of Directors has the overarching responsibility for ensuring that Statnett lives up to its corporate social responsibility, and has established a governance policy which specifies the principles Statnett is to take as its basis for this work. Furthermore, the Board is responsible for ensuring that CSR is integrated into Statnett’s strategy and goals, as well as Statnett’s follow-up processes. Statnett’s CEO regularly informs the Board about matters relating to financial, environmental and social topics. HSE results are reported at every Board meeting with a summary every quarter. Environmental results and compliance are reported through the annual report.

## About the report

Statnett reports on corporate social responsibility in accordance with Global Reporting Initiative (GRI) Standards, level Core. Statnett similarly reports in accordance with the sector-specific indicators for the energy sector (GRI Sustainability Reporting Guidelines & Electric Utility Sector Disclosures). Statnett is of the opinion that the majority of its reporting is in compliance with GRI reporting principles, and that it satisfies GRI standards. The GRI table provides references to where information about the various GRI indicators can be found in the annual report, as well as about any omissions. Indicators that begin with “EU” are specific to the energy industry.

Statnett believes that its CSR reporting activities fulfil the requirements set out in the expanded text of Section 3-3(c) of the Norwegian Accounting Act, adopted in 2013. Statnett’s CSR report covers all Statnett’s business activities, including wholly owned subsidiaries and partly owned entities where Statnett has a controlling interest. Statnett gathers and collates data with a view to ensuring a uniform presentation of relevant CSR information. While the company does place great emphasis on ensuring that all information is complete and correct, some uncertainty may nevertheless be associated with some of the data.

The CEO is responsible for ensuring that Statnett’s CSR framework is kept up to date and integrated into corporate governance. All levels of management are responsible for familiarising the organisation with CSR principles and frameworks and for ensuring compliance. Statnett integrates CSR into the organisation by setting goals for the company and through quarterly internal performance reviews in the line. Both Group management and Statnett’s Board are required to approve Statnett’s annual CSR report and ensure that all important topics are included in the report.

**Materiality matrix**

A materiality analysis is performed as a part of Statnett’s updated strategy. This analysis defines the factors that Statnett considers to be the most important at present, and correspondingly, the ones that society considers important focus areas for Statnett. The mapping process comprises a holistic assessment of stakeholder groups and is based on results from Statnett’s customer survey and on dialogue. The results of the analysis are presented in the materiality matrix, as shown below.

The matrix only features those topics considered to be most important. From 2017 to 2018, Statnett has adjusted the positions in the matrix for the topics of value creation and climate and the environment.

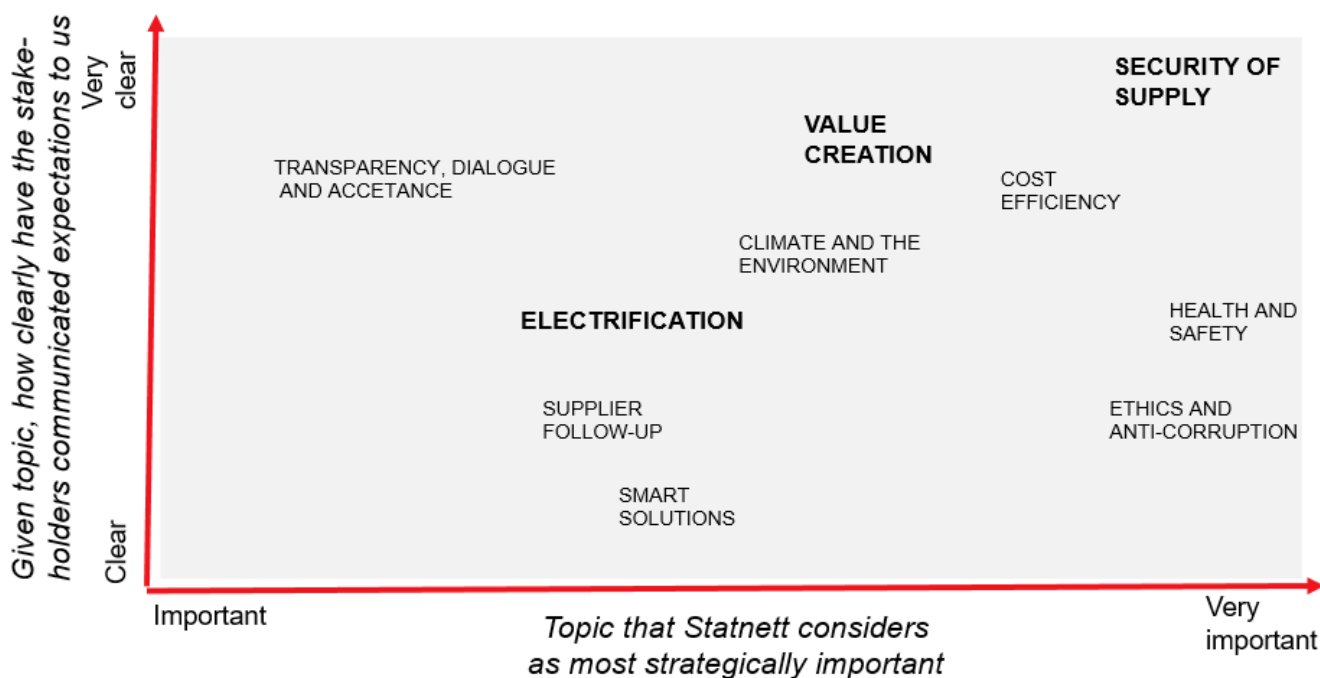
Value creation has to do with generating value for society and customers through the development of efficient, market-based solutions, and setting the tariff in a manner that transmits the appropriate price signals. This includes connecting new production and new consumption, an aspect that has attracted increasing attention both internally and externally on account of greater interest in the connection of new wind power and new industrial development, for instance data centres. At the same time, Statnett has identified a major need to focus on cost-efficient solutions. Value creation has therefore been

moved up and to the right in the matrix – from an already high position – on account of both the new connection issues and the work with tariffs.

Climate and the environment refer to Statnett’s impact on the climate and the external environment. The White Paper on state ownership clearly sets out its expectations that state-owned companies and enterprises are to take the lead in this area. This entails, for example, targets for reduced emissions from own activities. The topic is deployed in Statnett’s governance system and has received greater attention within the company over the past year. The area of climate and the environment has therefore been moved to the right in the matrix. This reflects the increase in internal focus – both as regards preparing conditions for electrification as a climate initiative, and reducing the company’s own climate gas emissions.

**Stakeholders**

Statnett has a range of stakeholders in Norway and the rest of Europe. These stakeholders cover a broad spectrum: from the Norwegian parliament (the *Storting*) and government, to end users of Statnett’s services in the local community; they also feature bodies and councils in the Nordic region and the EU. The list on the following page highlights the key stakeholders with whom Statnett interacts.



Statnett's stakeholders	Explanation	Interests	Involvement
The Storting	The Norwegian Parliament, i.e. the Government and the opposition parties	Legislative body	Statnett attends meetings when invited and invites the Standing Committee on Energy and the Environment for information meetings
Sametinget	The parties and leadership of Sametinget	The High North, interests concerning reindeer and nature conservation	Closely involved in licensing processes involving Sami areas and especially reindeer husbandry
Authorities	Ministry of Petroleum and Energy (MPE), Norwegian Water Resources and Energy Directorate (NVE)	The MPE is the owner, the NVE and the MPE make decisions on licences and other complaints	Owner meeting and owner follow-up (MPE), all licensing processes involve the NVE and the MPE is the appeals body
Customers	Producers, distribution system operators and industry	Producers are concerned with available capacity and market solutions, the distribution system operators are concerned with security of supply in their area and industry is concerned with good security of supply at the lowest cost	All of these are involved regularly through the Market and Operations Forum, regional customer meetings, individual customer meetings, and in licensing processes
Local authorities	Municipal and county authorities	The municipalities are concerned with how Statnett influence local conditions and how Statnett relates to municipal plans, as well as local value creation and property taxes. The counties have environmental responsibility	Involved in a consultative capacity in all licensing processes and the development of environmental and transport plans for the various projects
Organisations	Trade organisations, The Norwegian Confederation of Trade Unions (LO), The Confederation of Norwegian Enterprise (NHO), etc.	These organisations focus on different special interests	These organisations normally participate in consultative hearings on licensing and the industry organisations are also members of the Market and Operations Forum
International stakeholders	E.g. The EU, Nordic TSOs, the Nordic Council, ENTSO-E, European TSOs		Statnett has formal roles and cooperates with Nordic and European TSOs and answers enquiries and delivers the Nordic Grid Development Plan to the Nordic Council
Trading companies and power exchanges	Nord Pool, EPEX SPOT and various trading companies	The trading companies and power exchanges are concerned with well-functioning markets	There is regular contact in connection with the development of new market solutions
Environmental and climate organisations	NGOs that focus on the climate and the environment	Regard the environment and climate as key issues and are concerned with the electrification of society	Involved in a consultative capacity in all licensing processes. Annual contact meetings are also held
Suppliers	All who supply goods and services to Statnett	Are concerned with the project portfolio, future market opportunities and wish to see high activity levels. HSE and supplier partnerships are also key	Involved through prequalification processes and tender processes in the projects. Followed up through deliveries and contracts
Academic and research communities	Universities and other research communities	Have an interest in R&D and the development of new technology, as well as commissioned research	Contact through various research programmes, R&D work and through consultancy services paid for by Statnett
Media	Trade journals, national media, local media	Have the public interest in focus and expect good and objective information from Statnett	The Freedom of Information Act and open government are central to the involvement of the media. Followed up on an ongoing basis by a media relations contact
Landowners	Landowners directly affected by Statnett's construction work and facilities	Have interests as landowners. Also interested in how Statnetts projects affect them	It is natural to involve them in a consultative capacity in licensing processes and they are closely involved in the development of projects and when selecting power line routes
The general population	All residents of Norway	Interested in good security of supply and lowest possible tariffs	Involved through local public meetings in relation to projects and kept informed on an ongoing basis through Statnett's various communication channels
Own employees	Managers and employees at Statnett	Are closely involved in Statnett on a day-to-day basis and are concerned with Statnett as an employer and social actor	Involved through internal communications, internal meetings and communication from management



## Security of supply

As the TSO in the Norwegian power system, Statnett holds principal responsibility for security of supply in Norway. Security of supply refers to the capacity of the power system to supply end-users continuously with electrical power of a specified quality; the concept includes energy security, operational reliability, delivery reliability and voltage quality. Statnett must be prepared to deal with different types of faults and errors, in addition to ensuring that facilities are properly dimensioned and maintained and that the ICT infrastructure is secure.

## System responsibility

Statnett is to ensure security of supply through measures including maintaining balance between production and consumption at all times, monitoring flow in the power system, implementing actions necessary to assure supply, dealing with faults and errors, and providing the correct voltage and a low frequency of outages.

### Statnett's approach

The frequency is determined by the balance between production and consumption at any given time, and is an important indicator of the state of the entire power system. In the Nordic power system, Statnett and Svenska kraftnät hold primary responsibility for keeping the frequency within normal values. At the same time, each country has requirements for how much automatic and manual reserve capacity is to be available to deal with imbalances. In 2018 the Nordic TSOs agreed to develop a new Nordic balancing concept. The new concept entails among other things finer time resolution on imbalance settlements, the development of pan-Nordic market solutions for reserves, requirements for localisation of reserves and frequency regulation. The concept will be implemented in stages up to 2021.

Statnett monitors the voltage quality of the power system according to the "Regulation relating to the quality of supply in the Norwegian power system" (*Forskrift om leveringskvalitet i kraftsystemet*), and can show satisfactory margins in most places relative to the threshold values specified in the regulation. Controlling the operating voltage is being challenged by several development trends in the power system, such as closer integration with other countries, the appearance of more

new players, and new demands on both the production and the consumption side. Statnett works continuously to expand the number of measuring points, and to develop solutions for documenting actual voltage and for ensuring the correct voltage quality.

Delivery reliability measured by access to electric power for end-users is affected by weather conditions such as wind, snow/ice and lightning. Statnett works systematically to detect and improve exposed power station components and wiring in order to prevent faults and errors and to minimise the impact in the event of a fault. This is achieved through systematic maintenance and fault analysis, as well as through improvement work such as standardisation and quality assurance of materials, targeted reinvestment in ageing facilities and preventative maintenance. Statnett performs improvement work based on analyses of individual events and statistics, as well as on the basis of data from strategically placed measuring instruments. Close working relationships with other players in the sector, as well as digitalisation and relevant R&D projects are all contributing to improved security of supply.

### Results

The number of minutes with frequency variances in 2018 was at the same level as in 2017. Following a declining trend from 2011, the number of minutes with frequency variances began to increase again in 2015 and 2016, when the level was among the highest ever recorded. The reasons for this are complex and attributable in part to a higher share of intermittent production and greater exchange between the countries. Other factors include higher utilisation of the system, which translates into less flexibility to deal with imbalances. In 2017 and 2018, more secondary reserves were available than in 2016. This is considered to be one of the reasons why frequency variances have decreased slightly.

Voltage quality remains good in most of Statnett's facilities. Flickering in Nordland has given rise to challenges of varying degrees for many years, and more recently there have been issues with resonance in the SKL ring (Sunnhordland). Increased input of wind power has also given rise to new challenges, although close working relations with relevant players have produced improvements in the voltage quality. A high level of audit

	Unit	2018	2017	2016	2015	2014
Frequency variances	Minutes	11,471	12,018	13,647	10,616	10,232
Non-Delivered Energy (NDE)	MWh	49	772	823	1,279	1,232

activity involving the shutdown of several connections has also resulted in periods of reduced voltage quality, especially in Nordland.

Delivery reliability in the power system has improved in recent years, measured by a reduced amount of non-delivered energy. The number of interruptions has remained relatively stable, but end users are not as affected by the consequences of these.

### Security and emergency preparedness

Statnett's installations and systems constitute critical infrastructure. Failure in the power supply system would immediately have major consequences for other infrastructure, for Norway's critical societal functions and for the population as a whole. Health and safety are covered in a different section.

#### Statnett's approach

Statnett is to prevent extraordinary and undesirable events leading to failure of supply. Should this nevertheless occur, Statnett's emergency preparedness is to ensure that the company can quickly restore normal supply. Statnett therefore works systematically with improvements. The company analyses vulnerabilities, threats and risks. Preventative measures are implemented, and the company plans and organises to deal with incidents. The company also performs drills and systematically assesses its emergency preparedness work with a view to learning.

Statnett is regulated by the Norwegian Energy Act's Regulations relating to Preventive Security and Preparedness in the Energy Supply. The Norwegian Water Resources and Energy Directorate (NVE) oversees Statnett's compliance. NVE has carried out 31 inspections since 2009. Statnett works systematically with security and emergency preparedness, thus laying the foundations for compliance with the NVE's requirements.

#### Future ambitions and goals

The future of electricity is distinguished by new opportunities, while new vulnerabilities will also inevitably arise. Dependency on electricity in new areas makes greater demands of security of supply. A diffuse, but present, threat profile makes demands on robustness, anticipation and collaboration with other parties. The fact that Norwegian authorities consider critical infrastructure to be an element of national security generates new expectations and demands. New digital services demand

the capacity to adapt, as well as the ability to view various disciplines in relation to each other.

### Digital security

Statnett uses a range of critical information systems and must relate to an increasingly complex digital environment. This makes it essential for Statnett to have robust digital security systems to safeguard operations, digital assets, personnel and reputation. Digital security is being increasingly challenged by a growing number of highly skilled threat operators. This must be taken into account when Statnett performs its social mandate.

#### Statnett's approach

Statnett works consciously with measures in four areas devoted to digital security: *anticipate, identify, prevent and react*. One important initiative in 2019 is the establishment of an in-house Security Operation Centre that is to handle several of these assignments internally within the Statnett organisation.

Working relationships within the industry are to be further developed in partnership with the security company KraftCERT, of which Statnett is a joint owner. Sharing knowledge and experience from incidents is important if the industry as a whole is to be able to handle the future challenges.

The subsidiary Elhub AS is to process and store personal data about 2.7 million private individuals, so personal privacy has been accorded the highest priority in the development of the company's systems. Over the past year, work has been done to establish procedures and guidelines in accordance with the new Norwegian Data Protection Act and the General Data Protection Regulation (GDPR). This entails, for instance, procedures for investigating data protection consequences, risk assessments, handling personal data, encryption of key information elements, and procedures for triggering alerts in the event of personal data breaches. Mechanisms are in place for regular reviews of Elhub's procedures for handling personal data. Elhub has appointed a separate personal data consultant who is to work closely with Statnett's Data Protection Officer.

#### Future ambitions and goals

Statnett is responsible for critical infrastructure and takes digital security more seriously than most other companies. Digitalisation therefore plays a key role in Statnett's strategy, and Statnett will continue to invest in

this area so as to assure appropriate handling of the digital risk profile. This means that our work on digital security must be continuous, systematic, structured and subject to sound management. Raising awareness within the organisation is an integral part of the work and will continue to be a key focus area in the years to come.

Increasingly tighter collaboration and the need to share data at Nordic level demand a high focus on digital security and may prove challenging on account of various pieces of legislation, for example, and regulation of the Nordic and European TSOs. Statnett is therefore working closely with its Nordic colleagues to establish good, secure solutions.

## Value creation

Statnett's business creates value for society, both directly and indirectly. Direct value creation is shown in the Group's financial statements and distributed to the owner, authorities, employees and lenders as shown in the table below. Indirect value creation takes place through Statnett expanding the power network and facilitating the production, transport and consumption of power – which all form the basis for value creation on the part of manufacturers, consumers and suppliers.

### Statnett's approach

Statnett is to operate and develop the transmission grid in a cost-effective manner and ensure that all development is performed in a socio-economically rational manner. Statnett contributes to value creation by providing well-run and efficient market-based solutions, and by facilitating power trading. Trade with foreign enterprises enhances the security of supply and creates value through congestion revenues. Cost-efficiency also covers designing tariffs in such a way as to emit the right price signals, with the intention of contributing to balanced development of production and consumption over time.

### Future ambitions and goals

Distribution of value creation	Unit	2018	2017	2016	2015	2014
Employees – Salary and social benefits <sup>1)</sup>	MNOK	1,598	1,521	1,364	1,011	1,141
State and municipal taxes and fees <sup>2)</sup>	MNOK	959	620	548	707	613
Interest expenses	MNOK	772	616	527	514	527
Owner – dividends <sup>3)</sup>	MNOK	478	326	350	357	321
The company – Retained equity	MNOK	1,683	402	264	940	98

<sup>1)</sup> Payroll costs (excl. employer's national insurance contributions).

<sup>2)</sup> Tax expense, property tax and employer's national insurance contributions.

<sup>3)</sup> Proposed dividends for 2018.

<sup>4)</sup> Profit for the year less proposed dividends

Statnett prepares conditions for value creation by ensuring there is sufficient capacity and security of supply in the power system. Thus both power generators and power-intensive industry can maintain and develop their desired businesses. Through the obligation to connect, the authorities ensure that Statnett does what is necessary to allow new business to join.

### Results

The power trade market is under constant development. Conditions are in place to allow improved operation and more automation, which largely has to do with smart solutions for an efficient power system that will have a positive effect on indirect value creation. Delivery quality in the Norwegian power system is excellent (99.9999%). This lays solid foundations for value-creating business with electricity as a consumable.

## Electrification

A key element of Statnett's social mandate is to facilitate electrification and decarbonisation so as to help Norway achieve its climate targets. Through cable connections, the company is also contributing to the establishment of climate-friendly solutions in other countries. This is important internally, as well as among societal actors, and for Statnett's owner.

### Statnett's approach

Statnett is to ensure there is sufficient capacity in the grid to power all parts of the economy where this is possible. This may include land-based transport, sea transport, ports or the electrification of activities on the Norwegian continental shelf. Statnett has implemented the necessary re-prioritisation of resources to comply with the regulations on the obligation to connect, and the increasing number of enquiries from players who wish to connect to the grid. Statnett's planning processes cover this consideration in the assessments of new projects.

### Future ambitions and goals

Statnett is establishing conditions for full electrification of Norway. A fully electrified society will require around 30–50 TWh of new consumption. With the transmission grid in its current state, it will be possible to achieve full electrification of Norway.

### Results

Clear results can be seen in the completion of major projects. In 2018 Statnett among other results put into operation partial stretches of Ofoten – Balsfjord, Namsos – Surnadal and the Western Corridor. Generally speaking, results will take the form of the company completing planned initiatives in the grid that pave the way for increased electrification throughout Norway. Statnett's construction operations are at a historically high level, and projects are generally completed on time and within budget.

## Cost efficiency

Statnett's business is a natural monopoly and the costs are distributed between producers and consumers through grid rental (tariffs). The regulation of Statnett is to contribute to ensuring that the company handles its assignments efficiently, and an efficiency factor is therefore included in company revenue (permitted income). NVE is responsible for defining this efficiency factor. Statnett's costs for constructing and operating the grid are, for instance, compared with corresponding costs at other TSOs in Europe.

Two white papers and an almost unanimous Storting (parliament) give their backing to the need for a comprehensive expansion and upgrade of the transmission grid and the power system. Statnett's construction projects and investments have therefore achieved a record scope over the past decade. This poses a challenge to Statnett's efficiency, including the regulatory aspect. This is a challenge that is set to remain throughout the 2020s. Statnett has also completed investments on the system side so as to lay the foundations for market solutions that increase the total benefit from the power system. The results from the comparison to other TSOs are included in the basis for setting Statnett's efficiency factor.

### Statnett's approach

When Statnett processed the budget and long-term financial plan for the period 2013–17 the company set the target that efficiency should improve by 15 per cent by the end of 2018. At the same time, a project was established for executing the "15 per cent programme".

The adopted target was to be achieved by: reducing costs, completing more work with the same resources and/or balancing resource input against the appropriate quality.

For example, Statnett is concentrating on reducing construction costs, completing construction projects more rapidly, reducing operating costs in relation to assets, and maintaining focus on improving general efficiency and quality throughout the organisation. Improvement, standardisation and documentation of processes have all proved important in achieving the improvements in efficiency. A wide range of improvement measures have been implemented, which have generated positive effects in all parts of the business.

### Future ambitions and goals

Statnett has ambitions for further efficiency development and has the stated aim of being one of the most efficient TSOs in Europe during a time of historically high activity in the company. This objective forms the basis of a new programme to continue the efficiency work in the wake of the "15 per cent programme" being completed in 2018. In order to provide a more accurate, ongoing assessment of its own efficiency, and as a resource for learning and improvement, the company will be comparing its own performance and development with those of relevant parties to a greater extent. On the start-up of the new programme, three primary areas for improvement have provisionally been defined: project costs, operation of the facilities, and costs linked to staff and auxiliary functions.

### Results

European TSOs participate at regular intervals in shared benchmarking designed to form the basis for a directly comparable efficiency factor. The three most recent measurements showed Statnett to be significantly more efficient than the average in Europe. NVE awarded Statnett the score of 100 per cent in its efficiency assessment, with no curtailment of the income basis.

The "15 per cent programme" has contributed to continuous focus on costs and efficiency, in the implementation of measures, in ongoing measurements, and in management follow-up. This work has produced major savings and is contributing to significantly lower tariffs – approximately NOK 5 billion accumulated over the ten-year period 2016–25.

Statnett has achieved its objective of becoming a 15 per cent more efficient company. The overall image is positive for key indicators in the programme.



## Smart solutions

The European power system is changing, with increased input of variable renewable energy production. This constitutes a challenge to the way in which the power grid is constructed, maintained and operated at national, Nordic and European level. It is therefore essential to develop and utilise new solutions and methods, both as regards technology and collaboration. In addition, consideration must be shown to the opportunities that digitalisation is opening up. By facilitating smart and secure solutions in all areas of the business, Statnett wishes to help to raise the quality and reduce the cost of the company's deliverables.

## Innovation and technology development

Both OED and NVE expect Statnett, as TSO, to be active in the field of research and development (R&D). This has been demonstrated by White Papers, for example, and by NVE providing R&D incentives through financial regulation. In 2018 Statnett has devoted greater attention to this opportunity, and has set up projects such that they satisfy the requirements under the NVE plan. In 2018 Statnett was an active participant in 41 out of 135 projects supported by the NVE plan.

## Statnett's approach

The Nordic power grid is becoming increasingly integrated, and Statnett is working to come up with shared solutions in partnership with the other Nordic TSOs. In 2018 Statnett led the Nordic R&D partnership involving Statnett, Fingrid, Svenska kraftnät, Energinet and Landsnet. The Statnett R&D division is also a member of the European Network of Transmission System Operators' Research, Development and Innovation Committee (ENTSO-E-RDIC), where new EU projects are planned, discussed and followed up.

Statnett has divided its R&D activities into three programmes, which are to run until the end of 2019 (see following page). Many projects feature a strong emphasis on digitalisation, from robot development and digital stations to machine learning and real time control. In addition, HSE remains an area with a high focus on finding smarter solutions. At the end of 2018, Statnett had 63 ongoing R&D projects.

R&D is to be at the cutting edge and to support the execution of the Group strategy. The R&D programmes comprise projects that contribute to knowledge of possible to radical improvements as a result of technological development, as well as more tangible

incremental improvements linked to the company's activities. The R&D programmes consist of knowledge projects that have merely taken the first tentative steps towards specifying technical solutions, and which require little own input. There are also a number of pilot projects that demand more own input, and which utilise line resources in improvement work.

In accordance with the Statnett project model, the use of new technology is to be evaluated no later than at the time the decision to invest is made. Information about relevant R&D projects is incorporated into a technology roadmap that shows which new technology is appropriate for which projects, and which benefits can be achieved. Group management has overarching responsibility for the technology roadmap.

In 2018 it was decided to establish a centre for technology development, with the objective of reducing costs and improving lead times, as well as improving HSE in the projects and in operations.

Another important initiative is a "hybrid organisation" where employees from the line organisations are involved on a part-time basis in R&D projects. This ensures ownership of the projects that are executed, boosts skills development and helps make the results easier to implement.

An R&D suggestion portal has been set up on Statnett's external website. Both internal and external visitors to the site are encouraged to contribute thoughts and ideas about smart solutions, and to suggest R&D projects.

## R&D input divided into three programmes

### Smart grids

The pilot project **Large-scale load management** has tested the shutdown of load as a source of flexibility in the operation of the power system. One of the principal goals was to prepare conditions for working with relevant players on the design of a concept through which load can be managed from a central system. The design of the concept comprises role allocation, the technical solution and communication and management solutions. The conclusion is that the tests were successful, and that learning points are to be carried over in the work with flexibility solutions.

In partnership with the research company Optimeering and The Norwegian University of Science and Technology (NTNU), the Statnett project **IMPALA** succeeded in developing artificial intelligence with the capacity to anticipate imbalances in the power system before they occur. A prototype has been developed and tested on offline data. The results show that IMPALA is up to 50 per cent more accurate than the system currently in use. It is also estimated that IMPALA has the capacity to help reduce system imbalances by 25 per cent, thus contributing to achieving the system administrator's objective with regard to the maximum number of minutes of frequency variances. The program will be implemented in 2019 and should help generate financial savings for Statnett, while contributing to improved frequency quality and reliability in the power system in general.

### Innovative technology

As a part of the EU project **Best Paths**, Statnett has developed a robot for installing power line markers. Statnett has been working to have the robot approved for work on live electrical equipment (AUS). Work is also being done to find a good position marker to make it easier for helicopter pilots to judge the distance to the cable in the event that it is suspended extremely high above the ground. The company has also been working on minor optimisations of the robot – fitting a hook for emergency collection, for example. The robot was used to install 123 markers in 2018. No installation errors were reported in connection with this work, and robot installation therefore seems to be remarkably reliable.

In the ICEBOX project, Statnett is working to monitor vulnerable spans, improve models for predicting ice formation, and create an icing map that makes it easier to choose the best route when establishing new power lines. Statnett is also looking at technology for preventing the formation of ice, as well as methods for removing ice. To date, Statnett has worked on solutions including the development of new sensors with wireless data transfer. An international workshop has also been held, devoted to the prevention and removal of ice from the company's installations. The project, which receives support from the Norwegian Research Council (NFR), was launched in 2018 and is to run for four years.

### Sustainable grid development

Statnett is working on several projects intended to help the company achieve its goals for the climate and environment. Statnett has started looking into how the company can plan and execute fossil-free and emission-free electrical installation work. The first part of the project has focused on fossil-free construction sites and was completed in February 2018. The results were used in the execution of Statnett's first fossil-free construction project and in the planning of two new projects. The work to look into emission-free projects commenced in September 2018 and is scheduled for completion in 2019. The objective is to establish what can become emission-free on the company's construction sites today, and when fully electrical development projects can be carried out – an initiative that would mean elimination of climate gas emissions and local air pollution alike.

In partnership with SINTEF, NTNU and a number of European players, Statnett has participated in the GARPUR project. The objective of this project is to examine how the power grid of the future should be constructed and operated in a more sustainable manner, and it has demonstrated that a risk-based approach is both viable and useful for society. Participation in this project provided Statnett with methods and improved tools in the contexts of facility management and grid development.

Today, grid operators are subject to financial penalties if grid customers experience power outages. In order to contribute to a better understanding of what it is worth to society to avoid power outages, Statnett has launched an R&D project to determine whether the current methodological approach in the planning and practice of the KILE (Regulation of quality of supply) functions is appropriate. As a part of this work, Statnett will look at other ways in which the company can estimate the socio-economic costs of power outages. The project also involves examining whether there are special situations or events that should or can be accorded especial emphasis when evaluating whether a given measure is socio-economically rational.

### Future ambitions and goals

2019 is the final year of the current programme period. In 2018, Statnett worked on setting out the framework and determining deployment for a new programme period. In this work, it is important that the company take the Group strategy into account, and chart the course for coming strategies by identifying opportunities and threats. Energi21, the OED's permanent consulting body, has identified three areas for grid companies' R&D initiatives in the field of digitalised and integrated energy systems. These areas are: physical infrastructure, digitalisation and society, and the environment, market and customers.

### Results

R&D projects have delivered on four areas important to Statnett: reducing HSE risk, raising skill levels, digitalisation and cutting costs. R&D has made a substantial contribution to company development and efficiency over many years. R&D at Statnett has completed projects over the period 2014-2018 with the potential contributed savings calculated at more than NOK 7 billion to Statnett and the industry. This sum is based on estimated savings on projects carried out at the company.

### Digitalisation

Statnett has the stated aim of being a clear leader in the utilisation of digital technology. The company maintains a high rate of innovation, particularly in the areas of system operation, market operations and facility management.

### Statnett's approach

The focus of Statnett's digitalisation work is on interacting with other players, and on implementing internal simplifications and improvements. In 2018, Statnett established three interdisciplinary improvement portfolios regarding system and market operation, facility management and support systems. This in order to reinforce delivery capability for major development assignments. Work has likewise been done on continuing development of everyday digitalisation in order to strengthen the ongoing improvement work.

A solid digital basis is essential to the capacity to become more data-driven; this applies in the contexts of both business processes and decisions. A programme for implementing the digital foundations has been launched, and Statnett has entered into a two-year R&D partnership with the company Cognite. The intention here is to utilise

Cognite's technology and competence in the development of Statnett's digital foundations.

Statnett has a Data Science unit tasked with contributing to better analyses and improved decision-making support. The unit plays a key role in data administration and model development. One of the projects on which Statnett is working centres on developing a solution to raise the efficiency and quality of collecting and sharing information about infrastructure data in the facility database Fosweb.

Statnett has been a driving force behind the work for increased digital interaction and data exchange in the power industry under the auspices of DigitalNorway. This company was founded in 2017 as a non-profit limited company, and Statnett is one of 15 owners. Statnett has played an active role in a preliminary project for increased digital interaction in the power industry. The principal project is to continue under the auspices of Energy Norway and Statnett is of the opinion that this will set the new standard of information for a united industry's future productivity improvement. DigitalNorway is making a contribution to assure learning from other industries.

### Future ambitions and goals

The development of digital solutions is taking place in close collaboration with the industry in general. For players in the power industry, the development of a central data hub for measurement values and market processes in the Norwegian power market represents a significant efficiency and digitalisation project. The data hub is being developed and operated by Statnett's subsidiary Elhub AS, and when it is introduced in February 2019 it will collect and process consumption data from almost three million users and producers on a daily basis. The annual socio-economic savings are estimated at NOK 200 million.

Another key objective is improved harmonisation at Nordic level, as well as pan-Nordic market solutions. The five Nordic TSOs have entered into a collaboration agreement for the future balancing of the power system (mACE). The agreement sets out the roles in the balancing process and use of the Norwegian-Swedish IT company Fifty, which develops joint IT solutions. The agreement ensures implementation of European rules and prepares conditions for phasing in more renewable production.

Smart facility management is a prioritised area for digitalisation going forward. Increased data capture from sensors at the various facilities will provide a stronger basis for taking decisions about maintenance and renewal.

### Competence

Statnett is an expertise-based company. It is important to maintain and develop the core competency linked to existing facilities and systems, at the same time as new expertise is required. A key aspect of Statnett's need for expertise comprises professional knowledge, interaction and digitalisation.

### Statnett's approach

It is important that Statnett employees possess the correct competencies, so as to allow the company to address its present and future needs. As a part of the company's strategic competency development process (SKUP), managers and employees meet annually to review results from the preceding period, define new goals, and discuss the plans for developing the employee's skills and career. SKUP includes the company's career development model (KUM) that features four equivalent career paths (first line operation, skilled worker, project and management). The competency requirements are updated annually to reflect changes in strategy, goals and development trends in the separate professional environments. Statnett regularly holds meetings for all employees, where the management provides information about future competency requirements.

The intention behind career ladders and development levels is to motivate employees to cultivate their own development and to make the competency requirements transparent to everyone. The Competency Portal is used to register SKUP and all training activities that are either mandatory under law, compulsory for Statnett employees, or run under the auspices of the company. Statnett runs a number of internal courses within the framework of the Project Academy, in the field of HSE, and a broad portfolio of management development initiatives.

### Future ambitions and goals

It is an objective to make SKUP a more continuous process, and work will be done in 2019 to ensure that the strategic skills programme is more closely linked to Statnett's goals, development trends and the ongoing skills development in the different units. The tools will be

developed further to make them even more user-friendly and to generate added value for the organisation.

The 2018 organisation survey reveals that Statnett employees are highly committed to the company's business, thereby confirming the findings from previous surveys. Together, this and HSE, stand out as the two most prominent themes and indicators from this year's survey. In addition, it is clear that employees believe Statnett can become even better at defining which skills and development are needed in future in order for the company to achieve its ambitions. Employees are also clearly of the opinion that Statnett could be run more cost-effectively. This refers directly to the improvement work that has distinguished the organisation in recent years, and is set to continue. In addition, work is being done to optimise the organisation of the business in line with the company's model for efficient execution of projects.

### Results

The Competency Portal is used to collate all courses and training activities; it also contains documentation of training activities completed. Moreover, it is used to ensure that the different roles in the company live up to the requirements set by Statnett and the public authorities, and that training is automatically allocated on the basis of which roles the employees hold. Implementation of the Competency Portal has underpinned management by objectives at Statnett by linking the employees' skills goals to overarching objectives and strategies.



## Health and safety

Statnett has a goal of being a leader in the field of Health, Safety and the Environment (HSE), and is committed to contributing to positive HSE development in the power industry. Statnett's activities carry risk, of which the company is to have complete control. The external environment is covered in the section on climate and the environment.

### Statnett's approach

Statnett takes a systematic approach to HSE management and strives to maintain a proactive HSE culture. It is a matter of how HSE is integrated into the decision-making phases, ensuring that roles and responsibilities have been clarified, that routines for reporting are appropriate, and that systematic learning from incidents has been established. The HSE culture is to be distinguished by continuous learning and improvement.

In order to highlight and recognise good performance, two HSE-safe prizes – one internal and one external – were introduced in 2014. The external prize in 2018 was awarded to the contractor Infratek for its HSE work on Sogn substation in the Greater Oslo Network Plan project. The internal prize was presented to the R&D unit, which makes a significant contribution to elevating the company's HSE performance.

Statnett works actively to reinforce the company's internal HSE culture. Nine life-saving rules were implemented in 2018. The rules are observable and related to the HSE challenges facing the company. In 2018 Statnett developed a Virtual Reality simulator for the life-saving rules. This is a training simulator where everyone can use virtual reality experiences to train safely in recognising and avoiding hazardous situations.

Also in 2018 Statnett organised its first ever in-house HSE week, which was held to coincide with the international HSE week. The emphasis was on good, appropriate involvement of the safety officers and the working environment committee, and work was started on preparing a manual for the safety officers.

### Future ambitions and goals

In order to ensure a broader overview and more proactive measurement of HSE status, a set of measurement indicators for the field of HSE was developed in 2018. These will be published in early 2019. Statnett has a stated aim of achieving an annual 15 per cent reduction for H1<sup>1</sup>, H2<sup>2</sup> and SIF<sup>3</sup>. This includes both Statnett employees and contractors. A percentage reduction measures the positive development and potential of HSE work. This type of measurement reflects the dynamic nature of HSE-related issues and demonstrates that HSE results are a product of the measures implemented.

Statnett will continue to focus on three areas defined in the company's HSE action plan: management system, technical solutions and culture.

### Results

The HSE Action Plan was launched in 2016 as a strategic initiative to prevent serious HSE incidents, especially those linked to the project portfolio. Implementation of the initiatives continued in 2018 with a view to ensuring full compliance within the organisation. The action plan comprises a set of specific improvement areas. Clarification of the construction client role is one important result of this work. Focus on HSE in project planning has been reinforced through holistic risk management of HSE. In addition, the process for qualifying suppliers in connection with project contracts has been improved. HSE requirements in contracts have been simplified and clarified, and contract follow-up has been strengthened. Work has been done in 2018 on improving internal checks on HSE, and this work will continue in 2019. This comprises a system for compliance with requirements and guidelines, which provides an improved structure for governing documentation, expertise and training.

The target of a 15 per cent annual reduction was achieved for SIF in 2018. This translates into a reduction in incidents which could have led to serious personal injuries. The target was not achieved for H1 and H2, and development actually shows a percentage increase here. Of the lost-time injuries (H1) recorded, five affected own employees and 28 referred to contractors. There were no serious injuries or fatalities among Statnett employees, contractors or third parties in 2018.

	2018		2017		2016		2015		2014	
<b>Absence due to illness (%)</b>										
Short-term, 1–16 days	1.4		2.0		1.5		1.6		1.3	
Long-term (>16 days)	1.8		1.4		1.7		1.7		1.8	
Women	5.2		5.4		4.8		5.1		4.6	
Men	2.6		2.8		2.7		2.7		2.7	
Total	3.2		3.4		3.2		3.3		3.1	
<b>Serious Incident Frequency (SIF)</b>										
	Number	SIF value	Number	SIF value	Number	SIF value	Number	SIF value	Number	SIF value
Total	19	2.4	33	5.7	65	13	85	19	83	20
<b>Lost-time injuries (LTIF)</b>										
	Number of injuries	LTIF value	Number of injuries	LTIF value	Number of injuries	LTIF value	Number of injuries	LTIF value	Number of injuries	LTIF value
Employees	5	1.9	4	1.6	9	3.6	11	4.9	4	1.9
Subcontractors	28	8.6	16	5.3	19	7.6	17	7.9	15	6.8
Total	33	5.6	20	3.6	28	5.6	28	6.4	19	4.4
<b>Injuries (TRIF)</b>										
	Number of injuries	TRIF value	Number of injuries	TRIF value	Number of injuries	TRIF value	Number of injuries	TRIF value	Number of injuries	TRIF value
Employees	16	6.1	9	3.5	18	7.1	15	6.7	6	2.9
Subcontractors	50	15.4	46	15.0	36	14.5	42	19.4	26	11.8
Total	66	11.3	55	9.7	54	10.8	57	12.9	32	7.5
Total fatalities	0		0		2		0		0	
<b>Lost day rate (LDR)</b>										
	Number of lost days	LDR value	Number of lost days	LDR value	Number of lost days	LDR value	Number of lost days	LDR value	Number of lost days	LDR value
Employees	120	45.0	92	36.0	95	38.0	141	63.0	331	161.0
Subcontractors	366	113.0	426	140.0	423	170.0	234	108.0	209	95.0
Total	486	83.0	518	92.0	518	103.0	375	85.0	540	127.0

Total recordable injuries (TRIF) and lost-time injuries (LTIF) are not differentiated by gender or region. The lost-time injuries frequency (LTIF) shows the frequency of work-related lost-time injuries per million working hours. The total recordable injury frequency (TRIF) shows the total number of work-related injuries per million working hours. The serious incident frequency (SIF) indicator captures the most serious incidents/conditions involving injuries, near misses, environmental harm and recorded hazardous conditions per million working hours relating to electrical safety and working at height. Absence days are defined as lost working days in relation to the total number of working days the injured person is away from the first day after the work injury occurred. Lost day rate shows the absence rate or the frequency of absence due to the work injury per million hours worked. A fatal accident is considered as 365 days absence, two fatal accidents from 2016 have been added to the F-value, which gives high values in 2017.

<sup>1)</sup> Lost-time injury frequency, number of lost-time injuries per million working hours.

<sup>2)</sup> Injury frequency, number of lost-time and non-lost-time injuries per million working hours.

<sup>3)</sup> Number of serious (red) incidents involving injuries, near misses, environmental impact and hazardous conditions relating to electrical safety and working at height per million working hours.

## Climate and the Environment

Statnett is to be an environmentally responsible constructor and owner of the transmission grid. This is reflected in the Group strategy through the ambition to be a leader in environmental and climate work within the power industry.

Statnett updated its strategy for climate and the environment in 2018. The strategy contains an action plan that is to run until 2021. Prioritised areas include maintaining the leading work to conserve natural biodiversity and landscape values, and to reduce climate gas emissions from own activities, purchases and services.

### Environmental impact of own operations

Statnett's environmental policy centres on holistic environmental responsibility in the planning, construction and operation of the company's facilities. The environmental policy is incorporated into the internal policies for CSR and HSE that were updated in 2018. These policies set out the principles for how climate and the environment are to be taken into account.

The policies emphasise how Statnett is to be a knowledge-based premise provider and an effective facilitator for the increased use of renewable energy as a replacement for fossil energy carriers. The company is to place emphasis on environmental and climate consideration on a par with technical and financial considerations when making decisions.

Priority is accorded to Statnett reducing negative impacts on climate and the environment in the construction and operation of the company's facilities and offices. Statnett is to make high environmental demands on the company's suppliers.

Statnett is to meet authorities and affected parties with respect and a high level of environmental expertise. The company's environmental practice is to be transparent, in that its environmental assessments and performance are to be documented and communicated openly.

The overarching environmental responsibility rests with Group management. Managers at all levels are responsible for ensuring that their own units take account of environmental considerations.

New targets for climate and the environment are being prepared, based on the updated climate and environment strategy.

### Continuous improvement of systematic environmental work

Statnett has been certified according to ISO 14001, the international standard for environmental management, since 2006. In 2018, the company was certified according to the updated 2015 version of the standard. The ongoing improvement work will be continued over the coming years.

Environmental assessments are included in all phases of construction projects. In the early planning phase, when the company is selecting concepts and technical solutions, the impacts of the various solutions are assessed based on scope and degree of severity. During the licensing process, the company establishes requirements for detailed examination of the scope and consequences for nature and biodiversity. Statnett always seeks solutions that allow the best possible aesthetical adaptation to the surroundings, and accommodate consideration for affected parties locally.

As a part of the terms and conditions of licences for major projects, the authorities require preparation of an environment, transport and construction plan (MTA plan), which describes environmental considerations and remedial measures in the construction and operation phases. The MTA plan must be approved by the Norwegian Water Resources and Energy Directorate (NVE) before the construction work can start. The plan is also used as the basis for contracts with contractors engaged on the project. NVE follows up on requirements from both the licence and the MTA plan. This takes the form, for example, of monitoring during the construction phase and after completion. The requirements are then transferred to the operating phase of the facilities.

### Environmental incidents

Statnett's vision is to generate zero major emissions and no environmental damage. Environmental incidents are registered in project reporting to project owners and in HSE reporting to Group management. Statnett recorded three incidents of major environmental damage in 2018. There were two cases of SF<sub>6</sub>-emissions, and one incident of a major oil leak from a storage facility in Horten. One of the SF<sub>6</sub> emissions occurred in winter 2017/2018, and aspects of this emission were reported in 2017. Statnett was reported for unlawful pollution following the oil leak in Horten, where 2,500 litres of cable oil leaked into the soil and into the sea in the inner harbour in Horten. An internal review was conducted of the oil leak, and the report from the review – with learning points – was addressed by Group management. The lessons learned were then progressively introduced into the company.

A total of 628 environmental incidents were reported in 2018, compared with 631 in 2017. There were multiple incidents involving minor spillages of oil and fuel, as well as a number of breaches of requirements and regulations linked to same, as well as several incidents of terrain damage. The need to adjust routines is assessed on an ongoing basis. In 2018 Statnett updated its guidelines for handling chemicals, waste management and off-road driving, with the intention of reducing the number of environmental incidents.

### Biodiversity

Statnett takes habitat types and species distribution into account when planning and selecting solutions, and during construction and operation of facilities. The 2018 environment and climate strategy sets out conservation of biodiversity as one of the company's prioritised areas. Statnett has strong routines and practices for conserving biodiversity in the planning, construction and operation of facilities. The environment and climate strategy highlights the company's commitment to continue to focus on closely targeted R&D projects, and actively to apply research results in continuing the improvement work. One example is GRAN (Greener environmental interventions and reduction of climate gas emissions in construction work), an R&D project that was launched in 2018.

When Statnett is planning new construction work, internal and external investigations are carried out and used to select solutions with the least possible impact on biodiversity. In order to protect biodiversity to the greatest extent possible, Statnett assesses the need to restrict construction activities during particularly sensitive periods – during the nesting season for endangered and vulnerable bird species, for example, and in the calving season for wild reindeer. The same restrictions may also apply during the operating phase – except in emergency situations when infrastructure needs to be restored rapidly. The company may also restrict felling and limit or stop ground

transportation so as to reduce impact on significant areas of nature.

Restoring construction areas, temporary roads, rigging areas and any damage to the terrain this may have caused is to be handled in line with the principles laid down in the Statnett manual for terrain management. Several new protected areas were established in Norway in 2018, including a number of nature reserves. In several cases, power lines run through or close to areas that have now been granted protected status. This is the reason for the rise in the number of power lines in or close to protected areas (see the Form of protection table). Statnett is to avoid protected areas when establishing new power lines and stations. When planning new facilities, this is an assessment that is always made at an early stage. The establishment of new protected areas means that Statnett must establish whether these border on the company's existing facilities and then introduce measures depending on the project phase.

### Landscape

Statnett is committed to identifying solutions that provide a good aesthetic fit with the surroundings in all planning activities. Statnett uses laser scanning and three-dimensional modelling of the terrain to make it possible to select options that take into consideration the form and features of the landscape.

Statnett always strives to cover its need for new transmission capacity through limited use of new nature areas. For example, consideration will be given to whether it might be possible to make better use of existing power plants – by upgrading voltage and/or temperature, for example. In addition to limiting the need for interventions in new nature areas, voltage upgrades translate into lower energy loss per transported MWh.

Form of protection	2018			2017		
	Number of protected areas	Kilometres of power lines	Areal (km <sup>2</sup> )	Number of protected areas	Kilometres of power lines	Areal (km <sup>2</sup> )
Biotope protection under the Norwegian Wildlife Act	4	85	6	4	85	4
Animal protection area	11	44	3	11	42	2
Landscape protection area	14	132	9	15	132	7
National Park	0	0	0	1	0	0
Nature reserve	64	117	8	66	92	5
Protected plant area	0	0	0	1	0	0
<b>Total</b>	<b>93</b>	<b>378</b>	<b>26</b>	<b>98</b>	<b>351</b>	<b>18</b>



In its planning work, Statnett assesses whether it is possible to restructure or remove older transmission networks when developing the power system. In the event of removal, power lines are taken down and masts removed, allowing the natural vegetation to return.

Statnett has prepared a standard for forest clearance for power line routes to reduce the visual impact of power lines in forests. The standard establishes that vegetation must be preserved wherever possible – in river gorges, for example, and in areas of dwarf forest ecosystems in mountainous regions.

In addition, measures may have to be implemented to reduce the visual impact of the installations on some sections. This may involve camouflaging power lines, pylons and insulators, demolition and removal of old facilities and developing new types of pylon.

Out of consideration for air traffic safety, Statnett is obliged by laws and regulations to increase the visibility of individual pylons and power lines. This can be done by painting pylons red and white, or by fitting power line markers to some lines.

### Climate risk and adaptation

Statnett's climate risk is split into two main areas: physical climate risk through physical impact on the company's asset base, and political climate risk as a result of measures intended to combat climate change. The consequences of climate risk have been divided into the categories of finance, the environment, security of supply and reputation.

The overarching risk profile relates to more extreme weather and an increased focus on climate policy with the associated more stringent legal requirements in Europe and Norway. The European power system is to be updated in line with the EU's climate targets, and Statnett is ramping up its requirements for securing grid infrastructure of all voltage levels.

The work to map climate risk and develop measures to manage these risks is an ongoing assignment. Statnett is enhancing its expertise and methodology to be better able to leverage the opportunities offered by early adaptation to expected climate changes.

More radical climate change and more unpredictable weather are expected over the coming decades. More frequent occurrences of extreme weather conditions and increased risk of landslides and floods are likely.

A cold, snowy winter followed by a dry summer in 2018 provided an indication that more unpredictable weather is to be expected in future. Statnett is meeting these challenges by working with other players and professional groups in the fields of meteorology, geology and climate development. Statnett is working to continuously develop and improve methods and technology to reduce climate risk for new and existing facilities, and uses climate models as a basis for planning and designing new power lines and substations.

### Climate gas emissions from Statnett's activities

Statnett has the stated aim of reducing climate gas emissions from its own activities, as well as cutting indirect emissions through purchases and services.

In 2018, total emissions of CO<sub>2</sub> amounted to 63,010 tons (see the Climate Gas Accounts table). This represented an increase of 7,434 tons on 2017. For the first time, the emission accounts feature emissions from the subsidiary Statnett Transport AS and for the consumption of district heating, and these factors explain a part of the increase. Emissions linked to Statnett Transport amounted to 3,930 tons of CO<sub>2</sub> in 2018. Statnett started using a new IT system for registering climate emissions in 2018. Over the coming years, indirect emissions from the purchase of products and materials, as well as emissions caused by interventions into natural carbon sinks such as bogs and forests, will be included in the ongoing reporting in this system.

The climate gas emissions are calculated after the Greenhouse Gas Protocol (GHG protocol), and a location-based method is used for the calculations. With a market-based method which reflects the carbon emissions for power production throughout Europe adjusted for guarantees of origin, the total climate gas emissions for Statnett total 1,328,660 tons of CO<sub>2</sub>, of which grid losses account for a significant part.

For Statnett transmission losses in the power grid and emissions of SF<sub>6</sub> gas were the biggest sources of emissions in 2018 and these are the principal causes of increased climate gas emissions compared to 2017. The reason for this is the increased total holdings of SF<sub>6</sub>, as well as two major incidents involving emission of SF<sub>6</sub>. In view of these emissions, the company has updated and coordinated its routines for maintenance and planned replacement of facility components. 2018 transmission losses was 2 444 GWh which amounts to 2,43 percent of transported power in the transmission grid.

The climate gas emissions from the reserve power plants Tjeldberg-odden and Nyhamna increased in 2018 on account of maintenance and test operation of the facilities. Emissions from the reserve power plants are subject to quotas, which are reported annually to the Norwegian Environment Agency. Statnett does not have any free quotas and pays for emissions in accordance with EU ETS (Emissions Trading System) regulations.

Towards 2021, Statnett has identified climate initiatives associated with interventions in natural carbon sinks, construction work and the purchase of materials and products. In addition, the company has identified measures in other parts of the business – adapting its own vehicle fleet in line with national targets, for example, as well as systematic use of life cycle assessments, and the phasing in of carbon prices into the decision-making basis.

In 2018, Statnett launched two projects centred on the fossil-free construction site concept: Smestad – Sogn and Ålfoten substation. In the former project, construction transport is fossil-free as well. Statnett is planning more construction projects of this kind, i.e. free from the use of fossil fuel, and in 2018 the company initiated an investigation into how it can plan and implement completely emission-free (electrical) construction sites.

Emission intensity	Unit	2018	2017	2016	2015	2014
Total greenhouse gas emissions	tCO <sub>2</sub>	63,010	55,576	61,794	41,465	35,220
Total power transmission in the main grid	TWh	101	98	99	94	92
<b>GHG emission intensity</b>	<b>tCO<sub>2</sub>/TWh</b>	<b>626</b>	<b>568</b>	<b>624</b>	<b>441</b>	<b>383</b>
<b>Greenhouse gas emissions<sup>1)</sup></b>	<b>Unit</b>	<b>2,018</b>	<b>2,017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>Direct emissions (scope 1)</b>	tCO <sub>2</sub> equivalents	<b>16,522</b>	<b>11,898</b>	<b>12,190</b>	<b>10,676</b>	<b>8,868</b>
From fuel consumption <sup>2)</sup>	tCO <sub>2</sub> equivalents	2,230	2,302	2136	1,907	1,442
From company car travel <sup>3)</sup>	tCO <sub>2</sub> equivalents	134	158	198	190	201
From helicopter use (Statnett) <sup>4)</sup>	tCO <sub>2</sub> equivalents	558	800	640		
From fugitive emissions (SF6) <sup>5)</sup>	tCO <sub>2</sub> equivalents	9,173	8,446	7,807	6210	5,497
Fra Statnett Transport	tCO <sub>2</sub> equivalents	3,930				
From reserve power facilities (natural gas)	tCO <sub>2</sub> equivalents	498	192	1,409	2,369	1,728
<b>Indirect emissions (scope 2)<sup>6)</sup></b>	tCO <sub>2</sub> equivalents	<b>40,338</b>	<b>38,007</b>	<b>44,642</b>	<b>25,075</b>	<b>24,710</b>
Electricity	tCO <sub>2</sub> equivalents	253	215	255	135	160
Grid losses	tCO <sub>2</sub> equivalents	40,082	37,792	44,387	24940	24,550
District heating and cooling	tCO <sub>2</sub> equivalents	3	1	NA	NA	NA
<b>Other indirect emissions (scope 3)</b>	tCO <sub>2</sub> equivalents	<b>6,150</b>	<b>5,671</b>	<b>4,962</b>	<b>5,714</b>	<b>1,642</b>
From company air travel <sup>7)</sup>	tCO <sub>2</sub> equivalents	2,229	2,426	2,311	1875	1,642
From helicopter use <sup>4)</sup>	tCO <sub>2</sub> equivalents	3,921	3,245	2651	3,839	N/A
<b>Total emissions</b>	tCO <sub>2</sub> equivalents	<b>63,010</b>	<b>55,576</b>	<b>61,794</b>	<b>41,465</b>	<b>35,220</b>

<sup>1)</sup> Greenhouse gas emissions relate to Statnett SF, with the exception of helicopters (contractors). Emissions are reported based on operational control approach. The figures in the table are calculated in accordance with the GHG protocol and show emissions using the location-based method of calculation. In 2018, total emissions for scope 2 using the market-based method, which is adjusted for sales of guarantees of origin, amounted to 1,328,660 tonnes of CO<sub>2</sub> (emission factor per NVE equates to 531 tonnes CO<sub>2</sub>/GWh)

<sup>2)</sup> Emission factor: SSB Sales of petroleum products and gov.uk Greenhouse gas reporting

<sup>3)</sup> Emission factor: OFV AS

<sup>4)</sup> Emission factor JET A-1 (Kerosene): Asplan Viak report "Notodden airport - GHG emissions". The emissions for helicopter use are based on estimated average hourly usage per kilometer line section, which means there is some uncertainty in the numbers.

<sup>5)</sup> Emission factor: United Nation GWP potential, GWP 23,900

<sup>6)</sup> Emission factor: NVE electricity disclosure 2017

<sup>7)</sup> Source: Via Egencia

Levels and emissions, SF <sub>6</sub>	Unit	2018	2017	2016	2015	2014
Levels as of 31 Dec <sup>1)</sup>	kg	143,599	129,281	126,648	119,559	121,603
SF6 emissions	kg	384	353	327	260	230
<b>Substations with gaseous components</b>	Number	<b>145</b>	<b>141</b>	<b>138</b>	<b>137</b>	<b>137</b>
<b>Of which gas-insulated substations</b>	Number	<b>30</b>	<b>30</b>	<b>29</b>	<b>26</b>	<b>28</b>

<sup>1)</sup> Levels include SF6 in stations and stock. Previous years include SF6 in stock.

## Waste and pollution

Statnett's facilities are to be planned and built so as not to pollute the environment. Measures have been established to reduce the risk of pollution from the company's substations, and contractors are required to minimise the danger of leaks and emissions.

Through the introduction of new instructions in 2018, Statnett has improved its waste management procedures. The company has also developed an IT system for registering waste. This system will be implemented at all units in the organisation in 2019. The objective is to generate a more accurate data basis, and thus make it possible to increase the level of sorting and the proportion of waste sent for recycling and reuse.

The company has entered into a framework agreement for waste management, which all units are required to use. An estimated 85 per cent of all waste is reported, but some uncertainty is linked to the figures. In 2018, Statnett SF's sorting rate was 89 per cent (see Waste table). Sorted waste is sent for recycling, while hazardous waste is delivered to reception stations approved to handle such waste. Other fractions are dealt with in accordance with arrangements set up in the individual local authorities.

## Electromagnetic fields

All electrical installations are surrounded by electrical and magnetic fields, which are collectively referred to as electromagnetic fields.

The threshold value for public exposure to electrical fields is 5 kV/metre. Statnett designs new power lines so as to ensure that the threshold for electrical fields is not exceeded in places where people are expected to pass close by.

The threshold value for magnetic fields is 200  $\mu$ T. In order to make allowance for scientific uncertainty, the authorities have added a long-term exposure limit of 0.4  $\mu$ T. In step with this, Statnett examines and assesses alternative solutions if the annual average is higher than 0.4  $\mu$ T.

Statnett makes sure to stay up to date with research into the potential health effects of electromagnetic fields from high-voltage lines. In 2018, Statnett carried out an R&D project to acquire data on electromagnetic field values, and on occupational exposure at the company's facilities. Measurements were taken at substations of all ages, below live power lines, on pylons and on traverses.

Waste type <sup>1)2)</sup>	Unit	2018	2017	2016	2015	2014
Biological waste and sludge	tonnes	3,778	-	-	-	-
Paper and cardboard	tonnes	68	31	26	8	54
Glass	tonnes	40	-	-	-	-
Metals	tonnes	1,132	1,721	2,844	2,835	763
WEEE	tonnes	74	181	165	14	84
Soil and inorganic materials	tonnes	924	-	-	-	-
Plastics	tonnes	21	14	30	4	3
Chemicals	tonnes	2	-	-	-	-
Batteries	tonnes	3	-	-	-	-
Hazardous waste	tonnes	474	314	114	251	581
Total source-separated waste	tonnes	6,516	4,709	5,140	4,974	2,458
Mixed waste	tonnes	732	634	605	1,365	322
Source separation rate	per cent	89	87	88	73	87
Estimated reported	per cent	85	85	95	70-80	60-70

<sup>1)</sup> Statnett classifies waste in accordance to NS9431

<sup>2)</sup> New system for waste reporting introduced, only comparable historical values included



## Ethics and anti-corruption

Statnett's role in the Norwegian power system requires the company to work to a high standard of ethics which assures Statnett neutrality, credibility and integrity. Statnett takes a zero tolerance approach to corruption.

### Statnett's approach

The Board of Directors has approved the Group's Code of Ethics & Conduct. Managers are responsible for ensuring that employees are familiar with the code, and for following up on compliance. Statnett has an Ethics Representative tasked with strengthening the legal protection of employees and helping to uncover censurable conditions at the company, including harassment and discrimination. Employees and others who wish to draw attention to censurable conditions at Statnett are to have the opportunity to discuss matters in confidence with the Ethics Representative. The Ethics Representative Scheme has raised the profile of ethics issues among all Statnett employees and in the company as a whole. The Ethics Representative holds presentations as a part of all induction courses for new recruits, and the company communicates its representative scheme via its intranet and website. The Ethics Representative Scheme is also introduced at internal dilemma training courses, which are facilitated by the Ethics Representative.

### Future ambitions and goals

Statnett takes a zero tolerance approach to corruption, harassment and other work-related crime. The company works actively to ensure that such behaviour does not occur within the organisation or in interaction between the company and its partners.

### Results

An electronic whistle-blower channel was established in 2018 to allow reports to be submitted anonymously. The channel has already contributed to uncovering a number of unacceptable conditions. It is available via both the Statnett intranet and the company website. The Ethics Representative reports to the CEO and the Board of Directors on the number of referrals and the number of cases reviewed each year.

The work to combat unlawful pay and working conditions at suppliers and subcontractors continued in 2018. See the review in the "Supplier follow-up" section.

Over the course of 2017 and 2018, Statnett ran an anti-corruption programme to draw increased attention to and generate better understanding of the rules and regulations

concerning anti-corruption. Lectures on the topic have also been held over and above the dilemma training classes. The programme was run under the auspices of the legal department.

In the organisation survey conducted in autumn 2018, 0.4 per cent of respondents stated that they had been subjected to sexual harassment within the past 12 months. In addition, 1.9 per cent reported that they had suffered discrimination, and a further 2.4 per cent stated that they had experienced bullying in a work context. These results align with the report from the Ethics Representative. Matters referred to the Ethics Representative are dealt with on the basis of individual adaptation and needs, within the framework of the applicable guidelines.

Statnett received no fines or other sanctions relating to corruption, harassment or work-related crime in 2018.

See [www.statnett.no](http://www.statnett.no) for additional information about the Code of Ethics & Conduct.

## Transparency, dialogue and acceptance

In its capacity as TSO, Statnett sets out key premises for the operation and development of the power system and makes decisions that affect other players in the power system and local surroundings. Transparency and dialogue are prerequisites for ensuring sound processes and making legitimate decisions, which in turn generate trust and acceptance from society. Transparent processes have a key role to play in maintaining an appropriate balance between the different players.

Statnett is subject to regulations concerning the provision of information to the power market, and is also obliged to supply information under legislation concerning security and emergency preparedness. The company also publishes financial information pursuant to the prevailing regulations.

### Power system planning

A holistic image of future needs for transfer and investment is built up through market analyses, choice-of-concept studies (KVU) and fundamental technical analyses. Every two years, Statnett prepares a power system assessment (KSU) for the entire transmission grid. The KSU consists of a main report, a grid development plan (NUP), which is published, and a report basis which is submitted to the Norwegian Water Resources and Energy Directorate (NVE) and is exempt from public disclosure. Every second

year, Statnett also submits an investment plan to the NVE, containing details of expected commissionings, costs and justification.

In order to provide collaboration on actions across the grid levels, Statnett is required to contribute in regional power system assessments. Pursuant to the Norwegian Energy Act, Statnett has a duty to perform assessments relating to the connection of consumption and production to the power system. Statnett must also make plans for developing and updating its own grid facilities and for safeguarding future system operation. Statnett is required to follow a series of processes that ensure early involvement and stakeholder dialogue. Through the work with KSUs, KVUs and licensing processes, the company holds meetings with relevant stakeholders and players, and places emphasis on involvement in these projects.

Over the course of 2018, it is estimated that the number of enquiries from players looking to connect to the grid trebled in relation to 2016. Among the causes for this increase are the fact that the expansion of wind power is expected to become profitable without subsidies, and that Norway is considered an attractive market for data centre operators. It has been necessary to reprioritise and increase access to resources in order to cover the growing number of grid connection cases. At the same time, statutory regulations about obligatory connection to the power system are paramount and the authorities expect grid operators themselves to formulate how they will comply with the intentions of the regulations.

Statnett has noted that there is a major need to standardise the steps in the grid connection process within the industry, and has actively involved other players and stakeholders in the design of the company's interpretation of the framework. This work must also be viewed in the light of the new regulations concerning the payment of studies and investment contributions. Additional information about the process for connecting new customers to the transmission grid has now been published on the Statnett website. In addition, work has begun on digital solutions to improve the efficiency of analysis work, and to facilitate interaction and the flow of information between the players.

Statnett has published information about socio-economically rational development of the power grid on the company's external website and is increasingly publishing socio-economic analyses. Statnett has the stated aim of publishing more of these socio-economic analyses in individual projects. Statnett has published the company's project portfolio and updates this regularly so as to provide easier access to estimated investment costs for various

project phases. This will allow stakeholders to follow cost development over time. Statnett has also published an overview of future procurements. The objective here is, inter alia, to provide an insight into the company's level of activity and to strengthen coordination between Statnett and regional grid operators, producers, consumers and other players in the power system.

Statnett also publishes a long-term market analysis every two years. The first such analysis was published in 2016. This analysis focuses on the long-term development of the power market and grid development drivers.

### **Grid development projects**

Pursuant to the Norwegian Energy Act, all facilities for the transfer of electrical energy must have a licence. The energy authorities check projects through licence processing, and award permission to construct by granting a licence. The licensing process ensures that all relevant stakeholders are heard and given the opportunity to state their views before construction commences. The figure on the following page presents an overview of the various steps in a licensing process and stakeholder involvement.

On its website, Statnett provides information about individual projects in the form of messages and news, for example, as well as by publishing various documents such as licence applications and reports. As a part of the process concerning the individual project, the company also holds dialogue meetings with external stakeholders.

In addition, Statnett has a portfolio of minor maintenance and reinvestment projects that have little or no direct impact on the surroundings. While reduced requirements for involvement apply to these projects, they do follow internal instructions that assure the necessary dialogue with stakeholders.

### **System administrator**

Statnett's role of system administrator is regulated through the Regulations on system responsibility in the power system (fos). As the system administrator, Statnett is a part of the public administration and therefore subject to the provisions of the Norwegian Public Administration Act.

Statnett is to ensure secure and efficient operation of the power system and holds overarching responsibility for coordinating plans and operative measures. This is dependent on robust market-related and technical interaction between a variety of players. Power flow and bottlenecks in the transmission grid must be monitored continuously in order to maintain the prevailing power balance, and to avoid overloading components, consumption and production.

The system administrator is to contribute to efficient development of the power system going forward. The European power system is undergoing comprehensive changes – in the form of changes to production technology, for example, and the introduction of shared markets and regulations. This opens the door to increased value creation in Norway. At the same time, new solutions are required to ensure secure operation of an increasingly complex power system featuring a variety of new properties. Statnett is keen to be a driving force for efficient solutions. Statnett participates actively in Nordic and European partnerships, both bilaterally and through the European TSO network ENTSO-E.

Statnett has a comprehensive and ambitious action plan for system operation and market development (SMUP) over the coming five years. The measures in SMUP include the development of effective market and trading solutions, as well as new solutions to assure balance and stability in the power system. SMUP 2017–21 was sent out for consultation for the first time in 2017. Statnett experienced this as a useful process whereby the company received plenty of good, relevant input. The measures in SMUP are updated and published on a regular basis. The most recent update was the 2018 Action Plan.

In addition, Statnett publishes a value creation report that provides insight into how the system operation and market solutions contribute to value creation.

**Dialogue and cooperation with the industry**

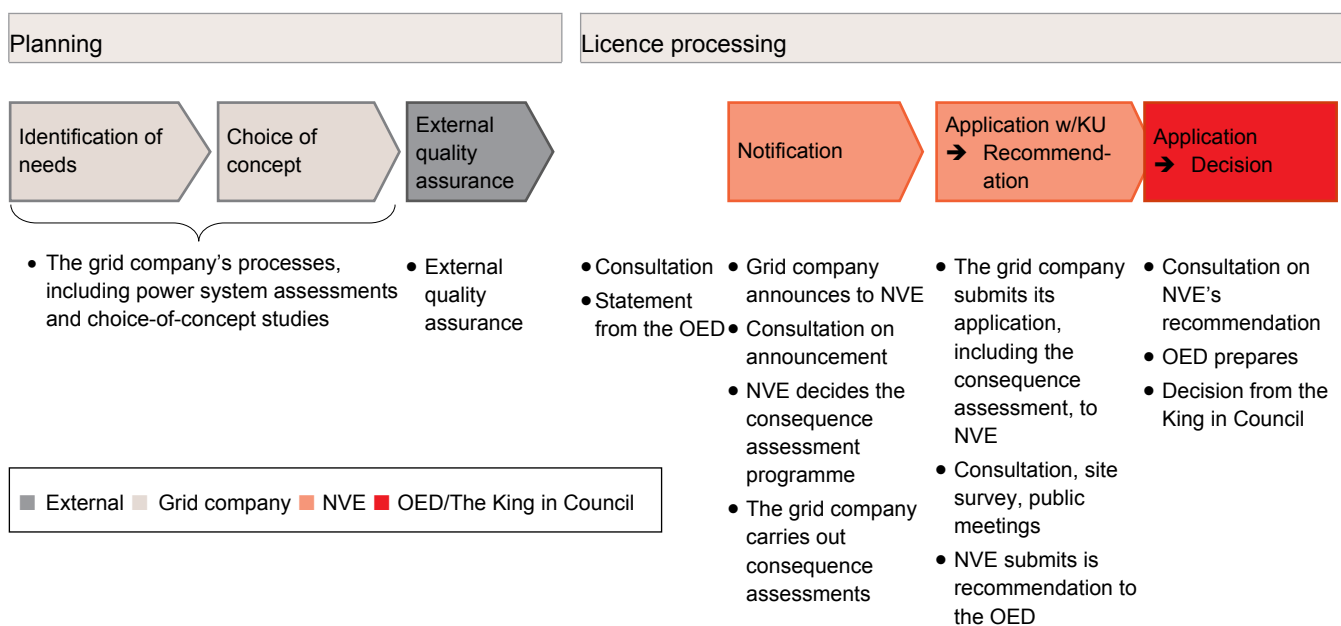
Statnett is obliged to involve the parties affected in all changes in the practice of the company’s role as TSO. Consultation processes must be held both for new solutions and for adaptations to current solutions.

Dialogue with other players in the industry is essential if Statnett is to acquire good, comprehensive knowledge of the consequences of planned solutions. Such knowledge is crucial in ensuring that the solution developed functions efficiently, and for securing acceptance of Statnett’s exercise of its system responsibility.

Statnett strives to provide good, relevant information to the industry through dialogue and cooperation. Over the course of 2018, the company has completed improvement initiatives in this area, for example through establishing a dialogue forum with the industry where experience can be exchanged and opportunities for improvement discussed.

Statnett makes active use of both a messaging service and the company’s own website to provide good and relevant information about operative system operation and the development of new solutions. Statnett invites industry players to events and dialogue meetings on relevant topics. In connection with key development activities, Statnett has set up several external reference groups and collaboration fora with participants from different areas of the industry.

In addition, Statnett has formalised the dialogue through its Market and Operation Forum, which features a representative cross-section of Statnett’s customers. The forum is used for discussions and for sharing knowledge about strategic and principle issues that have to do with the market and operations.



### Dialogue and cooperation with employees and employee organisations

Statnett employs 1,461 people, of whom more than 70 per cent are members of trade union organisations with which the company has collective agreements. Statnett maintains a good dialogue with the various parties, and holds regular meetings to assure and develop a strong working relationship. This also applies with regard to providing each other with information, and to statutory discussions, negotiations and the handling of HR issues. Dialogue with employee organisations and their international sister organisations is important in ensuring that foreign contractors comply with Norwegian regulations concerning pay, working conditions and working hours when carrying out assignments for Statnett. This is backed by the company's own follow-up on the obligation to ensure compliance through active checking and unambiguous requirements in contracts.

### Measurements in the areas of expertise, reputation and customer satisfaction.

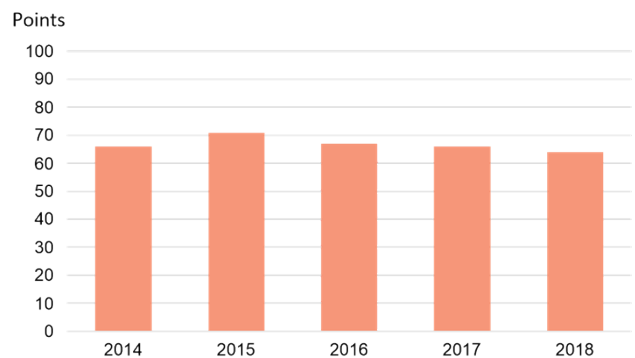
The company carries out annual reputation surveys. The findings reveal that public confidence in Statnett remains at a satisfactory level, and that familiarity with Statnett in recent years has moved to a higher level than previously. In 2018, the overall impression of Statnett scored 61 points out of a possible 100. This represents a slight decrease on the previous year, but the index has remained relatively stable for the past five years. Perceived knowledge of Statnett's business was at 28 points in 2018. This is eight percentage points higher than the level two years ago. At the same time, three out of ten Norwegians know that Statnett uses the slogan "Fremtiden er elektrisk" (The future is electric).

For customers who are directly connected to the transmission grid, satisfaction has remained relatively stable, with a score of slightly below 70 out of 100 points. In 2018, customer satisfaction was at 64, two points down from 2017. The survey reveals consistently high satisfaction with the operation of the power system, and increasing satisfaction with the company's plans for developing the grid. As regards Statnett's contribution to its customers' value creation and the company's cost-efficiency, the survey findings reveal that satisfaction is declining. Factors contributing to this decline may include higher costs as a result of Statnett having completed development of the "Next Generation Central Grid" and disagreements concerning future tariffs. Statnett has therefore adopted a new efficiency programme that continues to build on the "15 per cent programme", such

that the company maintains ongoing focus on cost-efficiency.

Moreover, Statnett receives annual feedback on how customers who are directly connected to the transmission grid perceive the company's transparency. The results have been improving in recent years, and show a slight rise from 65 points in 2017 to 67 points in 2018. The company is working consciously to increase transparency, both in connection issues and in the development of markets and operations. In particular in the area of operations, the company has established fora where players from the industry can work together on the development of roles and markets. This has been well received in the industry as a whole.

Total satisfaction





## Supplier monitoring

Statnett is currently experiencing a period of elevated construction activity and is putting large parts of the construction programme out to tender. Statnett makes clear demands on all suppliers, and follows up on risk topics throughout the procurement process. Statnett is committed to setting out guidelines for the company’s suppliers, and follows up to check that they comply with laws, regulations, requirements on working conditions and HSE standards when working for Statnett. The company also works continuously to develop the supplier market so as to ensure healthy competition, to obtain the appropriate quality and to reduce costs.

### Statnett’s approach

Statnett purchases goods and services for the construction, operation and maintenance of power lines, substation facilities and ICT. In 2018, Statnett paid NOK 8,282 million to 3,601 suppliers. The distribution of these payments is presented in the figure below.

Statnett has a set of ethical guidelines that place requirements on the company’s suppliers. These guidelines cover climate and the environment, human rights, work standards, pay and working conditions, requirements for business methods and use of subcontractors. These ethical guidelines are included as an appendix to all Statnett contracts. Statnett also imposes minimum requirements on suppliers with regard to pay and working conditions. Statnett only allows its contractors to engage two levels of subcontractors, and has introduced requirements regarding the use of apprentices.

Statnett uses qualification of suppliers to reduce the risk of non-compliance with the company’s requirements. In order to obtain qualification, suppliers must meet requirements for HSE and quality systems. For work or products associated with high risk, the qualification process will include audits and customer visits. These measures are

taken to verify that the qualification requirements are actually being fulfilled in practice. This qualification process is likewise to ensure that the contracts Statnett enters into with suppliers satisfy requirements regarding pay and working conditions.

Suppliers are monitored through audits and spot checks to ensure ongoing compliance during the term of the contract.

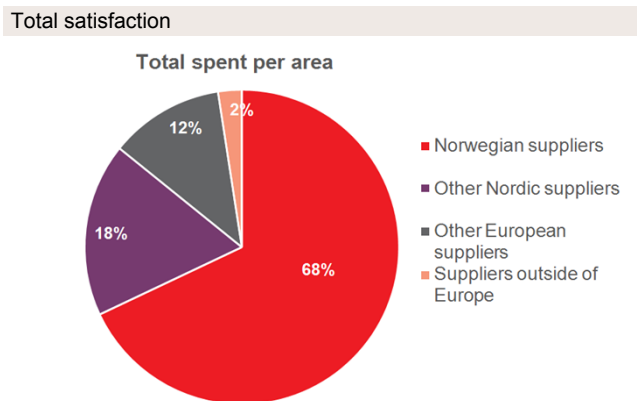
Within most of the procurement categories, Statnett uses scorecards to measure supplier performance. Suppliers are checked on parameters such as finance, progress, pay and working conditions, occupational health and safety (OHAS) and environmental issues.

### Future ambitions and goals

Statnett has the stated aim of showing greater consideration to climate and the environment in the company’s procurements. Statnett is working to define how environmental consideration can best be handled in contracts. In addition to incorporating environmental requirements into its contracts, Statnett is examining how climate and the environment can be evaluated or qualified in an objective and predictable manner.

Changes in the Norwegian Security Act oblige Statnett to introduce risk-reducing measures, and require the company to inform the Ministry of Petroleum and Energy (OED) of any purchases made for critical infrastructure. Additional amendments to relevant regulations are expected, which will result in more stringent regulation of safety-critical procurements.

In 2018, Statnett mapped options for introducing better tools, and the company has assessed opportunities for increased efficiency in the fields of procurements, analysis, financial follow-up on suppliers, and supplier market development. For 2019, Statnett has set itself the goal of implementing new and improved solutions.



### Results

The Statnett category team interacts with the supplier market within different product categories. Meetings are held regularly with both existing and potential suppliers in order to provide information about future development and plans. This has produced results. Statnett has noted competition in tender enquiries, and has succeeded in obtaining lower unit prices in the contracts. Statnett has also allocated contracts to several newly qualified tenderers in 2018.

Statnett's comprehensive construction activities demand high volumes of construction materials such as concrete and steel for substations, cables and power lines. No major power line contracts were entered into in 2018, and this resulted in a significant reduction in both materials purchased for foundations and lines purchased, compared to 2017 (see the Purchased Materials table). The volume of steel purchased has increased, partly on account of the Skillemoen – Skaidi stretch of line.

Construction of substations is often outsourced as design and build contracts, which involves the contractor procuring the construction materials. Statnett purchases the necessary transformers, reactors and p-coils. Procurements of transformers were higher in 2018 than in 2017.

Statnett operates a central supplier audit programme. The construction projects themselves are responsible for auditing ongoing contracts linked to the individual project. The Procurement Unit is responsible for initiating qualification audits and audits of suppliers with framework agreements. One of the company's objectives is to ensure that suppliers who supply with high risk are audited regularly through Utilities – Nordic & Central Europe (UNCE) and Statnett's own audits. In 2018, Statnett stepped up its work with supplier audits, carrying out 32 internal supplier audits during the year.

Also in 2018, Statnett followed up on the non-conformances identified at a Slovakian subcontractor to

Siemens in 2016. The supplier was underpaying installation engineers during transformer installation assignments in Norway. The company was suspended as a supplier to Statnett until the non-conformances were considered terminated on 20 August 2018.

In December 2018, Statnett received information about a serious breach of pay and working conditions at a subcontractor to ABB working on Statnett projects. Statnett has requested ABB to explain how this could happen, and how the company is to ensure that it does not happen again.

Statnett has commenced work to define product criticality. This includes an analysis of the extent to which there is danger to life and health during installation of the product and the subsequent operating phase. Based on this, Statnett will then prepare a follow-up plan for the most critical products. The intention here is to ensure that suppliers are in full control of their production processes and subcontractors, and that the deliveries satisfy Statnett's technical requirements.

In order to assure compliance with the company's ethical guidelines, Statnett has started to incorporate country risk assessment as a part of its qualification process. Statnett will make use of indices from highly respected international sources. These cover areas such as corruption, social risk and the environment, and when taken together they will produce an image of the inherent country risk level.

Purchased materials	Unit	2018	2017	2016	2015	2014
<b>Concrete (foundations)</b>	tonnes	<b>154</b>	<b>4,048</b>	<b>18,643</b>	<b>2,547</b>	Ikke rapp
Of which rock foundations	tonnes	79	3,298	12,658	2,059	"
Of which earth foundations	tonnes	75	750	5,985	488	"
<b>Steel</b>	tonnes	<b>7,942</b>	<b>6,225</b>	<b>18,500</b>	<b>9,803</b>	"
Of which steel foundations	tonnes	0	1,545	1,740	0	"
<b>Wires</b>	tonnes	<b>1,786</b>	<b>6,743</b>	<b>2,485</b>	<b>3,378</b>	"
Of which phase lines	tonnes	1,655	6,189	2,324	3,200	"
Of which overhead ground wires	tonnes	132	554	161		"
<b>Transformers</b>	tonnes	<b>2,400</b>	<b>900</b>	<b>3,000</b>	<b>4,500</b>	"
<b>Transformer oil</b>	tonnes	<b>512</b>	<b>192</b>	<b>640</b>	<b>N/A</b>	"
<b>P-coils</b>	tonnes	<b>0</b>	<b>180</b>	<b>120</b>	<b>0</b>	"
<b>Reactors</b>	tonnes	<b>0</b>	<b>675</b>	<b>225</b>	<b>450</b>	"

# GRI

## Global Reporting Initiative

GRI-disclosure	Description	Reporting	Omissions
102-1	Name of the organisation	Statnett SF	
102-2	Primary activities, brands, products, and services	See This is Statnett	
102-3	Location of headquarters	Oslo, Nydalen	
102-4	Countries where the organisation operates	See This is Statnett and Note 20	
102-5	Ownership and legal form	See This is Statnett and Note 20	
102-6	Markets served	See This is Statnett and Note 20	
102-7	Scale of the organisation	See This is Statnett	
102-8	Information on employees and other workers	See Report from the Board of Directors, Employers Reported for the Group. Statnett operates in Norway and reports on that as one region. Significant percentage of hired workers via subcontractors. No particular seasonal variations in the workforce.	Equivalent statistics for subcontractors and suppliers are not available Collecting demographic data in the procurement phase could be perceived as discriminatory and a breach of the public procurement regulations to which Statnett is subject. Statnett is also not entitled to collect demographic data.
102-9	Supply chain	See Corporate Social Responsibility/Supplier monitoring	
102-10	Significant changes to the organization and its supply chain	None	
102-11	Precautionary Principle or approach	See Corporate Social Responsibility/Climate and the environment/Biodiversity, Landscape, Pollution and waste	
102-12	External initiatives or principles	GRI Standards	
102-13	Membership of organisations or associations	See Corporate Social Responsibility/Smart solutions/Innovation and technology development, Digitalisation	
102-14	Statement from the CEO	See A Word from the CEO	
102-16	Values, principles, standards and norms of behaviour	See This is Statnett, and Statnett and Corporate Social Responsibility/Ethics and anti-corruption and Supplier monitoring	
102-18	Governance structure	See Corporate Social Responsibility/Managing our corporate social responsibility See Report from the Board of Directors/Corporate governance	
102-40	List of stakeholder groups	See Corporate Social Responsibility/Materiality matrix/Stakeholders/table on Stakeholder groups	
102-41	Collective bargaining agreements	See Corporate Social Responsibility/Transparency, dialogue and acceptance/Employees and employee organisations	Figures on the extent of unionisation among subcontractors and suppliers are not available on grounds of sensitivity.
102-42	Identifying and selecting stakeholders	See Corporate Social Responsibility/Materiality matrix/Stakeholders/table on Stakeholder groups	
102-43	Approach to stakeholder engagement	----- « -----	
102-44	Key topics and concerns raised by stakeholders	----- « -----	

GRI-disclosure	Description	Reporting	Omissions
102-45	Entities included in the consolidated financial statements	See This is Statnett and Note 20	
102-46	Defining report content and topic Boundaries	See Corporate Social Responsibility/About the report	
102-47	List of material topics	See Corporate Social Responsibility/Materiality matrix	
102-48	Restatement of information from previous reporting period	See This is Statnett The reporting method for earth and subsea cables was changed in 2016. Historic values have been updated	
102-49	Changes in from previous reporting period	None	
102-50	Reporting period	2018	
102-51	Date of most recent report	March 2018	
102-52	Reporting cycle	Annual	
102-53	Contact point for questions regarding the report	Knut Hundhammer, e-mail Knut.Hundhammer@statnett.no	
102-54	Claims of reporting in accordance with the GRI Standards	GRI Standards, level Core	
102-55	GRI content index		
102-56	External assurance	The GRI report was externally verified in 2018 See Independent assurance report	
<b>SECURITY OF SUPPLY</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/Security of supply	
EU28	Power outage frequency	See Corporate Social Responsibility/table under Security of supply and Value creation/ KPI Security of supply	Reported as frequency variances, non-delivered energy (NDE) and security of supply
<b>VALUE CREATION</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/Value creation	
201-1	Direct economic value generated and distributed	See Corporate Social Responsibility/table under Value creation See Financial reporting, consolidated financial statements and Note 9	
<b>ELECTRICITY</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/Electricity	
<b>COST OPTIMIZATION</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/Cost efficiency	Considering establishing GRI indicator for 2019
<b>SMART SOLUTIONS</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/Smart solutions	Considering establishing a GRI indicator for 2019



GRI-disclosure	Description	Reporting	Omissions
<b>HEALTH AND SAFETY</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/table under Health and safety	
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities	See Corporate Social Responsibility/table under Health and safety Norway is reported as one region	Not reported by gender due to the anonymity principle Occupational diseases are not reported HSE statistics for subcontractors include work conducted directly in the projects
EU25	Number of injuries and fatalities among the public involving the organisation's assets	See Corporate Social Responsibility/Health and safety	
<b>CLIMATE AND THE ENVIRONMENT</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/introductory information about each topic under Climate and the environment	
EU3	Number of customer accounts by type	Statnett's customers are exclusively professional customers in the transmission grid. The customers are divided into three categories: distribution grid companies (46), energy producers (20) and industrial companies (11) (individual consumption above 15 MW). There are a total of 77 customers in the central grid.	
<b>Environmental impact of Statnett's operations</b>			
306-3	Significant spills	See Corporate Social Responsibility/Climate and the environment/Environmental impact of Statnett's operations	Figures are reported, but no reporting routines have been established. A system for collecting statistics is established february2019 and will be implemented
<b>Biodiversity</b>			
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	See Corporate Social Responsibility/Climate and the environment/Biodiversity, Landscape	
304-2	Significant impacts of activities, products, and services on biodiversity	See Corporate Social Responsibility/Climate and the environment/Biodiversity, Landscape	
<b>Landscape</b>			
EU4	Length of overhead and subterranean transmission and distribution lines	See This is Statnett, table Transmission lines and cables in operation	
<b>Climate risk and adaptation</b>			
201-2	Financial implications and other risks and opportunities due to climate change	See Corporate Social Responsibility/Climate and the environment/Environmental impact of Statnett's operations, Climate risk and adaptation	Financial implications are not reported It is planned to carry out a thorough analysis in 2019 as a basis for reporting in this area.

GRI-disclosure	Description	Reporting	Omissions
<b>Greenhouse gas emissions from Statnett's operations</b>			
305-1	Direct (Scope 1) GHG emissions	See Corporate Social Responsibility/Climate and the environment, table under Greenhouse gas emissions	
305-2	Energy indirect (Scope 2) GHG emissions	See Corporate Social Responsibility/Climate and the environment, table under Greenhouse gas emissions	
305-3	Other indirect (Scope 3) GHG emissions	See Corporate Social Responsibility/Climate and the environment, table under Greenhouse gas emissions	
305-4	GHG emissions intensity	See Corporate Social Responsibility/Climate and the environment, table under Greenhouse gas emissions	
EU5	Allocation of CO <sub>2</sub> emission allowances or equivalent	See Corporate Social Responsibility/Climate and the environment, table under Greenhouse gas emissions	
EU12	Transmission and distribution losses as a percentage of total power transmitted	See Corporate Social Responsibility/Climate and the environment/ Greenhouse gas emissions from Statnett's operations Transmission losses as a percentage of total power transmitted is calculated as transmission loss divided by total power transmission in the transmission grid over a one year period	
<b>Waste and pollution</b>			
306-2	Waste by type and disposal method	See Corporate Social Responsibility/Climate and the environment/table under Waste type	
<b>ETHICS AND ANTI-CORRUPTION</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/Ethics and anti-corruption	
205-3	Confirmed incidents of corruption and actions taken	See Corporate Social Responsibility/Ethics and anti-corruption, Supplier monitoring	
419-1	Non-compliance with laws and regulations in the social and economic area	See Corporate Social Responsibility/Ethics and anti-corruption	
406-1	Incidents of discrimination and corrective actions taken	See Corporate Social Responsibility/Ethics and anti-corruption	

GRI-disclosure	Description	Reporting	Omissions
<b>TRANSPARENCY, DIALOGUE AND ACCEPTANCE</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/Transparency, dialogue and acceptance	
413-1	Operations with local community engagement, impact assessments, and development programs	See Corporate Social Responsibility/Transparency, dialogue and acceptance	Statnett has not measured the number of projects with stakeholder engagement in 2018 The project process ensures that requirements are met for all projects
<b>SUPPLIER MONITORING</b>			
103-1,2,3	Management approach	See Corporate Social Responsibility/Supplier monitoring	Evaluation of separate approach and results relating to inadequate compliance will be included in 2018
308-1	New suppliers that were evaluated using environmental criteria	Statnett requires that suppliers comply to environmental standards when making purchases with a value of more than NOK 500 000. Statnett evaluates procurement by four risk classifications. Purchases considered to belong to the two most high-risk classifications will be subject to a qualification process of which environmental standards is a part. All purchases are also subject to environmental standards by contract	Work is being performed on implementing a system for consolidation of data that can confirm the percentage of suppliers that is screened
414-1	New suppliers that were evaluated using social criteria	Statnett requires that suppliers comply to social conditions standards when making purchases with a value of more than NOK 500 000. Statnett evaluates procurement by four risk classifications. Purchases considered to belong to the two most high-risk classifications will be subject to a qualification process of which social conditions standards is a part. All purchases are also subject to social conditions standards by contract	
301-1	Materials used by weight or volume	See Corporate Social Responsibility/Supplier monitoring, table under Material consumption	Inventories of solid and liquid PCBs are not reported by low or high content



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To the Board of Directors of Statnett SFS

## INDEPENDENT AUDITOR'S REPORT ON STATNETT'S REPORTING ON CORPORATE SOCIAL RESPONSIBILITY FOR 2018

We have reviewed certain aspects of Statnett – Annual Report 2018, the chapter Corporate social responsibility ("the Report"). The Report is the responsibility of and has been prepared by the management of Statnett SF ("the Company"). Our responsibility is to draw a conclusion based on our review.

We have based our work on the international standard ISAE 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board. The objective and scope of the engagement were agreed with the management of the Company and included those subject matters on which we have concluded below.

Based on an assessment of materiality and risks, our work included analytical procedures and interviews as well as a review on a sample basis of evidence supporting the subject matters. We have performed interviews and meetings with management and individual resources responsible for preparing the Report and for managing corporate social responsibility aspects at corporate level.

We believe that our work provides an appropriate basis for us to provide a conclusion with a limited level of assurance on the subject matters. In such an engagement, less assurance is obtained than would be the case had an audit-level engagement been performed.

### Conclusions

Based on our review, nothing has come to our attention causing us not to believe that:

- Statnett has established management processes and systems to manage material aspects related to corporate social responsibility, as described in the Report.
- Statnett has applied procedures to identify, collect, compile and validate information for 2018 to be included in the Report, as described in the Report. Information presented for 2018 is consistent with data accumulated as a result of these procedures and appropriately presented in the Report.
- Statnett applies a reporting practice for its corporate responsibility reporting aligned with the Global Reporting Initiative (GRI) Standards reporting principles and the reporting fulfils in accordance level Core according to the GRI Standards. Statnett's GRI index presented in the Report appropriately reflects where information on each of the disclosures of the GRI Standards is to be found within the Statnett – Annual Report 2018.

Oslo, 4 April 2019  
Deloitte AS

**Gry Kjersti Berget**  
State Authorized Public Accountant

**Frank Dahl**  
Deloitte Sustainability

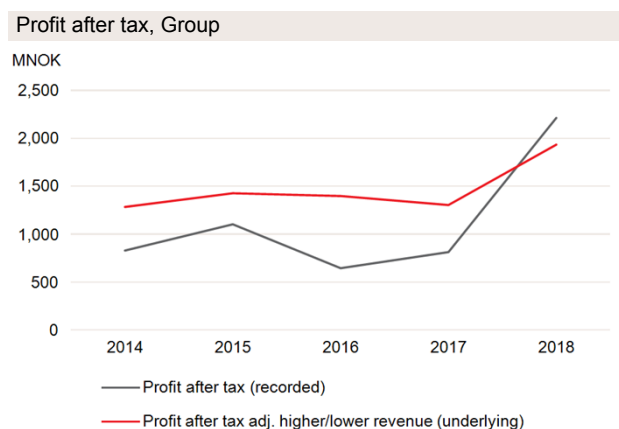
(This translation from Norwegian has been made for information purposes only.)



# Report from the Board of Directors

In 2018, Statnett achieved strong results in investments, system development, operations and efficiency improvements. The company also reached its planned investment peak of NOK 12 billion linked to construction of infrastructure, reinvestments, interconnectors and digitalisation. Significant system operation developments are currently underway at National, Nordic and European level, including extensive digitalisation projects. Despite challenges caused by major fluctuations in precipitation and temperatures and several construction-related disconnections, the grid operated smoothly throughout the year. Stable infrastructure and system operation ensured good security of supply.

Statnett comfortably achieved its targeted 15 percent improvement in efficiency from 2013 to 2018 with a final result of 17 percent. Development and investments in the transmission grid are essentially based on Statnett's grid development plan, which formed an important basis for the Grid and Energy White Papers which set national targets for the transmission grid. The national targets in the papers are expected to be achieved by the end of 2021. Tariff increases as a result of the investments, will end lower than forecasted when the papers were adopted. The reduction is mainly attributable to a combination of favourable interest rate changes, efficient project implementation and the results of Statnett's efficiency improvement initiatives. The implemented investments are consistent with the projections in the white papers.



The Statnett Group achieved an underlying profit<sup>1)</sup> after tax for 2018 of NOK 1,934 million (NOK 1,304 million in 2017). The consolidated recorded profit after tax came in at NOK 2,213 million (NOK 813 million). The Group made total investments of NOK 12,377 million (NOK 9,235 million) in the year, a record high for Statnett.

During 2018, Statnett achieved volume growth in grid infrastructure through own construction activities and infrastructure acquisitions. This has increased both the return basis and permitted income. Operating expenses rose as a result of higher Group activities. However, Statnett's efficiency improvement programme ensured that costs did not rise at the same rate as activities and infrastructure. Depreciation and impairments fell due to high depreciation charges in 2017 relating to changes in the residual value of some facilities. Adjusting for this, depreciation and impairments generally increased in line with infrastructure assets.

A dividend level of 25 percent has been proposed for the 2018 financial year, in line with the Norwegian government's proposal in the 2019 State Budget. Statnett's underlying results in recent years have helped to maintain sufficient capital to complete the extensive investment programme. In order to secure access to financing on competitive terms, Statnett attaches importance to maintaining a robust A-rating.

In 2018, Statnett constructed 225 kilometres and upgraded 119 kilometres of power lines and commissioned 67 new switchgears in substations. The largest construction projects include three substations for the Ofoten–Balsfjord project, approximately 80 km of new line for the Namsos–Hofstad connection and completion of the cable connection in the Inner Oslo Fjord. In the Western Corridor, voltage was raised from 300 to 420 kV on several connections. Progress in this project is important to prepare for the future interconnectors to Germany and the UK, scheduled to be completed by 2021. In 2018, the first section of the cable to the UK was laid and laying of cable to Germany was completed in the Norwegian sector. In digitalisation, a new operating centre system and Elhub (February 2019) were successfully commissioned. In addition, a number of power line and substation projects of varying sizes were completed or under construction in 2018. Statnett also took over parts of the Outer Ring from BKK effective 1 January 2018.

<sup>1)</sup> The underlying result is based on regulated permitted income, while the recorded result will vary depending on established tariffs and congestion revenues. Differences between these two results, which are known as higher or lower revenue, must be balanced through changes in tariffs, meaning that over time Statnett's recorded revenues will equate to regulated permitted income.

Statnett's report «Long-term market analysis – Nordics and Europe 2018–40» shows that society is transitioning to an increasingly electrified and more renewable power system more quickly than previously assumed. A number of measures currently being implemented in the transmission grid, along with new system and market solutions, will ensure that the Norwegian transmission grid system is well equipped for an electric future. These measures will also facilitate handling of significant volumes of new renewable production and increased consumption without impacting security of supply. The company experienced major interest in new connections throughout 2018, in particular with regard to small-scale hydropower, wind power and data processing centres. In the second half of the year, the company implemented measures to reduce the backlog of outstanding connection cases.

Operations remained sound in 2018, despite a number of challenges. Major snowfall during the first quarter resulted in several operational and supply interruptions for local grid operators, but there were few faults in the transmission grid that resulted in downtime. Several areas experienced reduced security of supply during periods of cold weather and high consumption. A hydrological surplus at the start of the year turned into a significant deficit during a hot and dry summer. The heat also posed challenges for system operations due to the fact that some power lines and components have reduced capacity at high temperatures. This resulted in the postponement of planned operational stoppages and reduced trading capacities.

An important objective for Statnett is greater harmonisation at Nordic level and joint Nordic market solutions. The report "The Way Forward - Solutions for a Changing Nordic Power System" was published in 2018, and describes challenges and opportunities presented by the Nordic power system. The solutions range from market measures through balancing and grid development, to ICT development.

The European power system is changing, with increased input of variable renewable energy production. This is challenging the way the power grid is constructed, maintained and operated, both in Norway and the rest of the Nordic area and Europe. Digitalisation will play a key role in these changes, and Statnett is striving to be at the forefront in implementation and use of digital technology. Therefore, the company has entered into R&D cooperation with the company Cognite to leverage new technology and expertise to develop Statnett's digital platform. Statnett has also been a driving force behind efforts to increase digital interaction and data exchange in the power industry under the auspices of DigitalNorway.

Statnett's initiatives in digitalisation will result in better support for decision-making and improved cost-efficiency, particularly in systems operation, market operations and infrastructure management. At the same time, the introduction of new technology will bring new vulnerabilities, and it is crucial for Statnett to have robust digital security to protect the company's operations, digital assets, personnel and reputation.

By the end of the year, the company had completed an extensive efficiency-improvement programme, in which it set a target of increasing efficiency by 15 percent between 2013 and 2018. The outcome showed a 17 percent improvement in terms of Statnett's influenceable operating costs in relation to the asset base. In total, the programme is expected to release around NOK 5 billion for lower tariffs in the period 2016–2025. The programme has improved the efficiency of existing infrastructure operation, as well as construction projects and support functions. Statnett is currently establishing the frameworks for an efficiency-improvement initiative to help the company to maintain its position as one of Europe's most efficient TSOs in both the short and long term. This is an important prerequisite for achieving the company's goal of levelling off the tariff for general consumption after 2023.

### Health, safety and the environment

Statnett has a zero accidents vision. To this end, the company systematically endeavours to prevent all accidents, personal injuries and damage to property and other tangible assets. Statnett aims to be a leader in HSE among European TSOs.

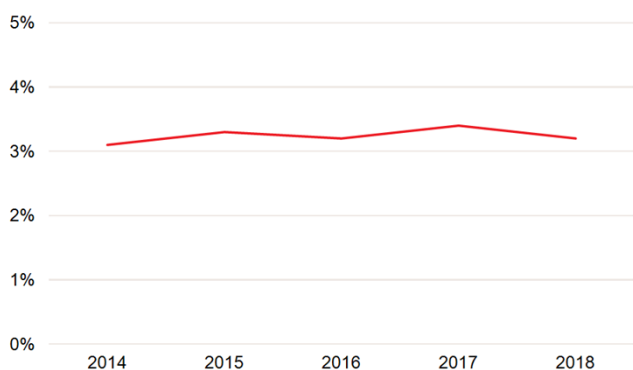
In order to secure a better overview of the HSE status, the company developed a set of measurement indicators for the field of HSE in 2018. These will provide a better indication of potential incidents, from which the company can learn to avoid serious incidents in future. Statnett has a stated aim of achieving an annual 15 percent reduction for H1<sup>1</sup>, H2<sup>2</sup> and SIF<sup>3</sup>. This includes both Statnett employees and contractors. A percentage reduction measures the positive development of – and improvement potential in – HSE work.

While the H-indicators deteriorated slightly in 2018, there was a reduction in the number of serious incidents. In 2018, a total of 33 lost-time injuries were reported at Statnett, 5 of which related to own employees and 28 to subcontractors. Statnett’s H1 and H2 indicators closed the year on 5.6 and 11.3, respectively. These were up on the respective prior-year values of 3.6 and 9.6. Despite this

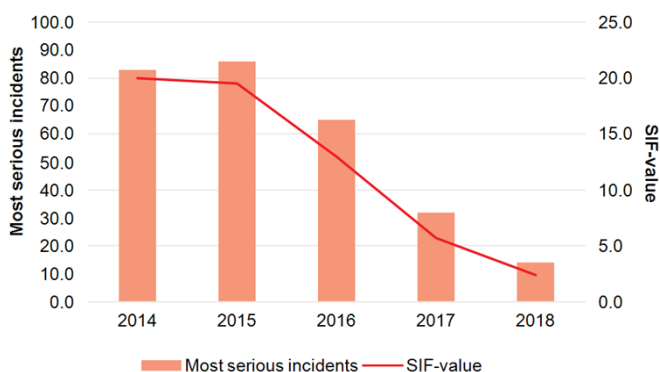
undesired development, the Group’s SIF indicator fell from 5.7 in 2017 to 2.4 in 2018, which equates to a 58 percent reduction in serious incidents. The improvements are attributable to a reduction in the number of potential and actual serious personal injuries, fewer high-risk incidents, and improved reporting and quality-assurance of non-conformances. This type of measurement shows that the HSE picture is constantly changing and that HSE results are a product of the measures implemented. Work to improve safety is also a question of long-term culture building in the company and the rest of the industry.

In 2018, the overall sickness absence rate closed on 3.2 percent, down from 3.4 percent in 2017. While Statnett’s sickness absence rate is low in relation to comparable enterprises and the power industry as a whole, the company is systematically striving to maintain sickness absence at a low level. Annual employee surveys have revealed high levels of employee satisfaction for a number of years. This is considered a key factor in maintaining sickness absence at a low level also in the long term. An accessible occupational health service makes a key contribution in this context. See the report on corporate social responsibility for further information on Statnett’s HSE initiatives.

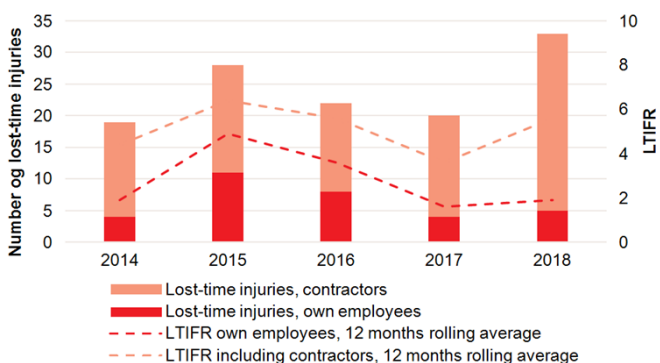
Sickness absence rolling 12-month, Group



SIF indicator rolling 12-month, Group



H indicator rolling 12-month and lost-time injuries, Group



1) Lost-time injury frequency, number of lost-time injuries per million working hours.  
 2) Injury frequency, number of lost-time and non-lost-time injuries per million working hours.  
 3) Number of serious (red) incidents involving injuries, near misses, environmental impact and hazardous conditions relating to electrical safety and working at height per million working hours.

### Operating and market information

The year under review was strongly impacted by major fluctuations in both precipitation and temperatures. At the start of the year, the power system had a hydrological surplus of around 9 TWh. Due in part to a particularly hot and dry summer, this surplus had turned into a deficit of around 27 TWh by the end of Week 29. Statnett reacted by following up and monitoring the energy situation more closely. The deficit fell to around 5 TWh at the start of the draw-off season (Week 40) following high precipitation in the late summer and autumn. After low snowfall in the final months of the year, the hydrological balance closed the year with a deficit of around 16 TWh.

During 2018, precipitation equating to 121 TWh fell in the catchment areas of the Norwegian power plants. This is around 90 per cent of the norm. In the first half of the year, there was 24 TWh less precipitation than the norm, while the second half of the year featured 12 TWh more precipitation than the norm. At the start of 2018, reservoir levels were at 72.3 per cent, 1.7 percentage points above the median (1990–2017). At the end of the year, reservoir levels were at 63.9 per cent, 6.7 percentage points below the median.

Norwegian power production and consumption for the first six months of the year totalled 146 TWh and 136 TWh, respectively, in the reporting period. This resulted in a net export around 10 TWh, down around 5 TWh on 2017. At the end of the year, there was a period of high production, and on 14 December, a new record of 27,514 MWh was set for hourly production.

High consumption in Eastern Norway (NO1) in the first quarter, combined with reduced capacity between Flesaker and Tegneby, resulted in reduced trading capacity within Norway (NO1A–NO1) and between Eastern Norway and Sweden (NO1–SE3). In particularly cold periods it was also necessary to disconnect flexible consumption in NO1, and the grid in the Oslo area operated with reduced security of

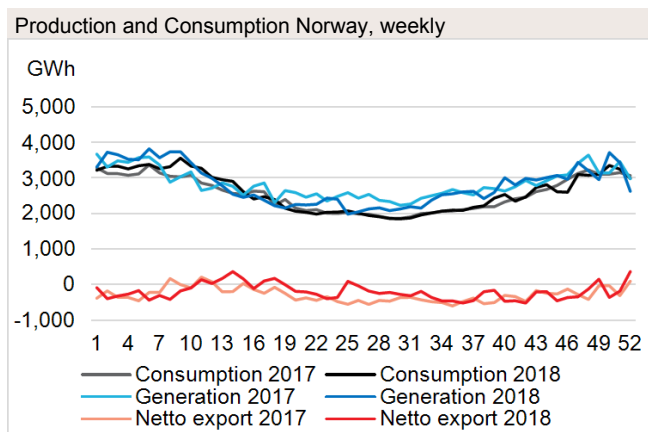
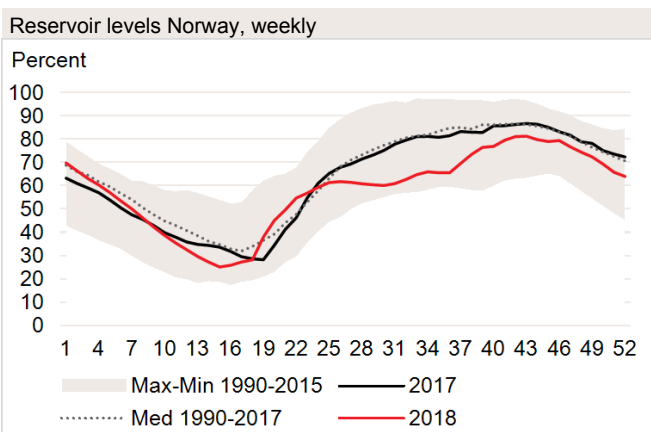
supply. Other areas such as Stavanger, Bergen and Vesterålen/Lofoten also experienced reduced security of supply due to limited grid capacity in periods of cold weather and high consumption. Heavy snowfall in the first quarter resulted in multiple operating and supply interruptions for local transmission system operators.

The heat proved challenging for system operations in the summer due to the fact that some power lines and components have low capacity in high temperatures. This resulted in the postponement of planned operational stoppages, changes to connection scenarios and reduced trading capacities. Operations in Eastern Finnmark were characterised by major power surpluses and low grid capacity, in part due to a high percentage of installed wind power.

Floods in October made it necessary to down-regulate high volumes of production, divide the grid into production radials and postpone individual operational outages. Between April and November, there were many planned operational outages, in particular in connection with the Western Corridor project in South-Western Norway.

Statnett’s new operating control centre system was commissioned in December. This was followed by a challenging migration period from the old system, during which Statnett and external parties agreed a freeze on planned operational outages and commissioning in both the transmission and the regional distribution grids.

In 2018, there were few faults in the transmission grid that resulted in supply interruptions. Three operating interruptions had long-term consequences for trading capacities: NorNed was unavailable from 20 March to 26 April due to cable faults, and Skagerrak 2 was unavailable from 6 April to 9 May due to faults with a transformer in Kristiansand. Faults with a filter at Eemshaven reduced NorNed’s capacity by around 200 MW in both directions from 4 July to 9 August.





## Development of the power system and -market

As transmission system operator, Statnett is responsible for rational operation and development of the power system and power market in Norway. Existing solutions must be developed and adapted to major changes and new framework conditions. Statnett develops the power system by constructing and reinvesting in the transmission grid, and by developing system operation solutions in Norway and in collaboration with other Nordic TSOs. This development is intended to facilitate closer market integration in the Nordic region and Europe.

A holistic view of future power transmission and investment needs is obtained through market analyses, choice-of-concept studies and fundamental technical analyses. Statnett has reporting responsibility for the transmission grid and prepares a Power System Assessment (KSU) every other year, in accordance with Norwegian regulations on energy reports. This assessment describes the existing power systems in terms of production, consumption, level of security of supply, and available grid capacity for the input of new production. The assessment also outlines possible changes in transmission needs and potential measures, with a time horizon of up to 20 years.

The Grid Development Plan (NUP) is the official version of the power system assessment. This adopts a more general approach and describes the key forces that drive the development of the power system, ongoing development projects and planned measures. The plan is updated every other year, most recently in 2017. An updated investment plan is also released every other year (when NUP is not released), most recently in October 2018. The NUP shows that Statnett expects to invest NOK 35–45 billion in grid projects in the period 2018–2022. Statnett expects investment levels to generally fall after 2021, when the company's key focus will switch to the renewal of existing grid infrastructure. Work on the next versions of the Grid Development Plan and Power System Assessment formally started with the Norwegian National Power System

Conference on 24 October 2018 and is scheduled for completion on 1 October 2019.

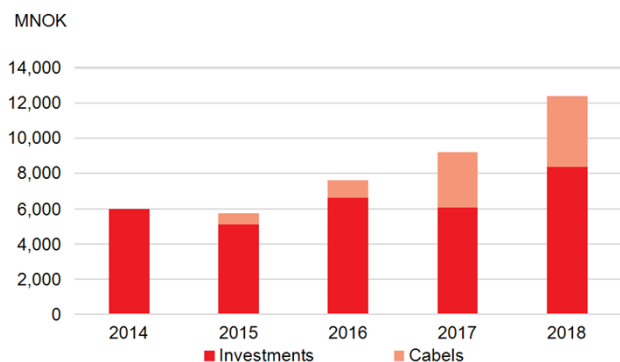
The System Operation and Market Development Plan (SMUP) describes Statnett's mandate for system responsibility, key issues relating to current system operation, the consequences of changes and prioritised measures moving forward. These measures are described in a dedicated action plan, which was updated for the period 2018–2022 during the year under review. The plan is ambitious and highlights the need for significant measures to accommodate a more complex power system and the new European regulatory framework.

Together with the SMUP, the NUP and the KSU outline how Statnett intends to fulfil its social mandate in the coming years. These documents are intended to give all stakeholders the opportunity to gain a comprehensive understanding of the company's measures and to promote wider involvement.

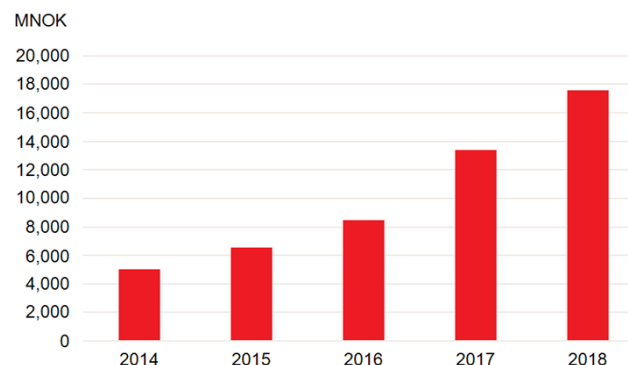
Market design and an appropriate tariff structure are vital for efficient development and utilisation of the grid. Consequently, Statnett is currently working to further develop the tariff model. A key premise for a future tariff model is that all parties must pay for the costs they incur for the grid. This is particularly important in situations where grid costs increase due to new connections of production or major consumption. Statnett believes that this illustrates the importance of raising the ceiling imposed by the EU which currently limits the costs to be covered by power producers.

New solutions for system operation will be required as the power system becomes increasingly complex. This growing complexity is partly being driven by changes in European regulations and the development and integration of Nordic market solutions. Statnett expects to make significant investments in ICT for system and infrastructure operations over the next few years. This includes Elhub

Investments Statnett, Group



Plants under construction, Group



and Statnett's share of regulation and market solutions developed through the Swedish/Norwegian collaboration Fifty.

### Investments and projects

In 2018, Statnett invested NOK 9,783 million in grid infrastructure (NOK 8,377 million), built 225 kilometres of new power lines, upgraded 119 kilometres of existing power lines and commissioned 67 new switchgears in substations. The company also made significant progress with its interconnectors to Germany and the UK.

Statnett invested a total of NOK 12,377 million (NOK 9,235 million) during the reporting period. These investments are related to commissioned grid projects, projects under construction, reinvestments, ICT projects, administration buildings, and acquisitions of grid infrastructure.

Statnett commissioned grid infrastructure from own projects of NOK 6,487 million in 2018 (NOK 3,969 million). Statnett also acquired the completed sections of the Outer Ring outside Bergen and Honna substation. In total, grid infrastructure worth NOK 8,153 million was commissioned in 2018. These projects contribute to stable operations, good security of supply and value creation for existing and new production and consumption. At the reporting date, the value of plants under construction amounted to NOK 17,581 million (NOK 13,393 million).

### Important project-related events

#### Major commissioned grid infrastructure

- *Ofoten–Balsfjord*: The entire project was completed with the commissioning of substations in Balsfjord, Bardufoss and Kvandal in February.
- *Inner Oslo Fjord*: The cable was commissioned as planned in August.
- *Namsos–Åfjord and Snilldal–Surna*: The Namsos–Hofstad section and Hofstad substation were commissioned in September.
- *Reactors for voltage reduction*: The project has been completed.
- *Sildvik substation refurbishment*: The substation has been commissioned and the project completed.
- *Temporary measures Hamang substation*: The project has been completed, and supply to Asker and Bærum has been secured during the construction of the new Hamang transformer substation.
- *Håvik temporary compensation*: The capacitor battery has been commissioned and the project completed.

#### Grid infrastructure under construction

- *Western Corridor*: Ertsmyra substation and the 420 kV Ertsmyra–Kvinesdal1 and Ertsmyra–Tonstad1 power

lines were commissioned as planned in August. Several important power lines have been installed and commissioned for the new Kvinesdal substation. The new 420 kV facility in Saurdal has entered operation and the 420 kV power line between Kvinesdal and Kristiansand has been commissioned.

- *Balsfjord–Skaidi*: A decision has been taken to commence implementation of the power line between Skillemoen and Skaidi.
- *Lyse–Fagrafjell*: An investment decision has been adopted, and the licence application is being reviewed by the OED.
- *North Sea Link (cable to UK)*: The first section of the subsea power cable between Norway and the UK was laid in 2018.
- *NordLink (cable to Germany)*: The first section of the subsea power cable between Norway and Germany was completed in the Norwegian sector in 2018. Work also started on the subsea cable in the Danish and German sectors.
- *Greater Oslo Grid Plan*:
  - Smestad–Sogn cable installation: Tunnel work started in January 2018.
  - Sogn, upgrading of substation: A final licence has been received and a decision taken on start-up.
  - Ulven, transformer: Project completed in the fourth quarter of 2018.
  - Røykås, transformer: Investment decision taken.
  - Hamang, transformer substation: A revised solution has been adopted reflecting changes in groundwork, ownership and internal requirements.
  - Hamang–Bærum–Smestad: Solution adopted.

#### Other substation investments under implementation:

An investment decision has been taken to increase transformer capacity at Mauranger and Leirdøla and to construct a new substation at Salten. A start-up decision has also been taken for increased transformer capacity Ålfoten and construction of the Kobbvatnet transformer substation.

#### Projects under development

A solution has been chosen for Sogn–Ulven, including a new tunnel cable connection, and renewal of the Kvandal–Kanstadbotn power line, Haugalandet grid reinforcement, Karmøy substation, Åsen transformer substation and control and switchgear and control gear at Rød.

A licence has been received for Samnanger substation. A licence application has been submitted for renewal of Kvandal–Kandstadbotn.

The following page shows a list of the company's most important projects.

## List of major investment projects

See [www.statnett.no](http://www.statnett.no) for more information about the projects

Project	Region	Expected investment (MNOK)
<b>Commissioned projects</b>		
Ofoten – Balsfjord, new 420 kV power line	North	
Inner Oslo Fjord, reinvestment cable connections	East	
Klæbu – Namsos, voltage upgrade	Central	
Renovation of Statnett's control centre system		
<b>Under construction</b>		
Western Corridor, voltage upgrade	South	6,600 - 6,800
Balsfjord – Skaidi, new 420 kV power line	North	4,000 - 4,500
Namsos – Åfjord and Snilldal – Surna, new 420 kV power line <sup>1)</sup>	Central	2,700 - 2,780
Smestad – Sogn substation and cable installation	East	1,250 - 1,390
Nedre Røssåga – Namsos, voltage upgrade	North	900 - 1,000
Bjerkreim, new transformer substation <sup>2)</sup>	South	500 - 540
Sogn, transformer substation reinvestment	East	545 - 580
Sylling, reinvestment	East	450 - 490
<b>Interconnectors, under construction</b>		
Cable to UK (North Sea Link) <sup>3)</sup>		MEUR 750 - 1,000
Cable to Germany (NordLink) <sup>3)</sup>		MEUR 750 - 1,000
<b>Final licences granted</b>		
Åfjord – Snilldal, new 420 kV power line and cable installation	Central	1,900 - 2,700
Aura/Viklandet – Surna, voltage upgrade	Central	500 - 700
Salten, reinvestment / new transformer substation	East	520 - 620
Hamang, new transformer substation	East	480 - 700
<b>Planned investments, licences pending or appealed</b>		
Lyse – Fagrafjell, new line and substation	South	1,800 - 2,100
Haugalandet grid reinforcement	West	1,150 - 1,350
Sogn – Ulven, new 420 kV cable installation	West	1,050 - 1,250
Karmøy reinvestment / new transformer substation	West	530 - 640
Aurland – Sogndal, voltage upgrade	East	500 - 900
<b>ICT projects</b>		
Elhub		600 - 800

<sup>1)</sup> Estimate does not include the Åfjord–Snilldal line, for which a final licence has also been granted.

<sup>2)</sup> Estimate shown as combined estimate for the entire project, including Statnett's and Lyse Elnett's shares.

<sup>3)</sup> Statnett's share. Exposure mainly in EUR, in range of NOK 7–9 billion per project Agreements with partners in Germany and UK are denominated in EUR.

The amounts in the table show the expected interval for project costs.

Costs for Projects under completion are shown in current currency; other projects are shown in 2018 currency, excl. construction loan interest and exchange rate uncertainty

## Financial results

The consolidated annual financial statements have been prepared in accordance with International Financial Reporting Standards (IFRSs) and interpretations issued by the International Accounting Standards Board (IASB), as adopted by the EU. All comments refer to the consolidated financial statements, and also apply to the parent company.

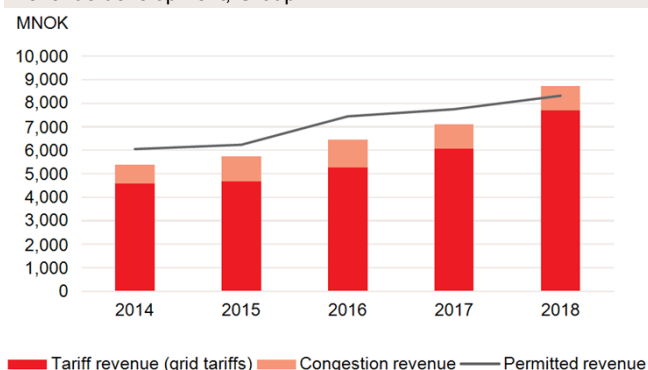
### Operating revenues

In 2018, the Group achieved operating revenues of NOK 9,138 million (NOK 7,401 million). Operating revenues from regulated activities amounted to NOK 8,651 million (NOK 7,103 million), while other operating revenues came in at NOK 488 million (NOK 298 million).

- The rise in income from regulated activities is mainly attributable to an increase in the fixed component of the tariff for retail customers from NOK 275/kW in 2017 to NOK 360/kW for 2018. This is a natural consequence of higher permitted revenue following significant investments in grid infrastructure in recent years. Tariff income from the energy component rose due to higher power prices.
- Total congestion revenues were approximately at the same level as in 2017. Congestion revenues with other countries fell slightly during the year, in part due to narrower price differences than normal and in part due to lower capacity or periodic disconnections at NorNed. Congestion revenues in Norway were higher than the previous year, partly as a result of a high number of disconnections for grid maintenance and partly as a result of lengthy periods of high consumption in Eastern Norway. Almost 60 percent of congestion revenues in 2018 related to trading outside the synchronous area.

The Group's operating revenues primarily derive from grid activities, which are regulated through a revenue cap (permitted revenue, see Note 4) which NVE establishes for

Revenue development, Group



Statnett. In the year under review, permitted income amounted to NOK 8,323 million (NOK 7,749 million). The higher permitted income primarily relates to increased regulated asset base and higher returns due to several completed projects in 2018. Higher power prices also increased the permitted income for transmission losses.

If recorded revenues from grid activities deviate from permitted revenue in a year, this gives rise to higher or lower revenue. Higher/lower revenues will balance out over time through adjustment of future tariffs. In 2018, Statnett had higher revenue of NOK 362 million (lower revenue of NOK 646 million), including interest. At the reporting date, the accumulated higher revenue, including interest, amounted to NOK 59 million (NOK -303 million). Higher/lower revenues are not recognised in the balance sheet.

### Operating expenses

Consolidated operating expenses totalled NOK 6,018 million in 2018 (NOK 6,089 million).

System services are costs related to Statnett's responsibility for maintaining an instantaneous balance in the power system and satisfactory quality of supply. Higher costs for system services are primarily attributable to the purchase of reserves during the year. Cold weather in the first quarter, followed by a hot and dry spring/summer and low reservoir levels pushed up power prices in 2018. Floods in Western Norway resulted in higher costs in the autumn.

Transmission losses were up year-on-year, mainly due to high power prices.

- Salaries and personnel costs rose on the back of higher activity levels, despite an increase in internal hours spent on investment projects recognised in the balance sheet.
- Lower year-on-year depreciation is mainly attributable to a high depreciation charge in 2017 relating to changes in the estimated residual value of back-up power plants. Adjusted for this, depreciation rose in line with the significant increase in assets recognised in the balance sheet in 2018, including for the Western Corridor and Namsos–Surna projects and infrastructure acquired from BKK.
- Other operating expenses fell against 2017 due to lower operation and maintenance activities and high investment activities in 2018. Lower costs for both ICT and consultancy services, combined with slightly higher costs for other external services, were partly attributable to the realisation of Statnett's cost-efficiency programme.

In the year under review, the company completed an extensive efficiency-improvement programme, in which it set a target of increasing efficiency by 15 percent between 2013 and 2018. The target was successfully achieved, and the programme helped ensure that costs did not rise in line with activity levels. The target encompassed all activities at Statnett, and generated efficiency improvements in the operation of existing infrastructure, development projects and support functions. The programme has contributed to a continuous focus on costs and efficiency through specific initiatives, ongoing measurements and management follow-up. It is estimated that the programme has contributed NOK 5 billion towards a lower tariff basis in the period 2016–2025. This is around 5 percent of the total tariff basis for the period, and equates to total tariff revenues for 2016.

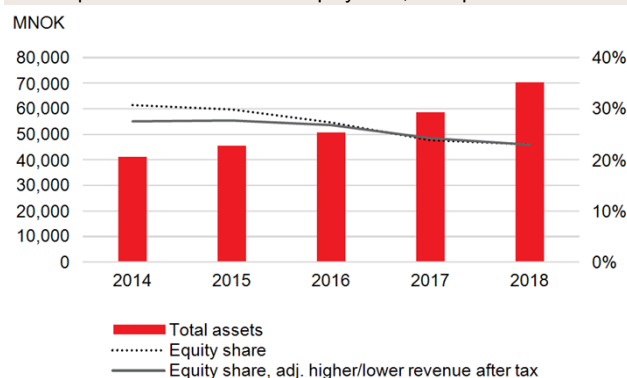
### Financial performance

Statnett achieved a consolidated operating profit of NOK 3,120 million in 2018 (NOK 1,312 million). The increase in the operating profit is primarily due to higher revenues. The underlying operating profit (adjusted for the change in the year in higher/lower revenues not recognised in the balance sheet) came in at NOK 2,758 million (NOK 1,958 million).

Consolidated net financial items closed on NOK -419 million (NOK -336 million).

- The increase in net financial expenses is in part due to higher interest-bearing liabilities deriving from high activity and investment levels. Higher capitalised construction interest negatively impacted the investment projects, in line with changes in plants under construction. Currency market fluctuations generated an unrealised loss on standalone derivatives, compared with an unrealised gain in 2017.
- Net financial items includes income from associates, which in 2018 totalled NOK 25 million (NOK 19 million).

Development total assets and equity ratio, Group



In 2018, Statnett achieved a consolidated profit after tax of NOK 2,213 million (NOK 813 million). The increase is mainly due to higher operating revenues. The underlying profit after tax, adjusted for the change in higher/lower revenues not recognised in the balance sheet, closed on NOK 1,934 million (NOK 1,304 million).

### Cash flow and balance sheet

The net cash flow for the period amounted to NOK 637 million (NOK -981 million).

- The cumulative cash flow from operating activities closed the year on NOK 3,983 million (NOK 3,615 million).
- The net cash flow from investing activities came in at NOK -8,392 million (NOK -10,764 million).
- Interest-bearing liabilities of NOK 4,355 million were repaid (NOK 5,801 million).
- Proceeds from new interest-bearing liabilities amounted to NOK 9,862 million (NOK 12,549 million).
- At the reporting date, consolidated cash and cash equivalents and market-based securities totalled NOK 3,750 million (NOK 2,405 million).
- Total unused drawdown facilities amounted to NOK 10,200 million at the end of 2018.

At the reporting date, the Group had total assets of NOK 70,281 million (NOK 58,721 million).

- Interest-bearing liabilities totalled NOK 45,737 million (NOK 39,189 million), and included guarantees under the CSA scheme of NOK 3,305 million (NOK 2,795 million). The market value of interest and currency swaps (fair value hedges) recognised in the balance sheet relating to interest-bearing liabilities amounted to NOK 3,451 million (NOK 2,701 million). Interest-bearing liabilities, adjusted for the above, totalled NOK 42,286 million (NOK 36,488 million).
- Equity amounted to NOK 16,194 million at the end of the period (NOK 14,011 million). Due to the low higher revenue, the consolidated equity ratio was 23 per cent both before and after higher/lower revenues.

### Subsidiaries and associates

Statnett SF is required to provide heavy transport preparedness for the Norwegian power supply. The wholly owned subsidiary Statnett Transport AS is responsible for ensuring that these obligations are fulfilled in an efficient and competitive manner.

The wholly owned subsidiary NordLink Norge AS is responsible for construction and operation of Statnett's share of NordLink, a subsea cable under installation between Norway and Germany.



The wholly owned subsidiary Elhub AS is responsible for development, and from February 2019, operation of a central data hub for meter values and market processes in the Norwegian power market (Elhub). NVE has assigned this task to Statnett under the Energy Settlement Licence.

Statnett founded the company Fifty AS in 2017. In February 2018, Svenska kraftnät bought a 50 percent stake in the company. Fifty AS's operation is to develop and operate the regulatory and market system to balance the Nordic power system.

Statnett SF holds a 33.3 per cent stake in eSett OY, which delivers balance settlement services to market players in Finland, Sweden and Norway, and was established in May 2017.

Statnett SF also holds a 33.3 per cent stake in KraftCERT AS, which monitors energy companies' IT systems and handles undesired IT security incidents. The company also assists other organisations in the power industry in Norway in managing and preventing attacks on ICT systems.

The Group also holds a 28.2 per cent stake in Nord Pool AS.

## Employees

### Recruitment and employee development

Statnett has an important and complex social mandate and must secure appropriate competence for the various tasks the company performs. The company is currently nearing the end of a growth phase driven by an extensive and resource-intensive investment programme. At the end of 2018, Statnett employed 1,461 permanent employees, compared with 1,415 at the end of the previous year.

The company is systematically working on the branding of Statnett as an employer and recruitment activities aimed at relevant target groups. Statnett prioritises attracting competence demanded by the market, primarily within ICT. General activities aimed at colleges and universities also play an important role in raising Statnett's profile as an employer.

Statnett focuses on developing employee competence through initiatives such as trainee programmes and apprentice schemes within electrical power engineering. The company uses systems for competence management, including employee development plans, and regularly implements an extensive development programme for managers. This provides an important foundation for an attractive and future-proof workplace.

Statnett carries out an annual employee survey that provides information about employee engagement, job satisfaction, opportunities to exert influence, management and development opportunities. The results of the survey provide the company with a solid platform for further development. In this year's employee survey, Statnett scored highly for employee satisfaction and engagement (4.3 out of 5.0).

Statnett strives to be an attractive employer for current and future employees in all stages of their working life. Internal mobility and competence development are essential for a thriving workplace with satisfied and engaged employees. It is also critical for equipping the company to meet the challenges of the future.

In 2018, Statnett employed 103 new staff. During the year, 40 employees left the company. This resulted in a relatively low staff turnover of 3.0 percent. There were also 43 internal transfers, which is testament to the strength of the internal job market. The average retirement age in 2018 was 67.4 years.

### Equality and diversity

Statnett actively strives to maintain diversity with regard to the gender, age and background of its employees. The company's recruitment and procurement processes ensure that all prospective permanent and temporary employees have equal opportunities. Statnett clearly promotes its desire for diversity, in particular with regard to recruitment processes. The aim of increasing diversity through recruitment is followed up each year.

The company works closely with trade unions to ensure equal opportunities and fair treatment of all employee groups. Statnett also performs internal work through periodic reviews of the workforce to identify any imbalances and implement any necessary remedial measures.

The company has reviewed employee salaries to make sure that there are no unjustified differences in salaries between women and men with broadly the same education and experience in comparable positions.

Nine percent of employees recruited in 2018 had a non-Norwegian background. The percentage of female employees rose from 26.5 percent in 2017 to 27.0 percent in 2018. The percentage of women in the energy sector as a whole is about 20 percent. At the reporting date, four of Statnett's nine Board members and two of the seven-strong Group management team were women. In total, 29.1 percent of all managers in the Group are women.

Statnett bases its activities on ILO (International Labour Organization) conventions. ILO's main object is to secure decent work for everyone.

### Risk

Statnett adopts a holistic approach to risk management, commensurate with the Group's management of critical societal infrastructure. Sound risk management and high emergency preparedness are critical in a period when the company is making historically high investments while striving to maintain sound operation of an ageing grid with high utilisation rates. The company assesses risk management from all business perspectives, prioritising potential consequences for HSE, supply of electrical power, finance and reputation. For a more detailed report on Statnett's framework for risk management as well as specific risks, please refer to the separate section on risk management and internal control in the Annual Report.

### Corporate social responsibility

Statnett's social mandate is to ensure a stable and secure electricity supply, contribute to value creation in society through an efficient and well-functioning power system and facilitate the use of electricity as a means for Norway to realise its climate targets. This social mandate is to be fulfilled in a responsible, economically rational manner.

This social mandate underpins the company's approach to corporate social responsibility at the same time as adopting a broader approach. Statnett stresses the importance of understanding the society's expectations of how the company should fulfil its social mandate, and endeavour to live up to this in a way that generates mutual trust and respect. Taking this approach to corporate social responsibility increases the company's influence and strengthens the company's ability to fulfil its social mandate in a sustainable manner.

Statnett reports on corporate social responsibility in accordance with the Core level of the Global Reporting Initiative (GRI). The company additionally reports in accordance with the sector-specific indicators and guidelines for the energy sector (GRI Sustainability Reporting Guidelines & Electric Utility Sector Disclosures). Statnett believes that its CSR reporting activities fulfil the requirements set out in the expanded text of section 3-3(c) of the Norwegian Accounting Act, adopted in 2013. For a more detailed report on corporate social responsibility, please refer to the separate report in the Annual Report.

### Climate and the Environment

Statnett is to be a climate- and environmentally responsible constructor and owner of the transmission grid. The company systematically works on preventive environmental measures to reduce the likelihood of serious incidents in the construction, operation and maintenance of the grid. Statnett updated its strategy for climate and the environment in 2018. The company also rolled out a new reporting system designed to secure a better overview and quality of environmental and climate data.

The most important way Statnett contributes to reducing greenhouse gas emissions is by facilitating the use of electricity in new areas and facilitating renewable energy construction. It is also important that the company maintains biodiversity and other local and national environmental values to the greatest extent possible. Statnett endeavours to identify solutions that reduces greenhouse gas emissions, provide a good aesthetic fit with the environment and limit encroachment on new nature areas. Statnett was in 2018 recertified for the environmental standard ISO 14001:2015. For a more detailed report on the climate and the environment, please refer to the report on corporate social responsibility in the Annual Report.

### Innovation and technology development

Both OED and NVE expect Statnett to be active in the field of research and development (R&D). This has been demonstrated by white papers, for example, and by NVE providing R&D incentives through the financial regulation. In 2018, Statnett devoted greater attention to this opportunity, and has set up projects in such a way that they satisfy the requirements of the NVE scheme. In 2018, Statnett actively participated in 42 per cent of the projects supported by the scheme.

The main purpose of the company's focus on R&D is to contribute to increased value creation, and safe, cost-effective and sustainable utilisation of Norwegian energy resources. R&D is a tool for realising Statnett's long-term ambitions. Statnett has divided its R&D activities into three main programmes; sustainable system development, innovative technology and smart grids.

The Nordic power grid is becoming increasingly integrated, and Statnett is working to come up with shared solutions in partnership with the other Nordic TSOs. As in the previous year, in 2018 Statnett led the Nordic R&D partnership involving Statnett, Fingrid, Svenska kraftnät, Energinet and Landsnet. Statnett is also a member of the European

Network of Transmission System Operators' Research, Development and Innovation Committee, ENTSO-E's Research and Development Committee (RDIC), where new EU projects are planned, discussed and followed up. The company is also developing wide-ranging solutions through its ICT projects, including the company's operating control centre systems, regulatory and market systems (Fifty), Elhub and infrastructure management support. Statnett has also decided to establish a new center for innovation and technology.

For a more detailed report on innovation and technology development, please refer to the report on corporate social responsibility in the Annual Report.

### Corporate governance

Sound corporate governance is a prerequisite for stable long-term value-creation and helps to ensure that Statnett delivers products and services that satisfy all relevant requirements and expectations. The company's frameworks for corporate governance are based on a group-wide management model, which clarifies role allocation between the owner, the Board and administration. Statnett complies with the government's Code of Conduct on Corporate Governance and the recommendations of the Norwegian Corporate Governance Board (NUES). Please visit [www.statnett.no](http://www.statnett.no) for further information about corporate governance.

### The Board of Directors' focus areas in 2018

One of the Board of Directors' mandates is to ensure that Statnett develops in accordance with political frameworks and prevailing Group strategy. Key considerations in this context include efficient and safe operations, sustainable development of the power system of the future, openness and transparency in the company's dealings with the wider community, and execution of corporate social responsibility.

The Board has focused on HSE improvement initiatives across the Group and among suppliers for a number of years. Despite this, the H-indicators deteriorated in 2018, although there was a significant reduction in the number of serious incidents. The Board will continue to focus on HSE, with the aim of making Statnett one of the leading TSOs in HSE in Europe.

The Board is constantly updated on the operational situation in the power system and, for example, the impact of challenges relating to extreme weather and extensive disconnections on security of supply. In 2018, a special Board workshop was dedicated to system operations and a tour of the national control centre.

Collaboration with other transmission system operators in Norway will play an important role in managing future system challenges and securing a collectively efficient grid infrastructure. The Board is pleased with the establishment of three pilot projects relating to the collaboration between distribution system operators and transmission system operators (DSO–TSO collaboration), and the continuation of the DigitalNorway initiative as an industry project. The Board believes that further digitalisation is necessary to leverage the opportunities offered by, and accommodate the future needs of, the power industry.

In 2018, agreements were reached on pan-Nordic digital balancing solutions. This partnership, which is necessary for operation of the power system, is expected to generate significant savings and facilitate efficient market solutions. Ever closer integration of the European power market requires close collaboration with premise providers in Norway and Statnett's associate companies in Europe, both directly and through the European Network of Transmission System Operators (ENTSO-E), and with European authorities.

The Board systematically monitors the project portfolio and is aided in this work by the Board's subcommittee, the Project Committee. The portfolio is performing satisfactorily, and a number of wide-ranging construction

projects have been implemented and commissioned on schedule, on budget and in line with HSE requirements. The infrastructure on the Norwegian side for the NordLink project (interconnector to Germany) will be completed in 2019. Voltage testing of the entire cable is expected in 2019 followed by trial operation at the end of 2020.

Statnett is investing significant resources in new digital solutions for the power market, system operations, infrastructure management and administrative support systems. These systems have to cover many complex needs. The Board has prioritised ensuring that the future ICT portfolio is based on shorter, limited-scope development processes rather than end-to-end solutions.

The Board prioritises improving the efficiency of operations. The «15 percent» programme was successfully completed in 2018. A new efficiency-improvement programme is being developed that will take more account of the way the regulatory authorities measure Statnett's efficiency. In general, importance will be attached to comparing Statnett to other businesses, in particular in the company's selected improvement areas. One important objective of the new programme is to improve the efficiency of Statnett's project implementation and construction client costs through the 2.0 Programme. The company has also established an extensive measures package for the implementation of projects. This will be particularly important in light of the significant changes expected in Statnett's project portfolio over the next few years. Further efficiency measures targeting system and infrastructure operations are also being implemented, including using comparisons such as the International Transmission Operations & Maintenance Study (ITOMS), which has provided valuable insights. Statnett has also established a target of improving the efficiency of staff and support functions by 20 percent by 2022. The programme will encompass the entire business, and the company is also establishing specific targets for other areas of its business.

In a phase where investments, and consequently the tariff basis, are significantly growing, tariffs represent an important and challenging task for the Board. The Board has discussed the development of Statnett's tariff model in the context of the future development of the power system and Statnett's strategy. The Board will continue to review changes in the tariff model, in consultation with customer organisations, authorities and other stakeholders. The Board believes that the tariff for general supply should flatten out following the expiry of the current investment programme in 2023. The tariff resolution for 2019 cut the maximum tariff reduction for high consumption from 90 to

75 percent. Statnett expects that this ceiling will be further reduced over the next two years.

Work on compliance and internal control represents a further important task for the Board. Statnett is a regulated TSO and is therefore subject to a number of control tests. The organisation is essentially profession-based, and Statnett has a stable, skilled and experienced workforce. The risk of inadequate compliance is deemed to be moderate.

In 2018, violations of Norwegian legislation on pay and working conditions were identified at a number of suppliers and subcontractors. The Board wishes to ensure that Statnett upholds its obligations and that the company has effective measures to ensure compliance.

The Board attaches a high priority to ICT security. Collaboration with other stakeholders in the power sector, relevant resource pools and authorities is an important means for achieving shared competence development.

Despite high activity levels, Statnett has a low sickness absence rate, scores highly in employee surveys and has a low staff turnover rate. The Board strives to ensure that Statnett's various divisions and departments employ an appropriate mix of permanent and contract employees.

The Board closely monitors the company's financial position. The total value of the company's facilities under construction is currently significantly growing, in part due to the construction of two capital-intensive interconnectors to Germany and the UK. A robust A-rating enables the

company to attract financing on competitive terms and thus helps to fulfil its social remit in a cost-effective manner.

Statnett turned in a good overall performance in 2018. The Board of Directors would like to express its sincere thanks to all employees for their outstanding efforts in a period of record-high investments alongside ongoing operations and the successful realisation of the company's 15 per cent programme. The Board looks forward to continuing this partnership for the future benefit of Statnett.

For more information on the Board's responsibility and roles, please visit [www.statnett.no](http://www.statnett.no)

### Attendance at Board meetings

Board meetings had an attendance rate of 100 per cent in 2018. The table below shows each Board member's attendance record at Board meetings and subcommittees. The difference between the number of meetings and the attendance figures is due to the appointment of new Board members in June 2018.

### Changes to the Board

Jon Fredrik Baksaas was appointed the new Chairman of Statnett in 2018, while new owner-elected Board member Tove Elisabeth Pettersen, and two new employee-elected Board members, Pernille Dørstad and Ole Bjørn Kirstihagen, also joined the Board during the year. At the same time, Per Hjorth and Kirsten Indgjerd Værdal stepped down from the Board after 10 and 9 years' service, respectively, along with employee-elected Board members Karianne Burhol and Nils Ole Kristensen.

	Board Meeting (9 meetings)	The Audit Committee (8 meetings)	Project Committee (9 meetings)	Remuneration Committee (4 meetings*)
Jon Fredrik Baksaas (Chairman of the Board)	5			
Synne Larsen Homble (Vice-President of the Board, Chair of the Remuneration Committee)	10			4
Maria Sandsmark (Remuneration Committee and Project Committee)	10		9	4
Egil Gjesteland (Chair of the Project Committee)	10		9	
Einar A. Strømsvåg (Chair of the Audit Committee)	10	9		
Tove Elisabeth Pettersen (Audit Committee)	5	4		
Pernille Dørstad (Audit Committee)	5	4		
Steinar Jøråndstad (Project Committee)	10		9	
Ole Bjørn Kirstihagen (Remuneration Committee)	5			1

\*Fourth meeting of remuneration committee for 2018 was postponed to early January 2019



## Outlook

If Norway is to successfully achieve its climate goals, the electrification of society will have to continue. Electricity is the most efficient large-scale energy bearer, which means that increased electrification will also contribute to increased value creation. It is striking to note that a fully electrified Norway would use almost 30 per cent less energy to perform the same activities as it does today. Realisation of climate goals is therefore also good for the Norwegian economy. To achieve these goals, the power system must be sufficiently flexible, smart and robust to accommodate development dynamics and the volumes and fluctuations that this will entail.

Lower construction costs and higher-than-forecast power prices are making it increasingly profitable to construct wind power in Norway without subsidies. In the long term, power surpluses are also expected to result in lower prices in Norway and the Nordic region and therefore favourable conditions for power-intensive industry. In addition, connection of more and larger data processing centres may increase capacity demand in the grid over both the short and long term. A robust grid enables utilisation of renewable resources to cut emissions and boost value creation.

Electrification will make society more dependent on a secure power supply, which in turn will present challenges for future security of supply, in particular in major cities and conurbations. Together with more renewable power and greater exchange capacity, this is resulting in an increasingly complex power system. To manage these developments, Statnett must leverage the opportunities offered by digitalisation in areas such as decision-making support and cost efficiency. This applies in particular to systems and market operations, grid planning and infrastructure management. It is also becoming increasingly important to work both across grid levels and with new organisations.

Climate challenges and related political goals and tools will have a significant bearing on the development of the power system in Norway and Europe moving forward. EU regulations are being extensively revamped to establish more efficient system and market solutions that will facilitate achievement of the objectives of the Paris Agreement.

Active customers will have a more central position in this regulation in the future. Statnett is striving to develop effective international solutions that also satisfy control requirements. This requires a smart electricity grid that meets customers' needs for power in a cost-effective manner through a smoothly functioning power market in Norway and the Nordic region.

Measures currently being realised by Statnett in the transmission grid, alongside new system and market solutions, will contribute to national value creation through facilitation for significant volumes of new renewable production and increased consumption while maintaining security of supply. Production and consumption technology is developing increasingly quickly, and adding uncertainty surrounding future capacity requirements in the grid. To ensure rational socio-economic operation and development, it is important to give the right price signals with the help of price areas, investment contributions and tariff structures. Statnett is also developing market and system solutions to manage variations in production and consumption more efficiently than today, for example with regard to smaller local transmission restrictions that could arise as a result of new wind power.



More wind power



Requirements from the EU



Security of supply

### Equity and dividends

In 2014, Statnett received an equity injection of NOK 3.25 billion, with the aim of achieving a minimum equity ratio of 25 percent by the end of 2017.

In connection with the equity injection, no dividend was paid for the 2013 financial year, and dividends for the financial years 2014–17 were set at 25 percent. A dividend level of 25 percent has also been proposed for the 2018 financial year, in line with the Norwegian government's proposal in the 2019 State Budget. Consequently, Statnett SF's equity was aligned with the Group's business and risk profile in the period from 2014.

### Going concern

In accordance with section 3-3a of the Norwegian Accounting Act, the Board confirms that the annual financial statements have been prepared in accordance with the going concern principle.

### Appropriation of profit for the year

Statnett posted a profit after tax of NOK 2,213 million in 2018. Statnett's Board of Directors proposes a dividend of NOK 484 million, which equates to 25 percent of the dividend basis. The dividend basis is defined as the Group's net result for the year after tax, adjusted for the change in the year's post-tax higher/lower revenues. The

proposed dividend is consistent with the adopted dividend policy for the enterprise, and is deemed to be reasonable based on Statnett's equity and liquidity.

Accordingly, the Board proposes the following appropriation of Statnett SF's net result for the year:

Proposed dividend	484
Transferred to other equity	1,677
Total appropriations	2,161

### Declaration from the Board of Directors and CEO

We declare that to the best of our knowledge the annual financial statements for 2018 have been prepared in accordance with IFRSs and disclosure requirements pursuant to the Norwegian Accounting Act, and that the disclosures in the financial statements provide a true and fair view of the company's and the Group's assets, liabilities, financial position and performance as a whole, and that the information contained in the Report from the Board of Directors provides a true and fair view of the performance, results and position of the company and the Group, together with a description of the key risk and uncertainty factors facing the Group.

Oslo, April 4, 2019

Statnett's Board of Directors



Jon Fredrik Baksaas  
Chairman



Synne Larsen Homble  
Deputy Chair



Maria Sandsmark  
Board member



Egil Gjesteland  
Board member



Tove Elisabeth Pettersen  
Board member



Pernille Dørstad  
Board member



Steinar Jøråndstad  
Board member



Einar Anders Strømsvåg  
Board member



Ole Bjørn Kirstihagen  
Board member



Auke Lont  
President and CEO

# Statement of comprehensive income

Parent company				Group	
2017	2018	(Amounts in NOK million)	Note	2018	2017
<b>Operating revenue</b>					
7,135	8,634	Regulated operating revenue	4	8,651	7,103
359	492	Other operating revenue	4	488	298
<b>7,494</b>	<b>9,127</b>	<b>Total operating revenue</b>		<b>9,138</b>	<b>7,401</b>
<b>Operating costs</b>					
435	541	System services	5	541	435
642	1,033	Transmission losses	5	1,033	642
962	985	Salaries and personnel costs	6, 7, 23	973	951
2,488	1,950	Depreciation, amortisation and impairment	8, 9	1,980	2,403
1,743	1,534	Other operating costs	27	1,491	1,658
<b>6,270</b>	<b>6,043</b>	<b>Total operating costs</b>		<b>6,018</b>	<b>6,089</b>
<b>1,224</b>	<b>3,084</b>	<b>Operating profit</b>		<b>3,120</b>	<b>1,312</b>
<b>Financial items</b>					
177	220	Financial income	10	59	112
508	655	Financial costs	10	478	448
<b>-331</b>	<b>-436</b>	<b>Net financial items</b>		<b>-419</b>	<b>-336</b>
<b>893</b>	<b>2,648</b>	<b>Profit before tax</b>		<b>2,701</b>	<b>976</b>
<b>Tax</b>					
165	486	Tax	19	488	163
<b>728</b>	<b>2,161</b>	<b>Profit for the year</b>		<b>2,213</b>	<b>813</b>
<b>Other comprehensive income</b>					
-6	-1	Changes in fair value of financial instruments	28	-1	-6
-110	267	Changes in fair value of cash flow hedge reserve	15, 28	267	-110
23	-62	Tax effect	19, 28	-62	23
<b>-93</b>	<b>204</b>	<b>Other comprehensive income to be reclassified to profit or loss in subsequent periods</b>		<b>204</b>	<b>-93</b>
-293	79	Changes in estimate deviations of pension liabilities	7, 28	79	-293
67	-20	Tax effect	7, 19, 28	-20	67
<b>-226</b>	<b>59</b>	<b>Other comprehensive income not to be reclassified to profit or loss in subsequent periods</b>		<b>59</b>	<b>-226</b>
<b>-319</b>	<b>262</b>	<b>Total other comprehensive income</b>		<b>262</b>	<b>-319</b>
<b>409</b>	<b>2,424</b>	<b>Total comprehensive income</b>		<b>2,475</b>	<b>494</b>

# Balance sheet

Parent company		(Amounts in NOK million)	Note	Group	
31.12.2017	31.12.2018			31.12.2018	31.12.2017
<b>Assets</b>					
<b>Fixed assets</b>					
-	47	Deferred tax asset	19	51	-
360	451	Intangible assets	8	1,054	413
35,335	40,636	Tangible assets	8	40,948	35,653
8,519	10,536	Plants under construction	9	17,581	13,393
2,318	2,384	Investment in subsidiaries	20	-	-
54	59	Investment in jointly controlled company and associates	20	111	94
6,355	8,166	Financial fixed assets	14	3,863	3,200
<b>52,941</b>	<b>62,279</b>	<b>Total fixed assets</b>		<b>63,608</b>	<b>52,753</b>
<b>Current assets</b>					
3,223	2,553	Trade accounts and other short-term receivables	11	2,630	3,563
652	1,365	Market-based securities	12	1,794	1,086
-	293	Assts held for sale	29	293	-
870	1,545	Liquid assets	13	1,956	1,319
<b>4,745</b>	<b>5,756</b>	<b>Total current assets</b>		<b>6,673</b>	<b>5,968</b>
<b>57,686</b>	<b>68,035</b>	<b>Total assets</b>		<b>70,281</b>	<b>58,721</b>
<b>Equity and liabilities</b>					
<b>Equity</b>					
5,950	5,950	Contributed capital		5,950	5,950
7,736	9,869	Other equity accrued		10,244	8,061
<b>13,686</b>	<b>15,819</b>	<b>Total equity</b>		<b>16,194</b>	<b>14,011</b>
<b>Long-term liabilities</b>					
902	1,871	Deferred tax	19	1,926	944
352	311	Pension liabilities	7	313	354
578	455	Other liabilities	24	455	578
35,418	40,421	Long-term interest-bearing debt	16	40,388	35,217
<b>37,250</b>	<b>43,058</b>	<b>Total long-term liabilities</b>		<b>43,082</b>	<b>37,093</b>
<b>Current liabilities</b>					
4,128	5,349	Short-term interest-bearing debt	16	5,349	3,972
2,303	3,809	Trade accounts payable and other short-term debt	17	5,653	3,310
319	-	Tax payable	19	3	335
<b>6,750</b>	<b>9,158</b>	<b>Total current liabilities</b>		<b>11,005</b>	<b>7,617</b>
<b>57,686</b>	<b>68,035</b>	<b>Total equity and liabilities</b>		<b>70,281</b>	<b>58,721</b>

Oslo, 4. april 2019  
Styret i Statnett SF

Jon Fredrik Baksaa  
Styrets leder

Synne Larsen Homble  
Nestleder

Maria Sandsmark  
Styremedlem

Egil Gjesteland  
Styremedlem

Tove Elisabeth  
Pettersen  
Styremedlem

Pernille Dørstad  
Styremedlem

Steinar Jøråndstad  
Styremedlem

Einar Anders Strømsvåg  
Styremedlem

Ole Bjørn Kirstihagen  
Styremedlem

Auke Lont  
Konsernsjef

# Statement of changes in equity

Parent company				Group				
Contributed capital	Other items	Other equity accrued	Total equity	<i>(Amounts in NOK million)</i>				
				Total equity	Other equity accrued	Other items	Contributed capital	
<b>5,950</b>	<b>-178</b>	<b>7,855</b>	<b>13,627</b>	<b>13,867</b>	<b>8,095</b>	<b>-178</b>	<b>5,950</b>	
-	-	728	728	813	813	-	-	Profit/loss for the year
-	-93	-226	-319	-319	-226	-93	-	Other comprehensive income, note 28
-	-	-350	-350	-350	-350	-	-	Dividends declared
<b>5,950</b>	<b>-271</b>	<b>8,007</b>	<b>13,686</b>	<b>14,011</b>	<b>8,332</b>	<b>-271</b>	<b>5,950</b>	<b>31.12.2017</b>
<b>5,950</b>	<b>-271</b>	<b>8,007</b>	<b>13,686</b>	<b>14,011</b>	<b>8,332</b>	<b>-271</b>	<b>5,950</b>	<b>01.01.2018</b>
-	-	2,161	2,161	2,213	2,213	-	-	Profit/loss for the year
-	204	59	262	262	59	204	-	Other comprehensive income, note 28
-	-	-326	-326	-326	-326	-	-	Dividends declared
-	-	35	35	35	35	-	-	Implementation effect IFRS 15
<b>5,950</b>	<b>-68</b>	<b>9,937</b>	<b>15,819</b>	<b>16,194</b>	<b>10,312</b>	<b>-68</b>	<b>5,950</b>	<b>31.12.2018</b>



# Cash flow statement

Parent company		(Amounts in NOK million)	Note	Group	
2017	2018			2018	2017
<b>Cash flow from operating activities</b>					
893	2,648	Profit before tax		2,701	976
-3	-2	Loss/gain(-) on sale of fixed assets	8	-2	-3
2,488	1,950	Depreciation, amortisation and impairment	8	1,980	2,403
-	63	Write-down shares	20	-	-
-	24	Net paid taxes	19	20	-10
375	434	Interest recognised in the income statement	10	422	362
24	7	Interest received	10	17	33
-396	-499	Interest paid, excl. construction interest	10	-499	-396
262	-719	Changes in trade accounts receivable/payable	11, 17	-610	76
239	-58	Changes in other accruals	11, 17	-46	174
<b>3,882</b>	<b>3,848</b>	<b>Net cash flow from operating activities</b>		<b>3,983</b>	<b>3,615</b>
<b>Cash flow from investing activities</b>					
88	75	Proceeds from sale of tangible assets	8	75	88
-8,262	-6,728	Purchase of tangible and intangible assets and plants under construction	8, 9	-8,175	-10,661
-148	-198	Construction interest paid	9	-312	-216
-745	-373	Paid capital to subsidiaries	20	-	-
9	-	Changes in investment in associates, jointly controlled and other companies	20	-6	9
-1,942	-1,010	Changes in long-term loan receivables	14	17	-
-	3	Changes in short-term loan receivables	11	-	-
19	9	Received dividends and group contributions	10, 20	9	16
<b>-10,981</b>	<b>-8,222</b>	<b>Net cash flow from investing activities</b>		<b>-8,392</b>	<b>-10,764</b>
<b>Cash flow from financing activities</b>					
12,549	9,862	Proceeds from new interest-bearing debt	16	9,862	12,549
-5,801	-4,355	Repayment of interest-bearing debt	16	-4,355	-5,801
105	569	Changes in collateral under CSA (Credit Support Annex) agreements	18	569	105
818	199	Proceeds from sale of market-based securities	12	372	958
-1,150	-900	Purchase of market-based securities	12	-1,076	-1,293
-350	-326	Dividends paid		-326	-350
<b>6,171</b>	<b>5,049</b>	<b>Net cash flow from financing activities</b>		<b>5,046</b>	<b>6,168</b>
<b>-928</b>	<b>675</b>	<b>Net cash flow for the period</b>		<b>637</b>	<b>-981</b>
1,798	870	Cash and cash equivalents at period start	13	1,319	2,300
<b>870</b>	<b>1,545</b>	Cash and cash equivalents at period close	13	<b>1,956</b>	<b>1,319</b>

# Note 1 General information and basis for preparation of financial statements

## General information

Statnett SF (the parent company) is a Norwegian state-owned enterprise that was formed on 20 December 1991. The sole owner of Statnett SF is the Norwegian State, represented by the Ministry of Petroleum and Energy (MPE). Statnett has issued bond loans listed on the Oslo Stock Exchange. The head office is located at Nydalen allé 33, 0484 Oslo.

The consolidated financial statements for the Statnett Group and the financial statements for the parent company, Statnett SF, have been prepared in compliance with the current International Financial Reporting Standards (IFRS), as adopted by the EU, and the Norwegian Accounting Act.

All subsequent references to "IFRS" imply references to IFRS as adopted by the EU.

The financial statements have been prepared on the basis of the historical cost principle, with the following exceptions:

- Derivatives, financial assets and liabilities classified as "fair value carried through profit or loss, amortized cost or fair value through other comprehensive income"
- The carrying value of hedged assets and liabilities is adjusted in order to register changes in fair value as a result of the hedging
- Assets are measured at each reporting date with a view to impairment. If the recoverable amount of the asset is less than the carrying value, the asset is written down to the recoverable amount

## Consolidation policies

The Group financial statements comprise the financial statements of Statnett SF and its subsidiaries, presented as if they were one entity.

The consolidated financial statements have been prepared using uniform accounting principles for equivalent transactions and other events under otherwise equal circumstances. The classification of items in the income statement and balance sheet has taken place in accordance with uniform definitions. The consolidated financial statements are prepared in accordance with the acquisition method of accounting and show the Group as if it was a single entity. Balances and internal transactions between companies within the Group are eliminated in the consolidated financial statements.

Associates are companies where Statnett has significant influence, i.e. Statnett can influence financial and operational decisions in the company, but does not have control of the company. Investments in associates are accounted for using the equity method.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint operations are accounted for on the basis of proportional consolidation.

Joint ventures are arrangements where the parties that have joint control, have agreed to share the net assets of the arrangement. Joint ventures are accounted for using the equity method.

Investments in companies in which the Group owns less than 20 percent of the voting capital are carried at fair value in the balance sheet if they can be reliably measured. Value changes are recognised through other comprehensive income. These investments are not specified in the notes to the financial statements.

## Classification of items in the balance sheet

An asset is classified as short-term (current asset) when it is related to the flow of goods, receivables paid within one year, and "assets that are not intended for permanent ownership or use in the operations". Other assets are fixed assets. The distinction between short-term and long-term loans is drawn one year before maturity. The first year's instalments on long-term loans are reclassified as current liabilities.

## Dividends

Dividends paid are recorded in the Group's financial statements during the period in which they are approved by the General Meeting. If the approval and payment occur in different periods, the amount will be allocated to current liabilities until payment is made.

## Foreign currency

The consolidated financial statements are presented in Norwegian Kroner (NOK), which is also the parent company's functional currency. All Group companies use NOK as their functional currency.

As all the companies in the Group have the same functional currency, no translation differences arise upon consolidation of the Group companies.

# Note 1 General information and basis for preparation of financial statements

Transactions in foreign currency are recognised at the current exchange rates prevailing at the date of the transaction. Monetary items in currencies are translated into NOK at the exchange rate in effect on the balance sheet date. Non-monetary items measured at acquisition cost are translated into NOK at the exchange rate in effect on the transaction date. Non-monetary items that are measured at fair value expressed in foreign currency are translated at the exchange rate in effect on the balance sheet date. Changes in exchange rates are recorded on a current basis in the income statement during the reporting period and presented as financial items.

The Group uses hedge accounting for all foreign currency long-term debt. Long-term interest-bearing debt in foreign currency is related to interest rate and currency swaps and presented as borrowings in NOK.

## Leasing

Lease accounting principles for the year 2018 are presented in the following. See note 2 for a discussion of the consequences of the new lease standard IFRS 16, effective from 1 January 2019.

### The Group as lessor

#### Financial lease agreements

Financial lease agreements are lease agreements where the lessee takes over the majority of the risk and return associated with the ownership of the asset. The Group presents leased assets as receivables equal to the net investment in the lease agreements. The Group's financial income is determined so that a constant rate of return is achieved on the outstanding receivables over the term of the agreement period. Direct expenses incurred in connection with the establishment of the lease agreement are included in the receivable.

#### Operating leases

Operating leases where the majority of the risk and return associated with ownership of the asset is not transferred to the Group, are classified as operating leases. The Group presents leased assets as fixed assets in the balance sheet. The lease revenue is recognised in a straight line over the term of the lease period. Direct expenses incurred to establish the operating lease agreement are added to the leased asset's carrying value and recognised as expenses during the term of the lease on the same basis as the lease revenue.

### The Group as lessee

#### Financial lease agreements

Financial lease agreements are lease agreements where the Group takes over the majority of the risk and return associated with ownership of the asset. At the beginning of the lease term, financial lease agreements are capitalised at an amount corresponding to the lower of fair value and the present value of the minimum rent, less accumulated depreciation and write-downs. When calculating the lease agreement's present value, the implicit interest charge in the lease agreement is used if this can be estimated. Otherwise, the company's marginal borrowing rate is used. Direct expenses related to establishing the lease agreement are included in the asset's cost price.

The same depreciation period is used as for the company's other depreciable assets. If it is not reasonably certain that the company will acquire ownership at the end of the lease period, the asset will be depreciated over the shorter of the lease agreement's duration and the asset's useful life.

#### Operating leases

Operating leases where the majority of the risk and return associated with ownership of the asset is not transferred to the Group, are classified as operating leases. The rent payments are classified as operating expenses and are recorded in a straight line in the income statement over the duration of the agreement.

## Government grants

Government grants are not recorded in the accounts until it is reasonably certain that the Group will meet the conditions stipulated for receipt of the grants and that the grants will be received. Grants are recorded as a deduction in the expenses that they are meant to cover.

## Statement of cash flows

The cash flow statement has been prepared based on the indirect method. Cash includes bank deposits. Cash equivalents are short-term liquid investments that can be converted immediately to a known amount of cash, and with a maximum term of three months.

## Note 1 General information and basis for preparation of financial statements

Restricted cash consists of employees' tax deductions restricted under Norwegian Law and security deposits related to power sale on the power exchange market.

### Segment reporting

Statnett has identified its reporting segment based on the risk and rate of return that affect the operations. Based on IFRS' definition, there is, according to the company's assessment, only one segment. The business is followed up as a single geographical segment. Subsidiaries do not qualify as separate business segments subject to reporting based on IFRS criteria. The parent company and the Group are reported as a single business segment.

### Events subsequent to the balance sheet date

New information on the company's positions on the balance sheet date is incorporated into the annual financial statements. Events after the balance sheet date that do not affect the company's position on the balance sheet date, but will affect the company's position in the future, are disclosed if they are material.

There have not occurred events after the balance sheet date that would have affected the financial statements or related assessments in any significant manner.

## Note 2 Amended accounting principles and new accounting standards

### Standards entering into force this year

The Group has implemented the following standards and amendments with first-time effect in the 2018 financial statements:

#### IFRS 15 Revenue from Contracts with Customers

The standard replaces all existing standards and interpretations for revenue recognition. The core principle of IFRS 15 is that revenue is recognised to reflect the transfer of agreed products or services to customers, and in an amount that reflects the consideration the company expects to be entitled to receive for these products or services. With a few exceptions, the standard applies to all revenue-generating contracts with customers and includes a model for recognition and measurement of sales of some non-financial assets (e.g. sales of property, plant and equipment). IFRS 15 is implemented using either the full retrospective or modified method. These amendments entered into force with effect from the 2018 accounting year.

The Group has implemented the standard from 1 January 2018 applying the modified method.

The Group has identified a positive equity effect of around NOK 35 million relating to the sale of software licences at the implementation date of 1 January 2018 as a result of a change in the timing of revenue recognition. Apart from this, the Group has not identified any effects from the recognition and measurement of revenue from contracts with customers.

A substantial part of Statnett's revenues is regulated by the Norwegian Water Resources and Energy Directorate (NVE) that sets an annual revenue cap. Consequently, differences will arise between this year's actual operating revenues and the permitted revenues according to the revenue cap (higher/lower revenue). The obligation to reduce future tariffs and the opportunity to collect increased tariffs do not qualify for balance sheet recognition according to IFRS. IFRS 15 does not change this principle, and consequently, the implementation of IFRS 15 has not affected the Group's principle for recognition of operating revenues from regulated operations.

IASB is currently working on a new standard for «rate regulated assets» that will possibly entail changes to principles for revenue recognition through recognition of higher/lower revenue. However, the standard had not been approved or adopted at the time of preparation of Statnett's consolidated financial statements for 2018, and it is uncertain if and when it will enter into effect.

#### IFRS 9 Financial Instruments

With effect from 1 January 2018, the Group has applied IFRS 9 to account for financial instruments in the financial statements. The standard replaces IAS 39 Financial Instruments – Recognition and Measurement of Financial instruments, and introduces changes relating to:

1. Classification and measurement of financial instruments
2. Impairment of financial assets
3. Hedge accounting

The transitional provisions do not establish requirements for the preparation of comparative figures.

The amendments that are relevant for the Group and their effects on the annual financial statements are summarised below:

1. Classification and measurement of financial instruments

Financial assets covered by IFRS 9 are measured at amortised cost or fair value. Financial assets defined as equity instruments and derivatives are always measured at fair value, while assets defined as debt instruments are measured in accordance with the Group's business model and the asset's contractual provisions. The business model describes how the Group administers its assets to generate cash flows:

- Debt instruments that in accordance with a business model are held to collect cash flows, and where contractual provisions exclusively relate to payment of interest and principal amounts, are measured at amortised cost.
- Debt instruments that in accordance with a business model are held both to collect cash flows and for re-sale, where the contractual provisions exclusively relate to the payment of interest and principal amounts, are measured at fair value through other comprehensive income (FVTOCI).
- All other debt instruments are measured at fair value through profit or loss (FVTPL).

IFRS 9 will not result in any material changes to the classification and measurement of the Group's financial liabilities.



The table below shows how financial instruments are classified under IAS 39 and IFRS 9.

Assets	Classification under IAS 39	Classification under IFRS 9
Trade receivables and other current and non-current receivables	Loans and receivables	Amortised cost
Subordinated loan capital in Statnett SF's Pension Fund	Fair value through profit or loss	Fair value through profit or loss
Financial assets available for sale	Available for sale	Fair value through profit or loss
Derivatives*	Fair value through profit or loss	Fair value through profit or loss
Market-based securities	Fair value through profit or loss	Fair value through profit or loss
Cash and cash equivalents	Fair value through profit or loss	Fair value through profit or loss
Current and non-current interest-bearing liabilities	Other liabilities	Amortised cost
Trade payables and other current and non-current interest-bearing liabilities	Other liabilities	Amortised cost

\* General rule for measurement and classification of derivatives: Derivatives relating to cash flow hedging are measured at fair value through other comprehensive income.

The Group's holdings of equity instruments were classified as assets available for sale and measured at fair value through other comprehensive income (FVTOCI) under IAS 39. On the transition to IFRS 9, the Group has elected to change the valuation principle to fair value through profit or loss. Previously recognised changes in value recognised through other comprehensive income of NOK 1 million have been reclassified through profit or loss.

Financial instruments classified as Loans and receivables and Other liabilities under IAS 39 were measured at amortised cost and will continue to be so under IFRS 9.

## 2. Impairment of financial assets

The rules for impairment of financial assets have changed from an incurred loss model under IAS 39 to an expected loss model under IFRS 9. The impairment requirements are intended to ensure that expected losses are recognised over the lifetime of all financial instruments where there has been a significant increase in credit risk since initial recognition. The following financial assets in the Group are affected by the amendments:

- Trade receivables and other current and non-current receivables measured at amortised cost
- Receivables relating to leases
- Financial guarantee contracts

The standard introduces a simplified method for trade receivables and contractual assets maturing within one year. The simplified method requires a loss provision to be recognised that reflects the expected losses over the asset's lifetime. The method will not have a material impact on the Group, since impairments of receivables have historically been of a limited scope and the nature of the trade receivables is such that loss risk is not expected to increase in future.

The amended loss provision rules will also not materially affect non-current receivables. Non-current receivables primarily comprise loans to subsidiaries and associates. Credit risk for loans to subsidiaries and associates is deemed to be low due to the fact that assessments are based on the owners' ratings.

## 3. Hedge accounting

The more fundamental approach to hedge accounting adopted under IFRS 9 includes requirements for a closer relationship between risk management strategy and actual risk management. This may open for increased hedge relations without the need for increase in type of hedge instruments compared to the current hedging instruments used. Simplified requirements to hedge effectiveness testing, whereas retrospective, quantitative testing is replaced by a more qualitative prospective approach to testing of hedge effectiveness, can result in reduced events of breaches in hedge relations due to hedge ineffectiveness. The simplification will not result in any material changes since ineffectiveness are still measured and accounted for. The Group has identified a need to adapt internal reporting routines to satisfy the significantly heightened disclosure requirements. During the year the Group clarified its risk management strategy in order to improve

## Note 2 Changes in accounting policies and new accounting standards

the relationship with actual risk management. The Group implemented new accounting routines for hedge accounting in order to satisfy the more stringent disclosure requirements in 2018.

### Changes in standards entering into force in the future

Details of standards and interpretations that had been adopted at the time of the preparation of the consolidated financial statements, but that had not yet entered into force, are set out below. The Group intends to implement the relevant changes at the implementation date.

#### IFRS 16 Leases

IFRS 16 Leases entered into force on 1 January 2019. The standard replaces the existing IFRS for leases, IAS 17 Leases. The new standard requires the lessee to recognise all significant leases with a lease-term over one year in the balance sheet. The lessee must recognise a liability to make lease payments and an associated right-of-use asset for use of the underlying assets over the lease term. In accordance with IFRS 16, there will no longer be a distinction between finance and operating leases the lessee. For lessors, IFRS 16 essentially continues the existing principles of IAS 17.

Statnett owns virtually all of its operating assets, but has some leases relating to land, premises and fibre cables. The bulk of the leases are classified as operating leases, while some agreements for fibre cables are classified as finance leases in accordance with the current standard for leases (IAS 17).

On implementation, Statnett will use the modified retrospective method without restatement of comparative figures. The implementation effect is recognised in the balance sheet at 1 January 2019 by setting the value of the assets (right of use) equal to the value of the lease obligations. The carrying amounts and liabilities for leases classified as finance leases in accordance with IAS 17 will be continued.

Statnett will use the exemption rule that permits current leases maturing within up to 12 months and low-value agreements to be expensed directly in the income statement. The lease term is determined based on a best estimate and utilisation of options. For contracts that include other product or service deliveries, Statnett has elected to recognise "non-lease components" as an operating expense.

A discount rate based on the marginal borrowing interest rate for the relevant company, asset and the agreement's residual lease term based on annual repayments is used to calculate the estimated implementation effect for existing leases at 1 January 2019. For agreements entered into after the implementation date, the discount rate corresponding to the implicit interest rate in the lease will be used, provided this can easily be calculated and determined. Alternatively, the marginal borrowing interest rate is applied.

The implementation is estimated to result in an increase in the balance sheet of approximately NOK 230 million due to recognition of future lease obligations and associated right-of-use assets in the balance sheet. This accounts for less than 1 percent of the balance sheet. The estimated effect is the best estimate at the time of preparation of the financial statements and may change. The final implementation effect will be presented in the financial statements for the first half of 2019.

## Note 3 Accounting estimates and assumptions

The preparation of the financial statements in compliance with IFRS requires that the management prepares assessments and estimates and assumptions that affect the application of accounting principles. This affects recognised amounts for assets and liabilities on the balance sheet date, reporting of contingent assets and liabilities, as well as the reported revenues and costs for the period.

### Principle

Accounting estimates are used to determine certain amounts that have an impact on the Group's financial statements. This requires that management prepares assumptions relating to values or uncertain conditions at the time of preparation. Key accounting estimates are estimates that are important to the Group's financial performance and results, requiring management's subjective and complex assessment, often related to factors encumbered by uncertainty. Statnett assesses such estimates continuously based on previous results and experiences, consultations with experts, trends, prognoses and other methods which management deems appropriate in the individual case.

Provisions for liabilities are recognised in the income statement when the Group has an existing liability (legal or assumed) as a result of an event that has taken place and it can be demonstrated as probable (more likely than not) that a financial settlement will be made as a result of the liability, and the amount can be reliably measured. Provisions are reviewed on each balance sheet date, and the level reflects the best estimate of the liability. If there is a substantial time effect, the liability will be accounted for at the present value of future liabilities.

Significant items relating to Statnett's use of estimates:

Item	Note	Estimate/assumptions	Group Carrying value
Other intangible assets	8	Estimate of recoverable amount and remaining useful life	1,001
Property, plant and equipment	8	Estimate of recoverable amount and remaining useful life	40,948
Pension liabilities	7	Financial and demographic assumptions	313
Asset retirement obligations	24	Estimate of asset retirement costs, NVE interest rate, retirement dates and price increases in the period leading up to retirement	461

## Note 4 Operating revenue

Statnett holds a license as transmission grid owner in Norway, and revenues mainly derive from operations regulated by the Norwegian Water Resources and Energy Directorate (NVE). Operating revenue related to the license as grid owner is reported as "Regulated operating revenue".

Statnett SF also holds a license to settle the regulated power market in Norway. Statnett has a national responsibility to coordinate measurement and settlement of all power sales as well as correct settlement of input and outtake of power to ensure financial balance in the power market. Operating revenue related to this license is included in "Other operating revenue".

Other operating revenue is revenue related to other activities than regulated operations. In addition to operating revenue originating from settling the power market, other operating revenue mainly consists of revenue from consultancy assignments, construction on behalf of distribution grid owners (customer projects) and rental income.

### Principle

#### **Regulated operating revenue**

*Regulated operating revenue is recognised accordingly:*

- a) *Tariff revenue fixed element generation is recognised evenly throughout the year, based on the tariff set for the year in question.*
- b) *Tariff revenue fixed element consumption is recognised according to the customer's measured input and outtake from the grid.*
- c) *Other rental income is mainly recognised based on the customer's measured use of the grid.*
- d) *Congestion revenue is recognised based on measured input and outtake from the grid between different price areas and on each side of interconnectors.*
- e) *Income to other owners in the grids is recognised evenly throughout the year based on estimates for the other owners' permitted revenue.*

*Operating revenue consists of actual delivered energy multiplied with a tariff model set by guidelines provided by the NVE.*

#### **Permitted revenue**

*Statnett's actual regulated operating revenue is tariff revenue in the transmission and distribution grid and congestion revenue. Due to uncertainty relating to each year's actual revenues and final permitted revenue, which the NVE decides after year-end, a difference arises annually between Statnett's actual regulated operating revenue and Statnett's permitted revenue. This difference is called higher or lower revenue.*

#### **Higher/lower revenue**

*Pursuant to NVE regulations, any higher revenue, including interest, must be returned to the customers in the form of lower future tariffs, whereas lower revenue, including interest, can be recouped from the customers in the form of higher future tariffs. The obligation to reduce future tariffs and the opportunity to collect increased tariffs do not qualify for balance sheet recognition according to IFRS, and represents a contingent liability (in the event of accumulated higher revenue) or a contingent asset (in the event of accumulated lower revenue). Consequently, an annual change in these items will not be included in the IFRS income statement. Higher revenue occurs when Statnett has a higher actual regulated operating revenue than the permitted revenue set for that particular year. Lower revenue means that Statnett's actual regulated operating revenue is lower than the permitted revenue.*

*Where Statnett mainly acts as a settler for the common grid and power trading, revenues are net reported.*

#### **Other operating revenue**

*Other operating revenue from balance settlement is mainly recognised according to the customer's measured input and outtake from the grid. Revenues from customer projects are recognised in accordance with transfer of control to the customer. When Statnett performs consulting assignments, control is considered to be transferred to the customer simultaneously as the service is performed. When Statnett constructs facilities on behalf of distribution grid owners, the contractual terms dictates whether control is transferred on an on-going basis during the construction period, or when the construction is complete. Both invoiced and recognised customer project revenues are included in trade accounts and other short-term receivables.*

*When customer projects are expected to incur a loss, the total expected loss is recognised.*

## Note 4 Operating revenue

### Permitted revenue – monopoly-regulated operations

Statnett owns transmission facilities and is the transmission system operator. These are monopoly-regulated operations, implying that the NVE sets an annual limit for Statnetts revenues - a permitted revenue. The basis for Statnett's permitted revenue is the revenue cap. The revenue cap is based on expenditures, including capital expenditures, for a retrospective period of two years. Costs related to transmission losses and system services are also included. The transmission losses included in the permitted revenue are based on measured actual loss (MWh) for a retrospective period two years and this year's regulated reference price based on the elspot for the current permitted revenue year. Statnett's revenue cap is regulated to ensure that the enterprise has incentives for efficient operations. In addition to the revenue cap, Statnett's permitted revenue consists of the following: This year's property tax, transit costs and a supplement for investments. The supplement for investments shall ensure that capital expenditure is reflected in the permitted revenue for the year in which the investment is ready to be used. Furthermore, Statnett's permitted revenue is adjusted for interruptions through KILE (quality-adjusted revenue cap for energy not supplied).

### Tariff revenue

Statnett is the operator of the transmission grid and two common regional grids. As operator, Statnett is responsible for setting the annual tariffs for each common grid.

As the operator of the transmission grid and two common regional grids, Statnett is responsible for invoicing the users for the services they receive. The invoicing takes place based on a tariff model prepared in accordance with guidelines provided by the NVE. The price system consists of fixed elements and variable elements; energy elements. Fixed elements are invoiced evenly throughout the year, while the energy element is invoiced concurrently with the customers' measured input or outtake of power from the grid.



## Note 4 Operating revenue

### Regulated operating revenue

#### Specification of income by distribution grid (D Grid) and transmission grid (T Grid)

(Amounts in NOK million)

#### Parent company

Operating revenue	D Grid	T Grid	Total 2018	D Grid	T Grid	Total 2017
Tariff revenue fixed element generation	51	1,653	1,703	50	1,612	1,662
Tariff revenue fixed element consumption	116	4,915	5,031	133	3,769	3,902
Other rental income	-	151	151	-	125	125
Tariff revenue energy element	-3	1,054	1,051	3	652	655
Congestion revenue	-	961	961	-	1,030	1,030
Income from other owners in the regional and main grids	-69	-194	-263	-69	-169	-238
<b>Total regulated operating revenue</b>	<b>95</b>	<b>8,539</b>	<b>8,634</b>	<b>117</b>	<b>7,018</b>	<b>7,135</b>

#### Permitted revenue

Revenue cap without grid losses	68	6,600	6,668	127	5,534	5,661
Revenue cap, grid losses	18	1,084	1,102	14	682	696
Supplement to revenue cap	15	522	537	10	1,414	1,424
<b>Total permitted revenue</b>	<b>101</b>	<b>8,206</b>	<b>8,307</b>	<b>151</b>	<b>7,630</b>	<b>7,781</b>

In 2018, Statnett had a higher revenue of NOK 362 million (lower NOK 646 million in 2017). This adjustment between Regulated operating revenues and Permitted revenue has been reported as part of Underlying profit and loss.

#### This year's changed balance for higher/lower revenue (-/+)

	D Grid	T Grid	Total 2018	D Grid	T Grid	Total 2017
This year's higher/lower revenue (-/+), not recognized	5	-333	-328	35	611	646
This year's provision for interest higher/lower revenue (-/+), not recognised	1	1	2	-	-	-
Higher/lower revenue adjustment (-/+), not recognised	-	-36	-36	-	-	-
<b>This year's changed balance for higher/lower revenue (-/+)</b>	<b>6</b>	<b>-368</b>	<b>-362</b>	<b>35</b>	<b>611</b>	<b>646</b>
Balance higher/lower revenue (-/+), incl. interest as at 1 Jan.	48	255	303	13	-356	-343
Changed balance for higher/lower revenue (-/+), incl. Interest	6	-368	-362	35	611	646
<b>Balance higher/lower revenue (-/+), incl. interest as at 31 Dec.</b>	<b>54</b>	<b>-113</b>	<b>-59</b>	<b>48</b>	<b>255</b>	<b>303</b>

## Note 4 Operating revenue

### Group

Operating revenue	D Grid	T Grid	Total 2018	D Grid	T Grid	Total 2017
Tariff revenue fixed element generation	51	1,653	1,703	50	1,612	1,662
Tariff revenue fixed element consumption	116	4,915	5,031	133	3,769	3,901
Other rental income	-	151	151	-	125	125
Tariff revenue energy element	-3	1,054	1,051	3	652	655
Congestion revenue	-	961	961	-	1,030	1,030
Income from other owners in the regional and main grids	-69	-176	-245	-69	-202	-271
<b>Total regulated operating revenue</b>	<b>95</b>	<b>8,555</b>	<b>8,651</b>	<b>117</b>	<b>6,986</b>	<b>7,102</b>

### Permitted revenue

Revenue cap without grid losses	68	6,616	6,684	127	5,502	5,629
Revenue cap, grid losses	18	1,084	1,102	14	682	696
Supplement to revenue cap	15	522	537	10	1,414	1,424
<b>Total permitted revenue</b>	<b>101</b>	<b>8,222</b>	<b>8,323</b>	<b>151</b>	<b>7,598</b>	<b>7,749</b>

In 2018, Statnett had a higher revenue of NOK 362 million (lower NOK 646 million in 2017). This adjustment between Regulated operating revenues and Permitted revenue, has been reported as part of Underlying profit and loss.

### This year's changed balance for higher/lower revenue (-/+)

	D Grid	T Grid	Total 2018	D Grid	T Grid	Total 2017
This year's higher/lower revenue (-/+), not recognized	5	-333	-328	35	611	646
This year's provision for interest higher/lower revenue (-/+), not recognised	1	1	2	-	-	-
Higher/lower revenue adjustment (-/+), not recognised	-	-36	-36	-	-	-
<b>This year's changed balance for higher/lower revenue (-/+)</b>	<b>6</b>	<b>-368</b>	<b>-362</b>	<b>35</b>	<b>611</b>	<b>646</b>
Balance higher/lower revenue (-/+), incl. interest as at 1 Jan.	48	255	303	13	-356	-343
Changed balance for higher/lower revenue (-/+), incl. Interest	6	-368	-362	35	611	646
<b>Balance higher/lower revenue (-/+), incl. interest as at 31 Dec.</b>	<b>54</b>	<b>-113</b>	<b>-59</b>	<b>48</b>	<b>255</b>	<b>303</b>

## Note 4 Operating revenue

### Operating profit within and outside grid operations

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
1,167	2,999	Operating profit within grid operations	3,004	1,126
57	85	Operating profit outside grid operations	116	186
<b>1,224</b>	<b>3,084</b>	<b>Total operating profit</b>	<b>3,120</b>	<b>1,312</b>

### Basis for return on invested grid capital

The regulatory asset base is defined as the average of the incoming and outgoing balance for invested grid capital, plus one percent of net working capital. The invested grid capital is defined as the initial historical acquisition cost. The share of common fixed assets is included.

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
34,678	38,404		38,404	34,678

### Return on invested grid capital

Return is defined as the operating profit/loss compared to the regulatory asset base. The reported operating profit/loss is given as the annual permitted revenue from own grid less costs of own grid. The difference is explained by the current year's change in higher/lower revenue not recognised under IFRS.

Parent company			Group	
2017	2018	(Return in percentage)	2018	2017
5%	7%		7%	5%

### Balance settlement (purchases and sales of power)

Revenues from balance settlement are included in other operating revenues. Operations related to balance settlement are financed by fees. The fees are also intended to cover a defined part of costs related to system services.

In 2018, income for the balance settlement responsibility amounted to 129 NOK million (NOK 76 million in 2017), of which NOK 56 million in 2018 (NOK 38 million in 2017) were fee revenues.

## Note 5 System services and transmission losses

System services are costs relating to the exercise of Statnett's system responsibility as defined in the Regulations relating to the system responsibility in the power system (FoS). The frequency in the power grid must be 50Hz. Statnett, as Transmission System Operator (TSO), is responsible for ensuring that this frequency remains stable. The requirement to maintain a reserve capacity for regulating purposes imposes limitations on the producers as they are unable to generate and sell the full generator capacity. The reserve capacity is distinguished between primary-, secondary- and tertiary reserves.

Statnett buys transmission losses (volume) from Nord Pool AS at spot price (market price) for the hour the transmission loss applies. The main grid transmission loss result is distributed between the grid owners in accordance with their proportionate shareholding in the main grid. 2 percent of the value of the facilities are owned by other companies than Statnett SF.

### Principle

*Costs for system services and transmission losses are recognised when acquired.*

System services can be divided into the following categories:

### Primary reserves

The primary regulation is automatic and is activated immediately if any changes occur in the power grid frequency. This takes place by using a pre-agreed reserve capacity. The requirement to maintain a reserve capacity for regulating purposes imposes limitations on the producers as they are unable to generate and sell the full generator capacity. Primary reserves are costs Statnett incurs by buying reserve capacity from the producers. The extent of primary reserves is determined by agreements at Nordic level and the reserves are acquired through market solutions.

### Secondary reserves

Automatic secondary reserves are activated to release the primary reserves so that they in turn can quickly handle any new faults or imbalances. Automatic secondary reserves function by the TSO sending a signal to a market player/power plant, which will then change the plant's generation. Secondary reserves are also referred to as Automatic frequency regulating reserve (aFRR), and in the Nordic countries they are mainly used to handle frequency deviations. The extent of secondary reserves is determined by agreements at Nordic level, and the reserves are acquired through market solutions.

### Tertiary reserves

In Norway, there is an options market for regulating power. This is used to ensure that we have sufficient regulating resources available in the Norwegian section of the regulating power market, also during periods of demand for increased output, such as in the winter months. In the winter, the TSO sets up a market where they purchase a guarantee ensuring that market members submit bids for the regulating power lists for the subsequent week. The guarantees can apply for both consumption and production.

### Transit costs

Transit costs are compensation for the use of grids abroad. The power system in Europe is connected through transmission lines/cables crossing international borders.

### Special adjustments

In some cases, there are restrictions in the transmission capacity (congestion revenues) which may entail that the bids in the regulating power market cannot be utilised in the "correct" price order. Activated regulations that are not in price order are categorised as special adjustments and are compensated for by the associated price of the bid without this affecting the stipulation of the regulating power price. Thus, Statnett will incur a cost equal to the difference between the price of activated bids used for special adjustments and the current hourly price mainly aimed at the regulating power market multiplied by the especially adjusted volume.

## Note 5 System services and transmission losses

### Specification of system services

Parent company		<i>(Amounts in NOK million)</i>	Group	
2017	2018		2018	2017
10	8	Net regulating and peak power	8	10
87	114	Primary reserves	114	87
13	32	Secondary reserves	32	13
66	106	Tertiary reserves	106	66
110	100	Transit costs	100	110
110	121	Special adjustments	121	110
39	60	Other system services	60	39
<b>435</b>	<b>541</b>	<b>Total system services</b>	<b>541</b>	<b>435</b>

### Specification of transmission losses

Parent company			Group	
2017	2018		2018	2017
2,362	2,444	Volume (GWh)	2,444	2,362
272	422	Price (NOK/MWh)	422	272
641	1,031	Transmission losses	1,031	641
1	2	Transmission losses other grid owners	2	1
<b>642</b>	<b>1,033</b>	<b>Total transmission losses</b>	<b>1,033</b>	<b>642</b>



## Note 6 Salaries and personnel costs

Salaries and personnel cost are the total cost relating to remuneration of personnel by the Group and Group officers. These expenses concern only the Group's own employees, not contract manpower. Ordinary salaries can be both fixed pay and hourly wages and are paid periodically. Holiday pay is earned on the basis of ordinary pay and is normally paid in the holiday month the following year. The employer's national insurance contribution is normally paid in arrears every other month.

### Principle

Salaries are expensed when they are earned. Ordinary salaries are earned on a regular basis. Holiday pay is earned on the basis of the ordinary pay. The employer's national insurance contribution is calculated and expensed for all pay-related cost. Pensions are earned in accordance with a separate set of rules (see note 7). Compensation to the Board of Directors is earned on an ongoing basis in accordance with special agreements approved by the General Meeting. The salaries and personnel cost are reduced with the value of capitalised own investments.

### Specification of salaries and personnel costs

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
1,161	1,213	Salaries	1,240	1,190
205	194	Employer's national insurance contributions (NICs)	198	210
197	220	Pension costs (Note 7)	226	201
129	132	Other benefits	132	130
<b>1,692</b>	<b>1,759</b>	<b>Total salaries and personnel costs</b>	<b>1,796</b>	<b>1,731</b>
-730	-774	Of which own investment projects	-823	-780
<b>962</b>	<b>985</b>	<b>Net salaries and personnel costs</b>	<b>973</b>	<b>951</b>
1,367	1,414	Number of full-time equivalents	1,454	1,404

### Loan to employees

Employees had loans in the company totalling NOK 1 million as at 31 December 2018. The loans are repaid by salary deductions over a period of up to two years. The loans are interest-free for the employee. The interest gain of loans exceeding 3/5 of the basic amount is taxed in relation to the current standard interest rate set by the authorities.

## Note 7 Pensions

The parent company and subsidiaries have pension schemes that gives the employees future pension benefits in the form of defined benefit and defined contribution plans. All defined benefit plans are closed, and the defined contribution plans are the Group's main pension schemes for all new employees. The Group's pension plans meet the requirements in the Norwegian Mandatory Occupational Pension Act. For the defined contribution plans, the Group pays an agreed annual contribution to the employee's pension plan, but any risk for the future pension is borne by the employee. The future pension will be determined by the amount of the regular contributions and the return on the pension savings. In a defined benefit plan, the Group is responsible for paying an agreed pension to the employee based on his or her final Pay. The cost for the accounting period equals the employee's increase of entitlement of the agreed future pension in the financial year.

### Principle

#### **Contribution pension plan**

*In the defined contribution pension plan the company is responsible for making an agreed contribution to the employee's pension assets. The future pension will be determined by the amount of the contributions and the return on the pension savings. Once the contributions have been paid, there are no further payment obligations attached to the defined contribution pension, and there is no liability to record in the statement of the balance sheet. The pension costs related to the defined contribution plans will be equal to the contributions to the employees' pension savings for the reporting period.*

#### **Defined benefit pension plans**

*The defined benefit pension plans are based on a promise by the company to the employees that they will receive a certain level of pension upon retirement, normally defined as a percentage of final pay. The company is responsible for the amount of the future pension benefit, and the financial value of this obligation must be reported in the income statement and the balance sheet statement.*

*The accrued liability is calculated on a straight-line basis, and is measured as the present value of the estimated future pension payments that are vested on the statement of financial position date. The capitalised net liability is the sum of the accrued pension liability minus the fair value of associated pension fund assets.*

*Changes in the liability for defined benefit plans due to changes in pension plans are reported in their entirety in the income statement in the case of changes that give a rise to an immediate paid-up policy entitlement. Other variances from estimates are recognised in equity through other comprehensive income in the period in which they arise. The discount effect of the pension liability and expected return on assets are presented net under "Salaries and personnel cost" as this is assumed to give the best information regarding the Group's pension cost.*

### More information about the pension plans

#### **Contribution pension plan**

Employees in the Group are mainly covered by pension plans classified as defined contribution plans. The defined contribution plan has a contribution level based on the maximum level in accordance with the "Defined pension contribution Act (Lov om innskuddspensjon)". Defined contribution plans also comprise pension plans that are common to several companies and where the pension premium is independent of the demographic profile in the individual companies (multi-employer plans).

#### **Defined benefit pension plans**

The Group has one closed defined benefit plan that is classified as a funded contribution plan in addition to two closed defined benefit plans that are unfunded. For employees at a certain age at the time of transition to a contribution plan, a compensation plan was established. This plan is an unfunded defined benefit plan, with a yearly increase in compensation until 67 years of age or earlier if the employee resigns.

The net pension liabilities in the balance sheet statement consist of defined benefit pension plan in Statnett SF Pensjonskasse eligible for older employees when the Contribution pension plan was established. The defined pension benefits are based on the number of service years and final wage at retirement age. The full retirement is 70 percent of pensionable income less calculated disbursements under the Norwegian National Insurance Scheme. The pensionable income is limited upward to 12 times the basic amount under the National Insurance Scheme. The full contribution period is 30 years, and the normal retirement age is 67.

## Note 7 Pensions

The Group management has supplemental pension agreements. For more information on pension arrangements for each member of Group management, see Note 23 Remuneration/benefits to the Group management.

The Group is a member of the private contractual early retirement scheme (AFP plan) The AFP plan entails that employees will receive a life-long supplement to the national insurance retirement pension. The pension can be drawn from age 62, also if an employee decides to stay employed. The AFP plan is a defined-benefit multi-employer plan, organised through a general office and financed through premiums stipulated as a percentage of the salaries. The premium level has increased every year since the plan was established, and thus the premiums are expected to increase in the years to come.

The net pension liabilities in the balance sheet statement are determined after adjustment for deferred recognition in other comprehensive income of the effect of changes in estimates. The net pension liabilities are reported as provisions for liabilities. When a plan has funds exceeding pension liabilities, net pension assets are reported as fixed assets.

Accrued pension rights are mainly secured through pension schemes in Statnett SF's Pensjonskasse. In addition, the parent company has early retirement pension obligations that are funded through operations.

Employees who leave the Group before retirement age, receive a paid-up policy. These paid-up policies are managed by Statnett SFs Pensjonskasse and Storebrand Livsforsikring AS. From the date the paid-up policy is issued, Statnett is exempt from any obligation to employees to which the paid-up policies apply. Assets and liabilities are measured at the date of issue of the paid-up policies, and are separated from pension assets and liabilities.

An external actuary calculates the pension liabilities. When calculating the pension liabilities, the National Insurance contributions that the company is required to pay as part of the payment of direct pensions or the payment of premiums for fund-based schemes are taken into account.

### Assumptions defined benefit pension plans

The Group uses Norsk Regnskapsstiftelse's assumptions as a basis for making the assessment as to whether these are applicable for the Group.

The discount rate is based on the corporate covered bonds (OMF). Statnett considers the OMF market to represent a sufficiently deep market to be used in the calculation of the discount rate.

### Pension costs

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
89	94	Defined benefit plan	96	91
2	9	Interest cost -(income)	9	2
-	-	Effect of plan changes	-	-
89	98	Defined contribution plan	101	91
17	19	Defined multi-employer plan	20	17
197	220	<b>Pension costs</b>	226	201
25	25	Employer's contributions	25	26
<b>222</b>	<b>245</b>	<b>Total pension costs, incl. employer's contribution</b>	<b>250</b>	<b>226</b>
<b>293</b>	<b>-79</b>	<b>Changes in estimate variances in other comprehensive income</b>	<b>-79</b>	<b>293</b>

## Note 7 Pensions

### Net estimated pension liabilities

Parent company			Group	
31.12.2017	31.12.2018	(Amounts in NOK million)	31.12.2018	31.12.2017
2,213	2,270	Estimated pension liabilities	2,286	2,229
-1,861	-1,959	Pension assets	-1,973	-1,875
<b>352</b>	<b>311</b>	<b>Net pension liabilities</b>	<b>313</b>	<b>354</b>
-	-	Net pension assets - funded plan	-	-
112	85	Net pension liabilities - funded plan	85	113
240	226	Unfunded pension	228	241
<b>352</b>	<b>311</b>	<b>Net pension liabilities</b>	<b>313</b>	<b>354</b>

### Funded and unfunded pension liabilities

Parent company			Group	
31.12.2017	31.12.2018	(Amounts in NOK million)	31.12.2018	31.12.2017
<b>Change in gross pension liability</b>				
1,918	2,212	Gross pension liability at 1 Jan.	2,228	1,934
101	110	Present value of the year's pension contributions	111	103
-56	-	Effect of plan changes	-	-56
-	-	Service costs plan changes (short-term debt)	-	-
49	50	Interest costs of pension liability	51	51
263	-48	Actuarial gains and losses	-46	259
-20	-9	Employer's contribution on premium paid	-9	-20
-43	-45	Disbursed pension/paid-up policies	-46	-43
<b>2,212</b>	<b>2,270</b>	<b>Gross pension liabilities as at 31 Dec.</b>	<b>2,289</b>	<b>2,228</b>

### Funded and unfunded pension liabilities

Parent company			Group	
31.12.2017	31.12.2018	(Amounts in NOK million)	31.12.2018	31.12.2017
<b>Change in gross pension assets</b>				
1,798	1,860	Fair value of pension assets at 1 Jan.	1,873	1,812
47	44	Interest income on pension assets	44	48
-57	-	Effect of plan changes	-1	-57
-31	31	Actuarial gains and losses	29	-33
160	78	Premium paid	80	161
-58	-53	Pension/paid-up policies disbursed	-54	-59
<b>1,859</b>	<b>1,960</b>	<b>Fair value of pension assets as at 31 Dec.</b>	<b>1,971</b>	<b>1,872</b>
<b>353</b>	<b>311</b>	<b>Net pension liabilities as at 31 Dec.</b>	<b>313</b>	<b>354</b>

## Note 7 Pensions

### Changes in estimate variances for the year

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
104	-119	Change in discount rate	-119	104
31	-32	Interest income on pension assets	-32	31
23	20	Salaries growth	20	23
79	79	Pension adjustments	79	79
-	-	Mortality	-	-
56	-27	Effect of experience adjustment	-27	56
<b>293</b>	<b>-79</b>	<b>Total changes in estimate variances for the year</b>	<b>-79</b>	<b>293</b>

### Financial/actuarial assumptions, parent company and Group

	2018	2017
Discount rate corporate covered bonds (OMF)	2.60%	2.30%
Interest income on pension assets	2.60%	2.30%
Expected wage adjustments	2.50%	2.25%
Expected pension adjustments	1.75%	1.50%
Expected adjustment of basic amount (G) under NIS	2.50%	2.25%
Mortality table *	K2013FT	K2013FT

\* The mortality estimate is based on mortality table K2013FT.

### Sensitivity analysis

The figures below give an estimate of the potential effect of a change in certain assumptions for defined-benefit pension schemes. The following estimates and estimated pension costs for 2018 are based on the facts and circumstances at 31 December 2018. Actual results may differ significantly from these estimates.

Sensitivities decrease (increase) benefit obligation as of year-end:

(Amounts in NOK million, except percent)

Parent company			Group	
182	-8.0 %	Discount rate increase 0.5 percent	182	-8.0 %
-46	2.0 %	Expected salary increase 0.5 percent	-46	2.0 %
-169	7.5 %	Expected pension increase 0.5 percent	-169	7.5 %

### Percentual breakdown of pension assets into investment categories, parent company and Group as at 31 December

	2018	2017
Property	10%	9%
Held-to-maturity bonds	8%	8%
Nordic bonds	23%	23%
Alternative bonds	2%	2%
Foreign bonds	18%	18%
Bank deposits	2%	2%
Nordic money market	5%	5%
Emerging markets shares	6%	7%
Foreign shares	20%	20%
Norwegian shares	6%	6%
<b>Total</b>	<b>100%</b>	<b>100%</b>



## Note 7 Pensions

### Members of the defined-benefit plan

Parent company			Group	
2017	2018		2018	2017
814	809	Members of the pension fund	819	824
430	453	Of which pensioners	458	435
<b>384</b>	<b>356</b>	<b>No. of active pension scheme members</b>	<b>361</b>	<b>389</b>

### Pension disbursement flow Statnett SF

The average weighted maturity for pension liabilities, related to the main scheme in Statnett SF, is estimated at 15 years based on the pension assumptions at 31 Dec. 2018. Statnett SF' Pensjonskasse does not compare the pension assets against the date of payments for the pension liabilities at 31 Dec. 2018.

## Note 8 Tangible and intangible assets

Tangible assets comprise power lines, stationary equipment, buildings, land, ICT equipment etc. that are necessary for the Group's operations. Intangible assets are mainly related to proprietary software and are classified as "ICT equipment" in the table below. Goodwill totals a small amount and is classified as «Other».

### Principle

#### **Tangible assets**

*Tangible assets are carried at cost less accumulated depreciation and write-downs. The depreciation reduces the carrying value of tangible assets, excluding building lots, to the estimated residual value at the end of the expected useful life. Tangible assets are depreciated in a straight line from the time the assets were ready to be used. This applies correspondingly to tangible assets acquired from other grid owners. Significant components of tangible asset are assessed separately for depreciation purposes. The significance is assessed based on the acquisition cost of the components in relation to the acquisition cost of the whole asset.*

*Cost estimates for removal of tangible assets are recognised as part of the acquisition cost at the time the Group is considered to have a legal or actual removal obligation. The estimate is assessed at the present value of the expenditure expected to incur at a future point in time. The annual interest cost that incurs as a result of the liability being one year closer to settlement, is recognised as a cost. The estimate may be amended later as a result of a change in the estimate of the size of the expense, change in the expected schedule and/or change in the discount rate. The amendments are recognised in the balance sheet as an increase or reduction of the carrying value of the asset. If a potential reduction is higher than the carrying value of the asset, the excess amount is recorded in the income statement. If there is an increase in the carrying value, the Group will assess whether this is a depreciation indicator for the portfolio of assets.*

*Gains or losses on the divestment or scrapping of tangible assets are calculated as the difference between the sales proceeds and the assets' carrying value. Gains/losses on divestment are recorded in the income statement as other operating revenues/expenses. Losses on scrapping are recognised in the income statement as depreciation, amortisation and write-downs.*

*Lump sum payments in connection with the acquisition of land etc. are included in the acquisition cost of the asset. Current payments are minor amounts and are recognised in the income statement in the year in which the payment is disbursed.*

*Maintenance expenses are recognised in the income statement when they incur. No provisions are made for the periodic maintenance of the grid (transformer stations or power lines/cables). Even though maintenance is periodic for the individual transformer station or power line, it is not considered periodic for the entire grid as the grid as a whole is regarded as a single cash-generating unit.*

*If the tangible asset is replaced, any residual financial value will be recorded in the income statement as a loss on scrapping. Expenses that significantly extend the life of the fixed asset and/or increase its capacity are capitalised.*

#### **Intangible assets**

*Intangible assets are measured at acquisition cost on initial recognition. In later periods, intangible assets are recognised at acquisition cost less accumulated amortisations and write-downs. Intangible assets with a fixed useful life are amortised over the asset's useful life which is assessed at least once a year. Intangible assets are amortised in a straight line as this best reflects the use of the asset.*

#### **Research and development**

*Research expenses are recognised on a current basis. Research is an internal process that does not give rise to independent intangible assets that generate future economic benefits. Capitalized development expenses are depreciated in a straight line over the estimated useful life of the asset.*

*Expenses related to development activities are capitalised in the balance sheet if the product or process is technically and commercially feasible and the Group has adequate resources to complete the development. Expenses capitalised in the balance sheet include material expenses, direct wage costs and a percentage of directly attributable overhead expenses. Capitalised development expenses are recorded at acquisition cost, less any accumulated depreciation and write-downs.*

#### **Goodwill**

*Goodwill is not amortised, but is tested for impairment annually. Write-downs are conducted if the carrying value is lower than the recoverable amount. The recoverable amount is the higher of the net sales value and the value in use. When assessing impairment, goodwill is allocated to fixed assets at the lowest identifiable level of cash-generating units. Write-downs of goodwill cannot be reversed in subsequent periods.*

## Note 8 Tangible and intangible assets

### **Depreciation**

*Depreciation is based on the management's assessment of the useful life of property, plant and equipment. The assessments may change owing, for example, to technological developments and historical experience. This may entail changes in the estimated useful life of the asset and thus the depreciation. It is difficult to predict technological developments, and the management's view of how quickly changes will come, may change over time. If expectations change significantly, the depreciation will be adjusted with effect for future periods. The estimated useful life, depreciation method and residual value are assessed at least once a year. For most assets, the residual value is estimated at zero at the end of the useful life.*

### **Write-downs**

*On each reporting date, the Group considers whether there are any indications of impairment in value for tangible and intangible assets. If there are any indications of impairment in value, the Group will estimate the recoverable amount for the assets and evaluate potential write-down. Estimates of recoverable amounts are in part based on management assumptions, including estimation of the asset's income-generating capacity and probability of gaining licenses for construction projects. Changes in circumstances and in the management's assumptions can lead to write-downs. Tangible assets in the parent company are considered as one cash-generating unit and are assessed combined since they have one combined revenue cap. For the Group's other companies, each part of tangible and intangible assets are assessed individually.*

## Note 8 Tangible and intangible assets

### Parent company

(Amounts in NOK million)

	Power lines	Land and subsea cables	Main circuit equipment	Control and auxiliary equipment	ICT equipment	Buildings and land	Other	Total
<b>Acquisition cost at 1 Jan. 17</b>	<b>15,700</b>	<b>4,787</b>	<b>10,894</b>	<b>3,293</b>	<b>3,124</b>	<b>8,045</b>	<b>2,507</b>	<b>48,350</b>
Additions, acquisition cost	1,316	382	622	281	483	967	254	4,305
Disposals, acquisition cost	-9	-3	-138	-103	-141	-13	-11	-418
<b>Acquisition cost at 1 Jan. 18</b>	<b>17,008</b>	<b>5,166</b>	<b>11,377</b>	<b>3,471</b>	<b>3,466</b>	<b>8,999</b>	<b>2,750</b>	<b>52,237</b>
Additions, acquisition cost	1,528	1,164	1,481	453	865	1,879	46	7,417
Disposals, acquisition cost	-7	-20	-50	-16	-189	-23	-11	-317
Reclassification to Assets held for sale	-	-	-	-	-	-	-730	-730
<b>Acquisition cost at 31 Dec. 18</b>	<b>18,529</b>	<b>6,310</b>	<b>12,808</b>	<b>3,908</b>	<b>4,142</b>	<b>10,855</b>	<b>2,054</b>	<b>58,606</b>
<b>Accumulated depreciation and amortisation at 1 Jan. 17</b>	<b>4,974</b>	<b>1,218</b>	<b>3,160</b>	<b>1,246</b>	<b>1,422</b>	<b>1,288</b>	<b>1,198</b>	<b>14,506</b>
Depreciation and amortisation	337	126	356	193	448	232	666	2,358
Disposals, depreciation and amortisation	-9	-	-84	-80	-134	-5	-8	-319
<b>Accumulated depreciation and amortisation at 1 Jan. 18</b>	<b>5,303</b>	<b>1,343</b>	<b>3,431</b>	<b>1,358</b>	<b>1,736</b>	<b>1,515</b>	<b>1,857</b>	<b>16,543</b>
Depreciation and amortisation	329	151	339	198	528	269	98	1,912
Disposals, depreciation and amortisation	-132	-91	-20	-12	-176	-4	-62	-498
Reclassification to Assets held for sale	-	-	-	-	-	-	-437	-437
<b>Accumulated depreciation and amortisation at 31 Dec. 18</b>	<b>5,499</b>	<b>1,403</b>	<b>3,749</b>	<b>1,543</b>	<b>2,088</b>	<b>1,781</b>	<b>1,456</b>	<b>17,520</b>
<b>Carrying value at 31 Dec. 17</b>	<b>11,705</b>	<b>3,823</b>	<b>7,947</b>	<b>2,112</b>	<b>1,730</b>	<b>7,484</b>	<b>894</b>	<b>35,695</b>
<b>Carrying value at 31 Dec. 18</b>	<b>13,030</b>	<b>4,907</b>	<b>9,059</b>	<b>2,364</b>	<b>2,054</b>	<b>9,074</b>	<b>599</b>	<b>41,087</b>
<b>Of which intangible fixed assets</b>								
<b>Carrying value at 31 Dec. 17</b>	-	-	-	-	360	-	-	<b>360</b>
<b>Carrying value at 31 Dec. 18</b>	-	-	-	-	442	-	9	<b>451</b>
<b>Of which financial lease</b>								
<b>Carrying value at 31 Dec. 17</b>	-	-	-	-	149	-	-	<b>149</b>
<b>Carrying value at 31 Dec. 18</b>	-	-	-	-	168	-	-	<b>168</b>
<b>Of which asset retirement obligations</b>								
<b>Carrying value at 31 Dec. 17</b>	58	11	83	-	-	-	-	<b>152</b>
<b>Carrying value at 31 Dec. 18</b>	56	-	113	-	-	-	-	<b>170</b>
<b>Acquisition cost for tangible fixed assets fully depreciated, but still in use</b>	<b>257</b>	<b>329</b>	<b>541</b>	<b>501</b>	<b>826</b>	<b>370</b>	<b>627</b>	<b>3,450</b>
<b>Depreciation rate (straight-line)</b>	<b>2%</b>	<b>2-7%</b>	<b>2-5%</b>	<b>3-13%</b>	<b>5-33%</b>	<b>0-7%</b>	<b>0-33%</b>	

## Note 8 Tangible and intangible assets

### Group

(Amounts in NOK million)

	Power lines	Land and subsea cables	Main circuit equipment	Control and auxiliary equipment	ICT equipment	Buildings and land	Other	Total
<b>Acquisition cost at 1 Jan. 17</b>	<b>15,731</b>	<b>4,787</b>	<b>10,956</b>	<b>3,304</b>	<b>3,134</b>	<b>8,112</b>	<b>2,946</b>	<b>48,970</b>
Additions, acquisition cost	1,316	382	622	281	539	967	141	4,248
Disposals, acquisition cost	-40	-3	-201	-115	-150	-39	-13	-561
<b>Acquisition cost at 1 Jan. 18</b>	<b>17,008</b>	<b>5,166</b>	<b>11,376</b>	<b>3,471</b>	<b>3,523</b>	<b>9,039</b>	<b>3,085</b>	<b>52,668</b>
Additions, acquisition cost	1,528	1,164	1,481	453	865	1,879	619	7,989
Disposals, acquisition cost	-7	-20	-50	-16	-189	-23	-11	-317
Reclassification to Assets held for sale	-	-	-	-	-	-	-730	-730
<b>Acquisition cost at 31 Dec. 18</b>	<b>18,529</b>	<b>6,310</b>	<b>12,807</b>	<b>3,908</b>	<b>4,199</b>	<b>10,895</b>	<b>2,962</b>	<b>59,610</b>
<b>Accumulated depreciation and amortisation at 1 Jan. 17</b>	<b>4,999</b>	<b>1,218</b>	<b>3,173</b>	<b>1,249</b>	<b>1,426</b>	<b>1,300</b>	<b>1,323</b>	<b>14,688</b>
Depreciation and amortisation	337	126	355	193	448	234	580	2,273
Disposals, depreciation and amortisation	-34	-	-97	-83	-138	-8	-8	-368
<b>Accumulated depreciation and amortisation at 1 Jan. 18</b>	<b>5,302</b>	<b>1,344</b>	<b>3,431</b>	<b>1,359</b>	<b>1,736</b>	<b>1,526</b>	<b>1,895</b>	<b>16,593</b>
Depreciation and amortisation	329	151	339	198	534	271	121	1,941
Disposals, depreciation and amortisation	-132	-91	-20	-12	-176	-4	-53	-489
Reclassification to Assets held for sale	-	-	-	-	-	-	-437	-437
<b>Accumulated depreciation and amortisation at 31 Dec. 18</b>	<b>5,499</b>	<b>1,403</b>	<b>3,749</b>	<b>1,544</b>	<b>2,094</b>	<b>1,792</b>	<b>1,527</b>	<b>17,608</b>
<b>Carrying value at 31 Dec. 17</b>	<b>11,705</b>	<b>3,823</b>	<b>7,947</b>	<b>2,112</b>	<b>1,787</b>	<b>7,514</b>	<b>1,179</b>	<b>36,067</b>
<b>Carrying value at 31 Dec. 18</b>	<b>13,030</b>	<b>4,907</b>	<b>9,059</b>	<b>2,364</b>	<b>2,105</b>	<b>9,102</b>	<b>1,433</b>	<b>42,002</b>
<b>Of which intangible fixed assets</b>								
<b>Carrying value at 31 Dec. 17</b>	-	-	-	-	355	-	58	<b>413</b>
<b>Carrying value at 31 Dec. 18</b>	-	-	-	-	992	-	62	<b>1,054</b>
<b>Of which financial lease</b>								
<b>Carrying value at 31 Dec. 17</b>	-	-	-	-	155	-	-	<b>155</b>
<b>Carrying value at 31 Dec. 18</b>	-	-	-	-	168	-	-	<b>168</b>
<b>Of which asset retirement obligations</b>								
<b>Carrying value at 31 Dec. 17</b>	58	11	83	-	-	-	-	<b>152</b>
<b>Carrying value at 31 Dec. 18</b>	56	-	113	-	-	-	-	<b>170</b>
<b>Acquisition cost for tangible fixed assets fully depreciated, but still in use</b>	<b>257</b>	<b>329</b>	<b>541</b>	<b>501</b>	<b>826</b>	<b>370</b>	<b>548</b>	<b>3,371</b>
<b>Depreciation rate (straight-line)</b>	<b>2%</b>	<b>2-7%</b>	<b>2-5%</b>	<b>3-13%</b>	<b>5-33%</b>	<b>0-7%</b>	<b>0-33%</b>	

Financial lease is paid for in full in advance. This means that there are no future lease obligations related to the financial lease agreements.



## Note 9 Plants under construction

Statnett is currently undertaking substantial investments. For the most part, this is done through projects that are recorded in the balance sheet as plants under construction until the assets are ready for use.

### Principle

*Plants under construction are recognised in the balance sheet at acquisition cost less any accumulated losses from impairments. Plants under construction are not depreciated.*

*Development projects starts with a feasibility and alternative study. Project costs are capitalized when the conclusion from the study is available, and the main development concept has been selected. At this point, a licence has not been granted and no final investment decision has been made. Statnett's experience is that once a main concept has been selected for development, it is highly probable that the project will be fulfilled.*

*The Group is currently constructing two subsea power cables, NordLink to Germany and North Sea Link to England. For both cables, the total cost is shared equally with the foreign partner. The incurred cost of the cable is measured according to progress of the Group's share of the cable, and not according to cable seen as one.*

*Ongoing assessments are made of whether licensing conditions or other causes necessitate a full or partial write-down of project expenses incurred. Write-downs are reversed when there is no longer any basis for the write-down.*

*Construction loan costs related to the company's own plants under construction are capitalised in the balance sheet. The interest is calculated based on the average borrowing interest rate and scope of the investment, as the funding is not identified specifically for individual projects.*

### Specification this year's change of plants under construction

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
6,403	8,598	Acquisition cost at 1 January	13,472	8,432
6,091	7,768	Additions	10,398	8,923
148	198	Capitalised construction interest	313	216
-3,914	-5,914	Transferred to tangible and other intangible fixed assets	-6,487	-3,969
-130	-39	Write-offs	-39	-130
<b>8,598</b>	<b>10,612</b>	<b>Acquisition cost at 31 December</b>	<b>17,657</b>	<b>13,472</b>
-79	-76	Hedge accounting effects	-76	-79
<b>8,519</b>	<b>10,536</b>	<b>Plants under construction at 31 December</b>	<b>17,581</b>	<b>13,393</b>

### Average capitalisation rate used to determine the loan expense that can be capitalised:

	2018	2017
	2.00%	1.92%

### Contractual obligations as at 31 December 2018

Contractual obligations as at 31 December 2018 amounts to NOK 11.2 billion. The reported obligation includes investment projects where future contractual obligations exceed NOK 50 million.

Effective from 1 January 2018, Statnett purchased the 300 kV grid for the stretch Fana-Kollsnes-Mongstad from BKK Nett AS. In connection with the transfer, the grid facilities were re-classified to transmission grid by the Norwegian Water Resources and Energy Directorate (NVE), effective from the same date as the transfer. The purchase price for the facilities was NOK 1,418 million. For the stretch Mongstad – Modalen, an agreement was signed 11 August 2017 granting BKK Nett AS the right to transfer the facilities when completed in 2019. Estimated purchase price is NOK 2.0 billion.

## Note 10 Financial income and costs

Financial income and financial costs mainly comprise interest income and interest expenses relating to the Group's financing. Other financial items not attributable to operating conditions are also included.

### Principle

*Interest income and interest expenses on loans and receivables are calculated using the effective interest method and are recognised when they are earned/accrued. Received dividends and Group contributions are recognised as income when they have been declared by the issuing company, which generally coincides with the payment date.*

*Impairments and impairment reversals of shares in subsidiaries and gains/losses on the sale of shares in subsidiaries are presented as Net financial income from subsidiaries or as Net financial costs from subsidiaries.*

*Dividends received, shares of profits/losses and impairment of shares for associates are recognised net under Net financial income from associates or Net financial costs from associates.*

*Interest income, unrealised and realised changes in value of market-based securities are presented net as Net gain/loss from market-based securities.*

*Contingency provisions and costs of new borrowings are presented under Other financial costs.*

*Interest expenses relating to asset retirements are presented under Other interest costs. The interest element in the asset retirements obligations is discussed in more detail in Note 24 Other liabilities.*

*Interest expenses relating to plants under construction are recognised in the balance sheet together with the plants under construction see note 9.*

*Currency gains or losses deriving from operating assets and liabilities, and hedging of these items, are classified as Other operating costs, see note 27. Currency gains or losses relating to hedging of loans are presented net as a change in value derivatives. Other currency effects are presented net as Net currency exchange gain/loss.*

*The interest element in pension costs is recognised in pensions, see note 7.*

## Note 10 Financial income and costs

### Specification of financial income and costs

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
<b>Financial income</b>				
4	58	Group contribution and dividend from subsidiaries	-	-
16	-	Net financial income from subsidiaries	-	-
16	9	Net financial income from associates	25	19
73	120	Interest income from subsidiaries	-	-
25	15	Other interest income	19	49
7	13	Net gain/loss from market-based securities	17	-
11	-6	Change in value of derivatives	-6	11
14	9	Net currency exchange gain	5	2
11	1	Other financial income	-1	30
<b>177</b>	<b>220</b>	<b>Total financial income</b>	<b>59</b>	<b>112</b>
<b>Financial costs</b>				
-	58	Net financial costs from subsidiaries	-	-
5	4	Interest costs from subsidiaries	-	-
615	772	Other interest costs	772	615
-148	-198	Capitalised construction interest	-313	-216
36	19	Other financial costs	19	48
<b>508</b>	<b>656</b>	<b>Total financial costs</b>	<b>478</b>	<b>448</b>

## Note 11 Trade accounts and other short-term receivables

This note presents trade and other receivables relating to the Group's operating activities. Other current receivables can be either interest-bearing or non-interest-bearing.

### Principle

Trade receivables are recognised and presented at the original invoice amount (the transaction rate) at the invoicing date. Subsequently, trade and other current receivables are measured at amortised cost using the effective interest method. The interest element is ignored since it is deemed to be immaterial for the overwhelming majority of the Group's receivables.

### Impairment losses

Trade and other current receivables are assessed for potential impairment on an ongoing basis. Impairments for losses on trade receivables follow the simplified method and are measured in an amount corresponding to the expected loss over the asset's lifetime. Loss provision is recognised on a separate provision account if the loss potential is material and it is deemed highly probable that the receivable will not be redeemed. An impairment is immediately recognised for the receivable if attempts to recover the receivable do not succeed and there are objective criteria that a loss-inducing event has occurred that can be reliably measured and will affect repayment of the receivable.

For other current receivables, credit risk relating to individual assets is assessed on an ongoing basis. If there is deemed to be a significant increase in expected credit risk for the asset, a loss provision is recognised in an amount corresponding to the expected loss over the asset's lifetime.

Derivatives are measured at fair value at valuation level 2. Derivatives and the measurement hierarchy are described in more detail in note 15.

### Specification of trade accounts and other short-term receivables

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
871	731	Trade account receivables	711	865
78	118	Derivatives	118	78
4	81	Derivatives non-interest bearing	81	4
2,270	1,624	Other short-term receivables	1,720	2,616
3,223	2,553	<b>Total trade accounts and other short-term receivables</b>	<b>2,630</b>	<b>3,563</b>

### Age distribution trade account receivables

(Amounts in NOK million)	Not due	1-30 days	31-60 days	61-90 days	Over 90 days	Total trade acc. rec.
Parent company	711	16	1	-	3	731
Group	691	16	1	0	3	711

### Impairment assessment

Trade and other current receivables account for a relatively small share of the Group's balance sheet, and errors in the valuation of customers'/debt owners' ability to pay will normally not result in material errors in the financial statements. A material share of the Group's income (around 85 percent) derives from the Group's grid agreements with grid customers for connection to and use of the central grid. Stringent sanctions and requirements for pledging of collateral mean that the risk of losses on these trade receivables is deemed extremely low. A specific assessment is made on material overdue other trade receivables.

Based on the assessment at the end of the year, no loss provisions were recognised for trade receivables or other current receivables as of 31 December 2018.

## Note 12 Market-based securities

This note presents the size of the Group's liquidity surplus invested in market-based securities.

### Principle

Market-based securities are part of a trading portfolio or have cash flows consisting of more than payments of principal amounts and interest and are classified at fair value with changes in value through profit or loss.

### Market-based securities

Parent company		(Amounts in NOK million)	Group	
Acquisition cost	Carrying value		Acquisition cost	Carrying value
<b>Bonds and interest rate funds</b>				
-	-	Government	14	14
-	-	Municipality/municipal operations	26	27
-	-	Financial institutions, including banks	324	324
1,370	1,365	Norw. interest rate and money market fund	1,370	1,365
<b>1,370</b>	<b>1,365</b>	<b>Total bonds</b>	<b>1,734</b>	<b>1,729</b>
<b>Equity funds</b>				
-	-	Norwegian equity funds	17	31
-	-	Foreign equity funds	21	34
-	-	<b>Total equity funds</b>	<b>38</b>	<b>65</b>
<b>1,370</b>	<b>1,365</b>	<b>Total market-based securities</b>	<b>1,772</b>	<b>1,794</b>

Market-based securities are recognised at fair value at valuation level 1, since the securities are listed on a stock exchange and freely tradable, and are measured at the most recent quoted price. Please see description of the measurement hierarchy in note 15.

## Note 13 Liquid Assets

This note presents the Group's liquid assets.

### Principle

Cash and cash equivalents comprise cash and bank deposits. Bank deposits include deposits under Credit Support Annexes (CSAs) that can be freely used by the Group. Restricted funds are funds that the Group may only use to a limited degree.

### Specification of liquid assets

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
629	1,272	Bank deposits	1,681	1,077
241	273	Restricted bank deposits	275	242
<b>870</b>	<b>1,545</b>	<b>Total liquid assets</b>	<b>1,956</b>	<b>1,319</b>

Unused credit facilities of NOK 10.200 million are not included in liquid assets.



## Note 14 Financial fixed assets

This note presents financial items of a non-current nature and includes both interest-bearing and non-interest-bearing items.

### Principle

*Financial assets are classified as non-current when they are not part of ongoing operations or the Group has an unconditional right to defer payment for at least 12 months.*

*Non-current receivables and non-current loans to Group companies are recognised at the transaction rate at the agreement date and subsequently measured at amortised cost using the simplified effective interest rate method, i.e. so that the receivable is amortised on a straight-line basis over its lifetime.*

*Shares that are not part of a trading portfolio are recognised at fair value through profit or loss.*

### Impairment losses

*Impairments of non-current receivables and non-current loans to Group companies are assessed on an ongoing basis. If the expected credit risk is deemed to have materially increased, a loss provision is recognised in an amount corresponding to the expected loss over the asset's lifetime.*

*Derivatives are measured at fair value at valuation level 2. Both the derivatives and the measurement hierarchy are described in more detail in note 15.*

### Specification of financial fixed assets

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
61	46	Long-term receivables	43	62
3,156	4,301	Long-term receivables group companies	-	-
75	75	Subord. capital in Statnett SFs pension fund	75	75
3	3	Shares and funds	3	3
3,060	3,739	Derivatives	3,740	3,060
0	2	Derivatives non-interest bearing	2	-
<b>6,355</b>	<b>8,166</b>	<b>Total financial fixed assets</b>	<b>3,863</b>	<b>3,200</b>

Subordinated capital in Statnett SF's Pension Fund and Shares and funds are recognised at fair value at valuation level 3 and derivatives at valuation level 2. Please see description of the measurement hierarchy in Note 15. There were no transfers between the respective levels in 2017 and 2018. There were no changes in level 3 in 2018.

Non-current loans to subsidiaries account for a material share of non-current financial assets. The risk of default for these loans is deemed to be extremely low both in the short and long term due to the company's non-distributable equity, its various regulated activities, including deliveries to the parent company, and financing agreements and guarantees with the parent company. The credit risk for the loans is deemed to be low.

Non-current receivables account for an immaterial share of the company's balance sheet. Impairments are assessed on an ongoing basis and loss provision is recognised for material changes in the items' credit risk.

Based on the assessment at the end of the year, no loss provisions were recognised for non-current receivables or loans to subsidiaries at the reporting date.

## Note 15 Derivatives and hedge accounting

This note describes which of the Group's risk exposures are hedged using derivatives in accordance with hedge accounting principles. The description includes how the risk exposures arise, which derivatives are used as hedging instruments and the Group's hedging policy when using derivatives. Information and tables will be the same for the parent company and the Group due to the fact that only the parent company uses financial derivatives and hedge accounting.

### Description of risk exposure hedged in accordance with the rules for hedge accounting

#### Currency risk

Currency risk is the risk of fluctuations in exchange rates affecting Statnett's income statement and balance sheet. Currency risk arises when the Group has income or costs, raises loans, has bank accounts or makes investments in securities in foreign currency. Some of this currency risk is inherently hedged, but the Group is exposed to currency risk in major investment projects through material procurements and through new loans in foreign currency. The Group's finance policy and limits instructs the Group to hedge currency risk for all loans and major procurement contracts.

#### Interest rate risk

The Group is exposed to interest rate risk through its loan portfolio, liquidity holdings and financial hedging activities, where interest rate risk relating to the loan portfolio is hedged using interest swaps. Interest on loans can be hedged both from fixed to floating and from floating to fixed interest rates. Limits have been established providing guidelines on how much of Statnett's loans should be at floating interest rates as well as criteria for hedging interest on loans.

### Description of derivatives used in hedging relationships

The Group uses different types of derivatives to manage currency risk and interest rate risk deriving from procurement contracts and new loans. Forward exchange contracts are used to manage currency risk in procurement contracts. Interest swaps or combined currency and interest swaps are used to manage interest and/or currency risk in loan contracts.

#### Principle

*Derivatives are initially recognised at fair value at the date the contract is entered into, and subsequently on an ongoing basis at fair value. Derivatives with a positive value are classified as assets, while derivatives with a negative value are classified as liabilities in the financial statements. Changes in fair value and gains/losses on realisation are recognised in profit or loss if the derivative is not part of a hedging relationship that satisfies the criteria for hedge accounting. Embedded currency derivatives in major procurement contracts are separated from the host contract and measured individually. Derivatives included in hedging relationships are classified in the balance sheet in the same way as the underlying hedged item. This means that derivatives that hedge the Group's borrowings are classified as interest-bearing, and derivatives that hedge currency risk for procurements are classified as non-interest-bearing. Derivatives that are settled within 12 months are classified as current, while derivatives that are settled after more than 12 months are classified as non-current.*

#### Hedge accounting

*The Group applies the rules for hedge accounting when derivatives are used to hedge interest and currency risk. A hedging relationship satisfies the requirements for hedge accounting only if the following criteria are satisfied:*

- 1. The hedging relationship consists solely of hedging instruments and hedged items that satisfy the criteria*
- 2. Satisfactory documentation has been established on the entering into of the hedge that describes the hedging relationship, the nature of the risk being hedged and how the Group will assess whether the hedging relationship satisfies the requirements for hedge effectiveness*
- 3. The requirements for hedge effectiveness are as follows:*
  - a. There is an economic relationship between the hedged item and the hedging instrument*
  - b. The effect of credit risk does not dominate changes in value deriving from the economic relationship*
  - c. Ineffectiveness in the hedge does not affect the hedge ratio*

#### The Group uses the following types of hedging relationships

##### Fair value hedge

*A fair value hedge is defined as a hedge of the exposure to changes in fair value of a recognised asset, liability or binding agreement that can be attributed to a particular risk and can affect profit or loss.*

*Changes in the fair value of the derivative designated as a hedging instrument are recognised in profit or loss on an ongoing basis. Changes in the fair value of the hedged item are similarly recognised in profit or loss. For fair value hedges of hedged items recognised at amortised cost, the change in value is amortised in the income statement over the residual term to maturity.*

## Note 15 Derivatives and hedge accounting

The Group discontinues fair value hedging if:

1. The hedging instrument expires, or is sold, terminated or exercised,
2. The hedge does not satisfy the terms for hedge accounting, or
3. The Group cancels the hedge for other reasons

Should a hedging relationship expire, the change in value of the hedged item and the hedging instrument that has been recognised in the balance sheet is amortised over the residual term using the effective interest rate method.

### Cash flow hedge

A cash flow hedge is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with all or a component of a recognised asset or liability or a highly probable forecast transaction, which could also affect profit or loss.

The effective portion of changes in the fair value of the hedging instrument is recognised in other comprehensive income, and reclassified through profit or loss on implementation of the transaction that the derivative is hedging, and is presented on the same line as the hedged transaction. The ineffective portion is recognised in profit or loss on an ongoing basis.

If the forecast future transaction is no longer expected to be implemented, the amount previously recognised in other comprehensive income is recognised under financial income or financial costs. If the hedging instrument expires or is sold, terminated or exercised, or Statnett elects to cancel the hedging relationship, despite the fact the hedged transaction is expected to take place, accumulated gains or losses remain in other comprehensive income and are recognised in profit or loss when the transaction is implemented. If the hedged transaction is no longer expected to take place, the accumulated unrealised gains or losses are immediately recognised in profit or loss.

### Measurement of financial instruments

The Group uses the following measuring hierarchy to measure and present the fair value of financial instruments:

- Level 1: Fair value are measured using listed prices from active markets for identical financial instruments. No adjustments are made regard to these prices.
- Level 2: Fair value is measured using other observable input than used at level 1, either directly (prices) or indirectly (derived from prices).
- Level 3: Fair value is measured using input that is not based on observable market data.

Information on the measurement hierarchy is provided in the relevant notes for the various financial instruments (note 11 to note 17).

## Note 15 Derivatives and hedge accounting

### The Group's hedging strategy

The table describes how the Group hedges different categories of risk exposure:

<b>Risk exposure category</b>	<b>Hedged item</b>	<b>Hedging instrument</b>	<b>Hedging strategy</b>	<b>Type of hedge</b>
Currency risk in major contracts with uncertain payment milestones	Major procurement contracts with foreign suppliers in foreign currency. The contract has multiple milestones that are invoiced in accordance with the degree of project completion. The exact payment date for each individual milestone is unknown at the time the contract is entered into, but final completion and the total contract amount is defined as a "firm commitment".	Forward exchange contract in an amount corresponding to the total hedged contract amount. The forward exchange contracts mature after more than one year. A new forward exchange contract is established to hedge residual contract payments.	All or part of the contract is hedged. Ineffectiveness is recognised through profit or loss and classified as Other operating expenses. To achieve an adequate economic relationship, the hedged item is hedged at the forward exchange contract's spot rate. The forward points (forward premiums) are recognised through profit or loss under Other operating expenses.	Fair value hedge
Currency risk in major contracts with fixed payment milestones	Major procurement contracts with foreign suppliers in foreign currency with fixed payment dates.	Forward exchange contract with the same amount and payment date as the hedged cash flow.	All or part of the contract is currency hedged. In essence, no changes are expected in the payment plan. For minor changes in the payment plan, the forward contract is rolled over to the bank account. For major changes in the payment plan, the forward contract is rolled over to a new forward contract. Hedging rate: The forward exchange rate (spot rate plus forward points).	Fair value hedge
Currency risk in loan agreements	Loans with fixed or floating interest in foreign currency.	Interest and currency swaps that switch loans from foreign currency to loans in NOK at floating interest rates in NOK.	Loans in foreign currency are hedged in NOK, and total loans with floating interest rates must be part of a more specifically defined share of assumed network capital per calendar year in accordance with frameworks for financial management. The loan will be exposed to fluctuations in interest rates. This can be hedged at a later date.	Fixed-interest loans: Fair value hedge  Floating-interest loans: Cash flow hedge
Currency and interest rate risk in loan contracts	Loans with fixed or floating interest in foreign currency.	Interest and currency swaps that hedge the loan in NOK at a fixed interest rate.	Currency and interest rate risk is hedged in accordance with frameworks for financial management.	Fixed-interest loans: Fair value hedge Floating-interest loans: Cash flow hedge
Interest rate risk on Norwegian loans	Floating-rate loans in NOK.	Interest swap with floating interest switched to fixed interest.	Interest rate risk is hedged in accordance with frameworks for financial management.	Cash flow hedge
Interest rate risk on Norw. loans	Fixed-rate loans in NOK.	Interest swap with fixed interest switched to floating interest.	Interest rate risk is hedged in accordance with frameworks for financial management.	Fair value hedge

## Note 15 Derivatives and hedge accounting

Description of hedge effectiveness and how this is measured for various risk categories:

<b>Risk category</b>	<b>Assessment of effectiveness</b>	<b>Measurement of effectiveness</b>
Currency risk in major contracts with multiple uncertain payment milestones	Different settlement dates for milestones in the hedged item and hedging instrument create ineffectiveness that must be measured.	Dollar offset method
Currency risk in major contracts with fixed payment milestones	Qualitative assessment based on the Principal Terms Match method provided that critical factors in the hedged item and hedging instrument are matched.  Critical factors: <ul style="list-style-type: none"> <li>• currency</li> <li>• amount</li> <li>• payment date</li> </ul> Provided that critical factors are matched, the hedge is considered to be approximately 100 per cent effective. Ineffectiveness arises when the payment date is changed and the hedging instrument must be rolled over.	When critical factors are not matched: Dollar offset method
Interest rate and currency risk on loans	Qualitative assessment based on the Principal Terms Match method provided that critical factors in the hedged item and hedging instrument are matched.  Critical factors: <ul style="list-style-type: none"> <li>• principal amount (amount and currency)</li> <li>• maturity date</li> <li>• interest dates</li> </ul> Provided that receipts from the interest and currency swap match payments on the loan, the hedge will be 100 per cent effective.	When critical factors are not matched: Dollar offset method

### Fair value measurement

Foreign exchange forward contracts are measured at fair value based on observable forward rates on contracts with similar terms on the balance sheet date. Fair value for interest and currency swap contracts is the present value of future cash flows based on observable market rates and foreign currency rates at the balance sheet date. Fair value of interest swaps contracts is the present value of future cash flows based on observable market rates on balance sheet day.

### Accounting treatment of derivatives

#### Cash flow hedges

All derivatives defined as hedging instruments in cash flow hedges are booked at fair value in the balance sheet while the effect are booked as cash flow hedge reserve and this year's change is presented through OCI – other income and expenses. When the cash flow is due, prior periods fair value changes related to the hedging instruments are removed from equity to ensure that the hedging instrument and the hedged items affects the result in the same period.

#### Fair value hedges

In fair value hedging, both the hedging instrument and hedged item are recognised at fair value through profit or loss.

In fair value hedging of loans, the estimated fair value of the hedging instrument will also be used as the fair value of the hedged item when all critical factors are matched and the hedge is deemed 100 percent effective. There has not been any ineffectiveness in fair value hedging of loans in the accounting year.

In fair value hedging of major procurement contracts in foreign currency, fair value is calculated for both the hedging instrument and the hedged item. Different maturity dates for the hedging instrument and hedged item and rolling of the hedging instrument will result in ineffectiveness that is recognised in profit or loss under Other operating expenses. Realised effects of the hedge for the hedging instrument and the hedged item affect profit or loss in the same period.

## Note 15 Derivatives and hedge accounting

### *Economic hedge - derivatives not included in hedge accounting*

Statnett also holds derivatives that does not qualify for hedge accounting under IFRS. These derivatives are measured at fair value and all changes in value are recognized in profit or loss. This type of derivatives are referred to as "Free standing derivatives".

### *Embedded currency derivatives*

For major procurements contracts, Statnett will separate embedded derivatives if agreed payment is in a currency different from the contract parties own functional currency, and that the contract is not considered to be commonly used for the relevant economic environment defined as the countries involved in the transaction. Embedded derivatives are recorded at fair value in the income statement.

### Repayment profile for derivatives related to debt

#### Parent Company and Group

<i>Amounts in NOK million</i>	<b>Under 1 year</b>	<b>1 to 5 years</b>	<b>5 to 10 years</b>	<b>10 to 15 years</b>	<b>&gt; 15 years</b>	<b>Total market value</b>	<b>Type of hedge accounting</b>
<b>Assets</b>							
Interes swap fixed to floating	1	97	236	49	-	383	Fair value hedge
Interest rate floating to fixed	-	-	10	-	-	10	Cash flow hedge
Interes swap fixed to floating	-	-	-	-	-	-	Free standing derivatives
Interest and currency swap	117	575	1,181	1,355	196	3,423	Fair value hedge
Interest and currency swap	-	-	-	34	-	34	Cash flow hedge
Interest and currency swap	-	7	-	-	-	7	Free standing derivatives
<b>Total assets</b>	<b>118</b>	<b>679</b>	<b>1,427</b>	<b>1,438</b>	<b>196</b>	<b>3,858</b>	
<b>Liabilities</b>							
Interes swap fixed to floating	-	-	-	-36	-	-36	Fair value hedge
Interest rate floating to fixed	-	-102	-30	-	-	-132	Cash flow hedge
Interes swap fixed to floating	-	-	-	-	-	-	Free standing derivatives
Interest and currency swap	-	-	-	-320	-	-320	Fair value hedge
Interest and currency swap	-	-	-	-	-	-	Cash flow hedge
Interest and currency swap	-	-	-	-	-	-	Free standing derivatives
<b>Total liabilities</b>	<b>-</b>	<b>-102</b>	<b>-30</b>	<b>-356</b>	<b>-</b>	<b>-488</b>	



## Note 15 Derivatives and hedge accounting

The table below presents the effect of cash flow hedges that are presented as a hedging reserve in equity (negative figures reduce the Group's equity). During the 2017 and 2018, no effects relating to hedge ineffectiveness or hedging instruments that no longer qualify for hedge accounting were recognised in the income statement.

### Development in cash flow hedge reserve

Amounts in NOK million

	31.12.2018	31.12.2017
Cash flow hedge reserve before tax at 1 January	-355	-245
Additions, market value new cash flow hedge derivatives	-28	-2
Change in market value	295	-108
<b>Cash flow hedge reserve before tax at 31 December</b>	<b>-88</b>	<b>-355</b>
Deferred tax on cash flow hedge reserve	-19	-82
<b>Cash flow hedge reserve after tax at 31 December</b>	<b>-69</b>	<b>-273</b>

### Derivatives related to investments in foreign currency

Forward exchange options

Statnett makes use of forward exchange contract in order to hedge the currency risk on major acquisitions in currencies other than NOK.

### Overview of derivatives related to investments in foreign currency

#### Parent Company and Group

Amounts in NOK million

	Currency	Nominal amount currency	Hedging rate	Market rate	Under 1 year	1 to 5 years	Total market value
<b>Assets</b>							
Fair value hedge	EUR	117	9.70	10.08	42	2	44
Fair value hedge	SEK	814	0.93	0.98	37	-	37
Free standing derivatives	EUR	3	9.62	10.00	1	-	1
Embedded derivatives	SEK	38	-	-	1	-	1
<b>Total assets</b>		-			<b>81</b>	<b>2</b>	<b>83</b>
<b>Liabilities</b>							
Fair value hedge	EUR	-29	9.88	10.07	-6	-	-6
Fair value hedge	USD	-43	8.32	8.68	-15	-	-15
Embedded derivatives	EUR	22	-	-	-7	-4	-11
<b>Total liabilities</b>		-			<b>-28</b>	<b>-4</b>	<b>-32</b>
<b>Total forward exchange options</b>					<b>53</b>	<b>-2</b>	<b>51</b>

## Note 15 Derivatives and hedge accounting

Changes in market value and income statement effects of currency hedging derivatives related to procurement contracts, embedded derivatives and free standing derivatives

	Hedging instrument			Hedged item			Income statement effects		
	31.12.2018	31.12.2017	Change in market value	31.12.2018	31.12.2017	Change in market value	Unrealised ineffectiveness	Realised ineffectiveness	Realised forward premium
	Currency hedging derivatives	60	76	-16	-61	-79	18	2	-1
Embedded derivatives	-11	-21	10	-	-	-	10	10	-
Free standing derivatives	1	3	-2	-	-	-	-2	-4	-

## Note 16 Interest-bearing liabilities

This note presents current and non-current interest-bearing liabilities for the Group, including financial derivatives classified as interest-bearing liabilities. The composition and level of interest-bearing liabilities are managed through the company's financing activities and are described in more detail in note 15 Derivatives and hedge accounting.

### Principle

*Interest-bearing liabilities are recognised at received funds, net after transaction costs. Loans are subsequently recognised at amortised cost using the effective interest method, where the difference between net funds and the redemption value is recognised in profit or loss over the loan term.*

*As a general rule, derivatives are recognised at fair value through profit or loss. Derivatives relating to cash flow hedges are recognised at fair value through other comprehensive income. See also note 15 for a more detailed discussion of derivatives.*

### Specification of interest-bearing debt

Parent company (Amount in NOK million) Debt	2018		2017	
	Carrying value	Fair value	Carrying value	Fair value
Long-term interest-bearing debt	39,901	39,012	34,510	35,563
Long-term interest-bearing debt Group companies	32	33	201	202
Derivatives	488	488	707	707
<b>Total long-term interest-bearing debt</b>	<b>40,421</b>	<b>39,533</b>	<b>35,418</b>	<b>36,472</b>
Short-term interest-bearing debt	5,349	6,581	3,953	3,919
Short-term interest-bearing debt Group companies	-	-	156	157
Derivatives	-	-	19	19
<b>Total short-term interest-bearing debt</b>	<b>5,349</b>	<b>6,581</b>	<b>4,128</b>	<b>4,095</b>
<b>Group (Amount in NOK million)</b>				
<b>Debt</b>				
Long-term interest-bearing debt	39,900	39,012	34,510	35,563
Derivatives	488	488	707	707
<b>Total long-term interest-bearing debt</b>	<b>40,388</b>	<b>39,500</b>	<b>35,217</b>	<b>36,270</b>
Short-term interest-bearing debt	5,349	6,581	3,953	3,919
Derivatives	-	-	19	19
<b>Total short-term interest-bearing debt</b>	<b>5,349</b>	<b>6,581</b>	<b>3,972</b>	<b>3,938</b>

Derivatives are measured at fair value at valuation level 2. Please see description of measurement hierarchy in note 15.

## Note 16 Interest-bearing liabilities

### Parent company

#### Repayment profile for interest-bearing debt

The loans are measured at amortised cost adjusted for the effect of fair value hedging.

<b>Maturity date</b> <i>(Amounts in NOK million)</i>	<b>Under 1 year</b>	<b>1 to 5 years</b>	<b>5 to 10 years</b>	<b>10 to 15 years</b>	<b>15 years +</b>	<b>Total</b>
<b>Fixed rate loans</b>						
Certificate issues	500	-	-	-	-	500
Bond issues	619	4,069	11,524	14,806	569	31,588
<b>Total fixed rate loans</b>	<b>1,119</b>	<b>4,069</b>	<b>11,524</b>	<b>14,806</b>	<b>569</b>	<b>32,088</b>
<b>Floating rate loans</b>						
Collateral under CSA agreements	3,305	-	-	-	-	3,305
Other interest-bearing debt	-	135	30	356	-	521
Bond issues	700	187	2,001	-	-	2,888
Loans from financial institutions	224	1,689	1,960	3,094	-	6,967
<b>Total floating rate loans</b>	<b>4,229</b>	<b>2,011</b>	<b>3,991</b>	<b>3,450</b>	<b>-</b>	<b>13,681</b>
<b>Total debt</b>	<b>5,349</b>	<b>6,080</b>	<b>15,515</b>	<b>18,256</b>	<b>569</b>	<b>45,769</b>

<b>Maturity of fixed interest of the loan portfolio</b> <i>(Amounts in NOK million)</i>	<b>Under 1 year</b>	<b>1 to 5 years</b>	<b>5 to 10 years</b>	<b>10 to 15 years</b>	<b>15 years +</b>	<b>Total</b>
Interest-bearing debt	40,074	821	3,627	1,247	-	45,769

### Group

The repayment profile for interest-bearing debt of the Group differs from the parent company's repayment profile with intra-group loans that are eliminated from the Group statement. Statnett has one intra-group loan of NOK 32 million, payable on demand and classified as long-term debt.

## Note 16 Interest-bearing liabilities

Specification of interest-bearing debt and derivatives	Principal debt Currency	Principal debt NOK	Principal swap NOK	Interest rate loan	Interest rate swap	Fair value swap
	(Amounts in million)	(Amounts in NOK million)	(Amounts in NOK million)			(Amounts in NOK million)
<b>Secured liabilities - fair value hedging</b>						
NOK	4,660	4,660	4,660	4.12%	1.89%	348
JPY	4,000	201	201	1.97%	1.23%	117
CHF	150	923	923	2.39%	1.69%	224
SEK	1,700	1,553	1,553	0.98%	1.73%	101
USD	1,080	7,208	7,208	3.17%	2.10%	1,700
EUR	1,070	10,025	10,025	1.13%	1.76%	961
<b>Secures liabilities - cash flow hedging</b>						
NOK	2,693	2,693	2,693	1.78%	3.47%	-94
USD	360	3,039	3,039	2.79%	2.14%	34
EUR	312	3,000	3,000	0.88%	2.49%	-28
<b>Unsecured liabilities</b>						
NOK - floating interest rate	4,300	4,300	-	2.86%	0.00%	-
NOK - fixed interest rate	6,976	6,976	-	1.72%	0.00%	-
<b>Free standing derivatives</b>						
NOK	-	-	700	1.73%	1.83%	-
SEK	-	-	180	0.00%	1.21%	7
<b>CSA</b>						
NOK	1,467	1,467	-	*	-	-
EUR	185	1,838	-	**	-	-
<b>Total</b>	-	-	-			<b>3,369</b>

\* NOWA (Norwegian Overnight Weighted Average rate) - daily interest for deposits in NOK

\*\* EONIA overnight - daily interest rates announced by the European Banking Federation (EBF)

## Note 17 Trade accounts payable and other short-term debt

This note presents trade payables and other current non-interest-bearing liabilities. Trade payables are directly related to operational activities, while other current liabilities relate to other payables such as public taxes and charges, salaries and holiday pay, accrued interest, etc.

### Principle

*Non-interest-bearing liabilities are classified as current when they are part of ordinary operations, are used for trading purposes and due by 12 months. Other liabilities are non-current.*

*Trade and other current liabilities are measured at amortised cost using the effective interest method. The interest element is ignored since it is deemed to be immaterial for the overwhelming majority of the Group's current non-interest-bearing liabilities.*

*Derivatives are valued at fair value at valuation level 2. Both the derivatives and the measurement hierarchy are described in more detail in note 15.*

### Specification of trade accounts payable and other short-term liabilities

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
659	572	Trade accounts payable	571	853
53	-	Short-term liabilities Group companies	-	-
129	25	Public fees	28	132
231	376	Payroll	381	237
-	-2	Non interest-bearing derivatives	-2	-
213	272	Accrued interest	272	213
1,019	2,566	Other short-term debt	4,404	1,874
<b>2,303</b>	<b>3,809</b>	<b>Trade accounts payable and other short-term debt</b>	<b>5,653</b>	<b>3,310</b>

Provisions related to progress measurement of investment projects are classified as other current liabilities.



## Note 18 Financial risk management

### Financial risk

The object of Statnett SF's financial policy is to ensure that the enterprise achieves the necessary financing of planned operational and investment programmes at the lowest possible cost, risk included. Statnett SF's financial policy also comprises aims and frameworks for minimising the enterprise's credit, interest rate and foreign exchange risks. Statnett SF uses financial derivatives to manage the financial risk.

### Capital management

The loan agreements do not impose any capital requirements on the enterprise which are expected to restrict the capital structure in the Group. Nor are there any explicit equity requirements other than those stipulated in applicable laws and regulations. The main objective of Statnett's capital management structure is to ensure that the enterprise has a sound financial position, which enables the enterprise to operate and develop the main grid in a socio-economically profitable manner in line with plans and the owner's expectations. It is a priority with the Statnett Board of Directors to maintain a robust A rating or better. To satisfy major investment requirements, the enterprise received an equity contribution in 2014 while the dividend was reduced from 50 percent to 25 percent of the Group's underlying result for the period 2013–2018. The underlying result is the Group's net result for the year after tax adjusted for changes in the net higher/lower revenue after tax. Moreover, the capital structure is managed by raising and paying off short-term and long-term debt, as well as through changes in liquid assets. There have been no changes to capital management guidelines or objectives through the year.

### Overview of capital included in capital structure management

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
35,377	40,388	Long-term interest-bearing liabilities	40,388	35,217
4,169	5,381	Short-term interest-bearing liabilities	5,349	3,972
1,522	2,910	Liquid assets and investment in market-based securities	3,750	2,405
<b>38,024</b>	<b>42,859</b>	<b>Net liabilities</b>	<b>41,987</b>	<b>36,784</b>

### Liquidity risk

Statnett SF aims to be able to carry out 12 months of operations, investments and refinancing without raising any new debt. This will make Statnett less vulnerable during periods of low access to capital in the financial markets and periods with unfavourable borrowing conditions. Liquidity is followed up continuously through weekly reporting.

Statnett reduces liquidity risk related to maturity of financial liabilities by having an evenly distributed maturity structure, limits on the proportion of the loan portfolio that can fall due within a 12-month period, access to several sources of funding in Norway and abroad, and sufficient liquidity to cover scheduled operations, investment and financing needs without incurring any new debt within a time horizon of 12 months.

31 December the liquidity consists of bank/time deposits, investments in market-based securities and a credit facility of NOK 8 billion, running until January 2022. The credit facility has not yet been utilised. Up to NOK 4 billion of the credit facility can be drawn at very short notice. Together with other sources of liquid assets, Statnett has a good ability to handle large liquidity needs that may occur at short notice, e.g. related to collateral for derivatives under CSA agreements with weekly settlement. In addition Statnett has a loan agreement of EUR 300 million, of which EUR 200 million is undrawn as of year-end, and a credit facility of NOK 200 million at the enterprise's main bank.

Statnett SF has a high credit rating. Standard & Poor's and Moody's Investor Service have given Statnett SF credit ratings for non-current borrowings of A+ and A2 respectively. The high credit ratings provides Statnett SF good borrowing opportunities.

## Note 18 Financial risk management

The table below presents all gross cash flows related to financial liabilities. The cash flows have not been discounted and are based on interest rates and exchange rates at the end of the reporting period.

(Amounts in NOK million)

### Parent company

As at 31. Dec. 2018	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
Interest-bearing debt and interest payments	6,230	9,849	18,916	17,690	1,083	53,768
Other liabilities	-	211	171	-	-	382
Trade acc.payable and other short-term debt	3,809	-	-	-	-	3,809
Derivatives	4,116	4,851	8,634	10,656	458	28,715
<b>Total</b>	<b>14,155</b>	<b>14,911</b>	<b>27,721</b>	<b>28,346</b>	<b>1,541</b>	<b>86,674</b>

Derivatives	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
Received	4,432	5,842	10,352	12,657	770	34,053
Disbursed	-4,116	-4,851	-8,634	-10,656	-458	-28,715
<b>Net derivatives</b>	<b>316</b>	<b>991</b>	<b>1,718</b>	<b>2,001</b>	<b>312</b>	<b>5,338</b>

(Amounts in NOK million)

### Group

As at 31. Dec. 2018	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
Interest-bearing debt and interest payments	6,197	9,849	18,916	17,690	1,083	53,735
Other liabilities	-	211	171	-	-	382
Trade acc.payable and other short-term debt	5,653	-	-	-	-	5,653
Derivatives	4,116	4,851	8,634	10,656	458	28,715
<b>Total</b>	<b>15,966</b>	<b>14,911</b>	<b>27,721</b>	<b>28,346</b>	<b>1,541</b>	<b>88,485</b>

Derivatives	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
Received	4,432	5,842	10,352	12,657	770	34,053
Disbursed	-4,116	-4,851	-8,634	-10,656	-458	-28,715
<b>Net derivatives</b>	<b>316</b>	<b>991</b>	<b>1,718</b>	<b>2,001</b>	<b>312</b>	<b>5,338</b>

## Note 18 Financial risk management

### Credit risk

Credit risk refers to the risk that the counterparty will default on its contract obligations and resulting in a financial loss for the Group.

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
870	1,545	Liquid assets	1,956	1,319
652	1,365	Investment in market-based securities	1,794	1,086
3,142	3,940	Derivatives	3,940	3,142
3,217	4,347	Long-term receivables, excl. derivatives	43	62
3,141	2,355	Trade accounts and other short-term receivables, excl. derivatives	2,432	3,481
<b>11,022</b>	<b>13,552</b>	<b>Total maximum credit exposure</b>	<b>10,165</b>	<b>9,090</b>

Statnett SF is exposed to credit risk through investment of surplus liquidity with issuers of securities and through the use of different interest rate and currency derivatives. To limit this risk, Statnett has frameworks establishing requirements for creditworthiness and maximum exposure for each individual counterparty. Furthermore, the enterprise ensures that credit risk in hedging relationships is extremely low by entering into collateral agreements based on Credit Support Annexes for its most important derivative counterparties.

All placements of liquid assets are made within sector limits and maximum limits for individual counterparties with a high credit rating, where higher credit ratings result in higher limits. Market-based securities consist of multiple, well-diversified investment grade fixed interest funds.

A CSA is a legal document that regulates credit support (collateral) for derivative transactions with weekly settlement of unrealised gains/losses. Unrealised gains result in Statnett receiving settlements that increase the company's bank balances and current liabilities. Conversely, unrealised losses result in Statnett paying settlements to its counterparties that reduce the company's bank balances and increase current receivables.

The table below shows the relationship between collateral pledged under the CSAs, unrealised values of hedged derivatives and unrealised values of all derivative transactions with external counterparties. Deposits are recognised in a separate account, but are not classified as restricted funds. This means that bank balances may not always fully reflect the amounts actually received from counterparties.

#### Specification of the relationship between collateral and derivatives

(Amounts in NOK million)	Totally paid	Market value derivatives under CSA agreements	Market value all derivatives
Received collateral under CSA agreements	3,305	3,478	3,728
Collateral under CSA posed to counterparty	-245	-298	-298

Internal limits require final counterparties in new derivative contracts based on a CSA to have a minimum A- rating from leading rating agencies. The rating requirement is two marks higher (A+) for counterparties without CSAs.

The Group's customer base primarily consists of municipal energy companies, Norwegian industrial customers and other Nordic TSOs. Historically losses on trade receivables have been low, and are expected to remain so moving forward. In the event of default, the Group has efficient routines for rapid and close follow-up of customers, stringent sanction options and the opportunity to demand collateral as part of the network agreement. Consequently, the Group deems credit risk for trade receivables to be very low.

At the reporting date, Statnett SF had extended loans to subsidiaries and associates of NOK 4,323 million in the parent company and NOK 22 million in the Group. The creditworthiness of the relevant subsidiaries is closely linked to Statnett SF's own credit rating due to ownership, the pledging of guarantees and/or receipt of services. Statnett SF also provides loans if needed to the eSett Oy (associated) and Fifty AS (jointly controlled). Credit assessments are carried out when loan terms are established. All companies are monitored through board representation. Some of the loan agreements impose requirements on the equity ratios. No conditions have been registered that indicate potential impairments of loans.

## Note 18 Financial risk management

### **Recognition and measurement of expected credit losses**

The Group recognises provisions for expected credit losses on financial assets measured at amortised cost or at fair value under Other comprehensive income in accordance with IFRS 9. The loss provision is based on the Group's assessment of the financial assets' credit risk.

For banks, derivative counterparties and other credit institutions, creditworthiness is regularly assessed during the year through monitoring of official ratings. Counterparty risk is monitored and reported on an ongoing basis to ensure that the enterprise's exposure does not exceed established credit limits and complies with internal rules. Credit risk for trade payables, other current receivables and non-current receivables is assessed monthly in the event of default or should other information become available that indicates that the borrower may not be able to redeem all or parts of its liabilities. A financial instrument is deemed to be in default if it has not been settled at the agreed date. Impairments are recognised using the following methods:

#### 1. Expected credit loss over the asset's lifetime

The expected credit loss resulting from all potential default events during a financial instrument's lifetime.

If the credit risk for a financial instrument has materially increased since initial recognition, the loss provision for that financial instrument is recognised in an amount corresponding to the expected credit loss over the lifetime.

#### 2. Expected credit loss over 12 months

The portion of the expected credit loss during the lifetime relating to the expected credit loss attributable to potential default events for a financial instrument within 12 months after the reporting date.

If the credit risk for a financial instrument has not materially increased since initial recognition, the loss provision for that financial instrument is recognised in an amount corresponding to the expected credit loss over 12 months.

The Group has defined the following categories for credit scoring to assess credit risk.

Category	Description	Method of impairment recognition
Performing	No overdue liabilities and no increase in credit risk since initial recognition.	Expected credit loss over 12 months.
Doubtful	Liabilities more than 30 days overdue, or there has been a significant increase in credit risk since initial recognition.	Expected credit loss over the asset's lifetime; effective interest is calculated on the gross amount.
In default	Liabilities more than 90 days overdue, but there are indications that the asset is creditworthy.	Expected credit loss over the asset's lifetime; effective interest is calculated at amortised cost.
Write-off	There are indications that the creditor's financial problems are so great that the receivables must be deemed lost.	The receivable is written off in full.

See also note 11 Trade and other current receivables and note 14 Non-current financial assets, for loss assessments.

### **Foreign exchange risk**

Foreign exchange risk is the risk of fluctuations in foreign exchange rates that will result in changes in Statnett's income statement and balance sheet. Currency risk relating to major procurement contracts and loans in foreign currency is hedged. Please see discussion in note 15. At the reporting date, currency reserves that were not swapped or reserved for future liabilities amounted to NOK 229 million in the parent company and NOK 383 million in the Group. This reserve consists of bank deposits. The Group also has foreign equity funds and shares of NOK 36 million.

### **Interest rate risk**

The Group is exposed to interest rate risk through its loan portfolio, liquid assets and financial hedges. Statnett SF is also exposed to interest rate levels on which the revenue cap for the grid operations is based (the NVE interest rate).

In order to reduce the interest rate risk and minimise fluctuations in the result, the interest rate on Statnett's debt must correlate to the extent possible with the NVE interest rate. The NVE interest rate is calculated based on daily averages of the five-year swap interest rate. In addition, the NVE interest rate comprises a fixed interest rate portion with the addition of inflation and a surcharge for credit risk. To achieve the desired fixed-interest period on the enterprise's debt, interest rate swap agreements linked to the underlying debt are used.

### **Average effective interest rate**

## Note 18 Financial risk management

The table below presents the average effective interest rate for the various types of financial instruments.

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
1.43%	1.29%	Investment in market-based securities	1.26%	1.74%
0.67%	0.24%	Bank deposits	0.76%	0.68%
-	-	Shares and equity funds	-3.64%	18.93%
1.97%	2.00%	Loans	2.00%	1.97%

### Sensitivity analysis

#### Interest rate sensitivity

(Amounts in NOK million)

Parent company		Change in interest rate level		Group	
2017	2018	Percentage points		2018	2017
-8	-11	+ 1		-18	-16
8	11	- 1		18	16

The table presents the sensitivity for parent company and the Group due to potential changes in the interest rate on asset placements. It shows the effect on the result of a change in the interest rate levels with 1 percentage point as at 31 December 2018.

#### Exchange rate sensitivity

(Amounts in NOK million)

Parent company		Change in NOK exchange rate		Group	
2017	2018	Percent		2018	2017
-11	-13	+ 5		-20	-21
11	13	- 5		20	21

The table presents the company's sensitivity to potential changes in the exchange rate of the Norwegian Krone, if all other factors remain unchanged. The calculation is based on an identical change in relation to all relevant currencies. The effect on the result is due to a change in the value of monetary items that are not fully hedged. Other monetary items and all foreign currency debt are hedged, and the change in value is matched by a change in the value of the derivative.

## Note 19 Taxes

Income tax is calculated in accordance with ordinary tax rules and by applying the adopted tax rate. The tax expense in the income statement comprises taxes payable and changes in deferred tax liabilities/tax assets. Taxes payable are calculated on the basis of the taxable income for the year. Deferred tax liabilities/assets are calculated on the basis of temporary differences between the accounting and tax values and the tax effect of losses carried forward.

### Principle

*The tax expense in the income statement comprise both the annual taxes payable and changes in deferred tax liabilities/tax assets. Taxes payable are calculated on the basis of the taxable income of the year. Deferred tax assets/liabilities are calculated on the basis of temporary differences between the accounting and tax values, and the tax loss carried forward.*

*Deferred tax liabilities and deferred tax assets are recognised net provided that these are expected to reverse in the same period. Deferred tax assets are recognized to the extent that it is probable that they will be utilised. Deferred tax liabilities/tax assets are recognized using the nominal tax rate.*

*Tax related to items recognised in other comprehensive income is also recognised in other comprehensive income, while tax related to equity transactions is recognised in equity.*



## Note 19 Taxes

### The tax expense comprises the following

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
350	-	Income tax	19	368
-1	-374	Income tax previous years	-375	-1
-141	945	Change in deferred tax/tax benefit	933	-158
-43	-85	Change in tax rates	-89	-46
<b>165</b>	<b>486</b>	<b>Tax</b>	<b>488</b>	<b>163</b>

### Tax payable in income statement

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
350	-	Income tax payable on the profit of the year	19	368
-	-	Tax effect of group contribution	-	-
<b>350</b>	<b>-</b>	<b>Taxes payable</b>	<b>19</b>	<b>368</b>

### Tax payable in the balance sheet

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
350	-	Tax payable for the year	19	368
-31	-	Tax payable on group contribution	-16	-33
<b>319</b>	<b>-</b>	<b>Tax payable</b>	<b>3</b>	<b>335</b>

### Reconciliation of nominal tax rate and effective tax rate

The following table provides a reconciliation of reported tax expense and tax expense based on nominal tax rate of 23 percent for 2018 (24 percent for 2017).

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
893	2,648	Profit before tax	2,701	976
214	610	Expected tax expense at nominal rate	621	218
		Effect on taxes of:		
-7	-	Permanent differences	-11	-10
2	1	Share of profit/loss in associates	1	2
-1	-40	Changes in previous years taxes	-33	-1
-43	-85	Changes in tax rates	-89	-46
<b>165</b>	<b>486</b>	<b>Tax</b>	<b>488</b>	<b>163</b>
<b>18%</b>	<b>18%</b>	<b>Effective tax rate</b>	<b>17%</b>	<b>17%</b>

## Note 19 Taxes

### Breakdown deferred tax

The following table provides a breakdown of the net deferred tax. Deferred tax assets are recognised in the balance sheet to the extent it is probable that these will be utilised. The tax rate used when assessing deferred tax is 22 percent as of 31 December 2018 (23 percent as of 31 December 2017).

#### Parent company

<i>(Amounts in NOK million)</i>	31.12.17	Recognised	Other comprehensive income	Group contribution	31.12.18
Current assets/current liabilities	45	-6	-	-37	2
Fixed assets	1,091	578	-	-	1,669
Pension liabilities	-81	-8	20	-	-68
Other long term items	-153	689	62	-	598
Implementation effect IFRS 15	-	-10	10	-	-
Tax loss carried forward	-	-382	-	6	-376
<b>Total</b>	<b>902</b>	<b>861</b>	<b>92</b>	<b>-31</b>	<b>1,824</b>

#### Group

<i>(Amounts in NOK million)</i>	31.12.17	Recognised	Other comprehensive income	Group contribution	31.12.18
Current assets/current liabilities	-4	-51	-	-	-55
Fixed assets	1,196	606	-	-	1,802
Pension liabilities	-82	-8	20	-	-70
Other long term items	-125	693	62	-	630
Implementation effect IFRS 15	-	-10	10	-	-
Tax loss/interest expenses carried forward	-44	-404	-	16	-432
<b>Total</b>	<b>941</b>	<b>826</b>	<b>92</b>	<b>16</b>	<b>1,875</b>

### Deferred tax recognised in other comprehensive income

Parent company			Group	
31.12.17	31.12.18	<i>(Amounts in NOK million)</i>	31.12.18	31.12.17
-67	20	Change in estimate deviations of pension liabilities	20	-67
-23	62	Changes in fair value for cash flow hedges	62	-23
<b>-90</b>	<b>82</b>	<b>Total deferred tax recognised in other comprehensive income</b>	<b>82</b>	<b>-90</b>

## Note 20 Investments in subsidiaries, jointly controlled company and associates

The activities of Group companies are mainly concentrated in the parent company. The Group also includes seven subsidiaries, one jointly owned company and ownership interests in certain associated companies. Reference is made to note 22, related parties, for a description of the activities of the subsidiaries.

### Principle

#### **Consolidated companies**

The consolidated financial statements comprise Statnett SF and subsidiaries in which Statnett SF alone has a controlling influence. Normally, Statnett SF is assumed to have controlling influence when direct or indirect ownership interests make up more than 50 percent of the voting shares. If Statnett owns less than 100 percent of the voting shares, or, through an agreement, has less than 100 percent of the votes, the Group assesses whether the Group has actual control.

The consolidated financial statements are prepared using the acquisition method and show the Group as if it was one unit. The cost price of shares in the subsidiaries is eliminated against the equity at the time of acquisition. Any excess value beyond the equity of the subsidiaries is allocated to assets to which the excess value can be attributed. The part of the cost of purchasing a business that cannot be attributed to specific assets, is presented as goodwill.

Statnett SF's Pension Fund is not part of the Statnett Group. Contributed equity to the pension fund is valued at fair value and classified as financial fixed assets.

#### **Jointly controlled company**

Currently, one jointly controlled company in the Group, Fifty AS, is considered to be a joint operation. Firstly, the company is considered to be a joint arrangement since Statnett, together with another party, is bound by contract, and the contract gives the parties joint control over Fifty AS. Secondly, the company is considered a joint operation since the parties have rights to the assets and responsibility for the obligations in Fifty AS. The investment in the jointly controlled company is recognized on the basis of proportional consolidation, implying that Statnett accounts for its share of revenues, expenses, assets and liabilities.

#### **Investment in associated companies**

Associates are companies where Statnett has significant influence, i.e. Statnett can influence financial and operational decisions in the company, but does not have control of the company. Normally, these will be companies where the Group owns between 20 and 50 percent of the voting shares. Associates are recognized using the equity method. This means that the Group's share of profit/loss and amortisation of any excess value is recognised in the income statement. The financial statements of associates are restated in accordance with IFRS. In the consolidated balance sheet, ownership in associates are recognised as financial fixed assets at historic cost plus accumulated profit/loss, less dividends and impairment if applicable.

#### **Purchase/sale of subsidiaries, jointly controlled companies and associates**

In the case of acquisition or sale of subsidiaries, jointly controlled companies or associates, the companies are included in the consolidated financial statements for the part of the year which they have been part of or associated with the Group.

#### **Investments in subsidiaries, jointly controlled companies and associates in Statnett SF (parent company accounts)**

Investments in subsidiaries, jointly controlled companies and associates are recognised in accordance with the cost method in the parent company accounts. Group contribution paid (net after tax) is added to the cost price of investments in subsidiaries. Group contribution and dividends received are recorded in the income statement as financial income, as long as the Group contribution and dividends are within the earnings accrued during the period of ownership. Dividends in excess of earnings during the ownership period are accounted for as a reduction in the share investment. Group contributions and dividends are recorded in the year they are adopted.

#### **Impairment**

At each reporting date, the Group assesses whether there are objective indications of impairment. If such indications exist, the investment is tested for impairment. The investment is impaired if the recoverable amount (higher of fair value less sales costs or value in use) is lower than the carrying value.

#### **Business combinations**

Business combinations are recognised according to the acquisition method. Acquisition costs are the total of the fair value on the acquisition date of assets acquired, liabilities incurred or taken over as compensation for control of the acquired enterprise, as well as costs, which can be directly attributed to business combinations.

## Note 20 Investments in subsidiaries, jointly controlled company and associates

The acquired enterprise's identifiable assets, liabilities and contingent liabilities, which satisfy the conditions for recognition according to IFRS 3, are recognised at fair value on the acquisition date. Goodwill arising from acquisitions, is recognised as an asset measured as the excess of the total consideration transferred and the value of the minority interests in the acquired company, beyond the net value of acquired identifiable assets and assumed liabilities. If the Group's share of the net fair value of the acquired enterprise's identifiable assets, liabilities and contingent liabilities exceeds the total consideration after re-assessment, the surplus amount is immediately recognised in the income statement.

Statnett SF had the following investments at 31 December 2018:

Company	Business nature	Year of acquisition	Registered office	Ownership interest	Voting rights	Carrying value (Amounts in NOK thousand)
<b>Subsidiaries</b>						
Statnett Transport AS	Transport and shipping	1996	Drammen	100%	100%	108,021
Statnett Forsikring AS	Insurance	1998	Oslo	100%	100%	30,200
Nord Link Norge AS	Develop and operate national transmission grid	2010	Oslo	100%	100%	2,000,262
NorGer AS	General Partner	2010/2011	Oslo	100%	100%	27,102
NorGer KS	No activity	2010/2011	Oslo	100%	100%	2,776
Nydalshøyden Bygg C AS	Real estate	2013	Oslo	100%	100%	6,342
Elhub AS	Data hub for electricity metering data	2014	Oslo	100%	100%	209,719
<b>Total subsidiaries</b>						<b>2,384,422</b>
<b>Joint controlled company and associates</b>						
Fifty AS	Develop and operate regulation and market systems	2017	Oslo	50%	50%	5,000
Nord Pool AS	Marketplace	2002/2008	Bærum	28%	28%	36,320
eSett OY	Nordic imbalance settlement	2013	Finland	33%	33%	16,891
KraftCERT AS	IT security	2014	Oslo	33%	33%	692
<b>Total jointly controlled company and associates</b>						<b>58,903</b>
<b>Total subsidiaries, jointly controlled company and and associates</b>						<b>2,443,325</b>

### Group value of companies recorded according to the equity method

(Amounts in NOK thousand)

	Group value at 1 Jan.	Result for the year	Dividend	Group value at 31 Dec.
<b>2018</b>				
Nord Pool AS, 28.2%	85,328	16,598	-9,357	92,569
eSett OY, 33.3%	8,750	9,142	-	17,892
KraftCERT AS, 33.3%	420	272	-	692
<b>Total associates</b>	<b>94,498</b>	<b>26,012</b>	<b>-9,357</b>	<b>111,153</b>
<b>2017</b>				
Nord Pool AS, 28.2%	88,850	12,082	-15,604	85,328
eSett OY, 33.3%	817	7,933	-	8,750
KraftCERT AS, 33.3%	819	-399	-	420
<b>Total associates</b>	<b>90,486</b>	<b>19,616</b>	<b>-15,604</b>	<b>94,498</b>

## Note 21 Joint operations

The Group has entered into agreements with transmission system operators in the Netherlands, Denmark, Germany and England to construct and operate subsea cables to the continent and the UK. These agreements are regarded as joint operations under IFRS.

### Principle

A "joint operation" is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets and obligations for the liabilities relating to the arrangement. The Group recognises its share of assets, liabilities, revenues and operating expenses relating to its involvement in a joint operation.

### Subsea cables in operation

TenneT TSO BV and Statnett SF have constructed a subsea cable to transport energy between Norway and the Netherlands, known as the NorNed cable. Each party owns its physical half of the cable, with Statnett SF owning the northern part and TenneT the southern part. The NorNed cable became operational in May 2008. Costs and trading revenues from the operation of the NorNed cable are shared equally between TenneT and Statnett.

Statnett SF owns Skagerrak cables 1-3 whereas Energinet.dk holds a long-term lease agreement for half of the cable capacity. Income from the lease is included in "Other operating revenue". At the end of December 2014, the Skagerrak Cable 4 became operational. Statnett SF and Energinet.dk each own its physical half of the cable, with Statnett SF owning the northern part and Energinet.dk owning the southern part. Costs and trading revenues related to the operation of the Skagerrak cables are shared equally between Energinet.dk and Statnett SF.

Statnett SF's assets in the cables are included in the asset group Land and subsea cables in the note related to fixed assets and intangible assets.

### Subsea cables under construction

In the autumn 2012 Statnett SF signed a cooperation agreement with the German companies TenneT and KfW in order to realize an HVDC interconnector between Norway (Tonstad) and Germany (Wilster). The project's name is NordLink. NordLink has a transmission capacity of 1400 MW. The interconnector consists of 53 km overhead line on the Norwegian side, a 514 km subsea cable and a 55 km land cable on the German side. The ownership will be shared equally, where Statnett SF will own the northern part through the wholly owned subsidiary NordLink Norge AS, and TenneT and KfW will own the southern part through a jointly owned German company. Costs and trading revenues are to be shared equally between Germany and Norway. Trading and technical licenses were granted for the cable in October 2014. Final investment decision was taken in February 2015. Placement of the subsea cable between Norway and Germany was finalized in Norwegian territory in 2018. In addition the placement of the cable in Danish and German territory started. In addition, testing of the converter station at Ertsmyra has started and is expected to be finalized in 2019. The interconnector will be in trial operation from the end of 2020.

National Grid NSN Link Ltd (NLL) and Statnett SF plan to realize an HVDC interconnector between Kvilldal in Norway and Blyth in North-East England. The project's name is North Sea Link, and the transmission capacity will be 1400 MW. The ownership will be shared equally, with Statnett SF as the owner of the eastern part and NLL the western part. Costs and trading revenues shall be shared equally between the parties. Technical license was already in place when the trading license was granted in October 2014. Final investment decision was taken in March 2015. In 2018, the first part of the subsea cable was put in place. The construction work for the converter station in Kvilddal and Blyth in England was also started. The interconnector will be in operation in 2021.

The value of work performed on the subsea cables under construction is included in the line Plants under construction in the balance sheet.

## Note 22 Related parties

### Principle

*Two parties are related if a party can influence the other party's decisions. Transactions between related parties are conducted at market terms.*

### Owner

As at 31 December 2018, Statnett SF was wholly-owned by the Norwegian State through the Ministry of Petroleum and Energy (MPE). Statnett has the following relations with MPE both as owner and regulatory authority.

### Regulatory authority

The Norwegian parliament (Storting) is the legislative authority that passes legislation based on bills put forward by the government. Regulations are adopted by the King in Council. The MPE administers its areas of responsibilities and delegates the administration of the greater part of the Energy Act to The Norwegian Water Resources and Energy Directorate (NVE). Pursuant to the Norwegian Public Administration Act, any administrative decision made by the NVE can be appealed to the MPE as the superior authority.

### Other related parties

Investments in subsidiaries, joint venture and associates are listed in note 20

### Parent company

Statnett SF is the borrower of the Group's external loans. The central treasury function in Statnett SF coordinates and manages financial risks related to currency, interest rates and liquidity within the Group. Loan agreements have been entered into between Statnett SF and its subsidiaries. In addition, there are agreements entered relating to services between companies within the Statnett Group. All agreements are part of normal commercial operations, and the transactions are conducted at market terms. Transactions with subsidiaries relate mainly to the following:

#### Statnett Forsikring AS

Statnett Forsikring AS is licensed to provide insurance coverage and reinsurance, though limited to companies within the Statnett Group where the ownership exceeds 50 percent. In addition, Statnett Forsikring AS operates both as a direct personal insurance company and a non-life insurance company.

#### Statnett Transport AS

Statnett Transport AS provides transportation services, transporting heavy machinery/equipment on land and at sea. Statnett Transport AS has a subordinated loan from Statnett SF and the loan ranks behind other creditors. Statnett also provides administrative services within ICT, legal, purchasing and finance.

#### NordLink Norge AS

NordLink Norge AS will build and own the northern part of NordLink, an electricity cable connecting the German and the Norwegian high-voltage electricity grids. The German companies TenneT and KfW, through a jointly owned German company, will build and own the southern part of NordLink. NordLink will be the first direct interconnector between the Norwegian and German electricity markets. NordLink will be operated by the transmission system operators, Statnett and TenneT respectively. Statnett SF is committed to providing the necessary funding for the project and has entered into a Capital Contribution Agreement with NordLink Norge AS. The funding committed is equal to NordLink Norge AS 50 percent share of the total investments costs related to the project. The drawdown will be made at intervals ensuring that NordLink Norge AS will be in a position to fulfil its own obligations.

Statnett SF has issued payment guarantees towards the main suppliers on NordLink Norge AS' behalf according to the terms and conditions in the agreements entered into with the respective suppliers. The guarantee fee is at market terms.

NordLink Norge AS has no employees. Statnett SF provides project services in the construction phase in addition to certain administrative services to support the operation of the company.

#### Elhub AS

Elhub AS will develop and operate the central datahub for metering values and market processes in the Norwegian electricity market. Its main function is automated metering processing and distribution of same, as well as processing of market processes such as change of electricity supplier, transfers and reporting. The datahub became operational in February 2019.

Statnett SF has been committed to providing the necessary funding of the project. A fee equal to 0.21 percent p.a. of unused credit facility has been charged by Statnett SF. Statnett SF also provides certain administrative services within ICT, legal, purchasing and finance.

#### Statnett Rogaland AS



## Note 22 Related parties

Statnett Rogaland AS was a wholly owned subsidiary. The company was dissolved in December 2018.

### NorGer AS and NorGer KS

Statnett SF owns 100 percent of the shares in NorGer AS and 90 percent of the shares in NorGer KS. In addition, NorGer AS owns 10 percent of the shares in NorGer KS. This entails that Statnett SF, including indirect ownership, controls 100 percent of the shares in NorGer KS. The companies have limited operation. As of December 2018 the equity in NorGer KS was reduced with NOK 269 million and NOK 156 million was disbursed to the owners.

### Nord Pool AS

Statnett SF purchases transmission losses on Nord Pool AS on a daily basis and settle at the power exchange's market prices.

### Fifty AS

Fifty AS is a jointly controlled company between Statnett SF and Affärsverket svenska kraftnät, where each company owns 50 percent of the shares in Fifty AS. Fifty AS maintains and develops ICT solutions to support the balancing of the Nordic power system. Fifty AS delivers licences-, development- and maintenance services to Statnett SF. Fifty AS has no employees. Statnett SF provides project services related to the development of ICT systems in addition to certain administrative services to support the operation of the company. Transactions between Statnett SF and Fifty AS are listed in the table below, as jointly controlled company. Statnett SF has sold intellectual property rights to software to Fifty AS for NOK 6.5 million.

### eSett OY

eSett OY delivers services related to imbalance settlement of electricity markets in Finland, Sweden and Norway.

When eSett OY was established, Statnett SF and the other owners provided loans to the company. As of December 31, 2018 the loan from Statnett SF to eSett OY amounted to NOK 22 million.

### Dividend and group contribution

In 2018, Statnett SF has received dividends and group contribution from subsidiaries and associates totalling NOK 68 million.

#### Statnett SF inter-company accounts

(Amounts in NOK million)	Trade accounts		Lending		Borrowing		Trade acc. Payable	
	2017	2018	2017	2018	2017	2018	2017	2018
Subsidiaries	50	11	3,156	4,300	357	32	28	12
Jointly controlled company	-	68	-	-	-	-	-	-

#### Interest rates

Interest rates on long-term borrowing and lending have been agreed at six months' NIBOR with a mark-up in the interval 0.5 - 2.5 percent.

#### Statnett SF's intra-group trading

(Amounts in NOK million)	Regulated operating revenue		Other oper. revenues		Operating costs	
	2017	2018	2017	2018	2017	2018
Subsidiaries	33	-16	59	76	-132	-101
Jointly controlled company	-	-	-	21	-	20

(Amounts in NOK million)	Financial income		Financial costs	
	2017	2018	2017	2018
Subsidiaries	89	126	-5	-4

(Amounts in NOK million)	Group contribution received		Dividend received	
	2017	2018	2017	2018
Subsidiaries	4	-	16	68

## Note 23 Remuneration to Group Management

### The Board's statement regarding salaries and other remunerations to Group management 2018

The statement concerning remuneration to the President and CEO and the Group management has been prepared in accordance with the enterprise's articles of association, provisions in the Public Limited Liability Companies Act as well as the Ministry of Trade, Industry and Fisheries "guidelines for salary and other remuneration for group management in enterprises and companies with state ownership" as of 13 February 2015.

### Management remuneration policy

The Group's guiding principle is to keep remuneration and other benefits for the Group management at a competitive level to ensure that the Group attracts and retains high-quality senior executives, though not taking a leading position when it comes to salary. However, the salary must be competitive for our industry and compared to other companies recruiting in the same market as Statnett. Also, the salary must reflect individual experience, area of responsibility and achieved results. The management remuneration policy is applicable for Statnett SF and subsidiaries.

### Guidelines for salary and other remuneration

Based on the Ministry of Trade, Industry and Fisheries "guidelines for salary and other remuneration for group management in enterprise and companies with state ownership" the Board of Directors has set a framework for elements to be included in the Group's future salary and remuneration package for new members of Group management. The following guidelines are applicable:

**Fixed salary:** Fixed salary is determined based on an assessment of the specific position and the market, measured against Statnett's policy of offering competitive terms, but not taking a leading position. When the fixed salary is determined, the total remuneration should be used as basis.

**Pensions:** Membership in Statnett's defined contribution plan. This entails no new individual pension agreements.

**Personnel insurance:** Arrangements applicable for other employees including group life-, accident-, sickness insurance as well as occupational injury- and travel insurance, are also applicable for Group management.

**Car arrangement:** Car allowance can be offered. In exceptional cases company car can be offered if needed in the line of duty.

**Other remunerations:** Coverage of newspapers, mobile phone and broadband communication in accordance with established standards.

**Internal board members:** Internal board members do not receive remuneration, however board insurance exists for all board members.

This is applicable for Statnett SF and subsidiaries and will also be applicable for 2019.

### Existing arrangements for Group management

The remuneration to the Group management is prepared in accordance with the guidelines describe above. The Group management may have different remuneration due to individual agreements entered before the guidelines were determined.

In addition to a fixed salary, the Group management is entitled to a company car or car allowance, pension benefits and individual pension arrangements for salary beyond 12 times the Norwegian national insurance scheme basic amount. Four members of Group management has a company car. This is in compliance with agreements entered at an earlier stage. There is no bonus scheme or other incentive based schemes for Group management. In accordance with entered agreements, the retirement age for the President and CEO and the Group management is at 65 years of age.

The President and CEO has a pension agreement securing 66 percent of the pension base upon resignation. The President and CEO is entitled to 12 months' severance pay in the event of dismissal from the company, after a notice period of 6 months. No other members of Group management have agreements for salaries after the termination of their employment. The general manager in two subsidiaries are entitled six months' severance pay, after a notice period of six months.

### Execution of remuneration principles in 2018

The remuneration approval for Group management in 2018 was conducted in accordance with the above guidelines in Statnett and subsidiaries. There were no new remuneration agreements entered with members of Group management in 2018. The Board of Directors approves the annual salary adjustment for the company's president and CEO, and adopts a framework that the president and CEO uses to adjust the salaries for the rest of the Group management team. The salaries for the president and CEO and Group management, were in 2018 adjusted within the same limits as the rest of the Group.

The Board of Director's assessment is that the remuneration to Group management, is in compliance with requirements in the Ministry of Trade, Industry and Fisheries "guidelines for salary and other remuneration for group management in enterprises and companies with state ownership".

## Note 23 Remuneration to Group Management

### Organisation

The Board of Directors has established a remuneration committee, consisting of two owner-appointed board members and one employee representative. The remuneration committee is an advisory and preparatory body for the Board of Directors, and will put forward proposals for salary adjustments in accordance with the guidelines specified above. Separate instructions has been prepared for the remuneration committee. The president and CEO is a regular member of the committee. The Senior Vice President Employer Relations acts as committee secretary.

Remuneration to the Board (Amounts in NOK)		Board remuneration	
		2018	2017
<b>Board members</b>			
Per Hjorth (until June 2018)	Chair	216,000	422,000
Jon Fredrik Baksaas (from June 2018)	Chair	216,000	-
Synne Larsen Homble	Vice Chair	294,000	288,000
Kirsten Indgjerd Værdal (until June 2018)	Board member	135,000	265,000
Tove Elisabeth Pettersen (from June 2018)	Board member	135,000	-
Egil R Gjesteland	Board member	290,000	285,000
Maria Sandsmark	Board member	275,000	270,000
Einar Strømsvåg	Board member	290,000	285,000
Steinar Jøråndstad	Board member *)	270,000	265,000
Nils Ole Kristensen (until June 2018)	Board member *)	117,500	230,000
Karianne Burhol (until June 2018)	Board member *)	135,000	265,000
Pernille Dørstad (from June 2018)	Board member *)	117,500	-
Ole Bjørn Kirstihagen (from June 2018)	Board member *)	135,000	-
<b>Total board remuneration</b>		<b>2,626,000</b>	<b>2,575,000</b>

All figures are exclusive of employer's NICs

Board members receive compensation for their participation in the audit committee, remuneration committee or project committee. Board remunerations may therefore vary.

\*) In the case of employee representatives, only board members' fees are stated.

Remuneration/benefits to the Group management 2018 (Amounts in NOK)		Salary	Other remuneration*)	Pension cost	Total remuneration
<b>President and CEO</b>					
Auke Lont		3,051,146	185,596	2,401,516	5,638,258
<b>Executive Vice Presidents</b>					
Håkon Borgen	Technology & Development	2,097,502	141,590	622,626	2,861,718
Øivind Kristian Rue	Market & Operations	2,293,449	137,084	1,352,711	3,783,244
Bente Monica Haaland**)	Strategy & Communication	1,828,388	152,003	402,450	2,382,841
Knut Hundhammer	CFO & Chief of staff	2,448,160	135,273	753,185	3,336,618
Peer Olav Østli	ICT	1,981,918	153,971	943,267	3,079,156
Elisabeth Vike Vardheim	Construction	2,043,850	216,883	631,829	2,892,562
<b>Total remuneration</b>		<b>15,744,414</b>	<b>1,122,399</b>	<b>7,107,584</b>	<b>23,974,397</b>

All figures are exclusive of employer's NICs.

\*) Included value of company car or fixed car allowance, phone, news papers and personal insurance

\*\*\*) As from 1. May until year-end 2018, Bente Monica Haaland was hired out to DigitalNorway, and Knut Hundhammer has functioned in her role. Haaland has taken on new tasks in the Group from 2019 and Knut Hundhammer has succeeded as leader for the division

## Note 23 Remuneration to Group Management

Remuneration/benefits to the Group management 2017 (Amounts in NOK)		Salary	Other remuneration*)	Pension cost	Total remuneration
<b>President and CEO</b>					
Auke Lont		2,965,666	183,234	2,152,461	5,301,361
<b>Executive Vice Presidents</b>					
Håkon Borgen	Technology & Development	2,041,681	125,599	544,619	2,711,899
Øivind Kristian Rue	Market & Operations	2,255,692	145,795	1,229,446	3,630,933
Bente Monica Haaland	Strategy & Communication	1,740,886	151,370	396,512	2,288,768
Knut Hundhammer	CFO & Chief of staff	2,380,190	120,104	746,421	3,246,715
Peer Olav Østli	ICT	1,840,780	155,875	863,229	2,859,884
Elisabeth Vike Vardheim	Construction	1,993,334	210,882	624,764	2,828,980
<b>Total remuneration</b>		<b>15,218,229</b>	<b>1,092,859</b>	<b>6,557,452</b>	<b>22,868,540</b>

All figures are exclusive of employer's NICs

\*) Included value of company car or fixed car allowance, phone, news papers and personal insurance

### Terms and conditions, senior executives

Title/name	Terms and conditions for retirement age, early retirement pension, retirement pension and severance pay
<b>President and CEO:</b> Auke Lont	<p>From the age of 65, the full annual retirement pension is 66 percent of the pension base. The pension base is adjusted annually by the same percentage increase as in the basic amount under the National Insurance Scheme. From the age of 67, the annual retirement pension of 66 percent will be co-ordinated with the retirement pension disbursed from Statnett SF's Group Pension Fund and the Norwegian National Insurance Scheme.</p> <p>Upon death, any surviving spouse and children under the age of 21 will receive a pension.</p> <p>Should the President become disabled before the age of 65, he will receive a disability pension. The full disability pension equals the retirement pension awarded at the age of 65. The disability pension disbursement will be reduced according to disability.</p> <p>The President and CEO is entitled to 12 months' severance pay in the event of dismissal from the company, after a notice period of 6 months.</p>
<b>Executive Vice Presidents:</b> Håkon Borgen Øivind Kristian Rue	<p>The retirement age is 65, but with the right to retire with an early retirement pension after the age of 62. In the event of retirement between 62 and 65 an annual payment of 66 percent of the pension base will be disbursed. The pension base is adjusted annually by the same percentage increase as in the basic amount under the National Insurance Scheme. In the event that income is received from others and this, together with the early retirement pension disbursed by Statnett, exceeds the final salary the early retirement pension will be reduced by 50 percent of the amount that exceeds the final salary.</p> <p>From the age of 65, the full annual retirement pension is 66 percent of the pension base. The pension base is adjusted annually by the same percentage increase as in the basic amount under the National Insurance Scheme.</p> <p>Upon death, any surviving spouse and children under the age of 21 will receive a pension.</p> <p>Entitlements to pension benefits beyond what is gained through the collective pension scheme will lapse if they are no longer employed by Statnett SF on their 62nd birthday.</p> <p>Should any of the above persons become disabled before reaching the age of 65, he or she will receive a disability pension. The full disability pension equals the retirement pension awarded at the age of 65. The disability pension disbursement will be reduced according to disability.</p>

## Note 23 Remuneration to Group Management

### Terms and conditions, senior executives

Title/name	Terms and conditions for retirement age, early retirement pension, retirement pension and severance pay
<b>Executive Vice Presidents:</b> Håkon Borgen Øivind Kristian Rue	<p>For Øivind Rue, the annual retirement pension will be coordinated with the retirement pension disbursed from Statnett SF's Pension Fund and the Norwegian National Insurance Scheme, from the age of 67.</p> <p>Håkon Borgen is included in the enterprise's defined contribution scheme and related compensation plan.</p>
<b>Executive Vice President:</b> Peer Olav Østli	<p>The retirement age is 65, with the right to retire with an early retirement pension at any time after 62. The full contribution period is 30 years. In the event of retirement between ages 62 and 65, an annual payment shall be disbursed of 66 percent of the pension base, less one percentage point for each year between 62 and 65. The pension base is adjusted annually by the same percentage increase as in the basic amount under the National Insurance Scheme. Pension disbursement may be reduced if the member receives any salary, pension or remuneration from other companies in the Statnett Group.</p> <p>From the age of 65, the full annual retirement is 66 percent of the pension base. The pension base is adjusted annually by the same percentage increase as in the basic amount under the National Insurance Scheme. From the age of 67, the annual retirement pension is covered through the National Insurance Scheme and Statnett's group pension scheme, plus 66 percent of the part of the pension base that exceeds 12 times the basic amount, provided that there is a full contribution period (30 years).</p> <p>Upon death, any children under the age of 21 will receive a children's pension.</p> <p>If the Vice President leaves the company before retirement age, a pension rights certificate will be issued, which will secure retirement pension benefits from age 65. The pension rights certificate will be adjusted by 75 percent of the increase in the basic amount for each year until retirement.</p> <p>Upon disability before reaching the age of 65, the Vice President will receive a disability pension. The full disability pension equals the retirement pension awarded at the age of 67, based on the pension base at the time the disability occurred. The disability pension disbursement will be reduced according to disability.</p>
<b>Executive Vice Presidents:</b> Knut Hundhammer Bente Monica Haaland Elisabeth Vike Vardheim	<p>The retirement age is 65. A pension agreement has been entered into in addition to the ordinary membership in the enterprise's group pension scheme, where the pension is secured through a bank saving account balance, including interest, disbursed to Vice Presidents. Statnett will, each year until retirement or resignation, pay up to 30 percent of the difference between the ordinary salary and 12 times the Norwegian national insurance scheme basic amount to the pension fund scheme. Upon death, the surviving spouse or spouse equivalent will receive an amount corresponding to the remaining savings balance including interest from Statnett SF. This lump sum will be taxable for the receiver.</p> <p>Knut Hundhammer og Elisabeth Vike Vardheim are in addition entitled to pension from the enterprise's defined benefit scheme from 67 years of age. Bente Monica Haaland is included in the enterprise's defined contribution scheme and related compensation plan.</p>

No loans have been made or security provided for members of the Group Management or Board of Directors.

## Note 24 Other liabilities

Other liabilities mainly consists of asset retirement obligations related to grid facilities.

### Principle

Estimates of costs related to retirement of tangible assets are recorded as liabilities from the time the Group deems that a legal or actual retirement obligation exists. Asset retirement obligations are discounted using estimates of future inflation and NVE interest rate. Changes in estimates due to asset retirement obligations approaching the estimated time of settlement are recorded as interest costs (accretion expenses).

See note 8 Tangible and intangible assets for a further description of the recording of asset retirement obligations.

### Specification of changes in other liabilities

Parent company/Group

<i>(Amounts in NOK million)</i>	Asset retirement obligations	Other liabilities	Total
<b>Liabilities at 1 January 2017</b>	<b>512</b>	<b>9</b>	<b>521</b>
New or changed estimates	115	23	138
Amounts charged against liabilities	-96	-	-96
Accretion expenses	15	-	15
<b>Liabilities at 31 December 2017</b>	<b>546</b>	<b>32</b>	<b>578</b>
New or changed estimates	97	43	140
Amounts charged against liabilities	-63	-	-63
Reduction due to divestments	-136	-	-136
Accretion expenses	16	-	16
Reclassification to short-term liability	-80	-	-80
<b>Liabilities at 31 December 2018</b>	<b>381</b>	<b>75</b>	<b>455</b>

There are no differences between parent company and Group.

For expected timing of cash outflows, see note 18 Financial risk management.

See note 3 Accounting estimates and assumptions for an explanation of the most significant causes to uncertainty in the estimates.



## Note 25 Secured debt and guarantees

The parent company may not pledge the enterprise's assets or provide other security, apart from providing security to financial institutions in connection with day-to-day banking transactions, and providing the customary security as part of the day-to-day operations. For guarantees issued on behalf of subsidiaries, see the note on related parties for details.

## Note 26 Contingent assets and liabilities

### Principle

*Contingent assets and liabilities are a potential asset or obligation where the existence is uncertain, and will be confirmed by a future event that may or may not occur, for example the outcome of a legal case or an insurance payment. Contingent liabilities are recorded in the annual financial statements, based on best estimate, if it is likely (more than 50 percent) that an obligation has occurred. When the probability is lower, information is disclosed if the potential obligation is significant and likelihood of payment is very low. A contingent asset will only be recorded in the balance sheet if it is highly probable (more than 90 percent) that the Group will receive the asset. If the probability is less than 90 percent, but there is a certain probability that the asset will benefit the Group, this will be disclosed in the financial statements.*

*Higher/lower revenues are contingent liabilities/assets in accordance with IFRS and are not recorded in the balance sheet. Please see note 4 for further details.*

There are not recorded contingent assets or liabilities in the financial statements.

In 2014 Statnett sold its former head office at Husebyplatået in Oslo to Husebyplatået AS with a recorded gain of NOK 56 million. In 2016 Statnett sold Noreveien 26 with a recorded loss of NOK 39 million, to the same buyer. The settlement is not final, and is dependent on the utilisation of the property granted to Husebyplatået AS as part of the future construction permit. Statnett estimates that the entity will receive payments of approximately NOK 800 million during the period 2021 – 2026 if the construction plans for Husebyplatået are realised. These expected payments are not recognized, and the estimates are uncertain.

## Note 27 Other operating costs

Other operating costs comprise cost types that are not classified on the other lines under operating costs.

### Principle

Other operating costs are recognized when incurred.

Property tax is classified as other operating costs and recognized in the financial year when an invoice that applies to the current year is received from the municipalities.

### Implementing IFRS 16

The Group will implement IFRS16 (Leasing) from 2019. See note 2 (Amended accounting principles and new accounting standards) for further details.

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
69	83	Lease rental payable	86	72
378	368	Contracted personnel/consultants/purchase of services	389	431
97	96	Insurance	69	31
409	253	Materials and subcontractors	192	408
243	248	Property tax	259	248
136	174	IT costs	180	143
411	312	Miscellaneous	316	325
<b>1,743</b>	<b>1,534</b>	<b>Total other operating costs</b>	<b>1,491</b>	<b>1,658</b>

### Operational lease agreements (maturity less than one year from balance sheet date)

Parent company			Group	
2017	2018	(Amounts in NOK million)	2018	2017
40	49	Buildings	51	42
20	23	Contracted communication	23	20
9	11	Miscellaneous	12	10
<b>69</b>	<b>83</b>	<b>Total lease rental payable</b>	<b>86</b>	<b>72</b>

### Operational lease agreements due later than one year from balance sheet date

The Group has entered into several minor lease agreements for buildings, communication and other operating equipment relating to ordinary onsite operations and implementation of projects. The leases vary from a few months to 15 years. Leases are paid and carried to expense in accordance with the terms of each contract.

### Auditor's fee (current auditor - Deloitte)

Parent company			Group	
2017	2018	(Amounts in thousand kroner)	2018	2017
-	519	Statutory audit	641	-
-	320	Other attestation services	364	-
-	373	Tax-related assistance	373	-
-	942	Other assistance	989	-
-	<b>2,154</b>	<b>Total fees (excl. VAT)</b>	<b>2,367</b>	-

## Note 27 Other operating costs

### Auditor's fee (previous auditor - EY)

Parent company			Group	
2017	2018	(Amounts in thousand kroner)	2018	2017
1,131	584	Statutory audit	813	1,462
280	298	Other attestation services	313	362
63	17	Tax-related assistance	17	64
840	-	Other assistance	-	844
<b>2,314</b>	<b>899</b>	<b>Total fees (excl. VAT)</b>	<b>1,143</b>	<b>2,732</b>
<b>2,314</b>	<b>3,053</b>	<b>Total auditor's fee</b>	<b>3,510</b>	<b>2,732</b>

## Note 28 Other comprehensive income

Other comprehensive income is part of Total comprehensive income, and is also part of Statement of changes in equity. Other comprehensive income to be reclassified to profit or loss in subsequent periods, is recorded as Other items in the Statement of changes in equity, while Other comprehensive income not to be reclassified to profit or loss in subsequent periods, is recorded as Other equity accrued in the Statement of changes in equity.

### Specification of other comprehensive income

Parent company/Group (Amounts in NOK million)	Fair value of financial instruments	Cash flow hedge reserve see note 15	Total Other comprehensive income recorded in Other items	Estimate deviations of pension liabilities	Total Other comprehensive income recorded in Other equity accrued	Total Other comprehensive income
<b>Carrying value 1.1.17</b>	-	-	-	-	-	-
Changes, gross	7	-185	-178	1	1	-177
Tax effect	-6	-110	-116	-293	-293	-409
<b>Carrying value 31.12.17</b>	-	<b>23</b>	<b>23</b>	<b>67</b>	<b>67</b>	<b>90</b>
<b>Carrying value 1.1.18</b>	-	-	-	-	-	-
Changes, gross	1	-272	-271	-225	-225	-496
Tax effect	-1	267	266	79	79	345
<b>Carrying value 31.12.18</b>	-	<b>-62</b>	<b>-62</b>	<b>-20</b>	<b>-20</b>	<b>-82</b>

## Note 29 Assets held for sale

### Principle

If the carrying amount of a non-current asset is expected to be recovered principally through a sale transaction rather than through continuing use, the asset is to be classified as held for sale. The asset must be available for immediate sale, and its sale must be highly probable and expected to take place within one year. Upon reclassification, depreciations cease even when the asset is still in use, and the asset is to be measured at the lower of its carrying amount and fair value less costs to sell.

The Group has entered an agreement concerning sale of gas turbines and related assets from the back-up power plant at Tjeldbergodden. The carrying value was NOK 293 million, and the assets were reclassified as Assets held for sale during the second quarter of 2018. The sale was completed by the end of March 2019 and will be recorded during the first quarter of 2019.



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To the General Meeting of Statnett SF

## INDEPENDENT AUDITOR'S REPORT

### Report on the Audit of the Financial Statements

#### Opinion

We have audited the financial statements of Statnett SF, which comprise:

- The financial statements of the parent company Statnett SF (the Company), which comprise the balance sheet as at 31 December 2018, the income statement, statement of changes in equity 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 Statnett SF and its subsidiaries (the Group), which comprise the balance sheet as at 31 December 2018, the income statement, 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 International Financial Reporting Standards as adopted by the EU.
- 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.

#### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

The key audit matters identified in our audit are:

- Investments in tangible fixed assets and plants under construction
- Currency hedging



### *Investments in tangible fixed assets and plants under construction*

Key audit matter	How the matter was addressed in the audit
<p>Refer to note 8 and note 9 in the group financial statements for specification of Statnett's investments in tangible fixed assets and plants under construction. Refer also to note 3 for a description of related estimates and assumptions, and description of the impact tangible fixed assets and plants under constructions have on the revenue cap in note 4.</p> <p>At 31 December 2018, the carrying value of tangible fixed assets amounts to NOK 40,948 million and the carrying value of plants under construction amounts to NOK 17,581 million. The Group's investments amount to NOK 12,377 million in 2018. Investments include additions and construction interest capitalized on plants under constructions and facilities purchased in the period.</p> <p>For investments management must make assumptions about:</p> <ul style="list-style-type: none"> <li>whether costs should be capitalized or expensed, for accounting and tax purposes</li> <li>estimate accrued costs and stage of completion of the cableprojects at the end of the reporting period</li> </ul> <p>For plants under construction, management must make assumptions about when projects are transferred from plants under construction to tangible asset, "the asset is ready to use".</p> <p>For assets that are ready to use and facilities purchased, management must make assumptions about identification of significant components of the asset and remaining useful life for the components.</p> <p>Due to size and complexity of tangible fixed assets and plants under construction, the level of management judgement involved and the impact on the revenue cap, investments in tangible fixed assets and plants under construction is identified as a key audit matter.</p>	<p>We have assessed Statnett's process for following up investment projects. We have tested the design and implementation of controls established when transferring projects from plants under construction to tangible assets, identification of significant components for projects and purchased facilities, estimating remaining useful life and stage of completion and estimating when the asset is ready to use.</p> <p>We have evaluated and challenged management's assessment about:</p> <ul style="list-style-type: none"> <li>whether costs should be capitalized or expensed, for accounting and tax purposes</li> <li>when projects are transferred from plants under construction to tangible asset</li> <li>remaining useful life</li> <li>degree of identification of significant components</li> <li>method for estimating stage of completion of the cables, and</li> <li>estimated accrued costs at the end of the reporting period.</li> </ul> <p>We have tested a sample of this year's additions and evaluated if they are correctly capitalized or expensed. We have also tested a sample of estimated stage of completion and accrued costs at the end of the reporting period.</p> <p>For assets ready to use in 2018 we have for a sample tested when the project is transferred from plants under construction to tangible asset, identification of significant components and estimated remaining useful life.</p> <p>For facilities purchased in 2018 we have for a sample tested identification of significant components and estimated remaining useful life.</p> <p>We have assessed the adequacy of the related disclosures in the financial statement.</p>

### *Currency hedging*

Key audit matter	How the matter was addressed in the audit
<p>Refer to note 15 in the group financial statement for a description of Statnett's use of currency derivatives to hedge currency risk in procurement contracts, and the accounting of currency</p>	<p>We have assessed Statnett's process for identifying, establishing and following up currency hedging in procurement contracts, measuring</p>





<p>derivatives and embedded derivatives in procurement contracts.</p> <p>At 31 December 2018, the carrying value of derivatives related to investments in foreign currency amounts to assets of NOK 83 million and liabilities of NOK 32 million.</p> <p>There is complexity associated with:</p> <ul style="list-style-type: none"> <li>• estimating payments when hedging currency risk in contracts that have milestones that are invoiced in accordance with the degree of project completion</li> <li>• calculating fair value of embedded currency derivatives in procurement contracts nominated in currencies not normally used in transactions between buyer and seller, and</li> <li>• measuring and recognition of inefficiency according to IFRS 9</li> </ul> <p>Due to the level of complexity in calculating and accounting for currency hedging, currency hedging has been identified as a key audit matter.</p>	<p>inefficiency and calculating fair value of embedded currency derivatives.</p> <p>We have tested whether the hedging documentation, calculated inefficiency and presentation are in accordance with IFRS 9 for a sample of currency hedges of procurement contracts.</p> <p>For embedded derivatives in procurement contracts, we have assessed the appropriateness of the valuation model and recalculated fair value for a sample.</p> <p>We have assessed the adequacy of the related disclosures in the financial statement.</p>
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#### *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 in accordance with International Financial Reporting Standards as adopted by the EU, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's and the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

#### *Auditor's Responsibilities for the Audit of the Financial Statements*

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report



that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with 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.

As part of an audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error. We design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's or the Group's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company and the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company and the Group to cease to continue as a going concern.
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.



### **Report on Other Legal and Regulatory Requirements**

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

Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors' report and in the statements on Corporate Governance and Corporate Social Responsibility concerning the financial statements, the going concern assumption 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, 4 April 2019  
Deloitte AS

**Gry Kjersti Berget**  
State Authorised Public Accountant (Norway)

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

# Cost development

## Introduction

Statnett publishes a report on the company's cost development every other year. This was instigated following a review of the financial regulation of Statnett by the Norwegian Water Resources and Energy Directorate (NVE) that was submitted for public hearing in 2015. The report proposed the publication of a new regular report on Statnett's cost development, which was issued for the first time in 2017, together with the company's Annual Report for 2016. The report provides an important supplement to financial regulation in that it helps Statnett's stakeholders to get an understanding of the development and changes in the company's costs.

NVE also instructs Statnett to report on the development of costs for completed projects, from estimates in licence application to project completion. This report will be published in the autumn at the same time as the Grid Development Plan (NUP).

This report is Statnett's response to NVE's instruction for cost reporting for the period 2014–2023. It includes historic costs for the period 2014–2018, and forecasts for the period 2019–2023. Expected changes in permitted income are shown for the period leading up to 2025. Explanations are given for major deviations between forecasts in the previous report and actual costs for 2017 and 2018. The reporting covers all activities in Statnett SF. Daughter companies are not included since these are an insignificant part of the regulated activities. All costs are presented in nominal NOK unless otherwise stated.

In addition to reporting at enterprise level, changes are also shown per function. The functions are defined in the same way as in the corresponding cost reporting in 2017, based on the allocation of activities applied in the European TSO benchmarking e3-Grid in 2013.

The 2017 report revealed an increase in Statnett's activity levels from both a historical and future perspective. This increase is primarily attributable to investments and a higher asset base, as well as the acquisition of transmission grid assets and new tasks from NVE. However, the report also showed that operating expenses did not rise at the same rate as the asset base. It was concluded that Statnett has become a more efficient enterprise through its internal efficiency improvement programme, which in turn has helped restrict the increase in the tariff basis.

## Summary

Statnett is in a period of historically high investments and has projects under planning and construction across the whole of Norway, in addition to interconnectors to other countries. In 2018, Statnett's investments reached a planned peak, and are expected to decrease moving forward. A high proportion of these investments relate to interconnectors to Germany and the UK, and related grid reinforcements in Norway. Statnett has also dedicated significant resources to major projects in Northern Norway, the Oslo region and connection of wind power in Central Norway. Statnett's investments in the transmission grid will ensure security of supply in the future and contribute to significant value creation for society. In connection with the implementation of the EU's third energy package, it will enter into law that Statnett will be sole owner of the transmission grid in Norway. This involves the takeover of significant grid infrastructure from third parties and oblige the company to establish operating organisations in new areas.

Statnett's cost basis and permitted income increased in the period 2014–2018, primarily due to a higher asset base. Most of the increase relates to capital costs, which comprise depreciation and the return on grid investments. Operating expenses also rose in the period, but not at the same rate as the asset base. Statnett's permitted income will continue to grow as major projects are completed in the period leading up to 2022, chiefly as a result of higher capital costs. While this applies to the entire period 2019–2023, growth is expected to diminish after 2021 as investment levels and costs for completed projects recognised in the balance sheet in the period gradually fall. After 2022, a higher proportion of the portfolio will consist of smaller substation projects, in particular reinvestments. At the same time, there is major uncertainty attached to scope of investments after 2022, where major constructions of wind power, new industry and other consumption could increase the need for grid investments.

Statnett implemented an extensive efficiency-improvement programme between 2013 and 2018. A 17 per cent efficiency improvement in the period ensured that operating expenses did not grow at the same rate as the asset base. The programme has improved the operating efficiency of existing infrastructure, as well as development projects and support functions. These results, combined with lower market interest rates, meant that the tariff basis for 2013–2018 came in lower than estimated in Statnett's equity application in 2013 and the Grid and Energy White Papers.

Statnett is currently establishing the frameworks for a new efficiency-improvement initiative to help the company maintain its position as one of Europe's most efficient TSOs in both the short and long term. This encompasses efficiency improvements in project implementation due to changes in the project portfolio, reductions in construction client costs and project procurements, along with measures intended to contribute to a further 20 per cent improvement in efficiency in operations and maintenance and staff and support functions. This is an important prerequisite to be able to achieve the company's goal of levelling out the tariff for general consumption after 2023.

## 1 Development at enterprise level

In this section, the cost development at enterprise level<sup>1</sup> is described. The reporting is based on Statnett's permitted income at enterprise level without quality adjustment for non-delivered energy (KILE). First, historical changes in permitted income between 2014 and 2018 are described, and deviations from the previous report for 2017 and 2018 are explained. This is followed by an outline of expected development between 2019 and 2025, based on forecasts for permitted income. Historical and forecast development in salaries, bought-in services and other operating expenses are described in more detail. This section also provides a statement of historical and anticipated development in new assets recognised in the balance sheet and facilities under construction, as well as higher/lower revenue.

### 1.1 Historical costs

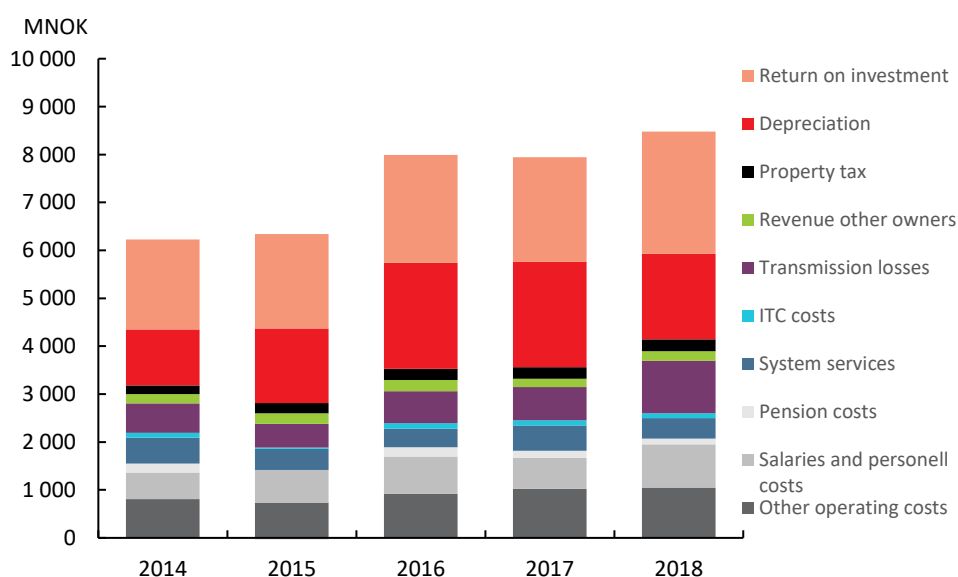
Since network activities are a natural monopoly, Statnett's revenues are regulated and controlled by the Norwegian Water Resources and Energy Directorate (NVE), which establishes an annual revenue cap (permitted income). Permitted income is intended to cover the costs of developing and maintaining the grid and to provide a reasonable return on invested capital provided the transmission grid is planned, constructed, operated, utilised and maintained in a cost-effective manner.

Development in permitted income in the recent five-year period (2014–2018) is shown in Figure 1. Permitted income has risen by around NOK 2 billion during the period. Capital costs, i.e. depreciation and the return on invested capital, account for more than half the costs. In the ensuing sections there will be given a brief explanation of the various cost items, and a description of historical development where relevant.

#### Return on investment

The regulated return is calculated as the NVE rate of return multiplied by the regulated asset base from two years ago, with an increment of one per cent for working capital. Permitted income includes an increment to eliminate the effect of time lags. In practice, this means that Statnett's permitted income includes the return on book values recognised for the year. The overall effect of return on investment is illustrated in figure 1. The company's return

Figure 1: Permitted income development



<sup>1</sup> In this report, company, enterprise and Statnett mean the same, and refer to the parent company Statnett SF in the Statnett Group.



has increased following the completion of major investment projects such as Ørskog–Sogndal, parts of the project "Western Corridor" and Ofoten–Balsfjord, in addition to a large number of smaller power line and substation projects. The regulated return is also dependent on the reference interest rate used in the regulation (the NVE regulated rate of return), which has decreased from 6.6 per cent to 6.1 per cent during the period. The additions to the return basis for the period are described in more detail in Section 2.3.

### **Depreciation**

Depreciation of grid capital from two years ago is included in the revenue cap, though permitted income includes an increment to eliminate the effect of time lags in the same way as for the return on investments. This means that, assuming 100 per cent efficiency, Statnett can collect the depreciation in the same year it arises. The graph shows the combined effect of depreciation from two years ago and the increment. The licence for operation of the back-up gas-fired power plants at Nyhamna and Tjeldbergodden expired at the end of 2016. Consequently, the assets were written down to realisable value, which resulted in a higher depreciation of the cost base for 2016 and 2017. The remaining increase in depreciation is attributable to a higher asset base resulting from new investments and newly acquired infrastructure.

### **Property tax**

Statnett's infrastructure and buildings are subject to property tax, which is included in the company's permitted income without a time lag. These costs have increased due to new infrastructure and to a lesser extent to the introduction of property tax or higher property tax rates by several municipalities.

### **Permitted income for other owners of the transmission grid**

Statnett collects permitted income for the entire transmission grid, including grid owned by third parties. Statnett acquired parts of the transmission grid owned by third parties in the period 2014–2018 and plans to acquire the remaining portion over the next few years. A reduction in permitted income for other owners will result in a corresponding increase for Statnett as Statnett will receive permitted income for these facilities. Permitted income for other owners includes the NordLink interconnector to Germany, which is owned by a subsidiary and therefore

income of other transmission grid owners will increase in 2019.

### **Transmission losses**

Costs relating to coverage of transmission losses are determined based on the volume from two years ago, while the reference price for power is estimated based on the current year's power price and consumption pattern. The volumes fluctuate relatively little in the period, and the change is primarily due to changes in the power price. The grid loss for the last five years peaked in 2018 as a result of high power prices during the year.

### **Transit costs (ITC)**

The European Inter-Transmission System Operator Compensation (ITC) mechanism obliges TSOs in perimeter zones to pay compensation to TSOs in countries through which power flows (pass-through countries) for using capacity in their grids. As the grid owner in a perimeter zone, Statnett pays annual transit costs, which are included as an increment to permitted income.

### **System operation costs**

System operation costs relate to Statnett SF's responsibility for maintaining an instantaneous balance in the power system and satisfactory delivery quality. These costs mainly relate to procurement of reserves and regulation services (ancillary costs). Statnett's permitted income includes 40 per cent of actual system operation costs and 60 per cent of the system operation norm stipulated by NVE. System operation costs were at historically low levels between 2014 and 2016, primarily due to hydrological conditions and low prices, along with Statnett's efficiency-improvement initiatives. The system operation norm for 2018–2019 has been set lower than the previous norm<sup>2</sup>, which will reduce system operation costs included in permitted income in 2018.

### **Operating expenses, salaries, payroll and pension costs and R&D costs**

Operating expenses are included in permitted income with a two-year time lag, adjusted for price increases. This item includes all operating and maintenance costs relating to Statnett's monopoly business, but excludes depreciation, property tax, transmission losses, system operation costs and transit costs as these are treated as separate items in

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<sup>2</sup> The previous norm for system operation costs applied to the period 2013–2017.



Statnett's permitted income. See Section 1.4 for more information on operating expenses.

Salaries and payroll costs, along with pension costs, are included in the calculation of permitted income and recognised under operating expenses. These are presented as separate items in Figure 1 in line with NVE's instructions. Pension costs were negative in 2015 due to the non-recurring effect of transitioning from a defined-benefit to a defined-contribution pension plan, which covered a high percentage of the enterprise's employees. Please see Section 1.3 for more details of payroll costs and bought-in services.

R&D costs for NVE-approved projects are also treated as a separate item in calculating Statnett's permitted income. These costs are included as an increment to the revenue cap in the same year they arise. NVE-approved R&D costs account for a small percentage of Statnett's permitted income and are collated with operating expenses in Figure 1 based on NVE's instructions.

### Deviations from previous reporting

The table below shows deviations between the cost development forecast in previous reporting and actual cost development over the last two years.

Permitted income (MNOK)	2017	2018
Forecast	7 400	8 370
Actual	7 780	8 310
Deviation	380	-60

A lower-than-forecast NVE regulated return in investments contributed to a lower return in both years. Previous reporting was based on a rising interest rate, while the interest rate has remained relatively constant.

The main reason for higher-than-forecast costs in 2017 are changes in estimated realisable values for back-up gas-fired power plants at Nyhamna and Tjeldbergodden, which resulted in a higher depreciation cost base in both 2016 and 2017. The deviation from the previous forecast in 2017 was also attributable to higher power prices than expected. However, reduced construction costs and deferred investments that resulted in fewer assets being recognised in the balance sheet and a lower-than-forecast return basis, along with lower system operation costs, reduced deviations compared with 2017.

In overall terms, there was a relatively small deviation between actual and forecast permitted income in 2018. The actual deviations in the cost groups largely cancelled each other out. On the one hand, reduced construction costs resulted in lower-than-forecast returns and depreciation. The new norm for system operation costs in 2018 also resulted in lower permitted income. On the other hand, the revenue cap for transmission losses increased due to high power prices during the year.

### Statnett is determining the basis for the power system of the future

Statnett is in a period of historically high investments. Over the next two to three years, Statnett will complete an important phase of investments in the transmission grid involving the establishment of an extensive portfolio of construction projects, as well as upgrading and renewal of many existing facilities. This report primarily focuses on Statnett's cost development, and the beneficial effects of the company's activities and increased use of resources are not presented in the same detail. It is nonetheless important to note that Statnett's increased use of resources, much of which is attributable to construction projects, contributes to ongoing stable operations, good security of supply and value creation for existing and new production and consumption. Statnett's report "Long-term market analysis, Nordics and Europe 2018–40" shows that society is transitioning to an increasingly electrified and more renewable power system more quickly than previously assumed. Measures currently being realised in the transmission grid, together with new system and market solutions, are facilitating handling of significant volumes of new renewable production and increased consumption while maintaining security of supply. These measures are also paving the way for increased electrification, which will play a key role in creating a climate-friendly future and further value creation for society.

The Norwegian Energy Act and Statnett's Articles of Association require the electricity grid to be developed in a rational socio-economic manner. This means when making decisions, Statnett must assess and substantiate that the social benefits of such projects outweigh the social costs. Statnett is bound by the Norwegian government's regulatory financial framework and performs cost-benefit analyses for all grid measures above a material size to assess whether these are in the best interests of society. Choice-of-concept studies for major new power lines and/or substations are submitted to OED for a ruling. They are also quality-assured by a third party. The Ministry then arranges a public review and issues a public statement

regarding the need for the power line infrastructure the chosen concept and any other politically important issues. Statnett's grid investments help secure an uninterrupted power supply for Norwegian consumers, facilitate industrial development and new power production and are of importance for power prices in different regions. The measures also affect the climate, environment and land use. Thus, it is evident that Statnett's measures impact Norwegian society in several ways. More information about the company's projects and cost-benefit analyses can be found on Statnett's website. The report on completed investment projects that will be published together with the NUP in 2019 will contain information on costs and beneficial effects.

### Statnett's operating expenses have not risen at the same rate as the asset base

Cost-effective construction and operation of the transmission grid is established as an object in Statnett's Articles of Association and is accorded a high priority throughout the enterprise. In 2013, Statnett was rated one of the most cost-efficient transmission system operators (TSOs) in Europe, based on figures from 2011. To guarantee efficiency improvements, including during periods of rising activity levels, in 2013 Statnett established a programme designed to improve cost-efficiency by 15 per cent. The target covers all activities at Statnett and involves efficiency improvements in the operation of existing infrastructure, development projects and support functions.

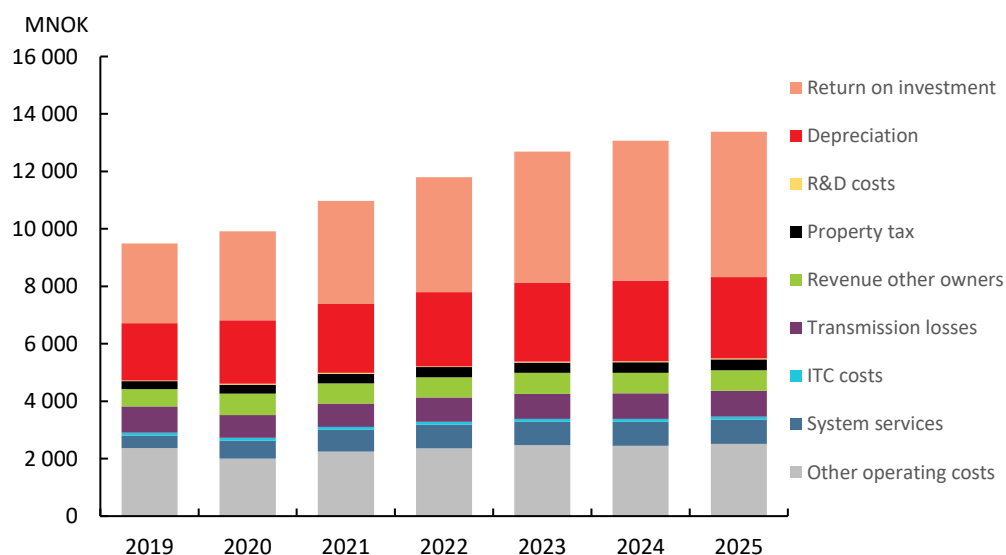
Results from the final report on the "15 per cent programme" issued at the end of 2018 have been used in this report. This measures developments from the 2013 budget to actual results in 2018. The overall calculations show Statnett's efficiency measured as total influenceable operating expenses divided by weighted maintenance objects (WMOs). It is estimated that the programme has contributed NOK 5 billion towards lower tariffs in the period 2016–2025. This is around 5 per cent of the total tariff basis for the period and equates to total tariff revenues for 2016. In actual NOK, influenceable operating expenses in 2018 were roughly at the same level as in the years 2012 and 2013, despite a higher asset base. This improvement has been realised alongside new assignments and quality improvements in emergency preparedness and monitoring.

Statnett is currently establishing the frameworks for an efficiency-improvement initiative to help the company maintain its position as one of Europe's most efficient TSOs in both the short and long term. This is an important prerequisite to be able to achieve the company's goal of levelling out the tariff for general consumption after 2023.

### 1.2 Expected changes in permitted income

Figure 2 illustrates expected changes in permitted income for the period 2017–2025, and the cost elements included. In the next period, increasing regulatory asset base due to investments will remain the main driver of changes in permitted income. The increase in assets recognised in the balance sheet, which in turn resulted in increases in the regulated return and depreciation, is described in more detail in Section 1.5.

Figure 2: Permitted income forecast



Statnett's internal efficiency improvement programme has helped restrict growth in investment costs and assets recognised in the balance sheet over the next five-year period. Statnett has managed to reduce the projected construction cost estimates for future projects by improving the supplier market and conducting research into and qualifying new technological solutions.

The forecasts assume that Statnett's efficiency will continue to be rated at 100 per cent in the period, as it has been since 2003. This means that Statnett's set revenue cap for a given year is equal to the cost basis for the year in question. If NVE had deemed Statnett's efficiency to be lower, this would have negatively impacted the revenue cap by an amount equal to the cost basis excluding transmission losses multiplied by 60 per cent of the efficiency reduction. As explained below, this has no impact on the increments to remove time lag, as these are always fully included in permitted income.

#### Return on investment:

The return basis is based on the book value of assets in operation (regulatory asset base), where the highest returns are seen at the start of the asset's lifetime. This means that the return in Figure 2 grows more steeply than depreciation, which is the same throughout the asset's economic lifetime. The return will increase in the period due to the fact that new assets recognised in the balance sheet exceed annual depreciation, and because interest rates are forecast to rise. New assets recognised in the balance sheet are relatively constant each year in the period, apart from in 2019 and 2021, when they are significantly higher due to the commissioning of interconnectors to Germany and the UK. In the graph below, NordLink is shown under "Income from other owners" since the cable is owned by the subsidiary NordLink Norge AS. Growth in return on investment is expected to flatten out at the end of the period.

#### Depreciation:

Depreciation is based on assets recognised in the balance sheet. Several large assets recognised in the next few years will result in higher depreciation for the whole period leading up to 2025. However, the annual investment level will decrease from 2019, and after 2021 the aggregate

volume of new assets recognised in the balance sheet will fall significantly. This will result in smaller increases in depreciation with depreciation flattening out around 2025.

#### Property tax:

Statnett's forecasts indicate that property tax costs will increase annually in the period 2019–2025. It is expected that a significant share of Statnett's new investments will be subject to property tax and that several municipalities will introduce a property tax. Property tax rates are also expected to increase in municipalities where the tax rate is below the current ceiling.

#### Transmission losses:

It is estimated that transmission losses for the period 2019–2025 will peak in 2019 due to expected continuing high power prices in the first year of the period. After decreasing in 2020, costs are expected to gradually increase in the following years, though without reaching 2018 levels. Commissioning of the two new interconnectors will result in increased volumes recognised in income with a two-year time lag.

#### System operation costs:

NVE has announced that it intends to adopt a new norm for system operation costs in the period 2018–2019 based on an average for the years 2008–2017. The norm comprises 60 per cent of the system operation costs included in permitted income, and 40 per cent are based on actual costs. NVE is considering abandoning a norm-based regulation of system operation costs after this period, and Statnett has based its forecasts from 2020 on a cost coverage approach. System operation costs are expected to increase from 2020 due to the commissioning of NordLink and NSL.

#### Transit costs:

It is difficult to estimate transit costs. Consequently, the forecast shown in Figure 2 is based on cost levels in previous years.

Table 2: Parameters - calculation of permitted income	2019	2020	2021	2022	2023	2024	2025
NVE regulated rate of return (%)	6.10	5.67	5.76	5.87	5.93	5.97	6.01
Inflation (%)	1.80	1.60	1.90	2.00	2.00	2.00	2.00
Price of power (NOK/MWh)	385	330	320	320	330	330	330

### Operating expenses, salary and payroll costs and bought-in services:

Operating expenses, adjusted for historical fluctuations in pensions, will increase during the period due to inflation and salary growth and a higher workload in connection with transmission infrastructure that Statnett is expected to acquire during the period. Major cost items recognised in operating expenses include salary and payroll costs, consultants/bought-in services and equipment/materials. Statnett is targeting further efficiency improvements, which are expected to ensure that operating expenses do not increase at the same rate as activities in the period 2019–2022 (included in the 2021–2025 revenue cap).

### 1.3 Changes in salary costs and bought-in services

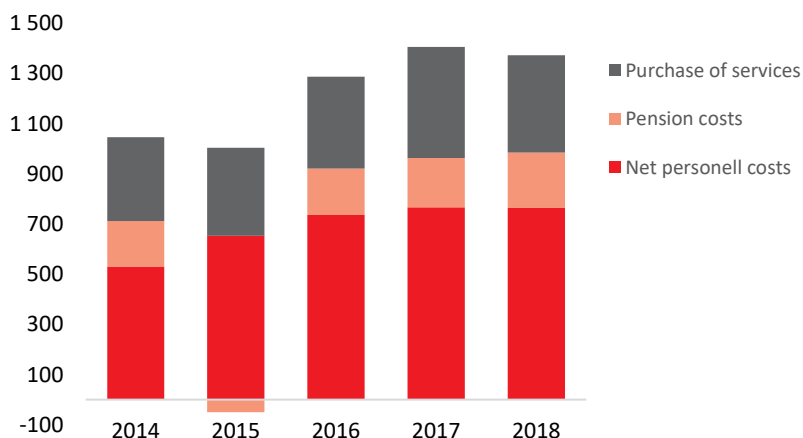
Changes in salary costs, pension costs and bought-in services are shown in Figure 3. Work relating to investment projects is excluded. Salary costs rose in the period 2014–2018 on the back of a 24 per cent increase in the number of employees and nominal salary growth of around 15 per cent. The increase in the number of employees is mainly attributable to a large project portfolio, high investment rates, a higher new and acquired asset base and more assignments performed as transmission system operator. A key reason for this development is also the fact that the cost of hours spent on investment projects recognised in the balance sheet are deducted from the salary costs. Net salary costs were low in 2014 because a relatively large proportion of salary costs were recognised as investments in the balance sheet.

In 2017, Statnett adopted a new practice for recognising hourly costs relating to early-phase projects that do not

qualify for recognition in the balance sheet. This means that costs that were previously recognised as investment costs have been recognised as operating expenses since 2017. The scheme for differentiated employer's national insurance contributions was modified midway through 2014. This resulted in a gradual increase in costs from 2014 to 2015 in the counties of Troms and Finnmark. In recent years, in particular between 2016 and 2018, Statnett has acquired parts of the transmission grid previously owned by third parties. This includes transmission grid in the Rogaland and Hordaland area (transferred to Statnett from Lyse Elnett and BKK Nett). This resulted in a slight increase in the number of employees and contributed to higher salary costs. Parts of the grid from the companies Lofotkraft and Trollfjord Kraft was reclassified as transmission grid and transferred to Statnett during the period. Statnett has also acquired transmission assets from Skagerrak Nett, Hafslund Nett, Odda Energiverket and Agder Energi.

Pension costs were negative in 2015 due to a non-recurring effect of transitioning from a defined-benefit to a defined-contribution pension plan, which covered most of the enterprise's employees. There were only minor changes in bought-in services during the period, with the highest value being recorded in 2017. This is consistent with the forecast in previous cost reporting and is attributable to factors including strengthened R&D initiatives, an increased focus on emergency preparedness, upgrading and digitalisation of a technical asset register, parallel operation of a new and old central operations system and a strong HSE commitment. In addition, the purchase of balancing services from eSett OY, which provides imbalance settlement services in the Nordic market, also resulted in

Figure 3: Development in salary costs, pension costs and bought-in services



an increase in bought-in services. The company has adopted a policy of using external consultants and other bought-in services to manage the large portfolio of investment projects during the period. This played a key role in restricting growth in the number of permanent employees and facilitation of an appropriate organisation including after the investment peak.

Statnett is planning to establish a new operating organisation in Western Norway to prepare for the takeover of operation of infrastructure in the area, including the grid acquired from BKK Nett in 2016. In this connection, the parties signed an operation, maintenance and preparedness agreement spanning a three-year period (OMP agreement). This will result in increased salary costs in the years to come. Pension costs are also expected to rise in line with the increase in the number of personnel.

Bought-in services are expected to gradually fall over the next few years before subsequently levelling out. This is due to factors such as the phasing out of OMP agreements for infrastructure acquired by Statnett from other grid owners, full-scale commissioning of the new central operations system and the phasing out of parallel operation of the old system, along with a number of other internal improvement measures completed during the period 2018–2019. A gradual decrease in investments in the period leading up to 2025 will also result in Statnett's employees taking on a higher percentage of workloads and reduce the need for external consultants. This will lead to the transfer of costs from bought-in services to salary and pension costs.

Statnett's salary policy states that the company does not aim to be market-leading in terms of salaries. At the same time, the company must have differentiated salary levels that facilitate the recruitment of talents from outside the company and prevent valued employees leaving the company on salary-related grounds. Salary development at Statnett has broadly mirrored that of society in general. Recruitment of a high number of younger employees has helped ensure that average salaries have only risen moderately. Statnett regards its largest customers as the most natural benchmark for salaries. However, insufficient public information is available to effectively compare Statnett's salary development per full-time equivalent to the rest of the industry. Furthermore, where statistics are available, it is not clear which costs are included in salary costs per full-time equivalent. Figure 4 shows salary development at Statnett compared to changes in major settlement areas in the report from the Technical Reporting Committee on Income Settlements (2018).

### 1.4 Changes in other operating expenses

Figure 5 shows changes in other operating expenses during the period 2014–2018. Adjusting for price increases, higher activities and staffing levels during the period resulted in an increase in other operating expenses. The peak in operating expenses in 2017 is in part due to the cost item consultants/bought-in services, which is explained in Section 1.3. High costs were also incurred for equipment/materials, primarily as a result of a change in practice for recognising early-phase projects that do not qualify for balance sheet recognition, and a provision for compensation in connection with a cancelled competitive

Figure 4: Illustration of total salary growth for 2013-2018 (red) and average yearly salary growth in the period (gray).

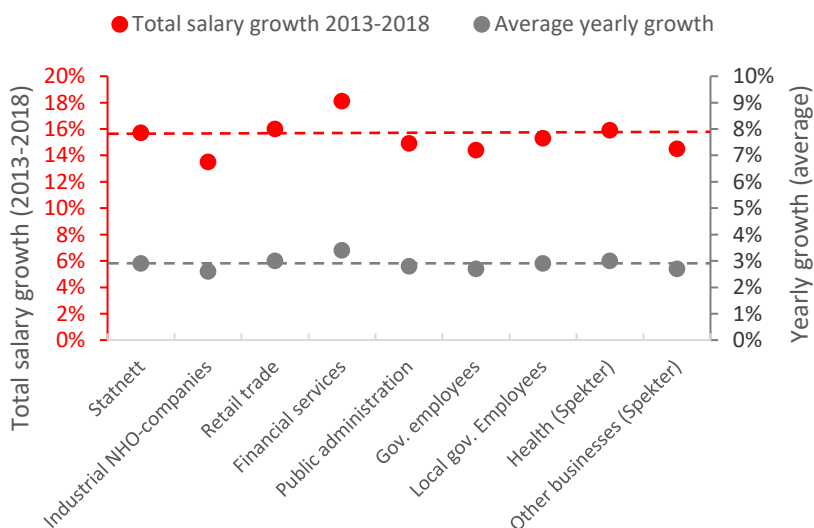
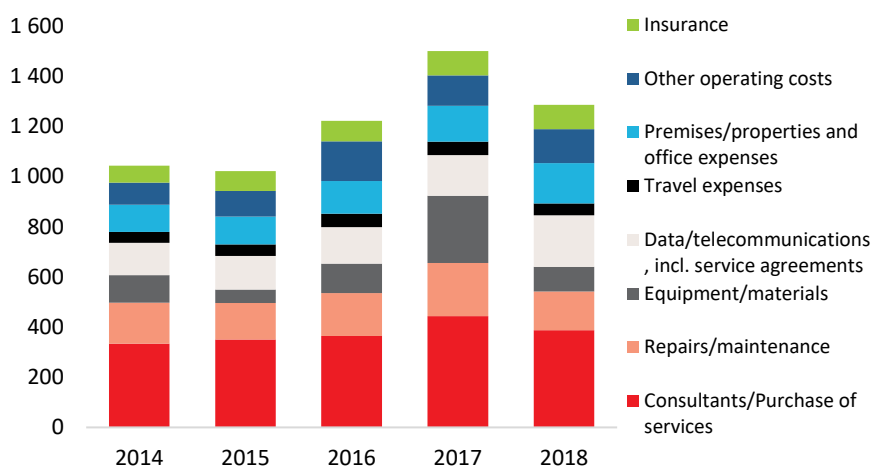




Figure 5: Development in other operating expenses



tender. The relatively high costs for equipment/materials are in part attributable to costs relating to damage to the Skagerrak 2 cable. Statnett recovered some of these costs in 2018 through insurance and contributions from Energinet.dk, which pays for half the cable.

Costs associated with data/telecommunications and service agreements increased during 2017 and 2018 on the back of growth in the number of users and systems. New focus areas within digitalisation and higher ICT investments are resulting in increased operating expenses. In 2018, a service agreement for the old central operations system was extended to cover the migration period to the new system. The costs of premises/properties/offices increased in the period, in particular in 2016–2018 due to the need for larger premises for projects for the interconnectors to Germany and the UK, along with ICT projects. Other operating expenses steadily increased over the period, peaking in 2016 due to the accounting effects of ineffective currency hedges for projects that did not qualify for hedge accounting in the balance sheet. Insurance costs gradually rose due to an increase in the company's asset base.

In 2019, other operating expenses are expected to increase by around NOK 100 million compared with 2018. In the following years, other operating expenses are expected to rise in line with general inflation. Changes in consultants/bought-in services are described above.

### 1.5 Change in investments recognised in the balance sheet

Figure 6 shows historical changes in investments recognised in the balance sheet for the last five years, allocated between new and reinvestments, in addition to assets under construction. In addition, the interconnector to Germany (NordLink) is recognised in the financial statements of the facility's owner, NordLink Norge AS, a daughter company of Statnett. At the end of the year, NordLink had assets under construction valued at NOK 7.1 billion. Assets under construction are transferred to "Property, plant and equipment" when they are ready to use. Once they have been capitalised, facilities are depreciated and included in the basis for Statnett's permitted income, through depreciation and return on the regulated asset base.

The majority of Statnett's investments recognised in the balance sheet relate to major investment projects. Table 3 provides an overview of investment projects costing more than NOK 250 million in the period 2014–2018, and information about the year of recognition in the balance sheet. Although the majority of the growth in the asset base related to these projects, reinvestments were also made to satisfy local needs for replacements. These reinvestments totalled around NOK 1 billion per year during the period.



Almost half of these are investments in ICT (projects under NOK 250 million), which are categorised as reinvestments despite the fact they also include new investments. The largest single expense in ICT projects categorised as new investments is the system upgrade of the central operating system.

Historically high investments were commissioned at the start of the period in 2014. Several major investment projects were fully commissioned this year, including the

Skagerak 4 interconnector, the project "Eastern Corridor" and cable infrastructure in the outer Oslo fjord, along with a major project portfolio with partly commissioned assets. Statnett maintained high investment levels throughout the period, with part-commissioning of major projects and full commissioning of smaller projects. At the same time, the balance of work in progress increased due to the fact that investments were higher than commissions. Several major assets were capitalised in 2018 as well, as shown in Table 3.

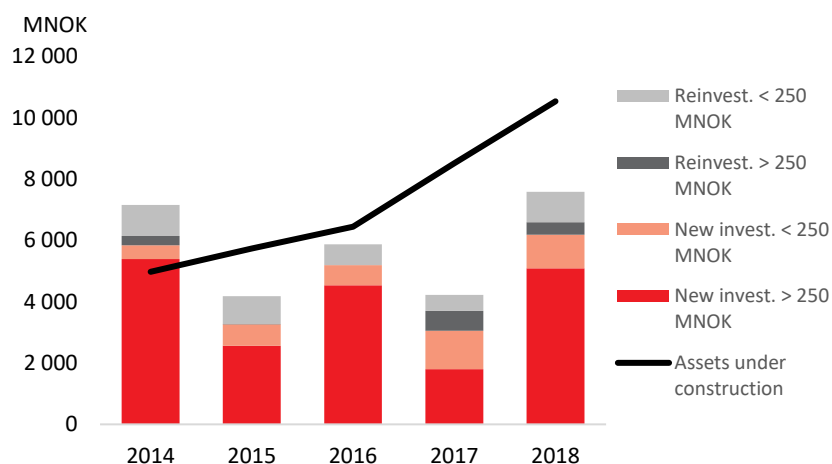
Table 3: Overview of investment projects with cost above NOK 250 million, and their respective years of recognition in the balance sheet

Projects with recognition in the balance sheet	Investment type	2014	2015	2016	2017	2018
Outer Oslo Fjord, reinvestment cable connections	Reinvestment	A				
Skagerrak 4, interconnector to Denmark	New Investment	A				
Eastern Corridor, voltage upgrade	New Investment	A				
Varangerbotn - Skogfoss, new 132 kV power line	New Investment	A				
Kvitfossen - Kanstadbotn (from Lofotkraft)	Acquisition			A	A	
Reactors for voltage reductions	New Investment	A	A	A	A	
Ørskog - Sogndal, new 420 kV power line	New Investment	A	A	A	A	A
Increased transformation capacity East Norway	New Investment	A	A	A	A	A
Ofoten - Balsfjord new 420 kV power line, substations	New Investment	A	A	A	A	A
Western Corridor, Package 1, 2	New Investment	A	A	A	A	A
Renovation of Statnett's control center system	New Investment		A	A	A	A
Balsfjord - Skaidi new 420 kV power line	New Investment			A	A	A
Nedre Røssåga - Namsos, voltage upgrade	New Investment				A	A
Klæbu - Namsos, voltage upgrade	New Investment				A	A
Inner Oslo Fjord, reinvestment cable connections	Reinvestment				A	A
Namsos - Åfjord and Snilldal – Surna new 420 kV power line	New Investment					A
Kristiansand, reinvestment 300 kV	Reinvestment					A
Purchase - parts of Outer ring from BKK Nett	Acquisition					A

A = Recognition in the balance sheet. Several projects have partly recognition when parts of the facilities are ready to be used.

\*New investments will normally consist of an amount of reinvestment, and the other way round.

Figure 6: Development in investments recognised in the balance sheet



Commissioned investments projects in 2017 and 2018 were more than NOK 1 billion lower each year than forecast in the previous cost reporting. This was primarily due to the deferral of projects that had not been approved for investment, and that several projects incurred lower investment costs than previously forecast. The single largest contributor to this reduction was the Western Corridor project which is now estimated to cost between NOK 6.6 and 6.8 billion, compared with an earlier projection of NOK 7.1–8.5 billion.

The final report on Statnett's 15 per cent efficiency-improvement programme showed that a number of projects achieved a significant reduction in the overall cost framework and management targets in the period 2013–2018. The investment forecasts show improvements of 18 per cent and 12 per cent for power lines and substations, respectively, in the period. Cost frameworks for projects fell by a total of NOK 7.1 billion, of which NOK 4.5 billion related to expected investment costs. This includes the projects Western Corridor, Ofoten–Balsfjord, Balsfjord–Skaidi, Inner Oslo fjord and Namsos–Åsen projects, some substation projects and the North Sea Link, together with NordLink, which is recognised in a separate subsidiary.

Figure 7 shows expected commissioning of assets recognised for the period 2019–2023 for new and reinvestments, as well as the development of assets under construction in the balance sheet. Major new investment projects are expected to continue to account for the majority of commissioning in the next period. The high level of commissioning will continue until 2021 as several projects will be completed during the period. Together with

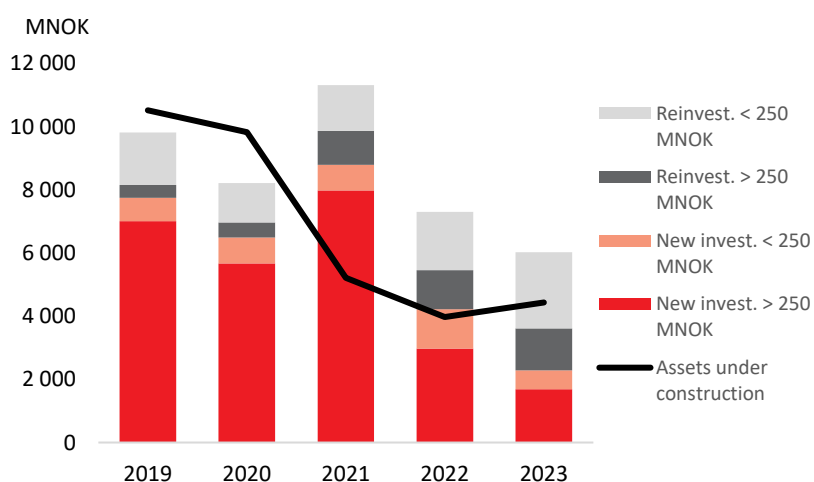
a gradual reduction in investments, this will result in a significant reduction in the balance of assets under construction. Commissioning of completed investment projects will remain at a high level in the period due to part- and full commissioning of projects such as the North Sea Link, Balsfjord–Skaidi, the Western Corridor, parts of the Greater Oslo Grid Plan and connection of wind power at Fosen. This will also cause a drop in assets under construction.

The NordLink project, which is administered by a subsidiary with a separate income framework, is scheduled to be recognised in the balance sheet in 2019. Investments in and assets recognised in the balance sheet relating to NordLink are not included in the tables and figures in this section.

Tables 4 and 5 provide an overview of reinvestments and new investments, respectively, costing more than NOK 250 million in the period 2019–2023, and information about which years assets are recognised in the balance sheet.

It has been necessary to defer reinvestment projects in recent years to manage the large portfolio of new investments. As new grid projects are completed, there will be a need to manage a number of investments in control- and switchgear for existing substations. Consequently, the percentage of smaller reinvestment projects is expected to increase throughout the period.

Figure 7: Forecast for investments recognised in the balance sheet



Reinvestments > 250 MNOK	2019	2020	2021	2022	2023
Inner Oslo Fjord, reinvestment cable connections	A				
Kristiansand reinvestment 300 kV	A	A	A		
Sylling, reinvestment	A	A	A	A	
Rød, Verdal and Sylling SVC		A	A	A	
NSO Sogn transformer substation reinvestment			A	A	
Leirdøla, reinvestment				A	A
Rød, reinvestment					A
NSO Hamang, new transformer substation					A

A = Recognition in the balance sheet. Several projects have partly recognition when parts of the facilities are ready to be used.

New investments > 250 MNOK	2019	2020	2021	2022	2023
Namsos - Åfjord and Snilldal – Surna new 420 kV power line	A				
Klæbu - Namsos, voltage upgrade	A				
Nedre Røssåga - Namsos, voltage upgrade	A	A			
Western Corridor package 1, 2	A	A			
Ørskog - Sogndal, New 420 kV power line	A	A			
Bjerkreim transformer substation	A	A			
Western Corridor, package 3	A	A	A	A	
Balsfjord - Skaidi new 420 kV power line and substations	A	A	A	A	A
Kobbvatnet new transformer substation		A	A		
North Sea Link, interconnector to UK		A	A	A	
Smestad – Sogn, substation and cable installation			A	A	
Salten reinvestment / new substation	A			A	A
Lyse- Fagrafjell, new line and substation	A			A	A
NSO Liåsen new substation					A
Odda, increased consumption from Boliden					A
Karmøy new substation					A

A = Recognition in the balance sheet. Several projects have partly recognition when parts of the facilities are ready to be used.

Cumulatively, the updated forecasts for the period 2019–2021 show a lower value of commissioning than in the forecast for the same years in previous cost reporting. This is attributable to a combination of reduced costs and the deferral of some projects. The largest contribution to reduced costs derives from the Western Corridor, where costs fell due to reduced uncertainty regarding project implementation. The forecast for 2019 is higher than in the previous report, while the forecast for 2020 is lower. This is essentially attributable to re-scheduling of the acquisition of parts of the Outer Ring from BKK Nett.

## 1.6 Changes in higher/lower revenue

Actual accounting income from regulated activities in each financial year will differ from the permitted income, which NVE establishes after the end of the year. These differences are known as higher or lower revenue, which in accordance with NVE regulations are equalised over time through adjustment of future grid tariffs. Consequently, higher/lower revenues represent temporary debt or receivables, but which in accordance with IFRSs are not recognised in the balance sheet.

Figure 8 shows higher/lower revenue for the year and changes in these balances for the last five years. Statnett's formulated price strategy includes instructions for establishing the annual tariff for the transmission grid. In accordance with NVE's guidelines, Statnett aims to facilitate predictable tariffs over time and has elected to repay accumulated higher revenue over several years. Since 2012, Statnett has repaid accumulated higher revenue to customers. This means that the tariff has been lower than would have been expected from permitted income in recent years. At the reporting date, Statnett had accumulated higher revenue of NOK 59 million. Moving forward, tariffs will be set with the aim that the enterprise's higher/lower revenue is projected to be zero at the end of each year.

Statnett's reported revenues in the financial statements comprise tariffs from customers in the transmission grid and congestion revenues (capacity charges). Congestion revenues arise when power is transmitted from areas with a low power price to areas with a high power price in the Nordic region and between Norway and the Netherlands. The network rental (tariff) is established ahead of each calendar year. Figure 9 shows changes in actual income in relation to permitted income over the last five years. Actual income is split between tariff income and congestion revenues.

Figure 8: Development of higher/lower revenue, shown yearly and outgoing balance

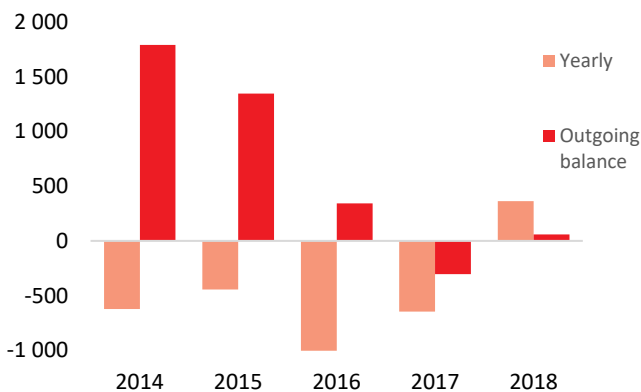
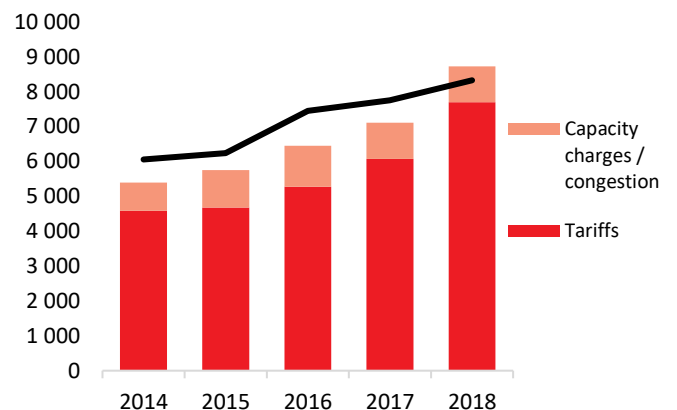


Figure 9: Development in actual income (split into capacity charges and tariff income) compared to permitted income



## 2 Development at function level

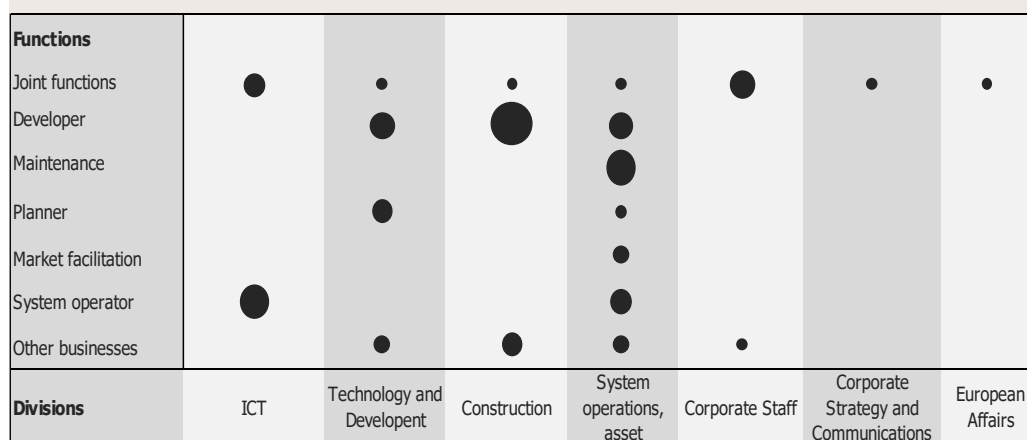
To provide a greater understanding of Statnett's cost development for the period 2014–2018 as well as forecasts for the next five-year period, activities are shown by function. The functions in this year's report are defined in the same way as the corresponding report in 2017 in order to facilitate comparison with previous results. The functions used in previous reporting were based on the allocation of activities applied in the European TSO benchmarking e3-Grid in 2013. This section shows the relationship between Statnett's organisation and the functions, and the share<sup>3</sup> of Statnett's activities within the various functions. The subsequent sections show changes in historical costs and activities by function. Comments have also been made concerning the anticipated cost and activity development at function level over the next five years.

A description of each individual function is included in the report on historical and forecast development. The report is based on the number of full-time equivalents, salary and payroll costs (subsequently referred to as payroll costs), consultancy costs and bought-in services (subsequently referred to as services), and other operating expenses excluding bought-in-services (subsequently referred to as operating expenses). This is also related to the various assignments that the functions perform. Full-time equivalents and payroll costs are adjusted for the sale and purchase of hours between functions, so that they reflect all full-time equivalents and payroll costs in the respective functions.

Figure 10 shows the relationship between Statnett's organisational structure at the end of 2018 and the functions on which subsequent reporting is based. The size of the circles reflects operations and investment costs in the division utilised within each function in 2018. The smallest circles reflect use of resources below NOK 50 million, whereas the largest circles reflect the use of resources above NOK 1,000 million per year. This shows, for example, that the Operations and Market division was active in all functions, while it used most of the resources for operation and maintenance of grid infrastructure in the maintenance function and reinvestments in the developer function.

The content in the individual function is described in more detail in the following sections. Please visit [www.statnett.no](http://www.statnett.no) for further information about Statnett's organisation.

Figure 10: Relationship between divisions and functions



<sup>3</sup> This report is based on the organisational structure as of 31 December 2018. Organisational changes are planned for the first half of 2019. The greatest change is that almost the entire

developer function of the Technology and Development division will be transferred to the Construction division, while a new division, Systems and Markets, will be established to be responsible for system operations and market facilitation.

## 2.1 The maintenance function

The maintenance function comprises all operation and maintenance of grid infrastructure. All manpower and material costs and costs connected to breakdown of grid assets are included in the function, as well as other resources used to operate and maintain the grid. Also included are planned measures to guarantee security of supply and grid quality, such as technical inspections and forest clearing.

Most activities in this function are included in Statnett's revenue cap cost basis. Some minor costs, for example, losses on the sale of assets, are not included in the cost basis, in line with the provisions stipulated by NVE. The maintenance function only includes operating expenses since reinvestments are recognised under the developer function. Costs and revenues are presented as net costs.

### Maintenance function costs by assignment

Figure 11 shows changes in costs in the maintenance function by assignment.

Costs for maintenance of the grid increase in the period, chiefly due to a more assets. In addition to construction projects, during the period Statnett acquired the transmission grid business in the Rogaland and Hordaland area from Lyse Elnett and BKK Nett and the Lofot Ring from Lofotkraft and Trollfjord Kraft. Statnett has also purchased transmission infrastructure from Skagerrak Nett, Hafslund Nett, Odda Energiverket and Agder Energi. Maintenance costs are expected to increase slightly due to the higher asset base moving forward, while cost growth is expected to be restricted due to targeted efficiency improvements.

Breakdown costs were high in 2016. The largest breakdowns related to the Hasle and Viklandet substations, the power line in lower Røssåga and the cable in the Inner Oslo fjord. Statnett is insured against breakdowns. Consequently, over time net breakdown costs are lower than actual breakdown costs, though it should be noted that the breakdown in the Inner Oslo fjord did not satisfy the insurance terms due to the age of the assets. High breakdown costs in 2017 are primarily attributable to the breakdown at the Skagerak 2 cable. Breakdown costs were negative in the 2018, due to the recognition in income of insurance payouts, and coverage of half of the costs by Energinet, which pays for half of the cable.

Emergency preparedness costs increased in 2017. A high proportion of these costs in 2017 and some costs in 2018 relate to settlement in connection with cancellation of the cable preparedness agreement with Statnett Transport, which will result in lower emergency preparedness costs in future.

Figure 11: Maintenance function by assignment

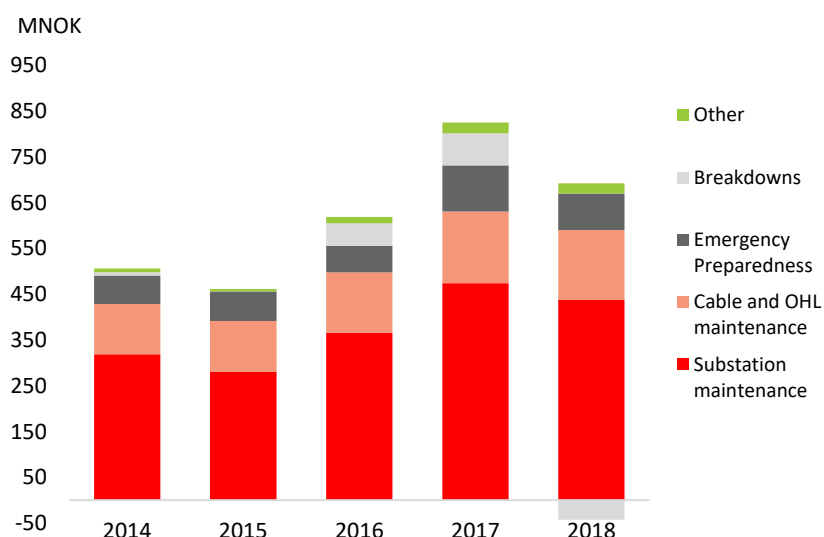
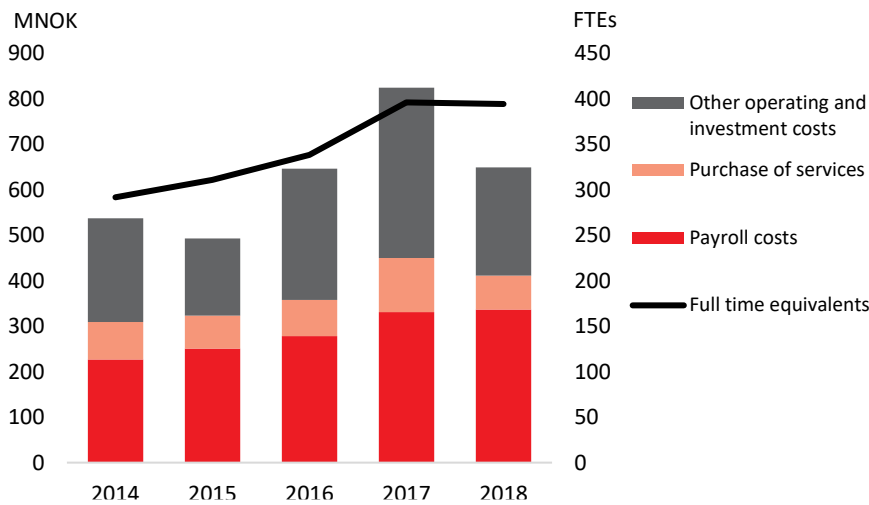




Figure 12: Maintenance function per cost type



### Maintenance function costs per cost type

Figure 12 shows changes in costs for the maintenance function per cost type. Costs are shown net.

Payroll costs and the number of full-time equivalents increase throughout the period. The majority of payroll costs relate to the maintenance function, while some costs relate to emergency preparedness. Bought-in-services are stable during the period, apart from in 2017, where the increase is attributable to bought-in services for breakdowns. Other operating expenses are also high in 2017 for the same reason, but are lower in 2018 due to compensation.

### 2.2 The planner function

The planner function exercises Statnett’s responsibility as power system planner and for research and development activities, as well as technology standardisation and qualification.

Statnett’s power system planner plays a key role in exercising the enterprise’s national responsibility for ensuring that the Norwegian power system is developed in a socially optimal manner. This includes providing support for issues relating to grid connection to power industry organisations who are planning to launch new or further develop existing operations, and keeping track of developments in needs for grid connection and increased transmission capacity resulting from new customers or increased production or consumption from existing. The power system planner is further responsible for maintaining good relations with regional transmission system operators and for coordinating regional power system assessments. The function also provides consultation statements regarding other organisations’ licence applications. The Power System Planner is responsible for preparing Statnett’s external planning products, the Power System Assessment and the Grid Development Plan (NUP). The power system planner function is also responsible for Statnett’s choice-of-concept studies.

Figure 13: Planner function by assignment

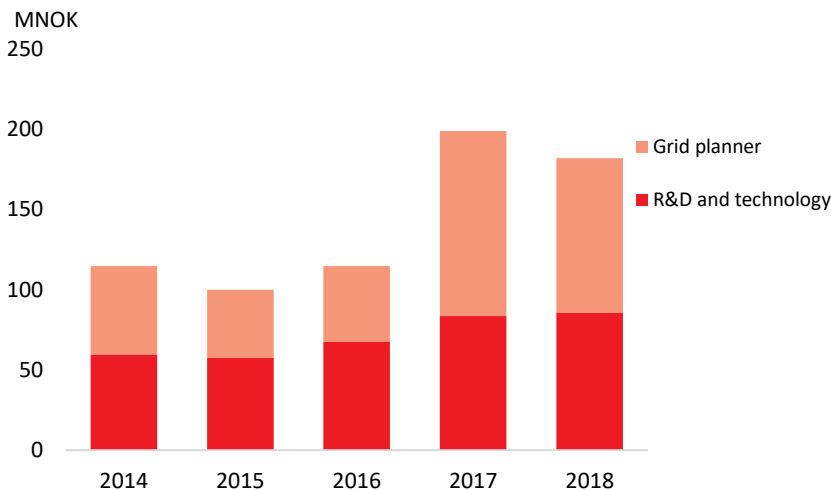
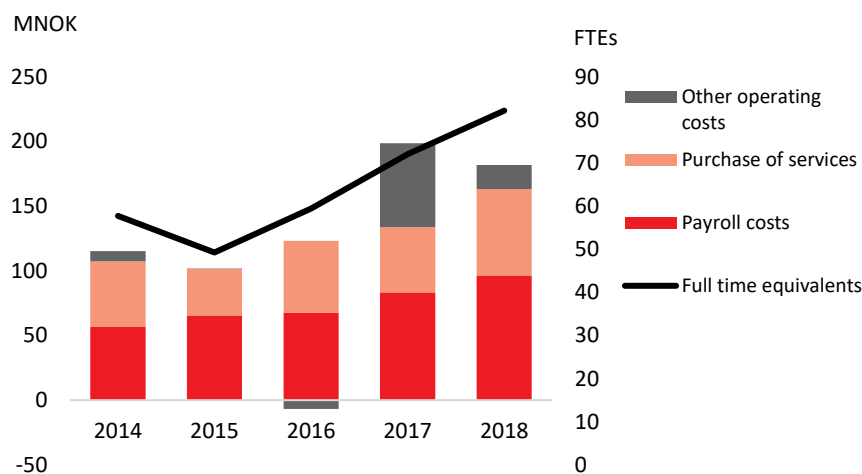


Figure 14: Planner function per cost type



All operating expenses reported under this function are included in the cost basis for Statnett’s revenue cap. Once a solution has been chosen for a project, project costs can in most cases be recognised as an investment cost in the balance sheet, after which they are recognised under the developer function.

### Costs for the planner function by assignment

Figure 13 shows cost development for the planner function by assignment.

The increase in power system planning costs from 2017 is primarily attributable to a change in the accounting treatment of early-phase project costs recognised in the balance sheet. Under the new approach, costs that were previously recognised under the developer function have been recognised under the planner function since 2017. The corresponding costs for 2014–2016 have been adjusted in the financial statements as an impairment, and are not presented here. No material changes are expected in planning costs in the next period.

R&D costs increase in the period, while the enterprise’s R&D focus will be further ramped up in the next five-year period with a view to developing a major portfolio of innovative solutions for operation and development of the grid. Statnett’s focus on R&D and technology has resulted in several solutions that have made grid development and operations more efficient. New types of towers and foundations have been developed. One new type of steel foundation, for instance, may generate savings of NOK 0.5 billion on the Balsfjord–Skaidi power line alone. The development of lighter composite towers will also facilitate a much faster and safer construction process. Substantial costs may arise from disconnection of high-voltage power lines for maintenance or upgrading. Statnett has developed methods that make it possible to perform work on power lines without having to disconnect them. The voltage

upgrade programme has facilitated reuse of 30 per cent of the existing 300 kV towers in Norway, rather than having to construct new 420 kV towers. This has saved billions and is highly beneficial for the environment and landscape, as less construction work will be necessary. Many projects involve a strong emphasis on digitalisation, from robot development and digital stations to machine learning and real-time control. A project’s interface with Statnett’s Data Science and ICT environments is therefore becoming increasingly important. A number of technology qualifications will be implemented in the next five years, such as new power line types and digitalisation of substations. This is expected to result in substantial cost savings. At the end of 2018, Statnett had 63 ongoing R&D projects. For more information about Statnett’s R&D and technology initiatives, please see the section “Smart solutions” under Corporate Social Responsibility in Statnett’s annual report.

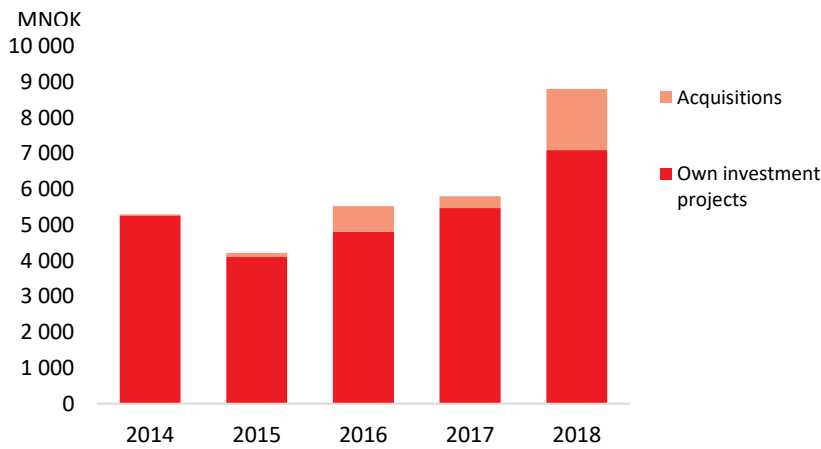
### Planner function costs by cost type

Other operating expenses relating to R&D projects were decreased throughout the whole period due to the classification funding for R&D projects from the Research Council of Norway and the EU under as cost reductions. The increase from 2017 is attributable to the change in practice for recognition of early-phase investment projects described above. Payroll costs and bought-in services increase in the period for the same reason and as a result of the reinforced R&D focus.

### 2.3 The developer function

Most of the costs relating to grid development projects will be capitalised as investments, while operating expenses will be modest. The developer function includes acquisitions. All costs in the function are included in the cost basis for Statnett’s revenue cap. Construction must be cost-efficient, and each project is followed up, with a particular focus on major projects. Information about

Figure 15: Development function by assignment



projects under development are published annually on [www.statnett.no](http://www.statnett.no), in connection with publication of the Grid Development Plan (NUP) and the Updated Investment Plan, together with general information about the projects. The final cost and explanations of deviations from the licensing and investment decisions for major completed investment initiatives are presented in a separate report in connection with the publication of the NUP.

### Developer function costs by assignment

Figure 15 shows costs for the period 2014–2018. This shows that investment activities increased each year in the period, including and excluding acquisitions, apart from in 2015. The reduction in 2015 was partly due to the transfer of the NordLink project to the subsidiary NordLink Norge AS, as well as the deferral of the Ørskog–Sogndal project. The increase in 2016 is mainly attributable to major investment projects such as NSL, Balsfjord–Skaidi, the Western Corridor, Klæbu–Namsos–Nedre Røssåga and

connection of wind power at Fosen. Investments in NordLink for the period 2016–2018 totalling around NOK 7 billion are not shown in the figure.

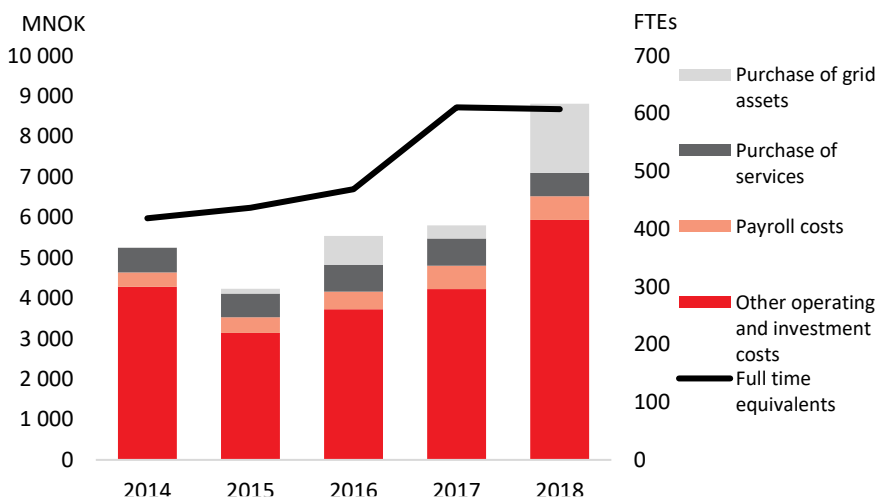
Investments in Statnett’s extensive project portfolio are expected to peak in 2018. After that, investments are expected to fall slightly until construction of the interconnector to the UK (NSL) is completed in 2021. Subsequently, investments are expected to continue to decrease, as described in section 1.5.

In recent years, in particular in the period 2016–2018, Statnett has acquired parts of the transmission grid from third parties. You can read more about this under the maintenance function.

### Costs for the developer function by cost type

To be able to increase performance capacity, Statnett has adopted a strategy of outsourcing work. This has resulted

Figure 16: Developer function by cost type



in the establishment of a significant supplier market after a long period of virtually no grid construction. In its early phase, a project will typically consist of construction client costs, which are a combination of internal hours and hired services from consultancy firms. Statnett has chosen to enter into framework agreements with a number of companies to cover some construction client functions, with the result that nearly 50 per cent of construction client functions have been outsourced. This provides a robust and flexible model where external construction client costs are scaled down when there is less activity. Acquisitions of grid infrastructure are based on a strategy of outsourcing purchases and construction of most assets to suppliers. Design and build contracts are used for the construction of new substations. The same type of contracts, split into smaller packages, are also used for the construction of international interconnectors.

## 2.4 System Operator

The System Operator is responsible for ensuring that the Norwegian power system is in balance at all times. The System Operator manages bottlenecks and ensures there are sufficient reserves for handling unforeseen incidents. The System Operator is responsible for fault analyses and communication with and control of the power grid, collaboration with other grid levels, connection and disconnection of components and management of third parties' access to the grid.

Most activities in this function are included in Statnett's revenue cap cost basis. Some minor costs, such as losses on the sale of assets, are not included in the cost basis, in line with the provisions stipulated by NVE. Statnett is partnering with Svenska kraftnät to develop a market and regulation system, Fifty. Statnett's share of Fifty's results are reported under the System Operator function. In 2018,

a separate company, Fifty AS, was established to develop the system. However, the parent company will continue to incur investment costs in the form of user rights recognised in the enterprise's balance sheet.

### System Operator costs by assignment

Figure 17 shows cost developments for the System Operator by assignment.

Costs for operation of operating centres and planning of the power system were higher in 2015 and 2016 than in 2014 due to migration costs in connection with the merger of the regional operating centres in North and Central Norway. In addition, the establishment of a joint Nordic office for coordination of operational safety in Denmark (RSC) also generated higher costs from 2015. RSC provides services such as security calculations during operations, coordination of capacity calculations and of disconnection plans, analyses of effect balances and establishment of a joint grid model for Nordic Transmission System Operators. Investment costs for operating centres and planning in 2017 and 2018 mainly relate to the purchase of user rights for the ICT system developed by RSC, along with development of automated analyses tools for fault analysis. Costs for the latter are expected to increase at the start of the next five-year period.

Investments in ICT infrastructure for communication with and management of the power grid increased from 2014. This was partly due to investments in the new operating centre system that was commissioned in December 2018. Parallel operation of the new and old systems in 2018 and at the end of 2017 also contributed to higher operating expenses. Investments were also made in the market and regulation system Fifty during the period.

Figure 17: System operator by assignment

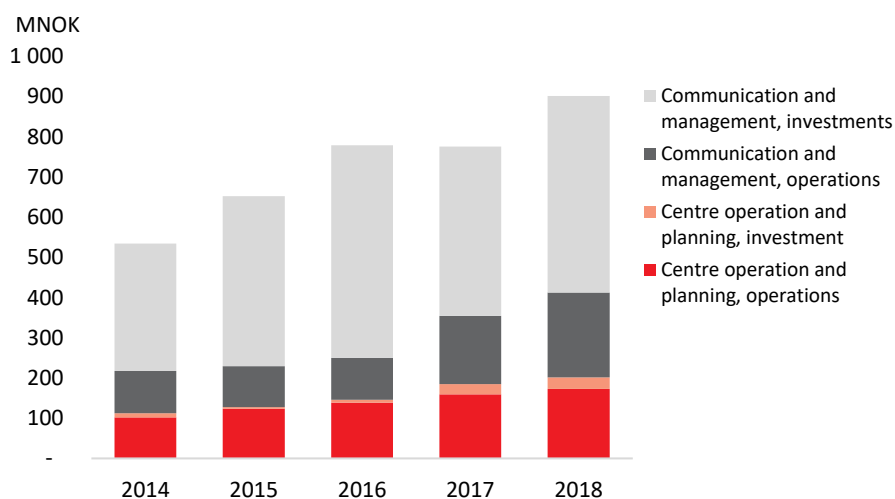
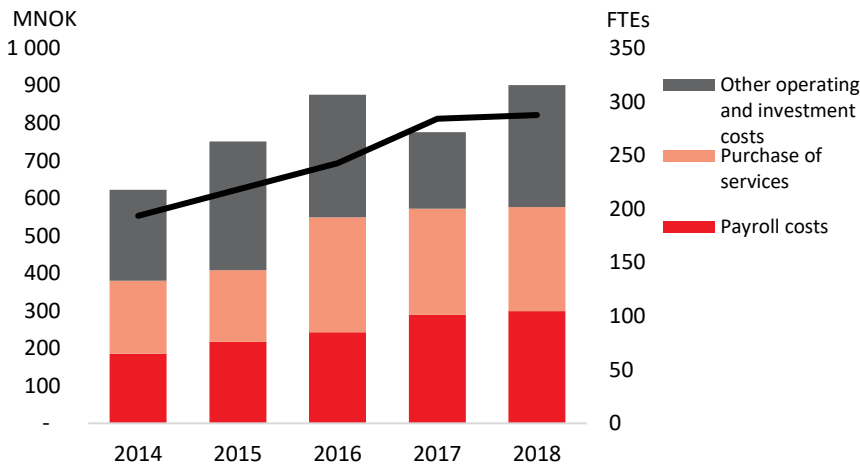


Figure 18: System operator by cost type



At the start of the next five-year period, investments are expected to further increase due to the implementation of EU rules, increased digitalisation and further development of the regulation and market solutions required to allow Statnett to effectively fulfil its system-wide responsibility.

### System Operator costs by cost type

Figure 18 shows changes in full-time equivalents, salaries and payroll costs, bought-in services and other operating and investment costs.

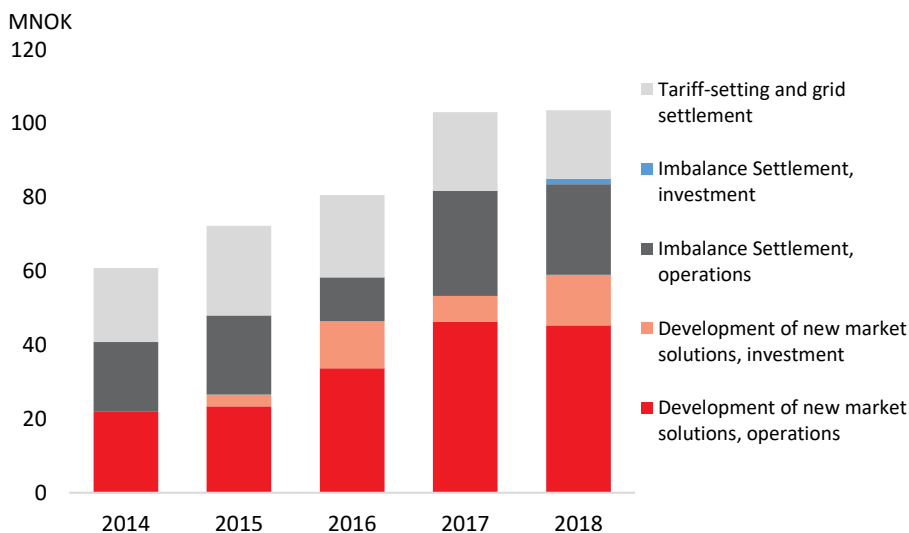
It shows that the number of full-time equivalents and payroll costs increased in the period 2014–2017, and that bought-in services and other operating expenses rose from 2016. As shown above, the increase primarily relates to higher investment activities for ICT infrastructure and a new

market and regulation system and new operating centre system.

### 2.5 Market Facilitator

This function includes costs for tariff-setting and development of market solutions, as well as costs included under Statnett’s settlement licence: the balance settlement system, Ediel, electricity certificates and guarantees of origin. Settlement costs are not included in the cost basis for Statnett’s revenue cap but are collected through a separate fee. Assignments relating to Ediel were taken over by Elhub in 2019. Elhub is administered by the subsidiary Elhub AS.

Figure 19: Market Facilitator by assignment



### Market Facilitator costs by assignment

Figure 19 shows cost developments for the Market Facilitator function by assignment. The Market Facilitator function incurs operating and investment costs. Costs and revenues are shown net, but revenues from balance settlements are not included as they fluctuate significantly due to the proportion of system operation costs that are covered through the balance settlement.

Settlement Officer costs were stable until 2016. Only a small amount of maintenance was performed in this year on systems that were phased out when eSett OY assumed responsibility for parts of this task in 2017. In 2017, eSett OY started to invoice Statnett for balance settlement services.

Costs associated with the development of market solutions increased from 2016, in part due to a higher workload in connection with the implementation of EU rules, including XBID (a joint European trading solution), as well as operating and investment costs for flow-based market clearing. The increase in costs was mainly attributable to operating and investment costs for preparations for and the introduction of systems for handling operation of the new international interconnectors.

Tariff-setting costs were stable in the five-year period and are expected to remain so moving forward.

### Market Facilitator costs by cost type

Figure 20 shows cost developments for the Market Facilitator function by cost type.

All cost types increase in the period as a result of higher costs for the development of market solutions, as described above.

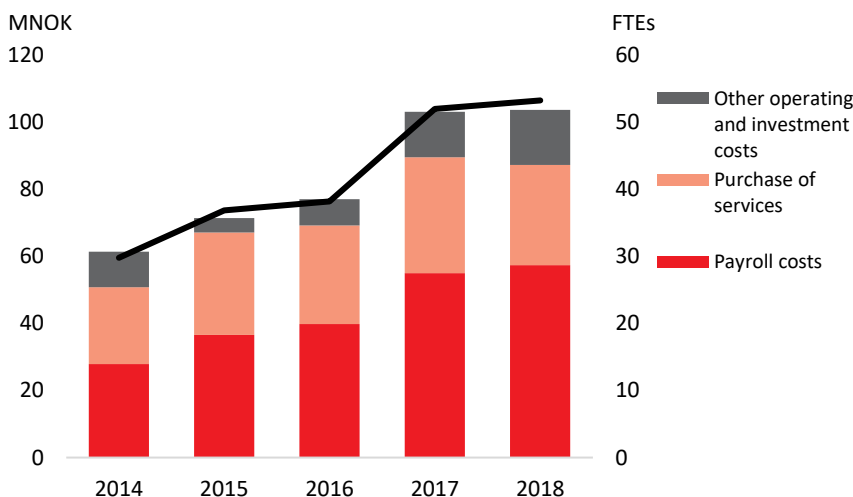
### 2.6 Joint functions including property management

This function covers joint functions in all divisions and includes resources used for administration of employees, financial and legal services, national and international public affairs work, communication, organisational development, strategy work, property management, joint ICT equipment and services, and management. About half of the function relates to management of properties and administration buildings, along with joint ICT equipment and services.

Most of the activities in this function are included in the cost basis for Statnett’s revenue cap. Some minor costs, such as losses on the sale of assets, are not included in the cost basis, in line with the provisions stipulated by NVE.

Key cost drivers for Joint Functions include the number of employees and general activity levels in the company. High investment activities result in a need for support from areas including procurements, legal services, property management, accounting and finance. The need for public affairs work is also impacted. Construction of energy transmission infrastructure can be controversial, as in the case of the Hardanger power line project. A large number of projects under planning and construction require public affairs work and communication to enable Statnett to realise its assignments as efficiently as possible.

Figure 20: Market Facilitator by cost type





Between 2014 and 2018, the number of permanent employees at Statnett increased from 1,120 to 1,427. Statnett achieved its desired activity levels for investments and further development of the power grid during the reporting period. This entailed a greater need for support from Joint Functions. However, these costs did not grow to the same extent as influenceable costs and investment costs in the enterprise in general. This shows that activity levels in the joint functions have risen more than costs. The enterprise has started work on an initiative to improve the efficiency of staff and support functions by 20 per cent by the end of 2022.

### Costs of Joint Function including property management by assignment

Figure 21 shows cost developments by assignment. Both investment and operating costs are included and costs and revenues are presented net.

Operating expenses for joint ICT services increased in the period due to a rise in staff numbers, and an increased focus on information security, enterprise architecture and digitalisation. Investment costs for joint ICT systems rose for the same reason. Projects recognised in the period 2016–2018 include the purchase of a new HR system, upgrading of conference rooms and staff computer equipment, upgrading to Windows 10 and a new website. Joint ICT costs are expected to rise in the next five-year period due to increased digitalisation and the introduction of new technology.

Costs relating to property management generally increased during the period in line with staffing levels.

Statnett has increasingly hired office workspace in the vicinity of head office to manage the increased activity levels, which has resulted in higher lease costs. Operating expenses were negative in 2014 due to gains on the sale of land and buildings at the former head office. In 2016, costs were incurred in respect of a negative accrual deviation in connection with the sale of another part of Statnett’s former head office, Noreveien 26. In 2015 and 2016, Statnett invested in the expansion of the company’s administration building in Alta, while in 2016 and 2017, costs were incurred for the expansion of the administration building in Trondheim. The company expects to make some investments in the administration buildings in Trondheim and at Sunndalsøra before 2020. Operating expenses for property management are expected to remain on a par with 2018 moving forward.

Insurance rose steadily through the period, in line with the increase in Statnett’s asset base and is expected to continue to do so in the next five-year period for the same reason.

Transaction costs rose throughout the period due to higher activities for the purchase of transmission grid infrastructure in connection with the Third Energy Market Package, and sales of the grids. A sharper focus on quality management resulted in increased costs from 2015. Much of the increase stemmed from the establishment of a three-year enterprise-wide initiative to improve central processes between 2015 and 2017. Acquisition costs rose during the period to meet the need for high-quality, efficient procurements in the investment projects.

Figure 21: Joint function by assignment

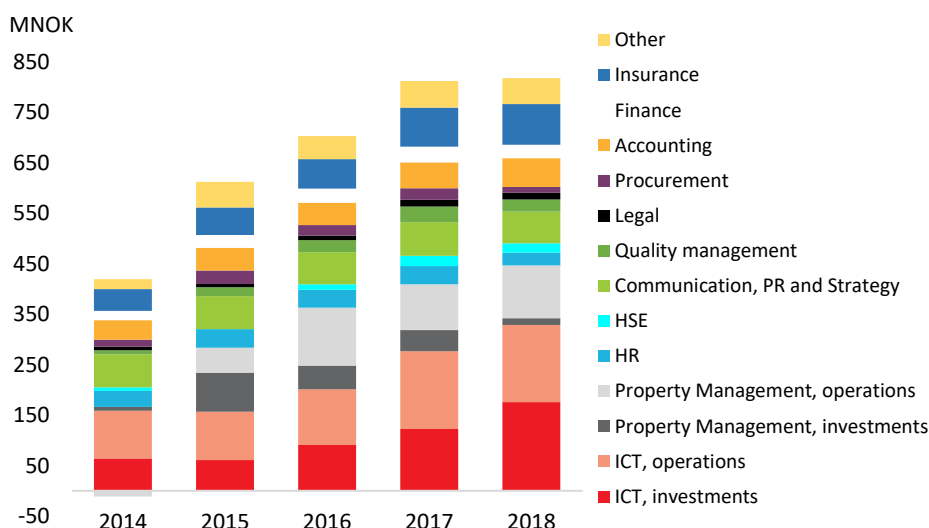
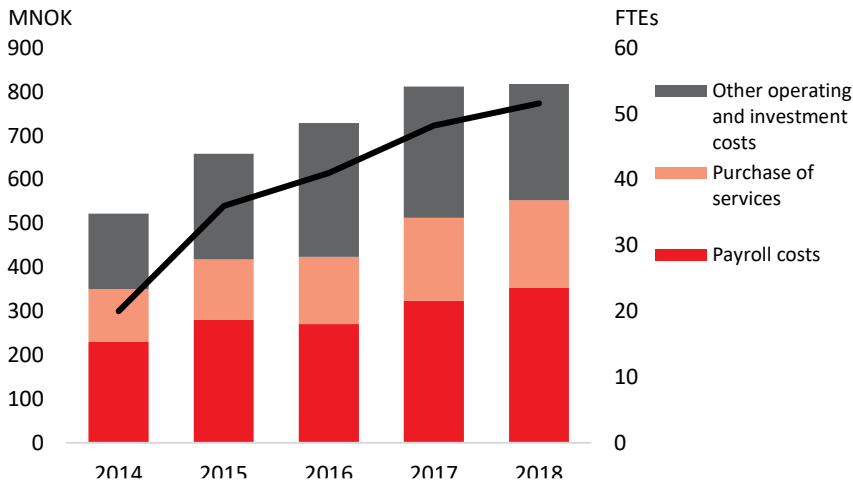


Figure 22: Joint function by cost type



Other costs were low in 2014 due to the reversal of a provision from 2009 (for a fine following a breakdown in the cable across the Outer Oslo fjord in 2008) after the Ministry of Petroleum and Energy upheld Statnett SF's appeal against NVE's decision to impose a fine.

### Joint Function costs including property management by cost type

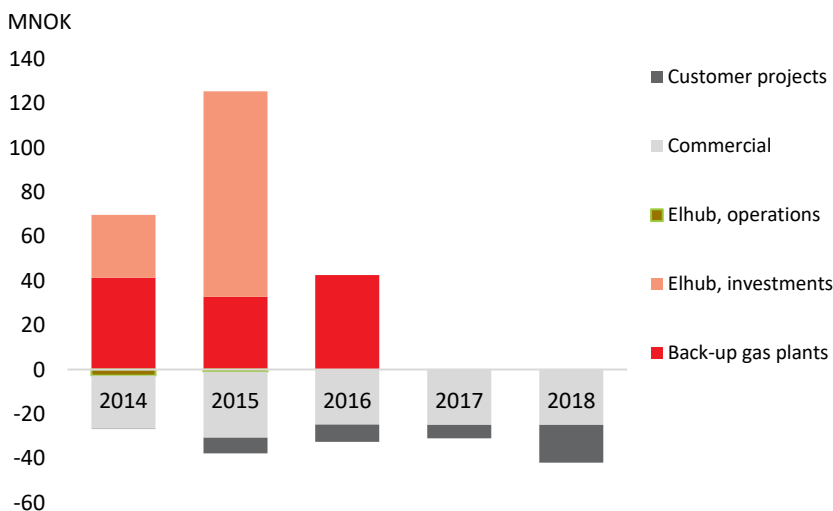
Figure 22 shows changes in full-time equivalents, payroll costs, bought-in services, other costs and other operating revenues in Joint Functions and property management.

At the start of the next five-year period, cost levels are expected to increase slightly, mainly due to higher ICT costs as described above.

### 2.7 Other business

The Other business function comprises Statnett's activities not allocated to other functions, as outlined below. This function is responsible for some assignments associated with licensed activities, including operation of the back-up gas-fired power plants until they were phased out and the development of Elhub, before the establishment of a separate company (Elhub AS) to take over this task in autumn 2015. The sale of corporate services, such as accounting services, is also allocated to Other business. Other business also comprises commercial activities such as customer projects and the sale of other services to non-associates, leasing of fibre and buildings, etc.

Figure 23: Other business by assignment



### Other business costs by assignment.

Figure 23 shows net revenues and operating expenses (excluding depreciation), and investments costs in Statnett's Other business segment.

Elhub AS was established in autumn 2015 and assumed responsibility for development of the data hub with the same name, after which the investment project was transferred from Statnett.

Costs for operation of the back-up gas-fired power plants at Tjeldbergodden and Nyhamna were relatively stable during the period until 2016. Following the commissioning of Ørskog–Sogndal in 2016, Statnett is no longer licensed to run the facilities and the power plants will be sold.

Statnett owns Skagerrak cables 1–3 in their entirety, while Energinet.dk covers half of the operating and capital costs. The latter are not included in Statnett's revenue cap basis and are also the reason why net costs are relatively stable in the period. Net income derives from the payment of investment costs.

Statnett's customer projects are primarily aimed at the Group's daughter companies, NordLink Norge AS, Statnett Transport AS and Elhub AS. The net amount is relatively modest and represents the profits of Statnett SF.

Commercial activities comprise the profit from leasing of fibre, buildings, space in substations and towers, etc., plus profit from the sale of services to Group companies and non-associates.

### Other business costs by cost type

Figure 24 shows the function by cost type. Development follows the pattern above.

#### Disclaimer of liability concerning forward-looking statements

This cost report contains forward-looking statements and projections, including expectations and forecasts of investments and costs, regulated revenues and objectives as well as requirements associated with the efficiency improvement programme. All forward-looking statements incorporated in this report are based on information available to Statnett and express Statnett's views and assessments at the time of publication. Undue reliance should not be placed on these forward-looking statements, and Statnett disclaims any obligation to update or change forward-looking statements in this report to reflect any subsequent changes in the Statnett's expectations or incidents, provisos or matters on which the statements are based.

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Figure 24: Other business by cost type

