



Statnett is the system operator in the Norwegian power system and is responsible for ensuring socio-economically efficient operations and development of the transmission grid

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# The President and CEO comments on 2016



**Statnett's mission remains the same; we must ensure a safe and efficient operation of the power system, promote value creation and facilitate renewable power production. To reach these goals we are constructing a grid that will meet the needs of the future, we collaborate with others in developing better market solutions, and we use ICT to make the power system intelligent and secure. In 2016, we also stepped up the work to fulfil our zero vision for accidents and lost-time injuries.**

## A grid for the future

As 2016 came to an end, we had almost reached the half-way point in our ambitious development plan that will strengthen the transmission grid throughout Norway. In 2017-2020, we plan to construct more than 1 000 kilometres of new power lines and about 1 350 kilometres of cables, and we will start the construction of 20 new substations.

In 2016, we completed the largest individual power line project in Norway so far: the construction of the 420 kV power line between Ørskog at Sunnmøre and Sogndal. It comprises 300 kilometres of new power lines and six new substations. In another major project between Ofoten in Nordland county and Balsfjord in Troms county, two out of three sections of the 420 kV power line were completed in 2016. This strengthens security of supply in our northernmost counties.

In 2016, Statnett's Board of Directors approved further construction northwards from Balsfjord and a new line between Namsos and Surma in order to pave the way for wind power at Fosen in Trøndelag county and elsewhere. The Board also approved the first construction phase in a major upgrade of the grid in the Oslo region.

We have started constructing the interconnectors to Germany and the UK. They are important for the evolvement and integration of the North-European power system. We are also upgrading the transmission grid in South-Western Norway, among other things to be able to handle increased overseas power trading efficiently.

The grid we are building now is important in attaining a secure and efficient power supply, adapted to the needs of the future.

## Secure and efficient

During this phase of intensive construction, it is particularly important to focus on safety in the building processes and a cost-efficient implementation of the projects. Systematic and targeted technology development, qualification and standardisation will enable us to build safer and more cost-efficiently. We are reducing costs by developing expert procurement teams and hiring more competitive suppliers.

The year 2016 was affected by two fatal accidents in April and May of 2016, when two people lost their lives in separate construction projects. The accidents were unrelated and quite different, but they have led to changes in how we plan our further work in order to prevent a recurrence of such tragedies.

Health, environment and safety has been at the top of Statnett's agenda for many years. We have achieved a great deal, but not reached our goal. These accidents are a painful reminder of that. Immediately after the accidents we prepared an action plan which we are implementing in our organisation as well as in cooperation with our suppliers.

We have a zero vision for lost-time injuries, and we are now taking further steps to make sure that everyone working for Statnett will get home safe and sound every day.

## Stable operations

Operating the transmission grid can be challenging at times, both due to bad weather and because parts of the grid do not have the capacity we'd like. The fact that we are constructing new grid sections brings its own challenges to the power system operation in the form of many disconnections. It also means that the trading capacity at times will be limited on certain sections.

We had no major irregularities in 2016, mostly thanks to fairly stable weather and good operations planning. A new record was set in Norway on 21 January 2016, when consumption peaked at

24 485 MWh in one hour between 8 am and 9 am – sufficient energy to charge 300,000 Tesla cars. A week later, when the extreme weather Tor swept over Central and North Norway, our transmission grid stood up to the challenge, with only brief outages in a few areas near the coast. That same month we also set a production record, with 26 766 MWh produced in one hour.

In June, we had a breakdown of one of the six subsea cables in Inner Oslofjord, between Hurumlandet and Vestby. This breakdown led to a more challenging power situation in Eastern Norway and reduced export capacity to Sweden, until a new back-up cable was deployed in October. The entire subsea cable system from 1975 is now being replaced and the capacity will be reduced until the new cables will be commissioned in 2017. This is also part of our extensive construction programme and vital for security of supply in Norway's most populous region.

### Need for new solutions

Increasing prosperity, electrification and digitisation of our society make reliable power supply even more important. Norway might see a wide-ranging electrification of the transport sector over the next 10-20 years. We may also become hosts for new IT centres and other industry that will create value based on our emission-free power production.

In parallel with these trends, the power system is becoming more complex: We are building cables to the UK and Germany and our Nordic neighbours are also strengthening their connections outside the Nordic area. This creates value, but it also makes the flow in the power grid more challenging. More intermittent and distributed (local) power production will also give greater variations. Hourly metering and smart control systems mean that even minor consumers can soon adjust to power prices and capacity limitations in the local grid. Batteries and other storage systems will become more important as costs fall.

The ongoing changes must be handled with a stronger grid, better markets, suitable regulation, new technology and ICT solutions. Innovation is always on the Statnett agenda, and our R&D work is

for the long term. During this last year we have reaped the benefits of dedicated work in various areas, such as live-line working and voltage upgrades, new VSC technology applied in our cable systems and pre-fabricated foundations, which enable us to extend the building season.

To be successful we require good interaction with our Nordic neighbours, with the EU and with subordinate grids (DSO). There is a process of change taking place on every front. As an example, a new Nordic office for operational planning is being set up in Copenhagen, scheduled to be operative from 1 December 2017. This is a collaboration between the Nordic TSOs; Svenska Kraftnät, Energinet.dk, Fingrid and Statnett. Our joint office will ensure access to better data across the Nordic power systems, better market conditions and improved security of supply for a power system in continuous change.

### Digitisation presents new opportunities

Digitisation allows for more efficient solutions throughout the power system and can be an instrument for more cost-efficient operation, maintenance and development of the grid. Statnett would like to make use of the new opportunities offered by digital substations and other forward-looking solutions. Digitisation permits better interaction between consumption, production and the grid. However, our solutions also need to be safe and secure. In many areas, new solutions may contribute to both financial savings and reduced risk to people, for example in power line maintenance.

Development of new, forward-looking solutions will be a key task for Statnett and the rest of the energy sector in years to come. During the next ten years, NOK 140 billion will be invested in all grid levels throughout Norway. It is our duty to help make sure these investments strengthen security of supply and create value for Norwegian society.

Statnett's strategic foundation is based on society's objectives regarding security of supply, climate and value creation



# Safe and efficient operations now and in the future

**Statnett is the system operator in the Norwegian power system and is responsible for ensuring socio-economically efficient operations and development of the entire transmission grid. Statnett's most important task is to ensure safe and efficient operation of the power system. Carrying out the right investments at the lowest possible cost, and establishing efficient system and market solutions, is an important part of this endeavour. Electricity is used in an increasing number of areas and society's demand for security of supply is increasing. Statnett must always be a safe, efficient and innovative enterprise in order to handle the tasks and challenges facing us in the years ahead.**

## The future is electric

Electricity is one component of society's critical infrastructure. Digitalisation, the need for climate-neutral energy carriers, establishment of new industries and population growth in the big cities are development trends that will make society increasingly dependent on a reliable supply of electricity in the years to come. Statnett's most important task is to contribute to a power system with a reliable supply of electricity – now and in the future. This is a precondition for Norwegian value creation and realisation of Norway's climate objectives.

In order to manage increased consumption, new electricity generation and additional international interconnectors, Statnett is now in a phase with an historically high investment level. Measures are also needed on the system and market side to safeguard security of supply. During high-activity periods, it is essential that Statnett tries to find the most cost-effective solutions. Statnett must also ensure safe and efficient operations during this period of high development activity. Statnett aspires to be the leading TSO in Europe within HSE and works to raise the bar through an HSE action plan.

## Further operations and development of the power system require collaboration

We anticipate a need for more advanced interaction between consumption, generation and transmission of power, based on new

technologies and market solutions. Statnett works to ensure that this development takes place in a manner that safeguards the overall assets in the Norwegian power system. A constructive dialogue and coordinated efforts with power producers, grid companies, industry, the authorities and other relevant players, are vital.

Increased focus on Nordic collaboration on further development of common power systems will become even more important in the years ahead. The power systems in the Nordic countries have the same frequency, which entails that grid investments, choice of market solutions and operational reliability measures in one country affect the entire synchronised Nordic system. Extensive development of new intermittent generation, shutdown of Swedish nuclear power, as well as a doubling of transmission capacity between the Nordic region and the rest of Europe, mean that Nordic collaboration is essential for maintaining safe and efficient operations.

## Statnett shall be a safe, efficient and innovative enterprise, with focus on system development

The extensive development and modification of existing grids require good operational planning and a focus on HSE. The commissioning of international interconnectors in 2019 and 2021 and a changed power generation mix will demand efficient and adapted market products. The changes will take place while Statnett intends to improve efficiency by 15 percent by 2018. Technology development and internationalisation also affect how Statnett fulfils its social mandate. In order to adapt to changes in our surroundings, this means that Statnett must excel in the development and utilisation of new technology, as well as develop digital solutions. Statnett must therefore evolve the way it does things, for example collaboration with other stakeholders.

A night-time photograph showing a city skyline in the distance, illuminated by lights, with a residential area in the foreground. A red callout bubble is positioned in the upper right quadrant, containing text. A red line connects the bubble to a small red circle on the city skyline. The sky is dark blue with some clouds and stars.

It is important for Statnett to build a grid that ensures security of supply and paves the way for renewable energy projects and business development throughout Norway



# This is Statnett

## **Statnett is responsible for developing and operating the power grid and for ensuring that it meets society's requirements to the energy sector.**

Statnett shall be a safe, efficient and innovative company, which owns and operates the entire transmission grid in a socio-economically optimal manner. Statnett is owned by the Norwegian State through the Ministry of Petroleum and Energy (MPE), which promotes a co-ordinated and integrated energy policy.

### **Statnett's mission**

- *Security of supply:* Statnett shall ensure the supply of electricity through development, operations, monitoring and preparedness.
- *Climate:* Statnett shall facilitate the realisation of Norway's climate objectives.
- *Value creation:* Statnett will facilitate value creation, both for customers and society at large.

### **Statnett's primary tasks**

Statnett's mission is to be the Transmission System Operator (TSO) in the Norwegian power system. This mission consists of three primary tasks; power system planning, grid owner responsibility and system-wide responsibility. The tasks concerning responsibility for power system planning and system operation require independence, transparency and trust, and affect all participants in the electricity market. The role of transmission grid owner requires close cooperation with power system planning in order to ensure that grid capacity is developed at the right time. The grid owner must also make sure the grid infrastructure allows the system operator to ensure instantaneous balance between overall generation and consumption of power at all times, and that transmission capacity is utilised in a socio-economically effective manner.

#### **Power system planning - responsibility for planning the transmission grid in the Norwegian power system**

The Regulations relating to energy audits designates Statnett as the body responsible for audits of the transmission grid. A key part of the power system planning is the Power System Assessment, which Statnett is obliged to prepare every two years. This assessment shall lay the groundwork for socio-economically optimal development of the transmission grid, coordinated with regional power system assessments,

customers and stakeholders, in addition to Nordic and European grid plans. The Energy Act's provisions stipulate that Statnett must assess and connect new consumption and generation. As regards major power line projects, the Regulations relating to external quality assurance and decision-making authority pursuant to the Energy Act stipulate that a concept and feasibility study (CFS) must be carried out with external quality assurance.

#### **Grid owner responsibility - owner of the Norwegian transmission grid and interconnectors to others countries' power systems**

In order to achieve socio-economically efficient development and operation of the power system, our job as grid owner is e.g. to ensure adequate transmission capacity and satisfactory quality of supply in the transmission grid. As a grid owner, Statnett shall engineer, construct, operate and maintain the transmission grid and international interconnectors based upon cost effectiveness and commercial principles. Key aspects of grid owner responsibility are regulated through Statnett's plant licences, the Energy Act with associated regulations such as the Contingency Planning Regulations, the Regulations relating to electrical supply installations, and the Working Environment Act with associated regulations such as the Construction Client Regulations. The grid owner responsibility comprises all distribution grid assets and associated assets managed by Statnett. Statnett is the operator of the transmission grid and responsible for tariff stipulation.

#### **System operator – ensure instantaneous balance between generation and consumption**

A licence from the Norwegian Water Resources and Energy Directorate (NVE) designates Statnett as the system operator of the Norwegian power system. The role of system operator and associated responsibility are governed in detail by the Regulations relating to system responsibility in the power system, and the objective is to facilitate an efficient power market and satisfactory quality of supply. One key element of system operation is socio-economically efficient operations and use of commercial solutions to the greatest possible extent. As system operator, Statnett exercises public authority and is, in general, subject to the provisions of the Public Administration Act, except for so-called system-critical decisions where it is important to execute decisions immediately. Statnett's decisions affect other grid owners, producers and customers connected to its own grid and the grids of other grid owners.

The system operator and the NVE together make up the Central Power System Management (KSL) in emergency situations.

Statnett has been given licenses from the MPE to ensure that energy trading on interconnectors out of Norway is as secure and efficient as possible. The terms and conditions of the licenses provide guidelines for how to execute this responsibility.

Another licence from the NVE designates Statnett as responsible for imbalance settlement. This role is governed in detailed by the licence and associated regulations, and the objective is to ensure financial balance in the power market. The imbalance settlement responsibility also includes operation and development of the securities scheme and issuing guarantees of origin for Norwegian production. Statnett has also been tasked with developing Elhub, which is the Norwegian data hub for metering values in the power market, operation and development of the NUBIX Internet service, as well as operating system support for Ediel, a standardised electronic data exchange for the Norwegian electricity market. The MPE has also made Statnett the registrar for electricity certificates in Norway.

### Statnett's values

Statnett empowers each manager and employee to assess, decide and exercise responsibility. Statnett also needs to appear as a consistent and professional steward of our social mandate. Through a common set of values, Statnett builds a foundation for behaviour based on interaction, dialogue and transparency. Statnett's values are:

- *Long-term perspective:* A long-term perspective means responsibility for Statnett's role as well as long-term development within the energy sector. This also entails navigating the balance between a long-term perspective and efficiency in daily operation.
- *Respect:* Respect means humility for the responsibility society has assigned to Statnett and that this shall be exercised with respect for our surroundings and stakeholders. This also entails that Statnett – internally as well as externally – shall respect the interests and viewpoints of others.
- *Community:* Community means that Statnett is part of the community and that Statnett must act within this context, our independent role notwithstanding. Internally, this means that we are all responsible for the big picture and reaching our goals together.

### Organisational structure

Statnett's activities are organised into four divisions, in addition to Corporate Strategy and Communications and Financial and Corporate Services. Auke Lont is the President and CEO. The head of the European Affairs unit reports directly to the CEO. See organisation chart on page 11.

### Technology and Development

Technology and Development is responsible for power system planning, project development and interconnector projects to Germany and the UK. The division has Group responsibility for HSE, as well as development and implementation of new technology. Research and Development (R&D) and Project Portfolio Management are also parts of this division.

### Construction

This division's main responsibility is to implement Statnett's development projects, and act as construction client. This involves following up risk and ensuring that Statnett delivers on HSE, cost, schedules and quality in construction projects. The division is also responsible for SHWE plans and document management in projects, as well as the Group's procurement function. The division also has a preparedness unit that conducts preparedness and tasks related to maintenance and assets.

### System Operations, Asset Management and Markets

This division is responsible for security of supply; hour by hour, 365 days a year. The responsibility lies in exercising the system operator responsibility in the Norwegian power system, managing ownership of Statnett's grid infrastructure and ensuring efficient operations and emergency preparedness. The division is also tasked with ensuring a well-functioning electricity market.

### ICT

The division's main task is to manage and develop Statnett's ICT systems and infrastructure. The power system is increasingly digitized and Statnett is therefore dependent on advanced ICT systems in order to develop and operate the power system. The ICT division provides services for monitoring and controlling the power grid, securing balance between production and consumption, settlement of the power transmissions, as well as systems for operation and maintenance of Statnett's substations, lines and cables.

### Corporate Strategy and Communications

The Corporate Strategy and Communications unit is responsible for business strategy, communications and public affairs, as well as following up customer relations and the company's tariff model.

### Corporate Staff

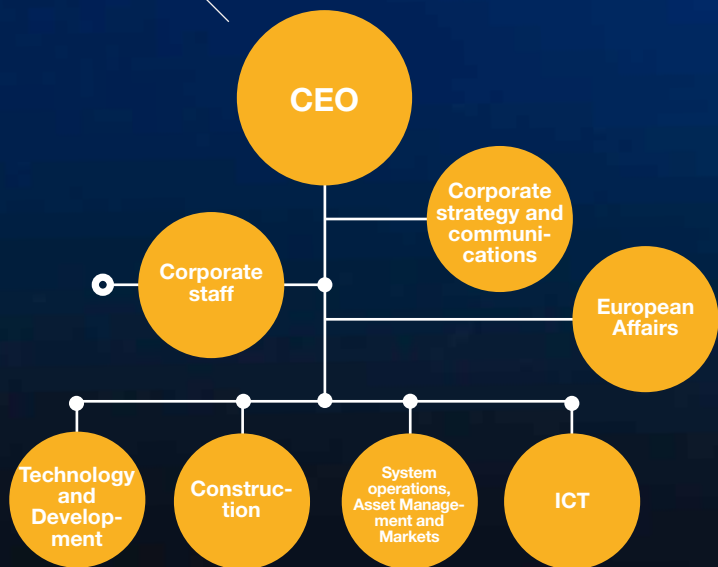
The corporate staff shall ensure consistent corporate governance and service delivery within corporate management, risk management, legal advice, HR, accounting and finance. The corporate staff is also responsible for grid transactions.

### European Affairs

European Affairs is responsible for strengthening and coordinating Statnett's activities in the EU and towards the European market. The head of the unit reports to the CEO.

Statnett has activities throughout Norway, with headquarters in Oslo, and administration offices in Alta, Trondheim, Sandnes and at Sunndalsøra

# Organizational structure



# Presentation of the Group management

## Auke Lont

**President and CEO** Auke Lont holds a Master's degree in Econometrics from Vrije University in Amsterdam. He became President and CEO of Statnett in February 2009 after having held the position of CEO of the consulting company Econ in Norway. Auke Lont has previously held senior executive positions in Statoil and was the CEO of Naturkraft AS. He has more than 30 years' experience from the energy sector and is a board member of the recently established Bane NOR SF, on the board of the employers' association Spekter.

## Bente Monica Haaland

**Executive Vice President Strategy and Communications** Bente Monica Haaland holds a MSc from the University of Aberdeen and a Master's in management from BI Norwegian Business School. She has more than 20 years of experience in the energy sector. Bente M. Haaland has worked for Statnett since 1993, except for a brief hiatus. She has held a number of management positions, and has been the head of Corporate Strategy and Communications, and part of Statnett's Group management since 2014. Bente M. Haaland has also held executive positions in Statkraft and the Eclipse Energy Group. She was member of Statnett's User Council on behalf of EBL from 2008 to 2010.

## Håkon Borgen

### Executive Vice President Technology and Development

Chartered engineer within electric power from the Norwegian University of Science and Technology (NTNU) and Technische Hochschule Darmstadt (THD) in Germany. He has close to 25 years of experience from the energy sector. Håkon Borgen has worked for Statnett since 1995 and has held several management positions. He has been the head of the Technology and Development division since 2014, but has been part of Statnett's Group management since 2004. Håkon Borgen has also held management positions in BKK.

## Elisabeth Vike Vardheim

**Executive Vice President Construction** Elisabeth Vike Vardheim holds an MSc in petroleum geology/finance from NTNU, is a business graduate degree and has a master module in board governance from BI Norwegian Business School. Elisabeth V. Vardheim has held a number of management positions since she started working for Statnett in 2007, including being the Director of the Project Development Section and the Project Owner Unit in Grid Development. She has been the head of the Construction Division and a member of Statnett's Group

management since 2014. Elisabeth V. Vardheim has many years of managerial experience in the public sector, has managed a number of construction projects as well as being the Project Management Leader of the construction client organisation for the 1994 Lillehammer Olympics. Elisabeth V. Vardheim is the chair of the board for Statnett Transport AS.

## Øivind Kristian Rue

### Executive Vice President System Operations, Asset Management and Markets

Øivind Kristian Rue holds a Master's degree in political science from the University of Oslo. He has worked in the energy sector since 1990 and has been employed by Statnett and part of the Group management since 2000. In Statnett, he has been the head of a number of divisions, and is now the head of the System Operations, Asset Management and Markets division. Øivind K. Rue is also Statnett's emergency team leader. He has led the Regional Group Nordic in ENTSO-E, which is responsible for coordinating operations in the Nordic synchronous area. He was formerly Director of Saga Petroleum AS and Deputy Assistant Director General at the Norwegian Ministry of Trade and Industry.

## Peer Olav Østli

### Executive Vice President ICT

Peer Olav Østli holds a MSc in informatics and has completed post-graduate management training at Henley Business School in the UK. Peer O. Østli has information technology experience from multiple sectors, and has been employed by Statnett since 2007 as head of the ICT division and part of Statnett's Group management. Peer Olav Østli has been an executive in Telenor, Schibsted Nett, and Scandinavia Online AB, CTO of NRK and has served as a board member and advisor for venture funds. Peer Olav Østli is the chair of Elhub AS.

## Knut Hundhammer

### Executive Vice President, CFO and Chief of Staff

Knut Hundhammer was educated at the Norwegian Military Academy and has an MBA from Wharton School of Business in the US. He has been with Statnett and a member of Group management since 2011 as EVP, Chief of Staff and CFO. Hundhammer has previously held positions as a Company Commander in the Norwegian Armed Forces, consultant at McKinsey & Company, CFO/COO of Høegh Autoliners, Senior Vice President/CFO in Finansbanken ASA, President of the Norwegian Defence and Security Industries Association (FSi) and Managing Director for the Commercial Shipping Division in the Klaverness group.

Bente  
Monica  
Haaland

Håkon  
Borgen

Elisabeth  
Vike  
Vardheim

Auke  
Lont

Øivind  
Kristian  
Rue

Peer Olav  
Østli

Knut  
Hundhammer



# Highlights 2016

## Acquisitions of existing transmission grid

Statnett has in 2016 taken over the existing transmission grid from BKK and has signed an agreement to purchase the "Outer Ring", Fana – Kolsnes – Mongstad – Modalen, once those facilities have been completed. Following an agreement with Lofotkraft AS, Statnett has also taken over the Kvitfossen – Kanstadbotn transmission line. The reason for these transactions is the EU's Third Energy Market Package, which, when incorporated into Norwegian law, will require all assets in the transmission grid would have to be acquired by Statnett.

## The power line between Ørskog and Sogndal operational

The new power line between Ørskog and Sogndal entered operation in December 2016. With its 300 kilometres and six new substations, it is the largest power line project Statnett has completed so far. The project provides secure power supply from Western Norway to Central Norway, also enabling planned renewables projects in Sogn og Fjordane to be realised.

## The first part of Ofoten – Balsfjord came online

In the Ofoten – Balsfjord development project, the sections from Ofoten to Kvandal and from Bardufoss to Balsfjord came online at 420 kV in August and October 2016 respectively. The final section between Kvandal og Bardufoss will come online at 420 kV closer to the summer of 2017. This project will provide a more reliable supply of power to the northern part of Nordland, Troms and Finnmark.

## Development of wind power in Central Norway in process

In April, Statnett's Board of Directors approved start-up of the first construction phase for a new power line between Namsos and Surna. This phase concerns development of the Namsos – Åfjord and Snilldal – Surna sections. The project will contribute to the realisation of wind power development in Central Norway and increased capacity in the transmission grid between the northern and southern part of Norway. Scheduled completion is 2019.

## Start-up of the first phase in the Balsfjord – Skaidi development

In June, Statnett's Board of Directors approved the start-up of construction of the new 420 kV power line from Balsfjord to Skillemoen, as well as the 132 kV substation at Skaidi. According to the

plan, the Skaidi power station will come online in 2018, with the new 420kV/132 kV substation at Skillemoen and the Balsfjord – Skillemoen line entering into operation in 2021. In line with the new HSE action plan the development of the Balsfjord – Skaidi project will take place stepwise and not, in some sections, in parallel. Consequently, the progress plan will be less stringent than originally planned.

## Construction of the interconnector to Germany

In 2016, groundbreaking was made on the German side, while on the Norwegian side, groundwork was completed and construction of the converter began on the new Ertsmyra station. Construction of a DC line between Ertsmyra and the transition station in Vollesfjord has started, and laying of the first section of the subsea cable will begin in summer 2017. The subsea cable to Germany will be completed in 2019, with commercial operation from 2020. The power trading capacity will contribute to security of supply and will create value for Norway. It will also be an important part of the transition to a more climate-friendly energy system with more renewable energy, both in Norway and in Germany.

## Construction of the interconnector to England

The project has started the construction phase of on both sides. At the beginning of 2017 there was breakthrough for the 2.3 km tunnel between Suldalsvatnet and Hydalsfjord, which is part of the cable route. During 2017, the groundwork will be completed on both sides. The subsea cable will be commissioned with commercial operation in 2021. The power trading capacity will contribute to security of supply and will create value for Norway. It will also be an important part of the transition to a more climate-friendly energy system with more renewable energy, both in Norway and in Germany.

## Final licence for the last sections of the Western Corridor

In June, the Ministry of Petroleum and Energy (MPE) granted the final licence for construction of the last sections of the 420 kV power line in the Western Corridor project. The Western Corridor is the main transmission grid between Kristiansand and Sauda, and the licences allow for a continuous 420 kV connection. The project paves the way for connection of new renewables production in Southern

# Highlights 2016

Through its projects, Statnett aims to facilitate smooth interaction between consumption, production and transmission of power



Norway and ensures power supplies for the interconnectors to Europe. The project includes construction of eight substations, around 250 kilometres of new power lines, demolition of about 200 kilometres of existing power lines and insulation upgrades from 300 kV to 420 kV on about 270 kilometres of existing power lines.

#### **Additional application for new transmission grid line in South Rogaland**

In December, Statnett applied to the Norwegian Water Resources and Energy Directorate (NVE) for a licence for a new transmission grid line from Lysebotn to Stokkeland, plus a new substation. Some parts of this section, which had been included in a former application concerning a power line between Lyse and Stølaheia in Stavanger, have been withdrawn from the ongoing licencing process. Assessments show that the new alternative is more cost-efficient and can be carried out stepwise in line with increased consumption. The project will ensure power to the residents of South Rogaland and facilitate expected, long-term growth in the region.

#### **Licence application for the Sogn substation in Oslo**

In December, Statnett submitted an application to NVE to upgrade Sogn substation in Oslo. The upgrade involves replacing the current air-insulated 300 kV switching facility with a new, compact and closed-in 420 kV facility which will take up significantly less space. This project is part of the Greater Oslo Grid Plan, which is an overall plan for how to develop the main transmission grid in Oslo and Akershus going forward in order to ensure a secure power supply.

#### **Updated investment Plan 2016**

Statnetts updated investment plan for 2016 was submitted to NVE in October. The investment level is the same as was mentioned in the Grid Development Plan 2015. The plans comprise investments totalling NOK 40-50 billion in grid projects the next five years. Investment decisions have been made for most of the development projects planned up to 2020, and many projects are now in the construction phase. There is thus little uncertainty concerning the investment level for this period. A somewhat lower investment level is expected after 2020.

#### **New regional control centre in Alta**

On June 14 the new regional control centre in Alta assumed the responsibility for operating the grid to as far south as Sognefjorden. The regional control centre at Sunndalsøra, which had previously been responsible for operation of the grid between Sognefjorden and Salten/Bodø, remained in operation until 1 September 2016. Statnett now has two operative regional control centres; in Oslo and Alta.

#### **Establishing a Nordic market for automatic reserves**

The Nordic system operators in the power system agreed in November to establish a common Nordic market for automatic secondary reserves. Automatic reserves are used to stabilise the frequency when imbalances occur in the power system. This becomes steadily more important in a power system that is undergoing change, and the increasing complexity and technological developments also require more automation. The Nordic market will start operating in the spring of 2018.

#### **Establishing a Nordic office in Copenhagen**

It was decided in May to set up a joint Nordic office in Copenhagen to support the four Nordic transmission system operators Statnett, Svenska Kraftnät, Energinet.dk and Fingrid in planning and coordinating their operation of the Nordic power system. The office, which in the European regulations is called a Regional Security Coordinator (RSC), will deliver services to the companies in the areas of new grid models, safety/security analysis, capacity calculation and planning for outages. The office is scheduled to be in operation from 1 December 2017.

#### **Statnett assumes ownership of all transmission assets in South Rogaland**

In December 2016, Statnett purchased the remaining 50 percent of the shares in Lyse Sentralnett AS from Lyse Elnett AS, and the company changed its name to Statnett Rogaland AS. With effect from 1 January 2017, all grid assets in Statnett Rogaland AS have been transferred to Statnett SF, and Statnett SF has taken over the remaining transmission grid assets in the region.



Over the last five years, Statnett has invested nearly NOK 30 billion in grid projects



# Financial framework conditions

## Statnett's revenues

Statnett's reported revenues during the fiscal year consist of fixed grid tariffs from the transmission grid customers as well as congestion revenues. Congestion revenues arise as a result of transmission of power from low-price areas to high-price areas in the Nordic region and between Norway and the Netherlands. Grid tariffs are stipulated prior to each calendar year.

The revenues are regulated and controlled by the authorities through the Norwegian Water Resources and Energy Directorate (NVE), and an annual permitted revenue is stipulated. The permitted revenue must cover the costs of grid developments and maintenance, and provide a fair return on grid investments. The precondition for this is that the transmission grid is designed, built, operated, used and maintained in a cost effective manner based on commercial principles.

There is normally a deviation between each year's regulated financial revenue and the final permitted revenue, which NVE stipulates after the end of the year. This discrepancy is called higher or lower revenue and will, in accordance with NVE regulations, level out over time through adjustment of future grid tariffs. Consequently, the higher/lower revenue represents temporary amounts in Statnett's accounts, which are not recognised in the balance sheet according to IFRS. Also presented are development in certain financial and operational key figures used by management to monitor performance measures over time.

To better understand Statnett's underlying profit, some key figures are presented corrected for higher/lower revenue. Accumulated higher/lower revenue also contains added interest and corrections from previous years, in addition to annual higher/lower revenue. Also presented are development in certain financial and operational key figures used by management to monitor performance measures over time.

## Repayment of higher revenue

Statnett's price strategy sets guidelines for stipulation of the annual transmission grid tariff. In accordance with the guidelines from the Norwegian Water Resources and Energy Directorate (NVE), Statnett emphasizes consideration for stable and predictable grid

tariffs over time. Consequently, repayment of higher revenue will take place over several years.

## Revenue and result development

Since 2009, Statnett has had significant higher/lower revenue. This has resulted in major fluctuations in Statnett's recognised operating revenues and operating profit/loss. Revenues and profit or loss adjusted for higher/lower revenue show that underlying activities are much more stable than indicated by the financial figures, including higher/lower revenue. The increase in underlying revenues and result from 2013 is mainly due to a change in the model for calculating the NVE interest rate, which yields an increased rate of return on grid capital. Revenue and profit increased in 2013 - 2016 due to increased grid capital as a result of high investments and multiple commissioned facilities during this period. In 2015, there was also a positive non-recurring effect of the transition from a defined benefit to a defined contribution pension scheme. Amended regulations for how pension costs will be covered by the revenues will have a negative effect in 2016.

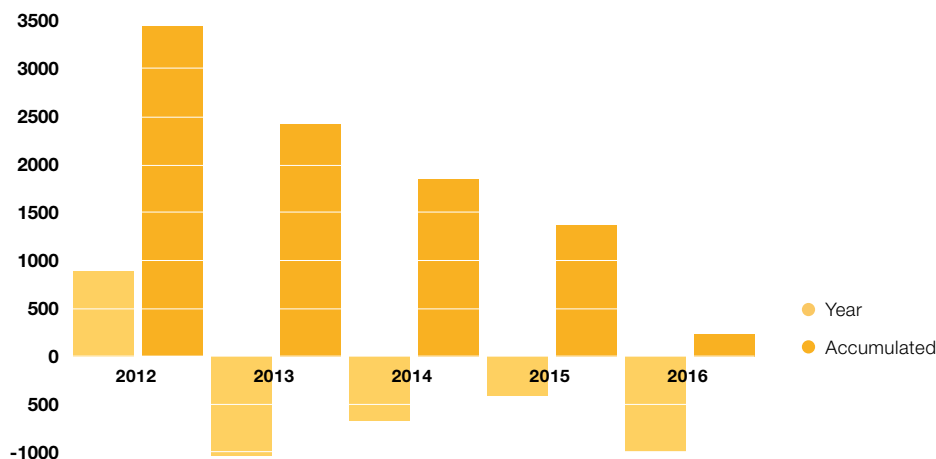
## Higher/lower revenue development

**2012:** Accumulated higher revenue at the end of 2011 was NOK 2 617 million. Somewhat lower tariffs were therefore stipulated for 2012. Due to higher congestion revenues than expected, this nevertheless resulted in higher revenues of NOK 837 million. Accumulated higher revenue was NOK 3 455 million at the end of 2012.

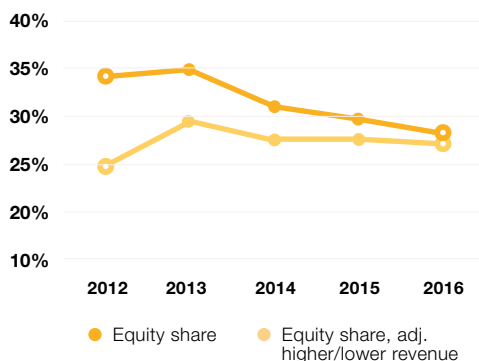
**2013:** Significantly lower tariffs were set for 2013 in order to reduce accumulated higher revenue. This, in addition to lower congestion revenues than assumed and a change associated with the setting of actuarial gains/losses on pensions to zero as of 1 January 2013, resulted in a lower revenue of NOK 1 042 million. Accumulated higher revenue was NOK 2 413 million at the end of 2013.

**2014:** In order to further reduce the accumulated higher revenue, the tariff for 2014 was kept at a low level. Lower congestion revenues than assumed also contributed to Statnett having a lower revenue of NOK 623 million in 2014. Accumulated higher revenue was NOK 1 790 million at the end of 2014.

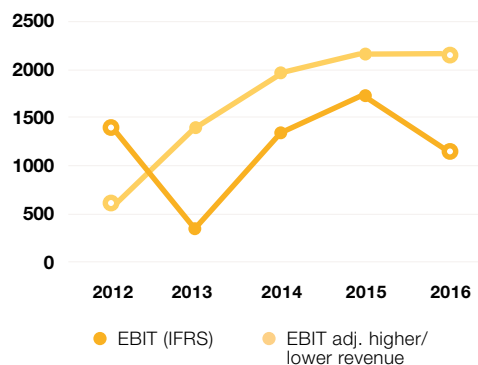
MNOK Development higher/lower revenue



Development equity share



MNOK EBIT adjusted for higher/lower revenue



**2015:** The tariff for fixed components for consumption increased in 2015 based on an expected increase in permitted revenue, but less than the expected permitted revenue would indicate. Congestion revenues were higher than assumed and contributed to a smaller reduction in the accumulated higher revenue than planned. Statnett achieved a lower revenue of NOK 444 million in 2015. Accumulated higher revenue was NOK 1 346 million at the end of 2015.

**2016:** The tariff for fixed components for consumption increased further in 2016 based on an anticipated increase in permitted revenue. The reduction in accumulated higher revenue was still somewhat lower than planned, as there was an increase in tariff revenues from energy components due to higher power prices, and congestion revenues in the Nordic region were high, primarily due to congestion internally in Norway. Statnett achieved a lower revenue of NOK 1 003 million in 2016. Accumulated higher revenue was NOK 343 million at the end of 2016.

**The investment level affects revenues and the balance sheet**

Investments increased steadily during the period 2009 to 2012, but

almost doubled to NOK 6 billion in 2013. During the period 2013 to 2015, the investment level was relatively stable, before increasing again to almost NOK 8 billion in 2016. Statnett has achieved an investment pace that is necessary in order to realise the Group's development plans. At the same time, the company has decided on an implementation strategy which is aligned with the Group's HSE action plan. The investments include both completed investments and plants under construction. Only completed investments are part of Statnett's basis for regulated revenues. Net interest-bearing debt has grown in line with the investment level.

Statnett's equity reported in the financial accounts includes accumulated higher/lower revenue. To show Statnett's real equity, equity is adjusted for accumulated higher/lower revenue after tax. As investments have increased in recent years, the adjusted equity ratio has been reduced. In December 2013, it was decided to increase Statnett's equity by NOK 3 250 million, and in January 2014, Statnett received the new equity. The equity ratio adjusted for accumulated higher/lower revenue after tax was 27 per cent at the end of 2016.

## Key Figures - Statnett konsern

Highlights profit & loss (Amounts in NOK million)	2016	2015	2014	2013	2012
<b>Reported figures</b>					
Revenue	6 678	5 906	5 563	4 561	5 334
Depreciation and amortisation <sup>1)</sup>	-2 120	-1 516	-1 150	-1 030	-825
EBITDA	3 272	3 230	2 528	1 376	2 258
Operating profit (EBIT)	1 152	1 714	1 378	346	1 433
Profit before tax	783	1 410	1 120	89	1 162
Profit after tax	645	1 103	829	82	837
<b>Adjustments</b>					
Changes in accumulated higher/lower (+/-) revenue before tax	-1 003	-444	-623	-1 042	838
Changes in accumulated higher/lower (+/-) revenue after tax	-752	-324	-455	-750	603
Accumulated higher/lower (+/-) revenue	343	1 346	1 790	2 413	3 455
<b>Underlying figures (adjusted for changes in higher/lower revenue)</b>					
Revenue	7 681	6 350	6 186	5 603	4 496
EBITDA	4 275	3 674	3 151	2 418	1 422
Operating profit (EBIT)	2 155	2 158	2 001	1 388	595
Profit before tax	1 786	1 854	1 743	1 131	324
Profit after tax	1 398	1 427	1 284	832	234
<b>Highlights balance sheet</b>					
Investments	7 695	5 820	6 037	6 375	3 152
Tangible fixed assets	33 861	30 215	27 515	21 472	17 805
Long- and short-term interest bearing debt including effect of hedges	32 633	28 289	24 643	19 909	14 390
Market value of interest and value hedges related to debt	2 844	4 833	2 942	471	820
Net interest bearing debt without effect of interest and value hedges	29 789	23 257	21 701	19 438	13 570
Equity	13 867	13 605	12 629	12 135	8 852
Equity adjusted for higher/lower revenue after tax	13 610	12 622	11 322	10 374	6 364
Total assets	50 743	45 547	41 107	34 897	25 794
Capital employed <sup>2)</sup>	41 322	35 859	31 271	27 017	21 807
<b>Financial key figures</b>					
Return on capital employed before tax, adjusted for higher/lower revenue <sup>3)</sup>	5.6%	6.4%	6.9%	5.7%	2.9%
Return on equity after tax <sup>4)</sup>	4.7%	8.4%	6.7%	0.78%	9.8%
Equity share	27.3%	29.9%	30.7%	34.8%	34.3%
Equity share, adjusted for higher/lower revenue	26.8%	27.7%	27.5%	29.7%	24.7%
<b>Operational key figures</b>					
Employees, total	1 323	1 226	1 119	1 074	986
Km power lines in operation	10 600	10 295	10 149	10 100	9 839
Km land and subsea cables in operation <sup>5)</sup>	1 282	1 268	1 212	1 132	1 132
Absence due to illness %	3.3%	3.3%	3.2%	3.1%	3.6%
Lost-time injuries, own employees	9	11	4	5	8
Lost-time injuries, including contractors	28	28	19	39	26
Greenhouse gas emissions (CO2-equivalents) <sup>6)</sup>	61 794	41 465	35 220	35 763	
Hours with N-0 operations	550	1 335	1 482	1 221	1 586
Customer satisfaction (score)	67	71	66	70	69

<sup>1)</sup> Depreciation, amortization and writedown quoted in financial statements reduced with writedown quoted in note 9 Plants under construction

<sup>2)</sup> Capital employed = Tangible fixed assets + Plants under construction + Trade accounts and other short-term receivables + Trade accounts payable and other short-term debt

<sup>3)</sup> Return on capital employed before tax, adjusted for higher/lower revenue = Operating profit (EBIT), adjusted for changes in higher/lower revenue / Average capital employed last two years

<sup>4)</sup> Return on equity after tax = Profit after tax / Average equity last two years

<sup>5)</sup> The reporting method is changed in 2016. Values are updated for all years. Values show total kilometres of cable installed, not kilometre route as before

<sup>6)</sup> Improved reporting, comparable numbers are not available for 2012.



Corporate social responsibility in Statnett is about understanding the expectations of the community, and handling these expectations in a manner that generates mutual trust and respect

# Corporate Social Responsibility 2016

**Statnett's social mission is to ensure a reliable supply of electricity, contribute to value creation in society through an efficient and well-functioning power system and pave the way for better environmental solutions. This social mission shall be resolved in a responsible and socio-economically efficient manner, which entails that social and environmental considerations are integrated in the Group's development and operations in a manner that goes beyond the requirements that follow from statutes and regulations.**

**Corporate social responsibility (CSR) in Statnett is all about understanding the expectations of the community, and hand-ling these expectations in a manner that generates mutual trust and respect. By doing so, CSR will deliver performance excellence and capacity which will ensure that Statnett meets its main objectives.**

## 1. Managing corporate social responsibility

State-owned enterprises must work systematically and be at the forefront of corporate social responsibility, climate and the environment. Statnett creates good results based on the Group's ethical standard. All employees are responsible for familiarising themselves with Statnett's management system and ethical guidelines, as well as complying with current principles, guidelines and requirements in their daily work.

The Board of Directors has the overall responsibility for corporate social responsibility in Statnett. The Board of Directors has established a management policy that specifies which principles Statnett must follow in order to safeguard its corporate social responsibility. It covers areas such as climate and the environment, anti-corruption, safety and human and labour rights. The Board of Directors is also responsible for ensuring that CSR is incorporated in Statnett's strategy and goals, as well as for follow-up of results. The President and CEO regularly briefs the Board of Directors concerning matters that relate to financial, environmental and social topics. HSE performance is reported to the Board of Directors on a quarterly basis and environmental performance and compliance are reported further through the annual report.

The President and CEO is responsible for ensuring that Statnett's framework for corporate social responsibility is updated and that it is integrated in corporate governance. The line management is responsible for ensuring that the organisation is familiar with the policy and that it is complied with. CSR is integrated by preparing goals for the company's activities, and internal follow-up takes place through quarterly follow-up of results in the line. Both the Group management and Statnett's Board of Directors approve Statnett's corporate social responsibility report, which is prepared every year, and ensure that all important topics have been covered.

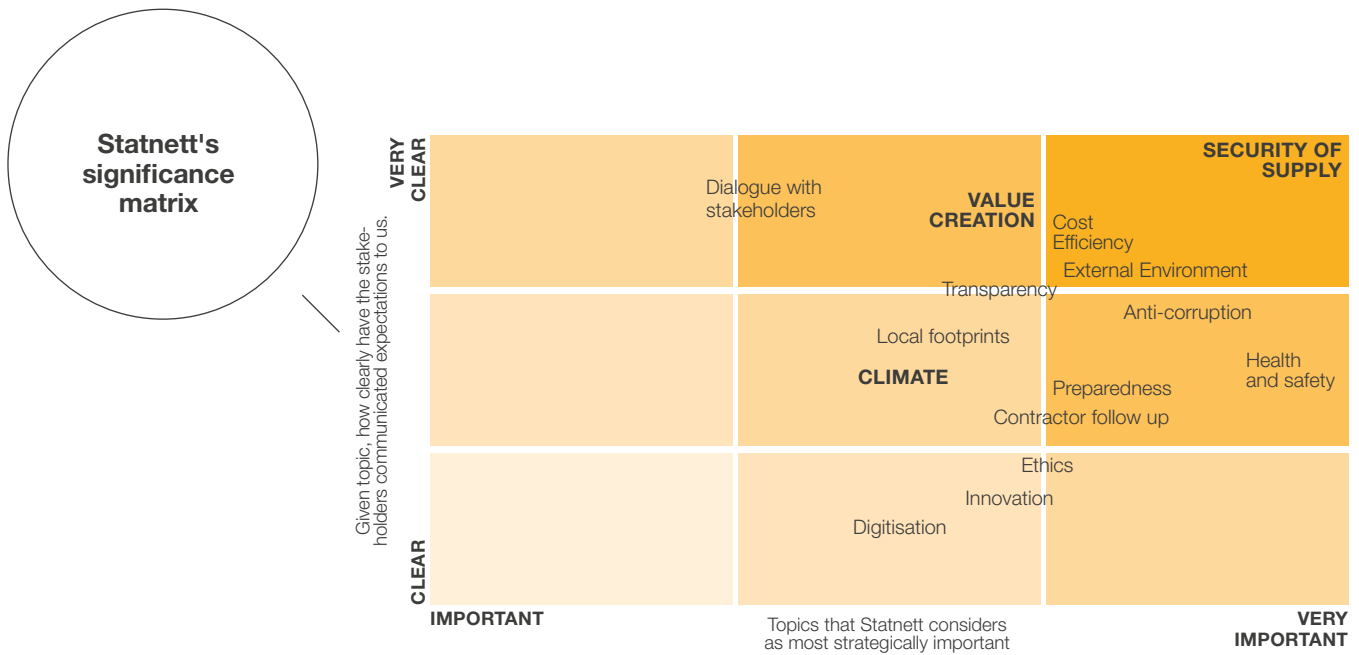
## Priority areas

Statnett's activity affects users of the power grid and a variety of stakeholders in society at large. Statnett updates its strategy every second year. During that process, Statnett identifies and analyses which social, financial and environmental factors are the most important for Statnett to manage, monitor and report on. The analysis reflects what Statnett considers to be the most important factors, while at the same time highlighting what the stakeholders are most concerned with. The analysis is illustrated on page 23. The identification of the stakeholders' views is based on a comprehensive assessment, based on results from Statnett's client survey and other dialogue with stakeholders. The analysis is endorsed by Statnett's Executive Board and the Board of Directors.

## Dialogue with stakeholders – involvement and transparency

Statnett engages in active dialogue with the stakeholders, as part of the company's daily activities and through other activities and projects. Dialogues are comprehensive and take place at, for instance, regular meetings and during consultation processes relating to grid developments and specific development projects. Statnett's most important stakeholders include customers, suppliers, the authorities, trade associations and unions, property owners, special interest groups, the general public and own staff. For more information about stakeholder dialogue in connection with development and construction projects, see Chapter 9, Local footprints.

Every other year, Statnett publishes its Grid Development Plan (GDP). The plan is one of Statnett's key planning documents. The next GDP



will be presented in the autumn of 2017. In the spring of 2016, a National Power System Conference was held. This represents the start of the process for the next GDP. The Regulations relating to energy assessments designates Statnett as the body responsible for assessments of the transmission grid. Regional power system assessments were completed in 2016. Statnett participates in the development of these assessments, which are managed by regional grid companies. In October 2016, Statnett presented an updated investment plan to the NVE. This is part of the statutory reporting to the Norwegian Water Resources and Energy Directorate (NVE), which is prepared every second year.

In 2013, a Market and Operations Forum was established. Its main purpose is to give customers an opportunity to provide input and advice to Statnett on issues relating to planning, operation and market conditions. Emphasis is placed on issues where Statnett will make fundamental and strategic decisions. The Forum has an advisory role for Statnett's administration and Board of Directors.

Statnett aims to increase transparency in its operations. This applies to e.g. access to analysis information upon which Statnett bases its decisions and socio-economic considerations. In the autumn of 2016, Statnett published its long-term market analysis, which is important for the decisions Statnett makes regarding future plans and investments. Efforts are also being made to give external parties access to cost developments for ongoing projects.

With approximately 1 300 employees and trade union membership of more than 70 per cent, close dialogue between the parties is

important to maintain good collaboration. This applies to statutory discussions and negotiations, as well as to HR issues and interest considerations. The mutual trust that has been established between the parties over several decades is one of the main reasons why Statnett and the employee organisations, in most instances, are able to find good solutions together and avoid unnecessary disputes. Dialogue with employee organisations and their central unions, as well as good contracts, are also essential for ensuring that foreign contractors comply with Norwegian wage and working conditions as well as Norwegian working hour provisions when performing work for Statnett.

**Knowledge communication**

Increased knowledge about Statnett and a good reputation is important so that Statnett can gain acceptance for its major ongoing and upcoming investments in the transmission grid in the years to come. This is also essential for recruitment purposes, and Statnett conducts regular reputation surveys. Statnett's reputation is mainly affected by how the outside world perceives the Group's products and services, management, environmental concerns and working conditions. Confidence in Statnett has remained stable in spite of Statnett's responsibility for projects that have sparked significant public debate in recent years. In 2016, the overall impression of Statnett received a score of 61 points. This is on a par with 2015. Confidence in Statnett providing a reliable supply of electricity gave a score of 58 points in 2016. This is two points lower than in 2015, and at the same level as in 2014. Customer satisfaction among customers directly linked to the transmission grid has remained relatively stable, with a score of about 70 of a total of 100 points in recent years. Customer satisfaction was 67 in 2016.

Statnett also wishes to make a positive contribution to local communities and supports local activities where the Group is present. Statnett has continued its cooperation with local science centres in 2016, in order to disseminate knowledge, inspire young people to acquire scientific competence and together develop new dissemination tools. A number of knowledge communication measures have also been implemented. For example, Statnett has launched two new games for mobile phone and tablet applications; BALANSE and OHM. BALANSE was launched at the end of 2015 and has been downloaded 2.2 million times worldwide. OHM was launched towards the end of 2016 and has, so far, been downloaded 30 000 times, primarily in Norway.

## 2. Security of supply and preparedness

Statnett SF is the transmission system operator in Norway and owns most of the transmission grid. Statnett's social mission is to contribute to a power system that is operated efficiently and to safeguard a secure supply of electricity – now and in the future.

In 2016, Statnett invested a total of NOK 5 939 million in grid assets. Statnett's largest grid and substation investment projects are described in more detail in the Board of Directors' report and on Statnett's website.

Statnett operates on the main principle that there should be two alternatives for power supply into an area. This is referred to as N-1-operation. This implies that the power supply must remain intact even when parts of the grid suffer outages. Statnett measures security of supply by e.g. registering periods with only one barrier against power outages in the transmission grid; N-0. The measurements show which areas are vulnerable and therefore which areas should be prioritised in future grid developments. In 2016, N-0 was substantially lower than previously. This was due to lower consumption in vulnerable areas, mainly in Stavanger, as well as a new over line between Ofoten and Kvandal. Lately Statnett has also experienced fewer periods of downtime during extreme weather, especially related to areas with new commissioned facilities.

Frequency deviations are another important indicator of the power system condition. Following a downward trend from 2011, frequency

deviations increased considerably in 2016. Among other factors, this was due to fewer secondary reserves (aFRR)<sup>1</sup>, many bottlenecks and an increase in the share of fluctuating wind power generation. Projects that are scheduled to be completed in the coming years will further strengthen security of supply, including in Western, Northern and Eastern Norway.

Statnett is responsible for preventing and handling extraordinary incidents, which affect security of supply. This includes extraordinary incidents relating to technical and human error, natural incidents and deliberate vandalism. Statnett has a key role in the Power Supply Preparedness Organisation (KBO).

## 3. Value creation and cost effectiveness

Statnett's operations generate value for society both directly and indirectly. The direct value creation is presented in the Group's accounts and is allocated to the owner, authorities, employees and lenders.

Indirect value creation is ensured through Statnett's grid developments and by Statnett, which enables generation, transmission and consumption of power, which supports producers' and consumers' value creation, whilst ensuring that this takes place in a cost-effective manner. Statnett adheres to socio-economic criteria for development and operation of the power grid. Furthermore, Statnett contributes to value creation by developing market solutions and facilitating power trading. This also entails trade across national borders, through so-called congestion revenues. Power trading across borders contributes to improved security of supply in Norway and generates larger markets for Norwegian players.

The Group aims to increase cost efficiency by 15 per cent by the end of 2018, based on the 2013 cost level. Results so far show that Statnett is expected to reach this goal in 2018. An important objective is to realise the potential for economies of scale inherent in the combination of existing and new facilities. Statnett also works actively to develop and implement new technology and solutions. One example is the introduction of a new tower foundation for construction in uncompacted material, which was used when constructing a new power line in Northern Norway.

Security of supply	Units	2016	2015	2014
Frequency deviations	Minutes	13 647	10 616	10 232
Periods with N-0 <sup>1</sup>	Hours	550	1 335	1 482

<sup>1</sup> Figures from Stavanger and Northern Norway north of Ofoten

<sup>1</sup> Automatic Frequency Restoration Reserves; an automatic regulation function where a regulating signal is sent from the TSO to a supplier's control system and automatically changes the production (or consumption) in the facility.



Distribution of value creation	Unit	2016	2015	2014
Employees – wages and social benefits <sup>1</sup>	NOK million	1 364	1 011	1 141
State and municipal contributions - taxes and fees <sup>2</sup>	NOK million	548	707	613
Interest costs	NOK million	527	514	527
Owner - dividend <sup>3</sup>	NOK million	350	357	321
Company - Retained equity	NOK million	264	940	98

<sup>1</sup> Wage costs excluding employer's contribution

<sup>2</sup> Tax charge, property tax and employers' contribution

<sup>3</sup> Proposed dividend for 2016

The foundation can be pre-fabricated and requires far less extensive transportation than conventional concrete elements. This saves costs and time as construction also can take place during winter. Another example is qualification of technology for installation of aircraft warning spheres on power lines using a robot from a helicopter instead of a crew out on the power lines or, alternatively, having to dismantle the line. This makes the power line more available, improves the safety and saves costs. Furthermore, work has been ongoing to develop the supplier market, and Statnett has improved procurement and reduced costs through category management.

Cost-efficient operation and grid development is important during times of heavy investment. Statnett is working actively to utilise the current grid efficiently by improving market solutions for better power flow in the system. Increased digitisation and real-time monitoring will also be important instruments in the time ahead.

Statnett received an equity injection totalling NOK 3.25 billion in 2014. In connection with this decision, no dividend was disbursed for 2013. Dividend for the 2014–2016 period was 25 per cent of the fixed basis according to Statnett's application for equity injection. Proposed dividend for 2016 is NOK 350 million. In its 2017 National Budget, the Norwegian government proposed to maintain the current dividend level of 25 per cent for the fiscal years 2017 and 2018.

#### 4. Ethics and anti-corruption

Statnett's role in the Norwegian power system requires integrity, and Statnett work systematically to ensure that its activities are of a high ethical standard. Statnett's Board of Directors has adopted the Group's Code of Conduct which stipulates that employees must:

- Comply with statutes, regulations and human rights
- Act with honesty and integrity
- Aim for openness, compliance and transparency in the organisation
- Act in a manner which secures Statnett's neutrality, integrity and independence
- Not receive or give gifts or services that may affect business conduct or independence

Managers are responsible for ensuring that the staff are familiar with the Code of Conduct, and for ensuring that it is complied with. Statnett has also appointed an Ethics Ombudsperson whose duty it is to strengthen the legal protection of employees and to help uncover censurable conditions within the company. The Ethics Ombudsperson shall be a function where Statnett employees and others anonymously or in confidence can raise issues that they would like to highlight.

The Ethics Ombudsperson scheme has helped put ethics higher on Statnett's agenda and make staff far more aware of ethical issues. The Ethics Ombudsperson is a fixed item on the programme in all introduction courses for new employees, and the Ombudsperson scheme is also communicated via the Intranet and Statnett's website. The Ethics Ombudsperson also participates in dilemma training for managers and employees. The Ethics Ombudsperson reports annually to the President and CEO and to the Board of Directors concerning the number of notifications and the number of cases dealt with.

Statnett has zero tolerance for corruption. There were no recorded incidents in 2016 and Statnett has not been fined or sanctioned for corruption. In 2016, Statnett introduced an anti-corruption programme in the organisation. It will increase focus on and understanding of anti-corruption law. The legal department is responsible for the programme, which includes presentations about this topic and dilemma training.

#### 5. Health, safety and the environment (HSE)

Health, safety and the environment (HSE) is an important focus area for Statnett. The HSE part pertaining to the external environment is described in Chapter 6, Environment and Climate.

Statnett has a zero tolerance philosophy for accidents, which means that Statnett seeks to prevent all accidents, personnel injuries, damage to property and other material assets. Everyone should be happy at work and return home safely.

HCE statistics	2016		2015		2014	
<b>Absence due to illness (%)</b>						
Total	3.2		3.3		3.1	
Short-term, 1-16 days	1.5		1.6		1.3	
Long-term (>16 days)	1.7		1.7		1.8	
Women	4.8		5.1		4.6	
Men	2.7		2.7		2.7	
<b>Lost time injuries</b>	<b>Number of injuries</b>	<b>LTIF value</b>	<b>Number of injuries</b>	<b>LTIF value</b>	<b>Number of injuries</b>	<b>LTIF value</b>
Own employees	9	3.6	11	4.9	4	1.9
Contractors	19	7.6	17	7.9	15	6.8
Total	28	5.6	28	6.4	19	4.4
<b>Injuries</b>	<b>Number of injuries</b>	<b>TRIF value</b>	<b>Number of injuries</b>	<b>TRIF value</b>	<b>Number of injuries</b>	<b>TRIF value</b>
Own employees	18	7.1	15	6.7	6	2.9
Contractors	36	14.5	42	19.4	26	11.8
Total	54	10.8	57	12.9	32	7.5
Total fatal accidents	2		0		0	

Injuries and lost-time injuries do not distinguish between genders or regions. The LTIF value shows the frequency of work-related lost-time injuries per million hours worked. The TRIF value shows the frequency of the total number of work-related injuries per million hours worked.

The Group has an ambitious goal of becoming the leading transmission system operator within HSE in Europe. The objective has been specified to a Lost Time Injury Frequency Rate (LTIF)<sup>2</sup> of 2.0 and Total Recordable Injury Frequency (TRIF)<sup>3</sup> of 4.0 by the end of 2017. The same requirements are set for suppliers as for Statnett's own employees.

Statnett has an HSE management policy, which comprises policy and procedures, reporting, measures, analysis, investigation and learning. HSE is the first item on the agenda in all management and board meetings. The status of the HSE work and any incidents are reported to the management and the Board of Directors on a regular basis. Statnett has established a deviation and reporting system, which is an important source of improvement and help in reducing the risk of incidents and accidents. Statnett reports undesirable HSE incidents and deviations in both the internal and contractor/supplier organisations.

Everyone who will carry out work on electrical installations in Statnett must complete training within basic HSE, practical first-aid and electrical safety. In addition, all employees receive required HSE training. Emergency situation and emergency preparedness drills are conducted regularly at various levels of the organisation. An HSE forum is held annually for safety delegates, HSE personnel and the management. The enterprise also contributes to external HSE work

and currently heads the HSE Trade Forum in Energy Norway.

In 2016, nine internal lost-time injuries were reported, whereas contractors/suppliers reported 19 lost-time injuries, including two fatal contractor accidents at Statnett's development projects. At year-end 2016, Statnett's LTIF was 5.6 and the TRIF was 10.8. Following several years of positive development, the number of lost time injuries in 2015 and 2016 (total 28 for both years) stabilised at a somewhat higher level than in 2014 (19 in total).

As a result of serious incidents and two fatalities in the first six months of 2016, the Board of Directors adopted a new HSE action plan. The plan includes 12 specific areas of improvement divided into four different topics:

- **Control:** Ensure that the building owner is clear and visible with defined roles and responsibilities internally and vis-à-vis contractors
- **Culture:** Safe behavior and implementation of life-saving rules
- **Contract:** Ensure clarity through simplification and an increased precision level with regard to HSE requirements in contracts, as well as an improved qualification and follow-up process
- **Consolidate** the project portfolio to ensure more robust capacity and resources.

These measures will be completed and implemented in the first half

<sup>2)</sup> Frequency of work-related lost-time injuries per million hours worked.

<sup>3)</sup> Frequency of the total number of work-related injuries with or without absence per million hours worked.

of 2017. In order to succeed in reducing the serious incidents great efforts are being made to improve work environment and to reinforce the organization's safety culture. One of the most important initiatives is the program "SIKKER", which after a pilot in 2015 was fully introduced in the company in March 2016. The purpose of the program is to increase job satisfaction, achieve a common safety culture and a mutual understanding of goals, of responsibilities and consequences with focus on own behaviour, awareness and clear leadership that will provide an injury-free day to day.

At year-end 2016, absence due to illness was 3.2 per cent, which is a small reduction from 2015. Statnett is making focused efforts to reduce absence due to illness. Various measures have been implemented, such as adaptation of individual workplaces and health-promoting measures including safety inspections and physical therapy. Statnett has entered into agreements with various approved occupational health service providers who together cover the Group's total need for such services. All employees are entitled to make active use of the services offered by the health scheme. Statnett conducts annual organisation surveys and has received a high score from own employees regarding safety at work, job satisfaction and motivation.

## 6. Climate and the environment

To facilitate better climate solutions is one of Statnett's three strategic primary objectives. Statnett's development of the transmission grid is important in order for Norway to reach its climate goals. At the same time, it is important to respect the natural environment during development and operation of the grid assets.

Guidelines for Statnett's climate and environment work are stated in the ownership report. Surveys<sup>4</sup> and audits conducted in 2016 have proven that environmental management in Statnett's development projects is good, and that the company has a sound understanding of direct risks caused by climate change. However, some areas of improvement were identified relating to how climate and the environment are integrated in the company. Initiatives have been introduced to improve environmental management in line with the feedback given.

### Climate and energy

Power can be produced from a number of sources. Electricity from renewable energy sources forms the backbone of the future climate-friendly energy system. Statnett's most important contribution to reduced greenhouse gas emissions is the development of the transmission grid and system solutions which facilitate connection of new renewable energy from both hydropower and wind power in Norway and from solar and wind power in Europe. Construction of interconnectors to Germany and the UK will help ensure security

of supply and balance variations in German and British renewable power production throughout the day. Development needs due to new renewable energy amount to 13 per cent (NOK 5-6 billion) of the planned grid investments over the next five years totalling NOK 40-50 billion. One of the largest renewables projects is grid construction in Central Norway to enable connection of wind power. There are also a number of projects where facilitation for new renewable energy is part of the reason for development.

### Climate adaptation

Climate change affects Statnett's operations. Statnett cooperates with experts within meteorology and climate development to establish how this will affect the company's activities, through, e.g. physical strain on the assets and the effect climate change will have on the energy and effect balance. There are various scenarios for greenhouse gas emission developments and thus climate change. Models have shown that a warmer and wetter climate is likely in Norway. This will improve the energy and power balance, but also increase the risk of flooding and landslides.

Wind is the most frequent reason for power outages in the power system. Climate models do not indicate more or stronger wind in general in the years to come. However, extreme weather may become more frequent. Ice and snow on the power lines is a common challenge in Norway in areas where humid air masses meet cold air. Climate models have indicated an amplification of the current picture where the most strained areas will suffer a higher climate impact, whereas the impact in lower-lying areas will be reduced.

Statnett will meet these challenges by developing models and methods for calculating climate impact. The models will be used as a basis for planning and engineering of power lines and switching stations. This will have an impact on both the location and design of the facilities.

### Environmental impact of Statnett's operations

Environmental management is incorporated into Statnett's quality assurance system. Internal decisions emphasise the natural environment on a par with technical and financial considerations. Statnett's environmental policy is part of the internal HSE policy and describes principles for how to safeguard environmental considerations.

The Group management has overall responsibility for the environment, and managers at all levels are responsible for safeguarding environmental considerations in their own units, both as regards their own environmental impact and reporting of results. Statnett works systematically on preventive environmental initiatives to reduce the risk of serious incidents, from the early planning phase, through the construction phase and in the operational phase.

<sup>4</sup> Surveys conducted by Trucost on behalf of the Ministry of Trade, Industry and Fisheries relating to how state-owned companies meet climate and environment expectations in the Ownership Report.

Environmental topics	Objective
Climate	<ul style="list-style-type: none"> <li>• Pave the way for realisation of Norway's climate goals</li> <li>• Minimise the environmental footprint from own operations</li> </ul>
Landscape and area of land without major infrastructure development	<ul style="list-style-type: none"> <li>• Seek solutions that provide a good aesthetic adaptation to the surroundings and avoid interventions in the untouched landscape</li> </ul>
Biodiversity	<ul style="list-style-type: none"> <li>• Seek solutions that avoid interventions in protected areas and take into consideration important areas for animal life, with special emphasis on endangered animal species</li> </ul>
Cultural heritage sites	<ul style="list-style-type: none"> <li>• Seek solutions that safeguard cultural heritage sites and the cultural landscape</li> </ul>
Housing, exposure and electro-magnetic fields	<ul style="list-style-type: none"> <li>• Follow up the authorities' precautionary principle regarding electromagnetic fields and human health</li> <li>• Assess solutions where the average magnetic fields over the year from new facilities are kept under 0.4 <math>\mu</math>T (microteslas) near permanent settlements</li> </ul>
Outdoor recreation	<ul style="list-style-type: none"> <li>• Seek solutions that safeguard outdoor recreation</li> </ul>
Pollution, noise and waste	<ul style="list-style-type: none"> <li>• Transmission facilities shall be designed and built in such a manner that they cause minimal emissions to the surroundings during production, installation, operations, maintenance/repair, fault situations or disposal</li> <li>• Help ensure that new power lines and substations are designed in such a way that they take into consideration the effect of noise on the surroundings</li> <li>• Reduce the volume of waste, e.g. by selecting the right materials, optimal maintenance that extends the lifetime and considering upgrades instead of disposal and new construction</li> </ul>

Each division has its own HSE resources that assist with this. In the larger projects, the project manager receives assistance from an area and environmental advisor. Statnett has set a number of environmental goals, where the impact on climate, landscape and biodiversity is the most important. Over the course of 2017, Statnett will revise its environmental targets as well as its environmental indicators.

Statnett has an environmental management system certified according to ISO 14001:2004 and all of Statnett's office buildings have been certified as Eco-Lighthouses.

Environmental incidents are reported both in project reporting to the project owner and in HSE reporting to the Group management. In 2016, 451 incidents occurred, compared with 403 incidents the year before. The increase was mainly due to higher activity. There were no incidents with serious emissions or environmental damage (red category), but one incident involving major environmental damage did occur (yellow category). The incident was a discharge of 11 kilos of SF<sub>6</sub> due to a technical fault. Several incidents involving discharges of oils and fuel occurred, but none of these were serious. All incidents with discharges have been cleaned up.

### Emission of greenhouse gases from own operations

In 2016, Statnett transmitted electricity totalling approximately 99 TWh. Greenhouse gas emissions from Statnett's activities totalled 61 794 tonnes of CO<sub>2</sub> equivalents. This corresponds to an emission intensity of 0.6 grams of CO<sub>2</sub> per kilowatt hour transmitted in the transmission grid.

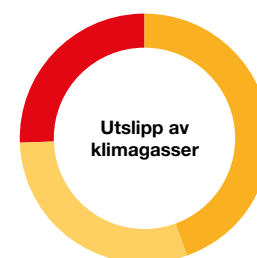
The largest source of greenhouse gas emissions is power loss from power transmission in the grid. Grid loss is unavoidable in the transmission of power, but the loss is generally reduced when the voltage level increases. Grid loss increased from 2 494 GWh in 2015 to 2 611 GWh in 2016, primarily due to higher electricity generation and thus increased transmission in the transmission grid. In 2016, grid loss amounted to 44 387 tonnes of CO<sub>2</sub>, about 70 per cent of total emissions. The increase in emissions is much higher than the actual increase in grid loss and is due to an increase in the emission factor for electricity without guarantees of origin<sup>5</sup>. Voltage upgrades of existing power lines and substations, which are important for implementing Statnett's strategy, will contribute toward reducing grid loss, in addition to increasing capacity in the grid without taking up more land for new construction. Grid loss varies from power line to power line and makes up three per cent of overall power transmissions<sup>6</sup>.

<sup>5</sup> Guarantees of origin are a certification system for electricity. The system was introduced in Norway as part of the EU's Renewables Directive. The NVE calculates the annual product declaration for electricity for customers who do not purchase guarantees of origin. This entails that the product declaration has a different energy source composition than Norwegian power production.

<sup>6</sup> Grid loss as a share of total power transmitted is calculated as grid loss divided by total power transmitted in the transmission grid. Total power transmission is calculated as total imported power plus total electricity generation in Norway, corrected for electricity generation fed in at a lower grid level.

Emission intensity	Unit	2016	2015	2014
Total greenhouse gas emissions	tCO <sub>2</sub>	61 794	41 465	35 220
Total power transmission in the main grid	TWh	99	94	92
<b>GHG emission intensity</b>	tCO <sub>2</sub> /TWh	<b>625</b>	<b>441</b>	<b>381</b>

Emissions in tonnes CO <sub>2</sub> equivalents <sup>1)</sup>	2016	2015	2014
<b>Direct emissions (scope 1)</b>	<b>12 190</b>	<b>10 677</b>	<b>8 868</b>
From fuel consumption	2 136	1 907	1 442
From company car travel	198	190	201
From helicopter use (Statnett)	640	N/A	N/A
From fugitive emissions (SF <sub>6</sub> )	7 807	6 210	5 497
From back-up power plants (natural gas)	1 409	2 369	1 728
<b>Indirect emissions (scope 2)</b>	<b>44 642</b>	<b>25 075</b>	<b>24 710</b>
Electricity consumption	255	135	160
Grid loss	44 387	24 940	24 550
<b>Other indirect emissions (scope 3)</b>	<b>4 962</b>	<b>5 714</b>	<b>1 642</b>
From company air travel	2 311	1 875	1 642
From helicopter use (contractor)	2 651	3 839	N/A
<b>Total emissions</b>	<b>61 794</b>	<b>41 465</b>	<b>35 220</b>



- 2016: 61 794 tonn CO<sub>2</sub>
- 2015: 41 465 tonn CO<sub>2</sub>
- 2014: 35 220 tonn CO<sub>2</sub>

Figures in the table are calculated according to the GHG Protocol and show emissions using a location-based method of calculation. Total emissions for scope 2 according to the market-based method, which corrects for sales of guarantees of origin in 2016, amount to 1 336 634 tonnes of CO<sub>2</sub> (the emission factor is 493 tonnes of CO<sub>2</sub>/GWh from the NVE).

<sup>1)</sup> Greenhouse gas emissions for Statnett SF with the exception of helicopter use (contractor).

All emissions are calculated according to the GHG Protocol using a location-based method to calculate emissions. Using a market-based method which corrects for the sale of guarantees of origin, emissions from grid loss will equal 1 328 999 tonnes of CO<sub>2</sub>.

Of the other sources of greenhouse gas emissions, SF<sub>6</sub> emissions are the second largest source. SF<sub>6</sub> gas has very good insulating properties and is therefore used in substations, for example where there is a need to build compact, indoor substations either due to lack of space or to avoid operational disruptions and corrosion due to salt pollution in coastal areas. SF<sub>6</sub> is the greenhouse gas with the highest GWP (global warming potential). There is currently no good alternative for high voltage facilities, but the authorities set strict requirements for handling of the gas. Statnett is continuously working on switching to facilities and components with lower emissions where this is possible. At the same time, plans are in place for an increase in the number of substations insulated with SF<sub>6</sub>, due to new construction in both dense metropolitan areas and in topographically challenging areas.

Statnett makes extensive use of helicopters both during construction activities and operation of power lines, as access for ground transport is difficult in many areas. This year, emissions from helicopter use have been split between Statnett's helicopter use (scope 1, see Table "Emissions in tonnes CO<sub>2</sub> equivalents") and contractors' use in connection with construction of Statnett's grid facilities (scope 3). There is a small reduction in total emissions from helicopter use in 2016 compared with 2015. This was due to natural variations in the type of activity in development projects.

Statnett's back-up power plants are a source of greenhouse gas emissions. These gas-fired power plants are subject to the EU quota trading system, and Statnett reports annual emissions to the Norwegian Environment Agency.<sup>7</sup> The facilities were licensed for use in highly strained power situations until the end of 2016, and have so far only been used for licensed test runs. Preliminary figures show that emissions from the back-up power plants totalled 1 409 tonnes of CO<sub>2</sub> equivalents in 2016.

<sup>7)</sup> The final figures for 2016 will be available after 1 April 2017, when the reported data have been approved by the Norwegian Environment Agency.

Statistics SF <sub>6</sub>	Unit	2016	2015	2014
Levels as of 31.12	kg	126 648	119 559	121 603
SF <sub>6</sub>	kg	327	260	230
<b>Number of substations with gaseous components</b>		<b>138</b>	<b>137</b>	<b>137</b>
<b>Of which number of gas-insulated substations (GIS)</b>		<b>29</b>	<b>26</b>	<b>28</b>

Purchased materials (tonnes)	2016	2015
<b>Concrete (foundations)</b>	<b>18 643</b>	<b>2 547</b>
Of which rock foundations	12 658	2 059
Of which earth foundations	5 985	488
<b>Steel</b>	<b>18 500</b>	<b>9 803</b>
Of which steel foundations	1 740	0
<b>Conductors</b>	<b>2 485</b>	<b>3 378</b>
Of which phase conductors	2 324	3 200
Of which overhead ground wires	161	178
<b>Transformers</b>	<b>3 000</b>	<b>4 500</b>
<b>Transformer oil</b>	<b>64</b>	<b>N/A</b>
<b>P-coil</b>	<b>120</b>	<b>0</b>
<b>Reactors</b>	<b>225</b>	<b>450</b>

### Material consumption

Statnett faces significant development activity in order to facilitate a reliable security of supply, value creation in society and climate-friendly solutions. As a result of this development, large amounts of construction materials such as concrete and steel will be used for substations, cables and power lines.

When purchasing equipment, materials and services, Statnett uses category management as a measure to become more cost-efficient. In addition to better quality and prices, category management gives a better overview of material use and thus an opportunity to set clearer environmental requirements in procurement.

In 2016, Statnett ordered 16 760 tonnes of steel for towers. The main deliveries were for the development projects Namsos – Åfjord and Snilldal – Surna (7 275 tonnes) and Balsfjord – Skaidi (8 651 tonnes). Statnett is testing the use of pre-fabricated steel foundations on the Balsfjord – Skaidi power line. The steel is transported to the site on winter roads, which reduces the use of helicopters and causes less

damage to the terrain compared with transportation on bare ground during summer.

The most common tower foundations are cast in concrete at the site where the tower will be constructed. There are two types of foundations; earth and rock foundations, built in earth or rock respectively. In 2016, Statnett purchased 798 earth foundations and 3 516 rock foundations, totalling 18 643 tonnes of concrete. As for steel, this was a major increase compared with 2015.

Construction of substations is often contracted out as total contracts, which entails that the contractor purchases the materials for construction of the substation. Statnett purchases transformers, reactors and P-coils.

### Biodiversity

Statnett aims to be an environmentally responsible grid developer. This entails incorporating environmental concerns in the company's planning process, choice of solutions, and during construction and

operation. At the same time, Statnett is experiencing substantial involvement from stakeholders concerning the location of new grid facilities. The result is that facilities are sometimes built in areas with difficult access by road, which leads to disruptions to the landscape with consequences for e.g. the landscape and biodiversity.

When choosing power line routes, various considerations are weighed against each other to arrive at the best alternative. The licensing process requires detailed studies of the scope and impact on the landscape and biodiversity during the construction phase and operational phase. The studies comprise habitats and species, focusing on endangered and vulnerable species in particular.

There are 2 700 protected areas in Norway totalling 64 700 km<sup>2</sup>. Statnett's power lines cross or are located in 96 of these areas, and the area restricted by contracts makes up a total of 17 km<sup>2</sup> in or close to protected areas. There has been an increase in appropriated area in recent years. This is primarily due to the establishment of several new protected areas near the existing grid, as well as completion of the 420 kV Ørskog – Sogndal power line which crosses Sørvalen nature reserve in parallel with the existing power line.

How a crossing power line route will affect a protected area varies according to the type of area and the purpose of the protection. The greatest impact on wildlife is assumed to take place during the construction phase, when high activity and noise from construction will be disturbing. To protect biodiversity and especially red-listed

species as much as possible, restrictions have been placed on construction activity in particularly vulnerable periods, such as e.g. nesting periods for birds and calving periods for reindeer. The same restrictions also apply to the operations phase, with the exception of emergency situations where there is a need to quickly re-establish the infrastructure. As a remedial measure in important natural areas, it is often a requirement that tree felling and ground transportation should be restricted.

### Landscape

Statnett is eager to limit any interventions in the landscape as a result of construction and ensure compliance with the authorities' orders. In connection with all planning, solutions are sought that provide good aesthetic adaptation to the surroundings, and laser scanning and three-dimensional modelling of terrain are used in the planning of new power line routes. This way it is possible to see how the power lines will look in the landscape. Furthermore, it gives Statnett the opportunity to adapt the construction plans and choose alternatives that take into account the shape and character of the landscape. The choice of power line route is the simplest and most efficient measure to ensure that power lines are less visible in the landscape. Some sections may require additional measures to minimise visibility. This may include camouflage of power lines, towers and insulators, developing new types of pylons or removal of old assets.

As part of the environment strategy, Statnett always consider whether the need for increased transmission capacity can be solved

Form of protection	Number of protected areas	Kilometres power line	Area (km <sup>2</sup> )
Biotope protection pursuant to the Wildlife Act	4	85	4.2
Animal protection area	11	42	1.8
Landscape protection area	15	132	6.6
National park	1	0	0.01
Nature reserve	64	92	4.4
Protected plant area	1	0	0.01
<b>Total</b>	<b>96</b>	<b>351</b>	<b>17.0</b>

Power lines and cables in operation	Unit	2016	2015	2014
Power lines in operation	km	10 600	10 295	10 149
Earth cable and subsea cable in operation <sup>1</sup>	km	1 282	808	794
New operational power lines	km	149	162	49
Modified/demolished assets	km	25	80	47

<sup>1</sup> The reporting method is changed in 2016. Values are updated for all years. Values show total kilometres of cable installed, not kilometre route as before.

through better utilisation of existing grid corridors, including through voltage upgrades. Statnett also consider whether restructuring and redevelopment of older power lines is possible when planning how to develop the power system. This strategy provides significant increase in grid capacity with only limited use of new natural areas.

In connection with removal, the power lines are taken down and the towers are removed, and after a few years, the forest grows back. Statnett has removed approximately 600 kilometres of power lines since a strategy was implemented for this about 15 years ago. During the same period, 1 100 kilometres of new transmission grid have been built.

Most power lines are built using a helicopter, mainly to avoid extensive road construction as well as environmental impact, but also because it is cheaper and more efficient. There is nevertheless a need to build some permanent or provisional roads in order to transport heavy equipment and materials to the facility. Statnett has prepared a handbook in terrain management that provides principles for terrain adaptation and preparation of e.g. roads. During operation of the facility, there is generally only a need for transport of personnel and light equipment. This transport either takes place using a helicopter, or with ATVs and/or snowmobiles.

### Pollution and waste

Statnett's facilities must be designed and built in such a way that they do not contribute to polluting the surroundings. An average 420 kV power line covers an area 40 metres wide and extends over long distances. This sets special requirements for waste handling and other pollution to avoid the spread of hazardous substances and to preserve the landscape. Oil pits have been installed at all substations to limit negative impact of a potential transformer oil spill. There was also previously a replacement programme for all asset components and light fixtures containing PCBs.

The risk of pollution is highest during the construction phase. Statnett sets requirements for contractors to ensure that the work is performed in a manner that minimises the risk of leaks and discharges. Preparedness procedures have been established to reduce environmental impact in the event of an accident resulting in discharges.

In 2016, Statnett reported 128 incidents involving discharge of oils or fuel. Most of these incidents were minor discharges. All incidents with discharges have been cleaned up and none of the discharges resulted in serious pollution of water or soil.

Statnett aims to reduce the waste volume from its activities, and ensure recycling and energy recovery. All waste must be sorted, handled securely and delivered to an approved receiving station. In 2016, the sorting rate from plant operations and development projects was 88 per cent. The increase in some waste types is partly due to increased activity in the Group as well as increased reporting.

### Electromagnetic fields

All electrical installations are surrounded by electric fields and magnetic fields. The Norwegian Radiation Protection Authority is the expert authority for fields from electrical installations. The legal basis is the Norwegian Act on Radiation Protection and Use of Radiation and the Radiation Protection Regulations. The Norwegian Labour Inspection Authority has the professional responsibility for electromagnetic fields in the work place. The legal basis is the occupational safety regulations where the new regulation came into effect from July 1, 2016.

*Electrical fields:* The limit value for electric fields is 5 kV/meter for public exposure and may be exceeded under Statnett's lowest-hanging 420

Waste type <sup>1</sup>	Unit	2016	2015	2014
Wood	Tonnes	1 040	596	853
Metals	Tonnes	2 844	2 835	763
EE waste	Tonnes	165	14	84
Other fractions <sup>2</sup>	Tonnes	921	1 266	120
Cardboard and paper	Tonnes	26	8	54
Plastics	Tonnes	30	4	3
Hazardous waste	Tonnes	114	251	581
Total sorted waste	Tonnes	5 140	4 974	2 458
Residual waste	Tonnes	605	1 365	322
Source separation rate	Percentage	88	73	87
Estimated reported	Percentage	95	70-80	60-70

<sup>1</sup> Statnett reports by waste type, not waste method.

<sup>2</sup> Other fractions; concrete, gypsum, batteries, glass, insulators, organic waste.



kV power lines. The Norwegian Radiation Protection Authority regard this as acceptable as long as it applies to short-stay and passage below. Electrical fields of this size may be experienced as uncomfortable, but are not considered hazardous to human health. Electrical fields are normally effectively shielded by vegetation and buildings. Statnett designs new power lines so that the limit value for electrical fields and public exposure is not exceeded in areas with general traffic. The limit value for electric fields is 10 kV/meter for occupational exposure. Statnett is working on the implementation of regulations related to occupational exposure.

*Magnetic fields:* The World Health Organization (WHO) has classified magnetic fields from high voltage lines as possibly carcinogenic. It is uncertain whether there is a connection between proximity to high voltage installations and the risk of cancer, but the authorities have chosen to follow a precautionary principle and have established a level that requires assessments (0.4 microtesla).

Statnett follows the authorities' principle that exposure to magnetic fields should be kept as low as practically feasible. When planning new power lines, Statnett aims to keep them at a sufficient distance from existing residential housing to ensure that the magnetic fields from the lines do not exceed 0.4 microtesla. This may entail that routes have an impact on valuable natural areas and recreational areas. Consequently, alternative solutions are often prepared and the final choice of route is often made by the licence authorities.

Statnett keeps continuously updated on research into any adverse health effects caused by electromagnetic fields from high-voltage power lines. Statnett has itself contributed to increased knowledge dissemination in this area, both through commissioned research and financial contributions to various studies.

#### Environmental R&D focus

Several of Statnett's R&D projects focus on challenges relating to climate and the environment. Statnett has for several years helped fund research on power lines' impact on nature and biodiversity. Through the R&D programme "Sustainable system development" Statnett has a special focus on increasing the awareness of how power lines affect the flora and fauna. Reindeer and how reindeers' area use is affected by power lines have been the subject of studies for many years. Such studies will be continued in the years to come. In 2016, an extensive study was concluded of biodiversity in power line routes. The study has increased Statnett's knowledge of power line routes as habitats for various insect species, including the effect of various types of stewardship. New studies were launched in 2016 including radar studies of birds near power lines, and the effect of bird flight diverters on the power lines, as well as the use of goats to keep down the vegetation in the power line routes.

## 7. Employees

Statnett is an attractive employer offering its employees challenging tasks. To meet the Group's objectives, it is important to have the right expertise. Statnett is committed to promoting a close community across the organisation and ensuring a safe and secure working environment.

#### Recruitment and employee development

In order to realise Statnett's social mission, including the many development projects, sufficient and correct expertise is needed. To cover these needs, there is a focus on development, training and recruitment of employees in accordance with Statnett's strategy and values. Two key focus areas are implementation of Statnett's expertise and career development model, as well as an extensive manager development programme.

Statnett recruited 134 employees in 2016, compared to 166 in 2015. The stable, high increase in staff over the last few years facilitates a planned high activity level over the next few years. In 2016, Statnett had an overall staff turnover, excluding retirement, of 2.1 per cent, compared with 2.4 per cent in 2015. Of the permanent employees 24 work part time, of which 19 are women.

Statnett emphasises a good working environment with motivated and committed employees. Annual appraisal interviews are well established in the enterprise. The process contributes to a systematic and uniform follow-up of objectives, performance and conduct, as well as development opportunities. Statnett emphasises developing employee competence, also across the Group. In 2016, 73 employees changed jobs internally in Statnett, compared with 67 in 2015.

For the fifth year running, an organisation survey has been conducted organised by Ennova. The survey provides information about employee satisfaction, job satisfaction, motivation and commitment. Statnett follows up the organisation survey by implementing improvement measures based on results for the individual manager and unit as well as measures that will help improve cooperation across the organisation. The results from the 2016 survey show that Statnett generally exceeds comparable companies in the industry and Norwegian enterprises in general.

There is competition as regards attracting the best candidates from universities and university colleges, and Statnett's trainee programme is one of the most important tools. In 2016, the company had eleven trainees. Statnett consciously focuses on collaboration with universities and university colleges in order to increase its attractiveness in relevant student communities, and facilitates summer internships, as well as collaboration on project papers and master's theses. In Universum's annual ranking of attractive technology enterprises, Statnett was ranked number 20 among young engineering graduates (17 in 2015).

In 2016, Statnett has continued a strong focus on apprentices. With 38 apprentices, mainly within electrical power engineering, the number has increased considerably (28 in 2015) to ensure that Statnett has a long-term pool of expertise.

### Gender equality and diversity

Statnett wants a diverse and varied organisation. All job advertisements encourage people to apply for a position in Statnett, regardless of ethnicity, gender or age. Of the new recruits in 2016, seven per cent were from foreign backgrounds. At the end of 2016, Statnett had approximately 80 employees with a foreign background. In addition, 27.6 per cent of all new employees were female.

Statnett has for many years focused on providing women and men with equal opportunities in management and technical positions. During the period 2005-2015, the percentage of women in management positions increased from approximately 20 to 29 per cent. At the end of 2016, this share had decreased to 28.5 per cent. The total percentage of women has increased from 25.9 per cent in 2015, to 26.1 per cent in 2016. Efforts to achieve an improved gender balance will continue. In 2016, the percentage of women in Group management constituted 29 per cent. On the Board of Directors, 50 per cent of representatives elected by the owners were women in 2016. In Statnett, women and men in comparable positions receive equal pay.

As part of its anonymous organisation survey, Statnett has asked its employees questions regarding discrimination, bullying and harassment. The results show that discrimination, bullying and harassment is rare in the organisation. Statnett has zero tolerance for this kind of conduct, and this topic is a permanent discussion point during appraisal interviews. Statnett rarely encounters personnel issues of this nature.

## 8. Procurement

Statnett purchases goods and services for construction, operation and maintenance of power lines, substation facilities and ICT. The central procurement unit is responsible for quality-assuring all procurements with an estimate value of more than NOK 500 000. The unit is also responsible for call-offs under strategic framework agreements. The procurement unit is responsible for training in and compliance with Statnett's relevant regulations and requirements,

and delivers qualified resources and services to Statnett's line and project organisation. The unit cooperates closely with the company's legal department.

As part of Statnett's cost efficiency programme, unit prices will be reduced by 15 per cent in 2018 compared to the 2011 – 2013 period. In 2016, Statnett purchased goods and services for about NOK 6.5 billion. The procurement unit is key to this work, in close dialogue with Statnett's cost estimation section.

Statnett promotes equal treatment and predictability in all procurement processes to ensure development of a strong and diverse supplier market. The principles are implemented through templates that are quality-assured by lawyers, common procedures and a strong professional procurement environment.

The procurement unit will ensure that HSE requirements are implemented in all procurement processes, including qualification of suppliers. Consequently, the unit plays a key role in the work on the contract and qualification improvement areas in the HSE action plan established in 2016.

### Contract

Statnett requires that the Group's suppliers comply with Statnett's ethical guidelines for contractors. The guidelines comprise climate and the environment, human rights, work standards, wages and working conditions, requirements relating to business practices and the use of subcontractors. The ethical guidelines are enclosed with all Statnett's contracts, and thus suppliers and contractors have a contractual obligation to comply with them. Requirements for suppliers are further stipulated in the procurement strategy, process descriptions as well as elsewhere in the contracts.

Work is ongoing to simplify and clarify HSE requirements in contracts. Statnett has an extensive and complex supplier base, including international power line contractors related to assignments of a more long-term nature. Statnett has identified contracts that require special follow-up in relation to CSR. It mainly regards building and construction work where its used international contractors, Norwegian contractors with foreign labour and the production of electromechanical materials abroad.

Statnett SF employees	Female	Male	Total
Permanent employees	341	965	1 306
Temporary employees	24	84	108
Apprentices	2	36	38

### Compliance monitoring

All relevant contracts contain provisions that safeguards the regulations associated with wages and working conditions, especially the Regulations relating to wages and working conditions in public contracts. For construction contracts this is safeguarded through a separate appendix L. Appendix L provides the entrepreneurs with an overview and references to all relevant agreements and regulations and gives Statnett the right to relevant documentation as well as a daily fine in case of deviations and/or lack of submission of documentation. The employer policy department has the professional responsibility for the L-appendix and ensures that systematic controls are carried out in cooperation with the projects to ensure contractor compliance, internal controls and follow-up of deviations. Statnett has uncovered deviations through this work that have been actively followed up and demanded corrected by the suppliers.

### Qualification

Statnett uses qualification of suppliers as a method of reducing the risk of non-compliance with Statnett's requirements. Qualification will always include requirements relating to systems for HSE, quality and technical capability. Methods to scale qualification in relation to HSE risk assessments during construction are under development. For high-risk work or products, audits and customer visits will be part of the qualification process to verify that the qualification requirements are complied with in practice. In the same manner, the qualification is supposed to ensure that Statnett enters into contracts with suppliers that relate to the requirements regarding wages and working conditions.

### Supplier audits

Statnett uses Utilities – Nordics & Central Europe (UNC, formerly Sellihca) as its qualification system to ensure an efficient procurement practice, ready access to suppliers and to safeguard the company's corporate social responsibility. Supplier audits are also conducted through this qualification system. The audits help increase transparency and reduce risk. Audits are available to all employers in the qualification system and are important for Statnett's follow-up of suppliers and sub-contractors.

The procurement unit has an audit programme which is coordinated with Statnett's other audits. The aim is for critical suppliers to be audited regularly through UNC and own audits. In 2016, Statnett has intensified its internal supplier audits, with an aim of conducting around 15 internal audits each year.

In 2016, Statnett implemented major audit work to check whether suppliers comply with Statnett's Code of Conduct. Audit inspections were conducted at major suppliers in December 2016, and an audit report will be available in 2017. Increased systematic follow-up is planned throughout 2017.

### Supplier development

Systematic supplier development contributes to Statnett attracting the best suppliers, and the objectives have been operationalised through implementation of category management, an industry standard for organisation of strategic procurement work in large organisations. Statnett has defined this as organisation of procurement according to the supplier market, in interdisciplinary teams and across projects, operation and line responsibility, in order to optimise Statnett's needs, develop suppliers and identify and realise technical and commercial opportunities, as well as ensuring compliance with relevant regulations.

In 2015, Statnett implemented a technical system for tenders and contract follow-up. The system has made the company better equipped to follow up the suppliers' obligations regarding HSE, wages and working conditions and corporate social responsibility. In 2016, the technical system was complemented with systematic and extensive use of scorecards in contracts for most procurement categories. Here the suppliers are followed up as regards parameters such as finances, progress, wages and working conditions, OHS and the environment. Data from the scorecards are collected in the technical system, and over time, the results will also be used as a basis for qualification for new projects. Besides ensuring compliance with requirements, the technical system contributes to more equal treatment and predictability.

To promote healthy competition with regard to the acquisitions, Statnett works actively to ensure that international, national and local suppliers gain a competitive position. The various procurement categories organise meetings with relevant suppliers to inform them of any upcoming tenders. To promote exchange of information with local businesses and industry, Statnett has organised HSE seminars for suppliers and held project presentations for local suppliers.

## 9. Local footprints

Statnett owns and operates high-voltage power lines and substations throughout the country. Statnett holds the role responsible for power system assessments for the transmission grid. Both existing facilities and the projects Statnett chooses to conduct affects the environment and communities to a greater or lesser extent, both locally, regionally and nationally. Statnett aims to promote exchange of ideas, constructive discussions and forward-looking solutions. This is done at an early stage by involving local customers, local authorities and businesses, landowners, non-governmental organisations and other special interest organisations. According to experience, between 15 and 25 per cent of total investments in projects go to local/regional businesses.

Statnett requires licences pursuant to the Energy Act in order to build and operate all its facilities. An extensive planning and

# Licensing process and stakeholder dialogue

An extensive planning and participation process is being conducted and will underpin the licence that Statnett requires in order to build and operate its facilities



stakeholder process is implemented before a licence can be awarded. This process is defined by statutes and regulations and is executed in cooperation between Statnett as developer and the licensing authorities (the Ministry of Petroleum and Energy and the NVE). However, the scope of the process varies depending on the project's size and how it affects the environment and other interests. The figure on page 36 provides an overview of the different steps of a licensing process, and how stakeholders and affected parties are involved in the various steps.

For larger development projects, Statnett prepares a Construction and Environmental Management Plan (CEMP plan) that must be approved by the NVE before construction starts. Here Statnett describes how it will execute the construction work so that local and regional considerations and environmental assets are safeguarded. The plan forms a basis for contracts with contractors. Statnett has locally posted employees, environmental inspectors and landowner contracts that together with the construction management follow up construction and ensure compliance with licence conditions and CEMP plan requirements. The NVE conducts environmental audits.

### Conflicts and the right to appeal

Statnett has a broad range of contacts and operates throughout the country. This means that stakeholder differences and conflicts will arise from time to time, either as regards Statnett's execution of its system responsibility, the design of tariffs for the transmission grid, or the manner in which Statnett implements development projects.

Statnett always endeavours to achieve amicable agreements with affected landowners and licensees, and reaches voluntary agreements in most instances. In instances where voluntary agreements are not reached, land and rights acquisitions are conducted in pursuance of the expropriation permit given by the licensing body.

Appeals of TSO decisions pursuant to the Regulations relating to the system responsibility in the power system follow the rules of the Public Administration Act and may be appealed to the NVE. Appeals of tariff decisions must be submitted to the NVE, with the MPE as the appeal body. Appeals of the NVE's licence decisions are submitted to the MPE as the appeal body. The MPE is the licensing body for the largest projects. Its decisions are final and cannot be appealed. Other appeals in connection with projects in which Statnett is the grid owner and developer are handled continuously by the projects.

## 10. Innovation and R&D

Research and development is a strategic tool for achieving Statnett's overall Group strategy, and to find new and better solutions for the power system of the future. From 2015 to 2019, R&D efforts in Statnett are split into three main programmes: sustainable system development, innovative technology and smart grids.

The programmes provide new solutions, which improve safety, reduce costs and result in more efficient and sustainable implementation of Statnett's work. Below follows a brief description of a selection of projects that have started or achieved good results over the course of 2016.

2016 saw the formalisation of the Nordic R&D cooperation between Statnett, Fingrid, Svenska Kraftnät, Energinet.dk and Landsnet. Further strengthening of the R&D cooperation in the Nordic countries will be a priority in the time ahead and Statnett will lead the cooperation in 2016 and 2017. Statnett R&D is also a member of ENTSOE-RDIC, where e.g. new EU projects are planned, discussed and followed up.

## 12. About the report

Statnett reports on corporate social responsibility in accordance with the Global Reporting Initiative's (GRI's) guidelines for the electric utility sector (GRI Sustainability Reporting Guidelines & Electric Utility Sector Disclosures). Statnett believes its reporting is principally in compliance with GRI's reporting principles and that the reporting satisfies the "Core" level in the Global Reporting Initiative, version G4. The GRI table contains references to where information about the various GRI indicators can be found in the annual report, and any omissions. Indicators starting with EU are specific for the energy industry.

Statnett believes that the reporting covers the requirements stipulated in the new Section 3-3c of the Accounting Act, adopted in 2013. If not otherwise specified, the corporate social responsibility reporting covers all Statnett activities, including wholly-owned subsidiaries and partly owned enterprises in which Statnett has a controlling interest, unless otherwise specified. Data is generally collected and collated with the aim of making the presentation as relevant and uniform as possible. Even though great emphasis has been placed on ensuring completeness and correctness, there may be uncertainties in relation to some of the data.

Sustainable system development	
<b>Biodiversity in power line routes</b>	The project has shown that relatively frequent, manual forest clearing in power line routes is the best way of maintaining biological diversity in the area, compared with other methods.
<b>Market models</b>	The projects have developed and tested new models for simulation of the Northern European power market, with more exact and individual water values. The models provide a better basis for investment decisions in Statnett.
<b>GARPUR</b>	This European collaboration project has developed a theoretic framework and models, which take into account probabilities and consequences of faults in the power system. This will result in a better balance between costs and security of supply.

Innovative technology	
<b>Digital substations</b>	The project was launched in 2016 and the purpose is to develop and test complete power plants systems, introducing new technology as well as a new standard for digital control and communication.
<b>Aluminium towers</b>	The project has shown that using aluminium towers that weigh less than steel towers enables more pre-assembly of the tower on the ground. This contributes to fewer expensive helicopter lifts and a safer and quicker final installation.
<b>Robot for air traffic warning spheres</b>	The project has developed a robot for installation of air traffic warning spheres on power lines. This has been tested with good results. Using a robot will reduce hazardous work at heights and reduce costs by approximately NOK 50 million.

Smart grids	
<b>SAMBA</b>	The project will develop a knowledge basis and conceptual solutions for condition-based maintenance of components in order to achieve more cost effective asset management in Statnett.
<b>SPANDEx</b>	Based on real-time measurements from Phasor Measurement Units (PMU), the project will develop methods for monitoring operations at Statnett's operating centres. This will contribute to improved security of supply and be the first step towards more automated operation of the transmission grid.
<b>Large-scale load control in Northern Norway</b>	The project develops a technical concept for use of flexible consumption load during strained operating situations and looks at how Statnett can make use of this type of flexibility.



Statnett's framework for corporate governance consists of six levels that describe roles and responsibilities that will enable the Group to safeguard its main areas of responsibility

# GRI

## General standard disclosures

GRI - indicator	Description	Reporting	Omissions
<b>Economic Performance</b>			
G4-1	CEO statement	p. 4-5	
<b>Organisational Profile</b>			
G4-3	Name of the organisation	<b>Statnett SF</b>	
G4-4	Primary brands and services	<b>p. 9</b>	
G4-5	HQ location	<b>Oslo, Nydalen</b>	
G4-6	Countries of operations	<b>p. 9, Note 17 p. 116</b>	
G4-7	Ownership and legal form	<b>p. 9-11, Note 17 p. 116</b>	
G4-8	Markets served	<b>p. 9, Note 17 p. 116</b>	
G4-9	Scale of organisation	<b>p. 20</b>	
G4-10	Total number of employees by employment type, employment contract, region and gender	<b>p. 34</b> <b>Reported for Statnett SF. Statnett operates in Norway and reports on that as one region.</b>  <b>Significant percentage of hired workers via subcontractors. No particular seasonal variations in the workforce.</b>	Equivalent statistics for subcontractors are not available
G4-11	Percentage of total employees covered by collective bargaining agreements	<b>p. 23</b>	Figures of trade unionisation for subcontractors are not available
G4-12	Supply chain description	<b>p. 34-35</b>	
G4-13	Significant changes during the reporting period regarding the organisation's size, structure or ownership	<b>None</b>	
G4-14	Precautionary approach	<b>p. 30-31</b>	
G4-15	External charters and principles	<b>None</b>	
G4-16	Membership of associations	<b>p. 37, p. 60</b>	



GRI - indicator	Description	Reporting	Omissions
<b>Identified Material Aspects and Boundaries</b>			
G4-17	Entities included in financial statements	<b>p. 9-11, Note 17 p. 116</b>	
G4-18	Process for defining content and aspect boundaries	<b>p. 22</b>	
G4-19	List of all material aspects	<b>p. 23</b>	
G4-20	Aspect boundaries within the organisation	<b>No particular boundaries</b>	
G4-21	Aspect boundaries outside the organisation	<b>Main focus on subcontractor conditions and procurement above NOK 500 000</b>	
G4-22	Restatement of information provided in previous reports	<b>p. 20, p. 31 The reporting method for earth and subsea cables has been changed in 2016. Historic values has been updated.</b>	
G4-23	Significant changes to scope and aspect boundaries from previous reporting period	<b>None</b>	
<b>Stakeholder Engagement</b>			
G4-24	Stakeholder groups	<b>p. 22-23, p. 35-37</b>	
G4-25	Identification of stakeholders	<b>p. 22-23, p. 35-37</b>	
G4-26	Approach to stakeholder engagement	<b>p. 22-23, p. 35-37</b>	Not reported per stakeholder group
G4-27	Key topics and concerns raised by stakeholders	<b>p. 22-23, p. 35-37</b>	Not reported per stakeholder group
<b>Report Profile</b>			
G4-28	Reporting period	<b>2016</b>	
G4-29	Date of previous report	<b>March 2016</b>	
G4-30	Reporting cycle	<b>Annual</b>	
G4-31	Contact person for questions about the report	<b>Knut Hundhammer</b>	
G4-32	Reporting level	<b>GRI G4 Core</b>	
G4-33	Policy and current practice with regard to seeking external assurance for the report	<b>The GRI report has not been verified externally</b>	
<b>Governance</b>			
G4-34	Governance structure	<b>p. 22, p. 48-51</b>	

GRI - indicator	Description	Reporting	Omissions
<b>Ethics and Integrity</b>			
G4-56	Values, principles and norms	p. 10, p. 25	
<b>Sector-specific general standard disclosures</b>			
G4-EU3	Number of customer accounts	<b>Statnett's customers are exclusively professional. The customers are divided into three categories; distribution grid companies (53), energy producers (20) and industrial companies (9) (individual consumption above 15 MW). There are a total of 82 customers in the transmission grid.</b>	
G4-EU4	Length of transmission and distribution lines	<b>p. 31 Distribution grid and cables vary from 22 kilovolt to 420 kilovolt</b>	
G4-EU5	Allocation of CO <sub>2</sub> emission allowances or equivalent	<b>p. 29-30</b>	

# GRI

## Specific standard disclosures

GRI - indicator	Description	Reporting	Omissions
<b>ECONOMIC</b>			
<b>Economic Performance</b>			
G4-EC1	Direct economic value generated and distributed	p. 24-25	
G4-EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	p. 27	Economic implications not reported.
<b>Research and Development</b>			
G4-DMA	Activities within research and development relating to secure and sustainable power supply	p. 33, p. 37-38	
<b>System efficiency</b>			
G4-EU12	Transmission and distribution losses as a percentage of total power transmitted	p. 29 Only technical loss is relevant. Transmission loss as a percentage of total power transmitted is calculated as transmission loss divided by total power transmission in the transmission grid. Total power transmission is estimated as total power imports + total domestic power generation (corrected for power production used locally outside the transmission grid).	
<b>ENVIRONMENTAL</b>			
<b>Materials</b>			
G4-EN1	Materials used by weight or volume	p. 30	
<b>Biodiversity</b>			
G4-EN11	Operational activity in, or adjacent to, protected areas and areas of high biodiversity value	p. 30-31	
G4-EN12	Description of significant impacts on biodiversity in protected areas and areas of high biodiversity value	p. 30-31	
<b>Emissions</b>			
G4-EN15	Direct Greenhouse Gas (GHG) emissions (scope 1)	p. 29 Emissions factors from: Car; Defra, OFVAS and SSB Helicopter; Defra SF6; UNFCCC global warming potential Back-up power plants; emission factor provided by Statnett but in line with factor from Defra	
G4-EN16	Indirect Greenhouse Gas emissions (scope 2)	p. 29 Emissions factors from: Electricity; NVE	

GRI - indicator	Description	Reporting	Omissions
<b>Emissions cont.</b>			
G4-EN17	Other indirect Greenhouse Gas emissions (scope 3)	<b>p. 29</b> <b>Emissions factors from: Helicopter; Defra Airplane; SAS data provided by Via Egencia</b>	
G4-EN18	Greenhouse Gas emissions intensity	<b>p. 29</b>	
<b>Effluents and waste</b>			
G4-EN23	Total weight of waste by type and disposal method	<b>p. 32</b>	
<b>Transport</b>			
G4-EN30	Significant environmental impacts of transporting products and other goods and materials used for the organisation's activities, and transporting members of the workforce	<b>p. 29-30, p. 32</b>	
<b>Supplier Environmental Assessment</b>			
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	<b>p. 34-35</b> <b>Reported for all procurements above NOK 500 000</b>	
<b>SOCIAL</b>			
<b>Occupational health and safety</b>			
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	<b>p. 26</b> <b>Norway is reported as one region</b>	Not reported by gender due to the anonymity principle. HSE statistics for subcontractors include work conducted directly in the projects.
<b>Supplier Assessment for Labour Practices</b>			
G4-LA14	Percentage of new suppliers that were screened using labour practices criteria	<b>p. 34-35</b> <b>Reported for all procurements above NOK 500 000</b>	
<b>HUMAN RIGHTS</b>			
<b>Non-discrimination</b>			
G4-HR3	Total number of incidents of discrimination and corrective actions taken	<b>p. 34</b>	
<b>SOCIETY</b>			
<b>Local communities</b>			
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, development programmes	<b>p. 35-37</b>	
<b>Anti-corruption</b>			
G4-SO5	Confirmed incidents of corruption and actions taken	<b>p. 25</b>	
<b>Compliance</b>			
G4-SO8	Fines and non-monetary sanctions for non-compliance with laws and regulations	<b>p. 25</b> <b>Reported on corruption</b>	

GRI - indicator	Description	Reporting	Omissions
<b>Supplier Assessment for Impacts on Society</b>			
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	<b>p. 34-35</b> <b>Reported for all procurements above NOK 500 000</b>	
<b>Customer Health and Safety</b>			
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	<b>p. 32-33</b>	
G4-EU25	Number of injuries and fatalities among the public involving company assets	<b>p. 26</b>	
<b>Access</b>			
G4-EU28	Power outage frequency	<b>p. 24</b>	Reported as periods of N-0 and frequency deviations

# Corporate Governance

Statnett's corporate governance is based on the company's external framework, including applicable laws, rules and regulations as well as constitutive documents adopted by the enterprise's governing bodies. Corporate governance in Statnett adheres to the Norwegian State's principles for corporate governance, and Statnett has also decided to report compliance in accordance with the Norwegian Code of Practice for Corporate Governance ([www.nues.no](http://www.nues.no)).

The Accounting Act's guidelines for corporate management reporting are complied with by the reporting in relation to requirements in Section 3-3b, Items 4, 7 and 8 below.

## 1. Statement on corporate governance

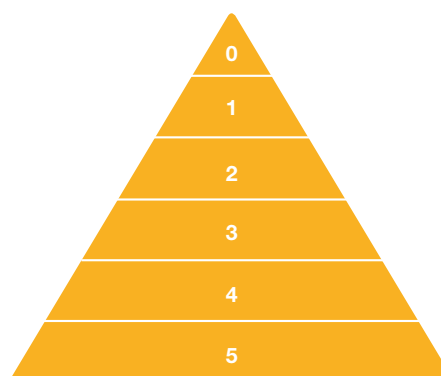
Statnett SF is a state enterprise owned by the Norwegian state, represented by the Ministry of Petroleum and Energy (MPE) and together with its subsidiaries organised as a group of companies. The Statnett Group of companies are independent legal entities and wholly responsible for their obligations.

Good corporate governance is a precondition for stable value creation over time and helps ensure that Statnett provides products and services according to the requirements and expectations laid down by the owner, employees, customers, suppliers, lenders and other stakeholders.

Statnett operating within the outer frames that are relevant for the enterprise's activities. This framework comprise principles related to the state ownership, the Norwegian state's corporate governance principles, articles of association, instructions relating to corporate governance, governing bodies' activities and decisions made by the Enterprise General Meeting. The Board of Directors ensures that Statnett has a sound corporate governance by adopting a framework for the Group's management, including principles relating to the enterprise's ethics and value base, corporate social responsibility and leadership, management and control. Along with Statnett's articles of association, instructions to the Board of Directors and instructions to the President and CEO, this framework constitutes the key governing documentation in Statnett.

Statnett's principles of corporate governance shall ensure that the Group is able to meet its primary responsibilities within power system planning, grid owner responsibility and system-wide

responsibility. This means clearly defining the distribution of roles between the owners, Board of Directors and the administration, and set the framework for how the Group is managed and controlled. Statnett's corporate governance framework consists of six levels and contains governing documents, policies, guidelines and regulations, process maps describing roles and responsibilities, as well as other supporting documentation applicable to the whole organisation. The management model is available to all employees at Statnett's intranet portal.



**Level 0: Constitutive documents.** Outer framework adopted by the governing bodies defining roles and responsibilities. Consists of articles of association, the Board of Directors' instructions and decisions adopted by the Enterprise General Meeting.

**Level 1: Management policies.** Top internal framework for management performance in the Group. Contains policies adopted by the Board of Directors.

**Level 2: Function policies.** Principles and guidelines adopted by the President and CEO that apply to all business areas, processes and activities in the Group.

**Level 3: Instructions and standards.** Group-wide regulations and requirements relating to limited areas or activities.

**Level 4: Processes and procedures.** Identified and documented requirements relating to implementation of activities approved by the process owner or document owner.

**Level 5: Guidelines, templates, checklists.** Supporting information that contributes to compliance with rules and regulations.

Statnett focusses on quality management and continuous improvement, and is certified according to PAS 55 and ISO 55001 (quality standard for asset management) and ISO 14001 (environmental management).

## 2. Business

Statnett has a purpose in the government's sector policy and the enterprise's activities are clearly described in the articles of association.

Paragraph 2 of Statnett's articles of association stipulates that "Statnett SF is the Transmission System Operator in the Norwegian power system." As System Operator, Statnett is responsible for ensuring that there is an instantaneous balance at all times between production and consumption of electric power in Norway. Our System Operator role is described in more detail in the Regulations relating to system operation.

It is also stipulated that "the enterprise is responsible for ensuring efficient operations in a social economy perspective and for developing the main power grid. Statnett SF shall, alone or with others, plan and engineer, build, own and operate transmission facilities. Statnett SF will execute the tasks assigned to the company pursuant to applicable laws, regulations and licences. In other respects, Statnett SF will adhere to commercial principles." Statnett's articles of association are available on the Group's website.

## 3. Equity and dividends

In 2014, Statnett received NOK 3.25 billion in equity with the objective of ensuring an equity-to-assets ratio of at least 25 per cent by the end of 2017. This has given the enterprise an equity that is adapted to the Group's operations and risk profile during the period.

The owner's dividend policy is stipulated in the government budget. In Proposition to the parliament of Norway No. 1 (2011-2012), the Norwegian government has established a long-term dividend policy of 50 per cent of the defined dividend basis. The basis for the dividend is defined as the Group's net annual profit after tax, adjusted for changes in the balance for higher/lower revenue for the year after tax. In connection with the addition of new equity, dividends were not disbursed for the 2013 accounting year in accordance with Statnett's application, and the dividend share for the 2014, 2015 and 2016 fiscal years was set to 25 per cent. In its 2017 National Budget, the Norwegian government proposed to maintain the current dividend level of 25 per cent for the fiscal years 2017 and 2018.

The decision to increase capital can only be made by the Enterprise General Meeting.

## 4. Equal treatment of owners and transactions with closely related parties

Statnett SF is wholly-owned by the Norwegian State through the Ministry of Petroleum and Energy (MPE). Consequently, the enterprise has no own guidelines for equal treatment of various owners.

For major transactions between the enterprise and related parties, Statnett performs value assessments prepared by independent third parties in accordance with national legislation.

Statnett's Code of Conduct stipulates that employees should report any doubt regarding their own impartiality.

## 5. Negotiability

Statnett is a state owned enterprise without transferable ownership interests. See figure on page 48.

## 6. The Enterprise General Meeting

As the sole owner, the MPE is the enterprise's supreme decision-making body through the Enterprise General Meeting.

The following issues are discussed and decided at the Enterprise General Meeting: Adoption of Statnett SF's profit and loss account and balance sheet, including distribution of profit or coverage of loss for the year, adoption of the Group's consolidated profit and loss account and balance sheet. Other matters that are discussed pertain to the General Meeting according to Norwegian laws and regulations, including election of the Statnett Board of Directors and stipulation of remuneration for board members and the board committee. The Board of Directors and the company's appointed auditor attend the Enterprise General Meeting.

The MPE is authority in the enterprise may not be exercised outside the Enterprise General Meeting. The General Meeting adopts Statnett's articles of association, including Statnett's business objectives providing the framework for the operations that Statnett may undertake. An ordinary general meeting is held every year by the end of June.

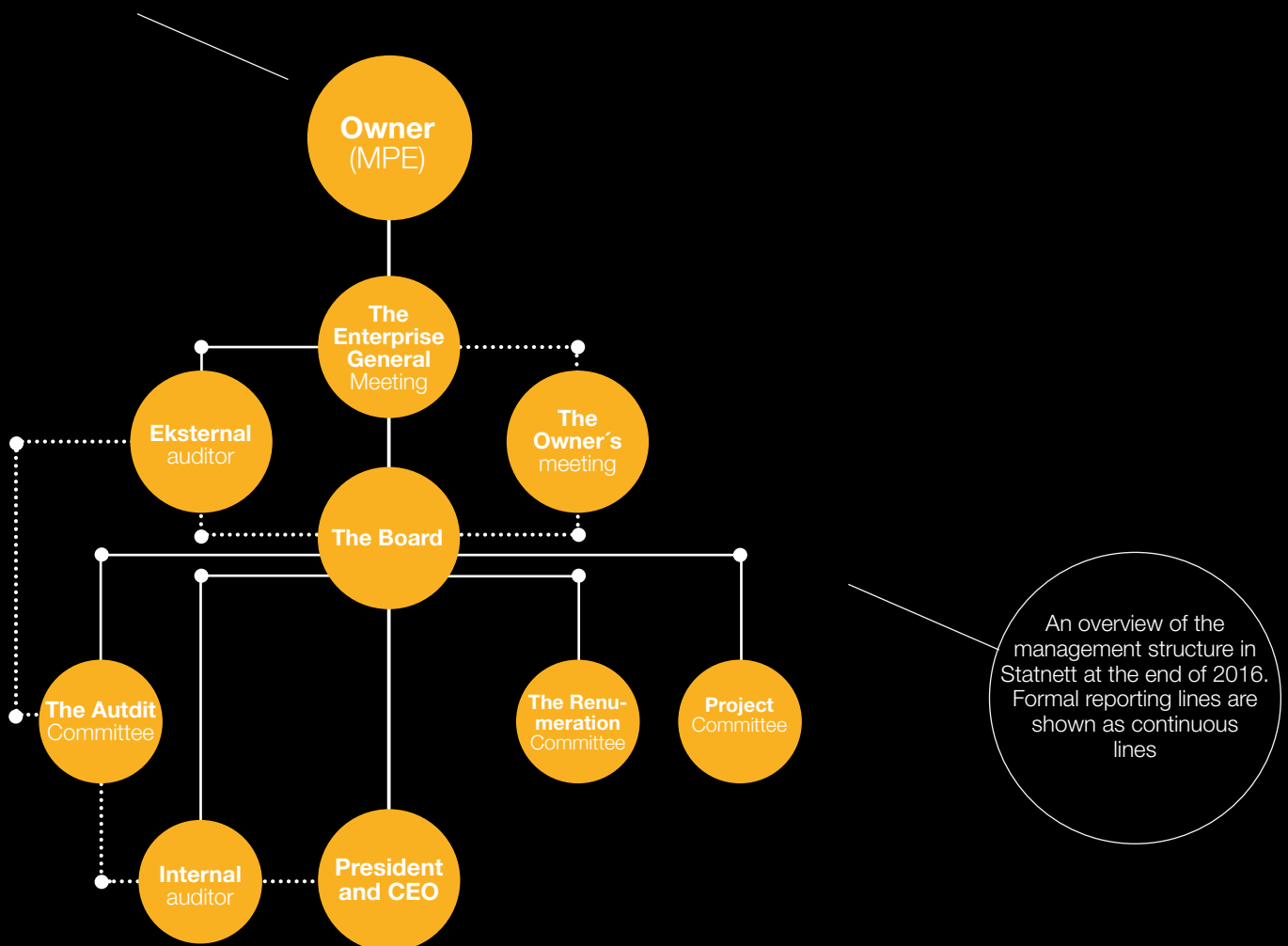
## 7. Election Committee

The MPE designates the owner-elected board members at the Enterprise General Meeting. Employee-elected board members and any deputy members for these are elected by and among the employees of the enterprise pursuant to the Public Enterprises Act.

## 8. Corporate Assembly and Board of Directors: composition and independence

Statnett has no corporate assembly. The enterprise's Board of Directors shall consist of seven to nine members, in addition to any

# Governance structure





deputy members. Two, or possibly three members, and their deputy members are appointed by and among the enterprise's employees according to the relevant rules laid down in Section 20 of the Act relating to state-owned enterprises and associated regulations. Pursuant to Section 21 of the Act relating to state-owned enterprises, board members are elected for a period of maximum two years, but will remain in office until a new member has been elected even though his/her term of office has expired.

See the annual report for more information about each board member.

Pursuant to the Act relating to state-owned enterprises, the President and CEO cannot be a member of the board. With the exception of employee representatives, members of the Board of Directors are independent of the enterprise and the owner.

The Board of Directors had an attendance record of 98.7 per cent in 2016. The table on page 50 shows the attendance of each board member at board meetings and subcommittees

## 9. The responsibilities of the Board of Directors

The Board of Directors is responsible for prudent leadership, management and control of Statnett. The responsibilities of the Board of Directors follows an annual plan and is governed in accordance with adopted rules of procedure for the Board. The rules of procedure for the Board stipulate roles and distribution of responsibility between the Board, the President and CEO and the internal auditor and help the Board maintain independence in their activities. The Board of Directors adopts Statnett's strategy and the instructions to the President and CEO and ensures that Statnett is organised in a satisfactory manner. Furthermore, the Board of Directors adopts budgets and ensures satisfactory asset management, a good working environment and compliance with regulatory requirements, laws and regulations.

The Board of Directors' tasks are aimed at further developing the Statnett Group, including achieving long-term value creation, openness and transparency, as well as exercising corporate social responsibility and contributing to the development of the next generation power system. Much of the Board's work in 2016 was related to HSE, daily operations, cost effectiveness, grid development and investment projects, as well as Nordic and European collaboration. Following two fatal accidents in the first six months, the Board of Directors has been deeply involved in the work on establishing an HSE action plan.

The Board of Directors shall help ensure its appropriate composition, that its work is based on transparency, trust, competence and impartiality, and that the board members' overall expertise effectively

contributes to long-term sound value creation in Statnett. Twice in 2016, the Board of Directors evaluated its work, competence and cooperation with the management, with the objective of ensuring high-quality work in the board. Statnett's Code of Conduct stipulates that board members should report any issues that may affect their competence on their own initiative. Statnett meets the statutory requirements concerning representation of both genders on the board.

### The Audit Committee

The Board of Directors has established an Audit Committee, which will function as a preparatory body to the Board of Directors. The Board has approved the instructions for the Audit Committee. The responsibilities of the Audit Committee include making preparations for the Board of Director's follow-up of the financial reporting process and monitoring the systems for internal control and risk management and the enterprise's internal audit process. Furthermore, the Audit Committee shall maintain continuous communication with the enterprise's appointed auditor with regard to the audit of the enterprise, and assess and monitor the auditor's independence according to the Auditors Act.

### Remuneration Committee

The Board of Directors has appointed a Remuneration Committee to assist the Board of Directors with stipulating the President and CEO's terms and conditions of employment and help establish the main principles and framework for remuneration of the Statnett Group management. The Board has approved instructions for the Remuneration Committee.

### Project Committee

The Board of Directors has appointed a Project Committee to function as a preparatory body for the Board of Directors relating to follow-up of Statnett's investment projects. In particular, the Project Committee shall ensure sound corporate governance of the projects approved by the Board of Directors and follow up projects from the time when an investment decision has been made in Statnett's project model. The Project Committee will present its views and evaluations to the Board of Directors, but will not make decisions on behalf of the Board.

### Owner's Meeting

In addition to enterprise meetings, the MPE holds owner's meetings with the Board of Directors, where the purpose is to create an informal forum where the Board of Directors and owner can exchange opinions and discuss issues of material financial or strategic significance for Statnett. The views expressed by the owner at the owner's meetings provide input for Statnett's Board of Directors and administration. Issues requiring owner approval must be addressed at the Enterprise's General Meeting.

	Board Meeting	The Audit Committee	Project Committee	Remuneration Committee
<b>Meetings</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>4</b>
Per Hjorth (Chairman of the Board)	9			
Synne Larsen Homble (Vice-President of the Board, leader of the Remuneration Committee from and including August 2016)	8			4
Maria Sandsmark	9	5	4	1
Egil Gjøsteland (leader of the Project Committee)	9		11	
Kirsten Indgjerd Værdal (leader of the Remuneration Committee until the end of July 2016)	9	4		3
Einar A. Strømsvåg (leader of the Audit Committee)	9	9		
Steinar Jøråndstad	9	5	4	
Karianne Burholm (appointed the Board in August)	3	4		
Nils Ole Kristensen (appointed the Board in August)	5			1
Pål Erland Opgård (resigned in July)	5		7	3
Ane Elgesem (resigned in July)	4			
Ole Bjørn Kirstihagen (vara)	1			

## 10. Risk management and internal control

Statnett works systematically to review any risks associated with our activities and the Board of Directors receives risk reports for the Group every quarter. Two of these are risk reports for the Group and two are more detailed reports on a selected risk area. See the separate section on risk management in the annual report for a more detailed description of Statnett's risk management framework and implementation of risk management.

Combined with the enterprise's organisation, enterprise management and reporting lines, Statnett's Code of Conduct and value base make up the foundation for a good internal control environment. Internal control is an integral part of corporate governance and is based on the principle of three lines of defence (manager, policies manager/staff and internal auditor). The Board of Directors is responsible for ensuring that the enterprise has satisfactory control and will stipulate the ambition level for internal control maturity, based on Statnett's role, social mission and risk profile, following a cost/benefit assessment. Statnett's internal control maturity is reported to the Board of Directors annually.

Extensive work is ongoing to improve the Group's most important work processes in order to strengthen internal control and increase cost effectiveness in the Group. At the same time, governing documentation is under improvement, while it is now easier to process improvement proposals, nonconformities and undesirable incidents.

### Financial Report

Statnett has a policy for accounting and financial reporting. An overview has been established of control activities conducted

to ensure correct financial reporting, and risk assessments are performed of the most important processes when necessary. The Audit Committee, internal auditor and the Board of Directors monitor the enterprise's internal control systems in financial reporting.

As of the 2016 accounting year, financial reports are published every six months. The decision to adopt semi-annual reporting as opposed to quarterly reporting was made based on an assessment of the nature of the enterprise, which changes very little from one quarter to the next, and that the need for financial information will be satisfactorily maintained. The external and internal reporting is reviewed by the Group management, the Audit Committee and the Board of Directors.

Monthly reporting of HSE results and quarterly management reporting, including Statnett's financial development and position, are carried out as part of the follow-up.

### NUES statement

Statnett adheres to the Norwegian State's own principles for corporate governance and the recommendations from the Norwegian Corporate Governance Board (NUES) insofar as this is appropriate. The NUES statement is submitted to the Board of Directors as part of the enterprise's annual internal control report, and any deviations from the recommendation are explained.

### Code of Conduct

Statnett's Code of Conduct provides guidelines for how employees should relate to each other and their surroundings. All policies and procedures are based on these principles. Statnett has

appointed an Ethics Ombudsperson who ensures compliance with the Norwegian Working Environment Act with respect to facilitating reporting of any censurable conditions. The Ethics Ombudsperson is a whistleblower channel for employees as well as for people not employed by Statnett. Failure to comply with the Code of Conduct may result in sanctions, depending on the nature and scope of the breach. The Code of Conduct applies to board members, managers, employees, contractor personnel and any other party acting on behalf of Statnett.

#### **Code of Conduct for suppliers**

Statnett puts particular emphasis on ensuring that our suppliers and partners comply with the Group's Code of Conduct for suppliers. The suppliers' obligation to comply with the ethical requirements is stated in the contracts Statnett enters into with its suppliers. Inspections and audits are conducted in order to make sure that the requirements are complied with during execution of the contracts. The Code of Conduct for employees and contractors is available in its entirety on Statnett's website.

#### **11. Remuneration of the Board of Directors**

See Note 20 in the annual accounts for a detailed overview of Board remunerations. Board member remunerations are not associated with profit or loss, option programmes or similar.

#### **12. Remuneration of executive employees**

Statnett follows the guidelines that apply for executive pay in state enterprises. In accordance with Section 8 of the articles of association, the Board of Directors prepares a statement concerning remuneration to the top management in accordance with the provisions in the Public Limited Liability Companies Act, the Accounting Act, and the Guidelines relating to state-owned companies. See Note 20 in the annual accounts for a detailed overview of remuneration of executive employees.

#### **13. Information and communications**

Statnett is governed by the Freedom of Information Act (with a few exceptions), regulations relating to dissemination of information to the power market and safety and preparedness legislation. Statnett distributes financial and operational information in accordance with the regulatory requirements and practises transparency and openness. Financial and operational information as well as the enterprise's financial calendar are available on Statnett's website.

#### **14. Company takeover**

Statnett SF is a state enterprise. The sale of assets in the enterprise would entail a restructuring of the enterprise and a legal amendment which requires the consent of the Norwegian Parliament.

#### **15. Auditor**

External auditors are appointed by the General Meeting and are independent of Statnett. The Group's external auditor for 2016 was Ernst & Young AS. The external auditor presents an annual work schedule to the Audit Committee. The external auditor attends meetings in the Audit Committee to discuss relevant issues. The auditor participates in the Board's consideration of the annual accounts. The external auditor attends one annual Board meeting where the management is not present. The Audit Committee evaluates and proposes an external auditor and is responsible for monitoring the auditor's independence. As an important part of the process of ensuring the auditor's independence, the Board of Directors has established guidelines relating to the enterprise's access to use the external auditor for assignments other than audits. Each year, the external auditor reviews the company's internal control together with the Audit Committee. See Note 24 of the annual accounts for information about the auditor's fees, divided between auditing and other consulting services.

Population growth in the big cities affects the needs for development in the main grid



# Risk management

## Risk management framework

Statnett practises unified risk management in a manner that reflects that the enterprise is responsible for critical infrastructure in society, and that Statnett is in a phase with a significant construction programme and an increase in the company's asset base. Statnett's risk management covers the enterprise's entire perspective, including strategic, commercial, operational and financial aspects. Risks with a potential impact on HSE, supply of electric power, finances and reputation will take priority. All development projects approved by Statnett's Board of Directors are reported to the Board and include an updated risk profile for the individual project. Statnett's activities are subject to comprehensive regulation from several regulatory bodies. Statnett's compliance with applicable regulations helps ensure low risk in connection with supply of electric power.

Good internal control increases efficiency and improves the quality of the results from our work processes. Statnett has a constant focus on improvement. In 2016, a maturity assessment was conducted to establish how internal control can be improved in the company. In 2017, we will evaluate the results from the maturity assessment and introduce measures to implement internal improvements.

As part of the work on improving the Group's management, core and support processes, an evaluation of Statnett's routines has also been conducted in order to prevent, uncover and handle fraud, misconduct and irregularities. A number of measures have already been introduced, including audits, improvement of governing documents, internal courses and dilemma training. This work also comprises activities in subsidiaries and associated companies.

Following below is a description of selected risks within Statnett's prioritised risk areas.

## HSE

Statnett's work relating to development, operations and maintenance involves work where there is a risk of serious personal injury and a risk of harming the external environment.

The HSE risk is managed by having sound, documented work

processes, use of risk analyses in the planning and conduct of operations in operations and project, close collaboration with suppliers, focus on HSE in technology and choice of solutions, reporting of incidents and near misses in a learning perspective and considerable management follow-up, in addition to an inclusive safety culture. Statnett has a wide range of procedures, which describe how risky operations should be performed and these are revised regularly. *Vis-à-vis* our suppliers we make sure to establish clear requirements. Work is under way to reinforce the safety culture in the company by introducing a culture programme – SIKKER, where many of Statnett's suppliers and contractors have been represented, by awarding the SIKKER award (an HSE award) to internal employees and suppliers, and through increased use of investigations and continuous improvement work.

In addition, the Board of Directors implemented a new HSE action plan in June 2016. The plan includes 12 specific areas of improvement measures divided into four different topics:

- **Control:** Ensure that the building owner is clear and visible with defined roles and responsibilities internally and *vis-à-vis* contractors
- **Culture:** Safe behavior and implementation of life-saving rules
- **Contract:** Ensure clarity through simplification and an increased precision level with regard to HSE requirements in contracts, as well as an improved qualification and follow-up process
- **Consolidate** the project portfolio to ensure more robust capacity and resources

These measures will be completed and implemented during the first six months of 2017.

## Risk of power supply interruptions

Interruptions in the electricity supply may occur e.g. as a result of a fault in a single component during N-0 operation (no barrier against power outage in the transmission grid) or as a result of concurrent faults in situations with normal operational reliability. Security of supply is below the desired level in certain areas, and on occasion N-0 operation is necessary in some areas. Stormy weather is the main single reason for interruptions in electricity supply. The most

important risk-reducing measures are Statnett's investment projects. For example, the risk to the power supply in Sunnmøre and Central Norway has been reduced because the Ørskog – Sogndal interconnector has been commissioned, completion of two out of three sections in the Ofoten - Balsfjord power line has improved security of supply in many parts of Troms and further north, and completion of the Kvitfossen – Kanstadbotn power line has ensured dual supply to Lofoten. Risk associated with security of supply remains high in areas around Lofoten and in the northern part of Jæren and out to Nyhamna. Ongoing measures include maintenance, fault correction, emergency preparedness plans and drills and component replacements.

### Risks in system operations

The frequency quality in the Nordic region, measured as the number of minutes outside the 49.9 - 50.1 Hz frequency band, is not as good as one would like. Frequency deviation is an indicator of the ability to balance the system during normal operations, but it is also an indirect way of measuring the risk of automatic consumption switch-off during major incidents. Together with the other Nordic transmission system operators (TSOs), Statnett has introduced automatic Frequency Restoration Reserves (aFRR, also called secondary reserves), which will help improve frequency quality. The Nordic TSOs have agreed to establish a single Nordic market to ensure aFRR capacity. The market is scheduled to start up in the first half of 2018. Furthermore, the Nordic countries are working together to revise the frequency quality requirements and describe in more detail how the frequency quality reflects the risk level during operations.

### Energy access

The energy situation was close to normal throughout 2016, and the risk of a strained power situation was low nationally and regionally. During a period, there was high focus on Central Norway, due to low reservoir water levels. At the beginning of 2016, Statnett had introduced two SAKS measures (very strained power situation); energy options in consumption (ENOP) and back-up power plants. ENOPs for 2017 were not purchased in 2016, and the licences for Statnett's two back-up power plants in Central Norway expired in December 2016. The licences have not been renewed as security of supply

improved after commissioning of the power line between Ørskog and Sogndal.

### ICT security

Statnett uses a number of ICT systems that are critical for the power supply and contain various types and levels of sensitive information. To protect Statnett's assets against an ever-changing threat and vulnerability situation, continuous, systematic and comprehensive work is ongoing to ensure information security. By having a risk-based approach we aim to achieve an appropriate and acceptable risk level. To achieve this Statnett is working closely with other stakeholders in the power industry and national authorities.

Information operations in the digital area, social manipulation and the use of malware are increasing and are increasingly used to interrupt the power supply, exert pressure and for financial crime. As a result, Statnett has strengthened the internal information security organisation and established a strategic initiative to further strengthen the company's ability to detect, prevent and handle cyber incidents that can threaten power system operations.

### Reputational risk

The power supply represents a critical infrastructure for society, and safeguarding the security of supply is Statnett's main mission. Statnett's biggest reputational risk is associated with the company's ability to deliver on this mission 24/7, through all seasons and unaffected by weather conditions and various events. In addition, our investments and operations set "footprints" throughout the country. This means that Statnett continuously need to seek acceptance for its plans and ongoing activities. Decision-makers and opinion-formers must be aware of both the gains and disruptions that follow from Statnett's activities, so that acceptance can be gained based on realistic expectations.

Statnett's mission is laid down in our mandate from the owner, the Ministry of Petroleum and Energy (MPE). At the same time, a broad majority of the Norwegian Parliament supports the main aspects of the Grid Report (Report to the Parliament No. 14 (2011-2012) We are building Norway - developing the power grid) and the Energy

Report (Report to the Parliament No. 25 (2015-2016) Power for Change - the Energy Policy towards 2030), which, together with the mandate, set the rationale and framework for Statnett's activities.

To establish good relations with the outside world, Statnett implements preventive communication measures in specific cases that are important for the company's stakeholders. Examples of this include publication of Statnett's plans, costs and profitability in development projects and long-term market analyses. We also put increasing emphasis on making the outside world aware of "our daily work", and show in practice how Statnett fulfils its social mission. Based on transparency, dissemination of knowledge and dialogue about the company and the power system, Statnett will cater to the need of its target groups' confidence.

### Financial risk

The Board of Directors has established principles for financial risk management for Statnett through the adopted financial policy. Based on this financial policy, Statnett has established a framework for financial management, including limits in connection with credit risk, settlement risk and counterparty risk, as well as instructions for executing financial transactions. Internal control procedures have been established which are carried out independently.

### Financial risk

Statnett has access to several credit markets and has a diversified maturity structure for its borrowings. This reduces the risk of Statnett not being able to refinance its loans during periods with little available capital. To be able to fund at least 12 months' revolving operation and investments without incurring any new debt, the enterprise has a credit facility totalling NOK 8 billion, valid until January 2022. Statnett has long-term credit ratings of A+ and A2 from Standard & Poor's and Moody's Investor Service, respectively.

### Currency risk

Statnett's revenues are mainly in Norwegian Kroner (NOK), whereas some of the Group's expenses are in foreign currencies. Currency risk is minimised through several measures, including hedging foreign exchange exposure linked to major purchases in investment

projects using currency futures contracts, as well as through the enterprise's revenue cap. All Statnett loans in foreign currency are converted to NOK through currency swap agreements.

### Interest rate risk

The Group is exposed to interest rate risk through its loan portfolio, liquidity portfolio 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). Statnett reduces the interest risk rate and fluctuations in the result by adapting the interest rate on Statnett's debt so that it correlates to the extent possible with the NVE interest rate. To achieve the desired fixed-interest on the enterprise's debt, interest rate swap agreements linked to the underlying debt are used.

### Credit risk

Statnett assumes credit risk by placing surplus liquidity in the bank and in securities. Statnett has limits which set credit rating requirements for credit counterparties and maximum exposure limits for each individual investment of surplus liquidity. Statnett also faces credit risk through its role of Imbalance Settlement Responsible in the regulating power market, a risk that is handled through established routines for provision of security for the stakeholders that participate in this market.

### Counterparty risk

Statnett has counterparty risk vis-à-vis the company's derivative counterparties. In order to reduce the counterparty risk, Statnett has entered into credit support annex (CSA) agreements with major derivative counterparties

Statnett is to be the leading European Transmission System Operator within HSE and has adopted a new HSE action plan that covers 12 improvement areas





# Board of Directors' report

**The Statnett Group's underlying profit after tax<sup>1</sup> amounted to NOK 1 398 million in 2016 (NOK 1 427 million in 2015). The underlying profit or loss is based on the regulated permitted revenue, whereas the recorded profit or loss will depend on stipulated tariffs and congestion revenues. The difference, referred to as higher or lower revenue, will level out over time through adjustment of tariffs, ensuring that Statnett's recorded revenue over time corresponds with the regulated permitted revenue. Recorded profit after tax for the Group amounted to NOK 645 million in 2016 (NOK 1 103 million in 2015). Statnett invested NOK 7.7 billion in 2016. This reflects a high level of activity, which is expected to continue in the years to come.**

**The underlying profit was about the same level as last year because the increase in permitted revenue due to an increased asset base was offset by regulative changes from 2016 related to accrual for pensions within the permitted revenue and a positive non-recurring effect of the transition from a defined benefit to a defined contribution pension scheme in 2015. The decline in recorded profit was primarily due to the company's higher operating revenues being offset by increased operating costs as a result of a high level of activity in the Group, as well as increased depreciation. In addition, measures related to Statnett's efficiency improvement programme have yielded results and contributed to lower cost growth than indicated by the increase in activity.**

Statnett is the system operator in the Norwegian power system and responsible for developing, operating and maintaining the transmission grid in a socio-economically prudent manner. Through investment projects as well as development of new operating and market solutions, the company facilitates better security of supply, and promotes Norwegian value creation and realisation of Norwegian climate goals. Statnett conducts operations throughout the country, with headquarters in Oslo and administration offices in Alta, Trondheim, Sandnes and Sunndalsøra.

The Group is making good progress in projects and operations were stable throughout last year. Several investment projects were completed in 2016, of which the power line between Ørskog and Sogndal is the largest. It has been planned and built over the course of several years. In addition, important parts of the section between Ofoten

and Balsfjord was commissioned, with major repercussions for the northernmost part of the country. Statnett has also taken over the new power line between Kvitfossen and Kanstadbotn, completed by Lofotkraft, which will further enhance security of supply in the north. These investments, as well as completed substation projects, have helped improve security of supply in several regions in Norway. Furthermore, the first part of a new central operations system has been implemented. In 2016, Statnett also started construction of several projects, of which the largest are the international interconnectors to Germany and the UK, and the initial construction stage of new power lines between Namsos and Surna, as well as between Balsfjord and Skaidi. Overall, Statnett has a grid investment portfolio in the order of NOK 40-50 billion that will be realised over the next five years. Progress has been made in the work to take over the remaining parts of the transmission grid, and in 2016 Statnett reached an agreement with BKK concerning take-over of the transmission grid in the Bergen area.

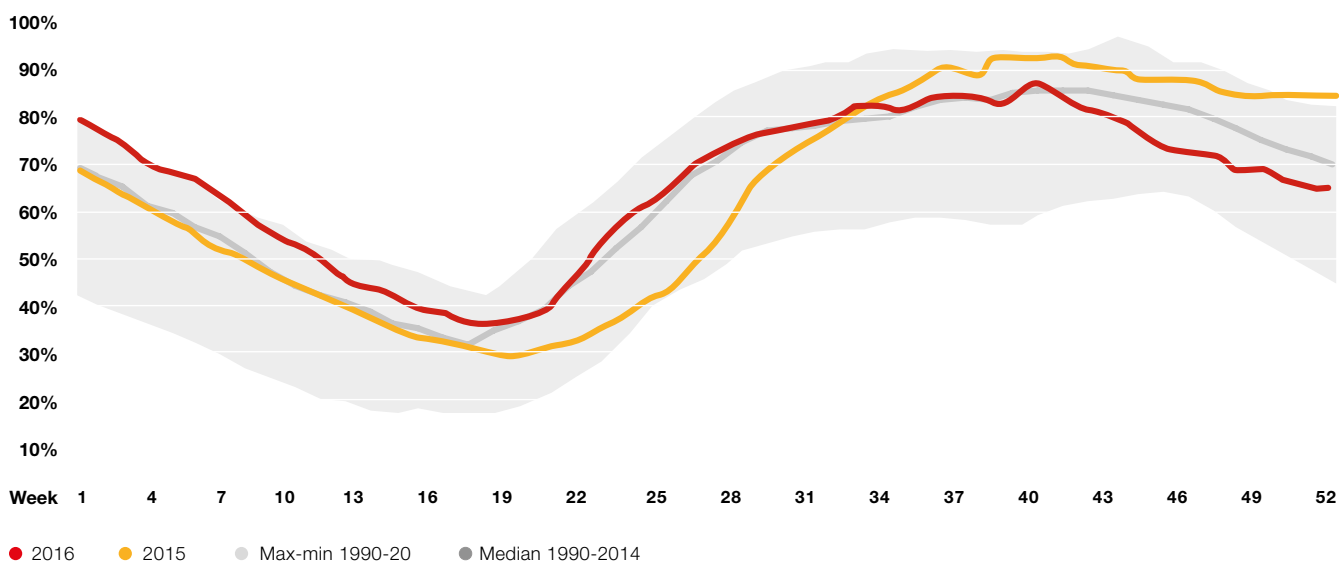
The power situation was normal throughout 2016. Reservoir water levels were below the median and the hydrological balance was below normal at the end of the year.

System and asset operations were stable throughout the year. Completion of several construction projects and work relating to voltage upgrades necessitated outages on several power line sections, which reduced trading capacity in some periods, particularly towards Central Norway. A few major faults and operational disruptions throughout the year caused interruptions to the power supply, and extreme weather around the New Year also resulted in outages. Statnett handled these challenging and unforeseen incidents efficiently, and the power lines were quickly reconnected. Concurrently, Statnett handled a cable breakdown in the Oslofjord and installed a backup cable. These has caused consequences for some players, without any noticeable consequences for end-users. The frequency quality deteriorated in the first half of 2016, but improved considerably following reintroduction of the secondary reserves market from September 2016.

The work at a Nordic and European level progressed well in 2016, and new forms of cooperation were established within the power market and power system management. In May, it was decided to establish joint offices in Copenhagen to support the four Nordic system operators, and in November, the Nordic system operators agreed to establish a single Nordic market for automatic frequency restoration reserves (aFRR).

<sup>1</sup> For alternative performance measure, for reconciliation and explanation see chapter on financial framework conditions

Reservoir levels Norway



Statnett works systematically to reduce the risk of accidents and injuries, and aims to become a leading Transmission System Operator (TSO) within HSE in Europe. After several years of positive development in the number of lost-time injuries Statnett experienced two contractor fatalities on two of Statnett's projects in the first six months of 2016, in addition to several serious incidents. The Board of Directors takes this very seriously and as a result a new HSE action plan was adopted in June 2016. The action plan includes 12 specific improvement areas that will be implemented in the first half of 2017.

In order for Statnett to carry out the social mission and maintain its financial implementation capability, it is vital that Statnett displays cost-effectiveness compared to other European TSOs. The main basis for this evaluation is an international benchmarking, which is expected to be carried out based on costs for 2017. The Group's internal cost-efficiency programme, which aims to improve efficiency by 15 per cent<sup>2</sup> from 2013 to 2018, has so far yielded the desired results.

Statnett's financial position was strengthened by the injection of new equity in 2014, and the company benefited from a fixed dividend share of 25 per cent for the years 2014 – 2016. In its 2017 National Budget, the Norwegian government proposed to maintain the current dividend share of 25 per cent for the fiscal years 2017 and 2018. In addition, Statnett's underlying profit improved over the last few years, which strengthened equity. Statnett prioritises maintaining a robust A rating, in order to ensure access to adequate loan capital on good terms. In 2016, Statnett entered into an agreement to take up long-term loans of USD 360 million and increased credit facilities to NOK 8 000 million applicable as of 2017.

Statnett is involved in a legal dispute with three municipalities concerning declared valuations and valuation method as a basis for property tax. Gulating Court of Appeal ruled in favour of Statnett in June 2016. The opposing party has appealed the decision and the case is scheduled to be heard by the Supreme Court in June 2017. The case is of great economic importance for the grid customers and is regarded as both highly academic and as a matter of principles. The case is mainly related to how wear and tear, aging and ill-time is to be calculated as a function of the grid assets age.

**Safe and efficient operations**

The power situation was normal throughout 2016. Inflow for 2016 was calculated at 129.4 TWh, which is more or less normal. The year was relatively mild. Only January had a monthly temperature below normal. The hydrological balance fell by approximately 14 TWh in 2016 and by the end of the year, it was around 3 TWh below normal.

The last part of 2016 was characterised by major weather fluctuations. October had low precipitation (37 per cent energy precipitation during Weeks 39-43) and low inflow, whereas December was both mild (4.6 degrees above normal) and wet (162 per cent energy precipitation during Weeks 49-52). During Week 45, reservoir water levels in Central Norway were under the minimum for that time of year (based on the 2002-2015 time series). In addition to low inflow, reduced transmission capacity due to outages in Statnett's building projects also contributed to low reservoir water levels locally. In December, modification works were completed and the power line between Sogndal and Ørskog was put into operation. At year-end, reservoir water levels in Central Norway were around normal.

<sup>2</sup> Involves cost reduction, increased volumes without increasing costs and increases quality.

Reservoir water levels in Norway were 82.5 per cent at the beginning of 2016, 12.9 percentage points above the median for the 1990-2015 measuring period. At the end of the year, reservoir water levels were 65.7 per cent, 4.9 percentage points below the median.

Overall power generation was 149 TWh in 2016, and the overall power consumption was 132 TWh. The corresponding figures for 2015 were 143 TWh and 128 TWh, respectively. Net export was about 17 TWh in 2016, somewhat higher than in 2015.

The cold weather in January resulted in record high hourly values for both output and consumption, amounting to 26 766 MWh/h and 24 485 MWh/h, respectively.

As of 1 September, grid operations for the whole of Northern and Central Norway took place from the Regional Control Centre North in Alta. Concurrently, the Regional Control Centre in Sunndalsøra was closed down.

In 2016, several outages occurred which led to reduced trading capacity, special regulation and reduced operational reliability. Such as:

- The voltage upgrade in Central Norway reduced capacity going out of NO4 and contributed to NO4 being a low price area.
- The construction of a new power line between Ofoten and Balsfjord required outages in the existing power lines. This was challenging to handle at times and there were areas with both a power surplus and shortfall, and resulted in both special regulation and reduced security of supply.

Following a downward trend from 2011, frequency deviations increased in 2016. In 2016, the number of minutes with a frequency outside the 49.9 - 50.1 Hz range was 13 647, almost 30 per cent higher than in 2015. This was, among other factors, due to reduced sales of secondary reserves, considerable congestion and a large share of fluctuating wind power generation in the Nordic power system.

Operational disruptions, which affected the operating situation for shorter or longer periods in 2016 was limited. The most important incidents was:

- During the extreme weather "Tor" from 29 – 30 January, there were breakdowns in approximately 25 lines in the transmission grid and distribution grid one or more times, and some of these caused outages in the supply. Several thousand customers had no power due to a fault in the lower voltage level. The 300 kV power line between Modalen and Refsdal broke down during the storm and remained inoperative until 28 February.
- On 2 February, inclement weather caused an outage in the power line between Viklandet and Ørskog, and outage in the supply from Ørskog to Grov and Ålesund of approximately 250 MW for about 20 minutes.
- A broken-down transformer led to a fire in Halden substation on 9 March. The 420 kV power line Hasle - Halden was disconnected during the fire extinguishing operation. The fire was

extinguished after about four hours and the line reconnected.

- A fire occurred in a transformer at Viklandet on 20 March. Consumption at Hydro Aluminium Sunndalsøra and Nyhamna was lost simultaneously, but was back after about one hour. The back-up transformer was connected on 29 April.
- A fault in an earthing switch at Hydro caused disconnection of the entire Øvre Årdal substation on 15 June. Årdalstangen remained in separate operation, whereas Øvre Årdal lost all output and consumption. Hydro Årdal was completely without supply for about 1.5 hours and partly without supply for about four hours.
- Breakdown of Sylling - Tegneby on 20 June due to a cable failure at the Oslofjord-connector caused reduced capacity between the areas NO1-SE3 and cancellation or delay of planned shutdowns in Southern Norway. A back-up cable was installed on 13 October. Capacity will be reduced until autumn 2017 when all cable sets will have been replaced.
- 420 kV Nore1 - Dagali was disconnected from 12 December until 19 January after it was discovered that a lead-in wire to the SF<sub>6</sub> facility in Nore1 had overheated.
- The extreme weather Urd hit Southern Norway in the afternoon of 26 December. There were few outages in the transmission grid, but many end-users were affected by a power outage, as a result of faults in the subsidiary grid.
- On the evening of 30 December, supply was interrupted in many parts of Helgeland due to a fault in the 132 kV grid. Operations resumed and consumption was reconnected after about 45 minutes.

## Development of the power system

Statnett develops the power system by building and reinvesting in the transmission grid and developing system operation solutions nationally and in cooperation with the other Nordic TSOs. The development will pave the way for increased integration of the markets in the Nordic region and Europe.

### Power system development

The Regulations relating to energy audits designate Statnett as the body responsible for audits for the transmission grid. This entails that the company must have knowledge about the transmission need between regions in Norway and between Norway and other countries, both in the short and long term. This knowledge sets guidelines for project development in Statnett.

A comprehensive picture of future transmission and investment needs is formed through market analyses, fundamental technical analyses and concept and feasibility studies. Every two years, Statnett conducts a Power System Assessment (PSA) for the transmission grid that must be submitted to the Norwegian Water Resources and Energy Directorate (NVE). The study is exempt from public disclosure. The Grid Development Plan (GDP) is a public summary of the PSA with information concerning Statnett's plans for the transmission grid in particular and the power system in general, under which multiple development projects are in the planning and execution phases. The GDP was most recently presented in October 2015, and Statnett presented an updated investment plan to the NVE in October 2016. Statnett also conducts more specific analyses for individual areas as

needed. In the spring of 2016, a National Power System Conference was held. This represented the start of the process for the next PSA and GDP. The documents will be submitted for hearing in April and presented in its final form in autumn 2017.

Through its ongoing work on the PSA for the transmission grid, Statnett maintains a dialogue and exchanges information with other grid owners, especially those responsible for regional power system assessments, as well as power producers and other stakeholders. Information from the regional assessments is used actively in Statnett's work on grid planning. Furthermore, Statnett receives information about grid development in the other Nordic countries through its international work, both bilaterally and in the European System Operator Cooperative ENTSO-E.

As part of the planning work, Statnett conducts Concept and Feasibility Studies (KVU), with the purpose of providing a sound basis for deciding what system solution to select for each area. A KVU is initiated when a need for strengthened transmission capacity has been identified. A KVU follows a process that includes an assessment of needs, a description of purpose and terms or requirements that must be fulfilled, as well as a socio-economic analysis of the various alternative concepts.

In 2016, Statnett published the following area assessments, which were prepared in accordance with requirements to the elaboration of the KVU:

- The power system in Finnmark – Analysis of needs and measures after 2020
- The power system in South-Rogaland – Analysis of needs and measures

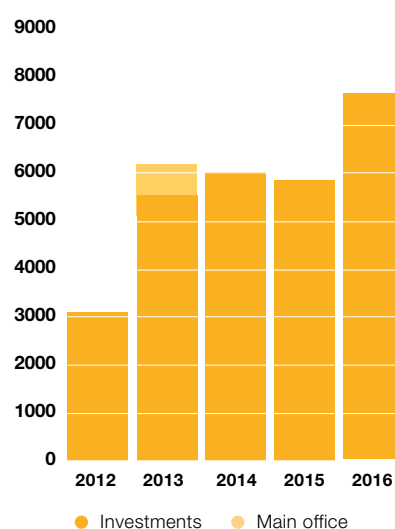
The development towards a more climate-friendly and more closely integrated power system is significant for operation of the power system. The system operations and market solutions must be adapted to exploit the opportunities and contribute to safer and more efficient operations of an increasingly complex power system. Statnett develops measures in order to secure stability and efficiency in the operation of the power system, and regularly publishes a System Operation and Market Development Plan (SMUP) with an overview of challenges and planned measures. A new plan, valid for the period up to 2021, is seen in context with the GDP and both plans will be submitted for hearing in April, and published in its final form in autumn 2017.

### Investments

During the 2011–2016 period, Statnett has invested more than NOK 30 billion in grid projects, which include among other 850 kilometres of new power lines, upgrades of more than 340 kilometres of existing power lines, several new and upgraded substations, in addition to cable projects. The largest projects that have been completed during this period are the Ørskog - Sogndal power line, the Eastern Corridor, Skagerrak 4, Sima - Samnanger, Varangerbotn - Skogfoss and the new cable facility in the Outer Oslofjord. In addition, an

investment decision has been made and construction started of international interconnectors to Germany and the UK, as well as major grid projects such as the Western Corridor, a new power line from Ofoten to Skaidi and the new wind-power operated power lines in Central Norway.

MNOK Development investments



The 2015 GDP and the 2016 updated investment plan submitted to the NVE, show that Statnett is planning to invest NOK 40-50 billion in grid projects in the next five years. This includes projects under planning and implementation.

Statnett's overall investments amounted to NOK 7 695 million in 2016. This is more than any year in the past and 30 per cent more than in 2015 (NOK 5 820 million). Investments include commissioned grid projects, projects under construction, ICT projects as well as other investments including purchase of grid facilities. The largest purchases were transmission grid facilities from BKK and the Kvitfossen – Kanstadbotn power line bought from Lofotkraft. Investments in own grid projects totalled NOK 5 939 million in 2016.

Commissioned projects amounted to NOK 5 963 million in 2016, compared with NOK 4 152 million in 2015. The largest facilities commissioned in 2016 were the final section between Høyanger and Sogndal, which is part of the Ørskog - Sogndal project, and the power lines on the sections from Ofoten to Kvandal and from Bardufoss to Balsfjord, which are part of the Ofoten – Balsfjord project. The scope of commissioning will vary from year to year, and was according to plan in 2016.

At year-end 2016, the value of plants under construction was NOK 8 473 million, compared with NOK 6 553 in 2015.

An overview of the most important projects is shown on the next page.

### Overview of major investment projects

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

Project	Location	Expected investments NOK
<b>Completed projects</b>		
Ørskog - Sogndal, new 420 kV power line	Midt	
Transformer capacity Eastern Norway	Øst	
<b>Under implementation</b>		
Western Corridor, voltage upgrades <sup>1)</sup>	Sør	MNOK 7 100 - 8 500
Balsfjord - Skaidi (-Hammerfest), new 420 kV power line	Nord	MNOK 4 000 - 6 000
Namsos - Åfjord and Snilldal - Surna, new 420 kV power line <sup>2)</sup>	Midt	MNOK 3 400 - 3 700
Ofoten - Balsfjord, new 420 kV power line	Nord	MNOK 3 200 - 3 700
Inner Oslofjord, reinvestments interconnectors	Øst	MNOK 1 050 - 1 200
Subsection Nedre Røssåga - Namsos, voltage upgrade	Nord	MNOK 800 - 1 000
Subsection Klæbu - Namsos, voltage upgrade	Midt	MNOK 700 - 800
Bjerkreim, new transformer substation	Sør	MNOK 500 - 540
<b>Interconnectors, under implementation</b>		
Cable to England (NSN Link)		MEUR 750 - 1 000 <sup>3)</sup>
Cable to Germany (NordLink)		MEUR 750 - 1 000 <sup>3)</sup>
<b>Final licence granted</b>		
Åfjord-Snilldal, new 420 kV power line and interconnector	Midt	MNOK 1 900 - 2 700
Salten, new substation	Nord	MNOK 400 - 500
<b>Planned investments, licences pending or appealed</b>		
Greater Oslo Grid Plan, phase 1	Øst	MNOK 4 000 - 6 000
Lyse - Fagrafjell, new 420 kV power line and substation <sup>4)</sup>	Sør	MNOK 1 600 - 2 100
Mauranger - Samnanger, voltage upgrade	Vest	MNOK 600 - 950
Aurland - Sogndal, voltage upgrade	Vest	MNOK 500 - 900
Aura/Viklandet-Surna, voltage upgrade	Midt	MNOK 500 - 700
Sylling, reinvestment	Øst	MNOK 490 - 590
<b>ICT projects</b>		
Renewal of Statnett's central operations system		MNOK 600 - 800
Elhub		MNOK 500 - 600

<sup>1)</sup> Parts of the project are under planning. Final licence is granted for all sub-sections and substations of the project.

<sup>2)</sup> The sub-section Åfjord-Snilldal is not included in the estimate, but final licence is granted

<sup>3)</sup> Statnett share. Exposure mainly in Euro which corresponds to a span of 7-9 billion NOK per project. Agreements with partners in Germany and England will be in Euro.

<sup>4)</sup> Lyse-Fagrafjell is a continuation of the project previously described as Lyse-Støleheia.

The amounts in the table show the anticipated range for project costs. Projects under implementation are shown in current rates, other projects in 2016 rates, excl. interest on building loan and risk regarding foreign currency volatility.

## Important project events

### Commissioned major investment projects

- *Ørskog - Sogndal*: The final power line section between Høyanger and Sogndal was commissioned in December. This means that the entire project is in operation following a five-year construction period.
- *Transformer capacity Eastern Norway*: All seven substations were commissioned in 2016.

### Ongoing major investment projects

- *Western Corridor*:
  - In April, the Board of Directors decided to start construction of the substations Lyse and Fjotland and the power line sections Ertsmyra - Lyse, Ertsmyra - Fjotland and Lyse - Duge. Contracts have been signed for the power lines and the work is progressing well.
  - The Ministry of Petroleum and Energy (MPE) sanctioned NVE's licence decision for Ertsmyra - Lyse on 3 June. On 13 June, NVE granted Statnett a licence to build a 420 kV power line between Sauda and Lyse.
  - The insulation upgrade, reinforcements for aircraft warning spheres and temperature upgrades of the sections Feda - Tonstad II, Solhom - Kvinen, Lyse - Førre - Saurdal and Feda - Kristiansand have now been executed. All the work in Saurdal has been completed.
- *Balsfjord - Skaidi*: In June, the Board of Directors decided to start construction of a new 420 kV power line from Balsfjord to Skillemoen, as well as Skaidi substation. The work is progressing well.
- *Ofoten - Balsfjord*: A new 420 kV power line was commissioned on the section between Ofoten and Kvandal in August and on the section between Bardufoss and Balsfjord in October. Work on remaining section is progressing well.
- *Wind power Central Norway (Namsos - Åfjord and Snilldal - Surna)*: The Board of Directors made a decision to start construction in April. The work is progressing well.
- *Inner Oslofjord cable facility*: In May, the Supreme Court rejected the appeal from the landowner concerning access to areas on the Vestby side. The work is progressing well on both sides of the fjord.
- *Voltage upgrade Central Norway*: The upgrades of the power lines between Klæbu and Namsos and between Namsos and Nedre Røssåga are at the end of 2016 more than 70 per cent and 60 per cent complete respectively.
- *Bjerkreim substation*: The Board of Directors made an investment decision in June, and the wind power operators have confirmed that they will continue their involvement in the project. A decision to start construction was made in February 2017.
- *New international interconnectors*:
  - NSL (cable to England): Both suppliers have started the type testing process. Groundwork and tunnel excavation are now taking place in Kvilldal. The project is scheduled for completion by the end of 2017. The overhead line in Kvilldal has been moved.
  - NordLink (cable to Germany): The cables have passed type tests by both suppliers, and cable production has been

started by one of the suppliers. In June, groundworks at Ertsmyra were completed and construction work has started. Micro tunnel excavation is taking place in Vollesfjord and the first pilot hole was completed in November.

### Other projects under development

- Greater Oslo Grid plan:
  - Smestad - Sogn cable connection and Smestad substation: The Board of Directors made an investment decision in June. Licence from the NVE was received in September.
  - Hamang substation, temporary measures: The Board of Directors made an investment decision in September. Licence from the NVE was received in October.
  - Sogn substation: In December, Statnett applied for a licence to upgrade Sogn substation in Oslo.
- Lyse - Fagrafjell (previously Lyse - Stølaheia): Additional application for Lyse - Fagrafjell was submitted to the NVE in December.
- A choice of solution and investment decision have been made for Sylling substation and an investment decision has been made for reinvestments at Sylling substation.

## Health, safety and the working environment

Statnett's main objective is to prevent accidents, injuries and environmental impact. Goals have been defined relating to safety in all activities in Statnett's organisation as well as in contractor organisations. The Group works systematically to fulfil its objective to become the HSE leader among transmission system operators in Europe. The objective has been specified to a Lost Time Injury Frequency Rate (LTIF)<sup>3</sup> of 2.0 and Total Recordable Incidents Rate (TRIF)<sup>4</sup> of 4.0. The same HSE requirements are set for suppliers as for Statnett's organisation. To achieve this objective, initiatives have been implemented relating to safety culture, risk assessments, expertise and supplier requirements.

After several years of positive development, the number of HSE incidents increased in 2015 and levelled out in 2016. In 2016, Statnett reported nine internal lost-time injuries, whereas our suppliers/contractors reported 19 lost-time injuries. The LTIF value including suppliers/contractors was 5.6 in 2016, down from 6.4 at the end of 2015. The Lost Workday rate (LWR)<sup>5</sup> for Statnett's own employees was 38 in 2016, compared with 63 in 2015. Including suppliers/contractors, the LWR value was 103 in 2016 compared with 85 in 2015.

Statnett experienced two work-related accidents on two of Statnett's construction projects where two contractor employees lost their lives. The fatalities occurred at the Western Corridor in April and the Nedre Røssåga - Namsos project in May. The Board of Directors takes this very seriously and as a result, a new HSE action plan was adopted in June 2016. The action plan includes 12 specific areas of improvement, which are expected to form a sound foundation for the future HSE work in Statnett and improve HSE results.

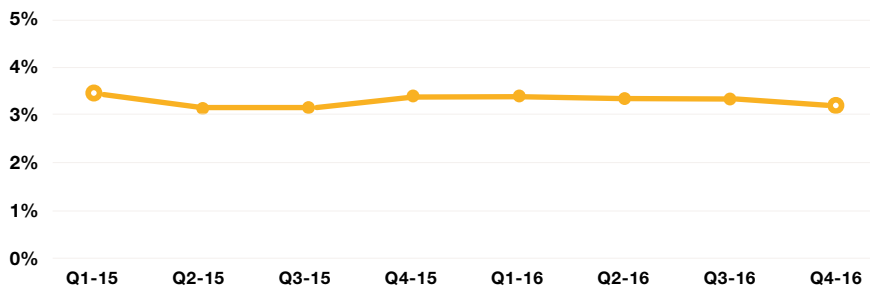
Absence due to illness in 2016 was at 3.2 per cent, which is a slight reduction from 2015. Even though absence due to illness is lower

<sup>3</sup> Lost-time Injury Frequency (LTIF), lost time injuries per million hours worked.

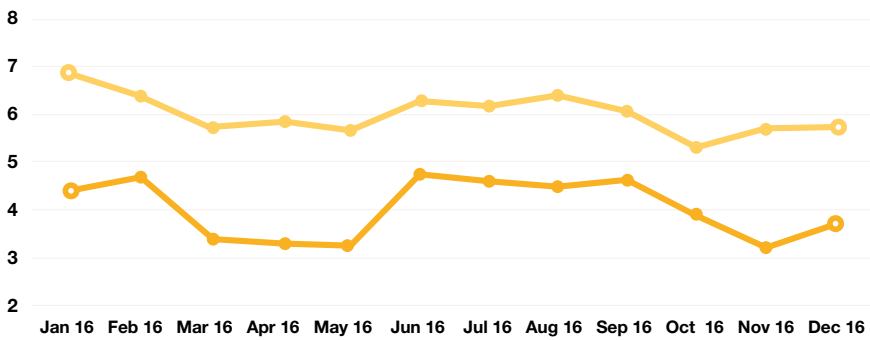
<sup>4</sup> Total Recordable Incidents Frequency (TRIF), number of injuries with or without absence per million hours worked.

<sup>5</sup> Lost workday rate (LWR), number of days absent per million hours worked.

Absence due to illness 12 months rolling average Group

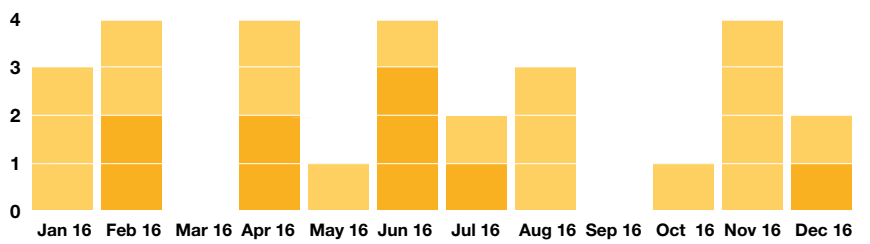


Lost time injury frequency (LTIF) 12 months rolling average Group



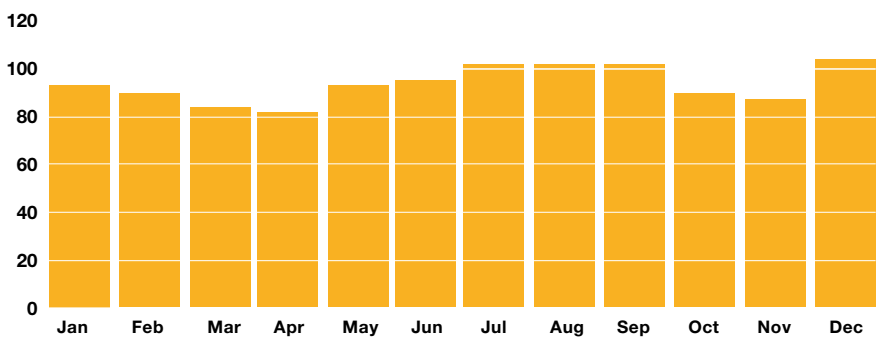
- LTIF own employees
- LTIF including contractors

Lost-time injuries Group



- Lost-time injuries, contractors
- Lost-time injuries, own employees

Lost workday rate (LWR) 12 months rolling average Group



than in the energy industry in general, Statnett is working purposefully to keep it low.

See Corporate Social Responsibility for more detailed information about Statnett's HSE work.

### Recruitment and employee development

Statnett has an extensive social mission and must ensure that the right expertise is in place for the right tasks. Statnett's investment program is extensive and resource demanding and Statnett is still in a phase of significant growth. At year-end 2016, Statnett had 1 323 full-time equivalents, compared with 1 226 the year before. However, it is evident that the investment volume will reduce after 2021. Therefore, Statnett has focused on reallocating full-time equivalents to prioritized tasks, as well as the use of temporary solutions and outsourcing of tasks in areas where the need for flexibility is high. This improves the company's ability to adapt resource usage over time. Statnett is already working actively to ensure that the company over time will be able to adapt to changes the required competence and a reduced level of investment by 2021.

Statnett has low turnover, but many of our current employees will reach retirement age in the next few years. Consequently, Statnett makes a targeted effort to be an attractive employer in order to attract new employees, as well as to retain and develop the expertise of current employees. This includes a trainee programme as well as an apprentice programme in electrical power engineering. Statnett is currently launching a career development model and a manager development programme to further develop management at all levels. Furthermore, Statnett has a senior policy for retaining senior employees and their expertise until retirement age. Statnett's average retirement age in 2016 was 67.4.

Statnett conducts annual organisation surveys. The survey provides information about employee satisfaction, job satisfaction, motivation and commitment. The results from the 2016 survey show that Statnett generally exceeds comparable companies in the industry and Norwegian enterprises in general.

### Gender equality and diversity

Statnett has a zero tolerance policy regarding discrimination and harassment. This is stipulated in the Code of Conduct, and is followed up by e.g. Statnett's Ethics Ombudsperson, local safety delegates as well as through appraisal interviews and opinion polls. It is important to Statnett to ensure a diverse organisation in terms of gender, age and background. Seven per cent of employees recruited in 2016 came from an international background.

Statnett will continue its efforts to increase the number of women in technical and managerial positions. The total percentage of female employees has increased from 25.9 per cent in 2015, to 26.1 per cent in 2016. The percentage of female employees in the energy sector in general is approx. 20 per cent. At the end of 2016, four of the nine members of Statnett's Board of Directors and two of the seven members of the Group management were women. Female managers constituted 28.5 per cent of all managers in the Group.

Employment conditions for women and men are monitored using a variety of processes, including wage reviews and staff surveys. Women and men with approximately the same educational background and experience, and employed in comparable positions, receive equal pay.

See Corporate Social Responsibility for more detailed information about employee conditions in Statnett.

### Research & development

Statnett has a comprehensive program within Research and development (R&D), and makes use of new and more cost-efficient technologies and methods. R&D is a tool to realise Statnett's long-term ambitions. From 2015 to 2019, R&D efforts in Statnett are split into three main programmes: sustainable system development, innovative technology and smart grids. The programmes provide innovative solutions, which improve safety, reduce costs and result in more efficient and sustainable implementation of Statnett's work.

To promote Nordic aspects in European R&D activities, Statnett formalised the Nordic cooperation within R&D in 2016. Our R&D projects will be directed at common Nordic challenges and opportunities.

Furthermore, Statnett focuses on extensive development of solutions through major ICT projects, such as control centre, regulation and market systems and data hub.

See Corporate Social Responsibility for more detailed information about Statnett's R&D work.

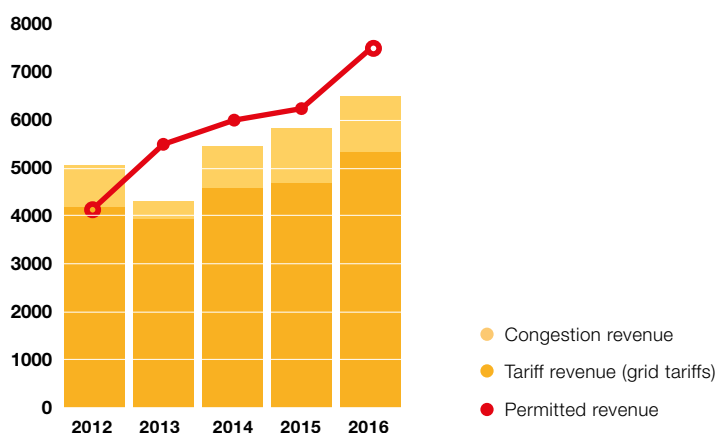
### Financial performance

The annual financial statements for Statnett SF and the Statnett Group have been prepared in compliance with the International Financial Reporting Standards (IFRS) and interpretations established by the International Accounting Standards Board (IASB), which have been approved by the EU. Comments to the Accounts are related to the Group's financial statement. Developments described for the Group also apply to the parent company.

### Operating revenues

The Statnett Group's total operating revenues for 2016 amounted to NOK 6 678 million (NOK 5 906 million in 2015). The increase in operating revenues is mainly due to higher tariff revenues and congestion revenues. Tariff revenues from fixed tariff components have increased as a result of a change in tariff rates for consumers, based on an increase in Statnett's permitted revenue. Tariff revenues from energy components have increased as a result of higher power prices, as well as high production in January. Congestion revenues were high in the Nordic region primarily due to congestion within Norway. The largest increase was due to lower cable capacity between Sylling and Tegneby due to a fault in the cable, as well as high production in Western Norway and reduced capacity due to outages in Central Norway. In addition, power prices were high in Sweden throughout the second quarter due to modifications of nuclear power plants. Congestion revenues from trading with the



**MNOK Operating revenue**

Netherlands were lower due to lower gas and power prices on the Continent.

Statnett's operating revenues mainly derive from grid operations regulated by the NVE, which stipulates a cap (permitted revenue) for Statnett's revenues. Permitted revenue was NOK 7 445 million in 2016 (NOK 6 236 million). The increase was primarily due to increased return as a result of increased grid capital, increased depreciation and higher transit costs. Furthermore, higher power prices led to increased permitted revenue for grid loss.

If the recorded revenues from grid operations for one year diverge from the permitted revenue, so-called higher or lower revenue will occur. Higher/lower revenue will level out over time through adjustment of future grid tariffs. In 2016, Statnett had a lower revenue of NOK 999 million (NOK 489 million), excluding interest. Accumulated higher revenue including interest was NOK 343 million at the end of 2016. The higher/lower revenue is not recognised in the balance sheet.

**Operating costs**

The Group's operating costs totalled NOK 5 526 million in 2016 (NOK 4 192 million).

System services costs amounted to NOK 479 million in 2016, up NOK 28 million compared with 2015. System services are costs associated with Statnett SF's responsibility to maintain instantaneous balance in the power system and to ensure satisfactory quality of supply. The increase is primarily due to higher costs for tertiary reserves, as well as higher transit costs, somewhat offset by lower costs for primary and secondary reserves, as well as special adjustments.

For 2016, transmission losses amounted to NOK 642 million, up NOK 176 million compared with 2015. The increase is mainly due to increased power prices, as well as a somewhat higher loss volume. Salaries and personnel costs totalled NOK 887 million for 2016, up NOK 296 million compared with 2015. Corrected for the non-recu-

ring effect of transitioning to a new pension scheme recognised in 2015, Salaries and personnel costs remain almost the same as last year. Increased staffing as a result of a higher activity level led to higher salary costs, but was offset by reduced pension costs as a result of the change of pension scheme.

Depreciation and impairment totalled NOK 2 144 million in 2016, up NOK 518 million compared with 2015. The increase was mainly due to an increased asset base and a reduced depreciation period for the back-up power plants as Statnett no longer has emissions license for the plants after the commissioning of Ørskog - Sogndal. Lower residual depreciation in connection with disposal of fixed assets has the opposite effect.

Other operating costs totalled NOK 1 374 million in 2016, up NOK 316 million from 2015. The reason is higher costs of equipment and materials as a result of increased activity in operations and customer projects, increased maintenance costs due to an ageing grid, increased preparedness costs, somewhat increased costs associated with rent and operation of office premises, as well as an increase in property tax as a result of the increased asset base, new tariffs and introduction of property tax in additional municipalities. Furthermore, currency hedging of procurement contracts that do not fulfil the criteria for hedge accounting incurred a cost, compared with currency gains in 2015. Sale of property associated with Statnett's previous head office in Oslo (Noreveien 26) entailed an accounting loss in 2016, but revenue is expected in connection with the future part settlement and final settlement, which have not been recognised as revenue. Moreover, measures in Statnett's efficiency improvement programme have yielded results and contributed to a generally lower costs.

**Net profit/loss**

The Group's operating profit for 2016 was NOK 1 152 million (NOK 1 714 million). The underlying operating profit for 2016 (adjusted for the year's changes in unrecognised higher revenue balance) totalled NOK 2 155 million (NOK 2 158 million).

The Group's net financial items for 2016 amounted to a loss of NOK 369 million (loss of NOK 304 million). Interest costs were virtually unchanged from 2015, as increased debt associated with realisation of Statnett's development projects was offset by generally lower interest rates. The increased net financial costs were mainly due to changes in the value of derivatives and a foreign exchange effect as a result of developments in the currency market.

Profit for the year after tax in 2016 was NOK 645 million (NOK 1 103 million). In 2016, the underlying profit after tax was NOK 1 398 million (NOK 1 427 million). The underlying profit was more or less on a par with last year's level. This was due to higher regulated permitted revenue due to an increased asset base, offset by regulative changes from 2016 related to accrual for pensions within the permitted revenue and a positive non-recurring effect of the transition from a defined benefit to a defined contribution pension scheme in 2015.

#### Cash flow and balance sheet

The Group's operating activities generated an accumulated cash flow of NOK 3 235 million at the end of 2016 (NOK 2 260 million). Net cash flow from investment activities totalled NOK -7 788 million (NOK -5 777 million). In total, loans were paid down by NOK 2 692 million, and new loans of NOK 9 159 million were raised. At year-end 2016, the Group's liquid assets and market-based securities amounted to NOK 3 031 million (NOK 2 376 million).

At the end of 2016, the Group had total assets of NOK 50 743 million (NOK 45 547 million). Interest-bearing debt amounted to NOK 32 633 million (NOK 28 289 million), including security under CSA of NOK 2 729 million (NOK 3 328 million). The market value of recognised interest swap and currency swap agreements (fair value hedges) related to interest-bearing debt was NOK 2 844 million. Interest-bearing debt, corrected for this, totalled NOK 29 789 million.

At year-end 2016, the Group's equity totalled NOK 13 867 million (NOK 13 605 million). Statnett SF's distributable equity was NOK 7 677 million at year-end (NOK 7 315 million). Corrected for net higher/lower revenue, the equity ratio in the Group was 27 per cent.

The Board of Directors and management consider the enterprise's equity and liquidity to be prudent.

#### Subsidiaries and associated companies

Statnett SF is required to provide heavy transport preparedness for the Norwegian power supply. Statnett's wholly owned subsidiary Statnett Transport AS is required to ensure efficient and competitive implementation of this duty. In 2016, operating revenues for Statnett Transport amounted to NOK 105 million (NOK 130 million) and the profit before tax was NOK 1 million (NOK 19 million).

The wholly owned subsidiary NordLink Norge AS is responsible for construction and, from 2020, operation of Statnett's section of the NordLink, a subsea cable facility between Norway and Germany. The company had a negative result before tax of NOK 4 million, mainly due to property tax and loss on currency exchange.

The wholly owned subsidiary Elhub AS is responsible for developing, and once it is operative, operating a central data hub for metering values and market processes in the Norwegian electricity market (Elhub). This is a task the NVE has assigned to Statnett under the Energy Settlement Licence. Elhub is scheduled to be operative in the Norwegian electricity market from October 2017. The company had a negative result before tax of NOK 9 million in 2016.

In 2016, Statnett SF has had a controlling interest of 50 per cent in Statnett Rogaland AS (previously called Lyse Sentralnett AS). In December 2016, Statnett purchased the remaining 50 per cent of the shares. The company was consolidated in the group accounts also prior to the acquisition, which means this will only have effect for recognition of equity in the Group. Operating revenues for Statnett Rogaland AS totalled NOK 44 million in 2016 (NOK 33 million), and profit after tax was NOK 3 million. With effect from 1 January 2017, all employees and fixed assets in Statnett Rogaland AS have been transferred to Statnett SF.

Statnett SF has an ownership interest of 33.3 per cent in eSett OY. The company will provide balance settlement services for market players in Finland, Sweden and Norway, and the launch has been scheduled for May 2017. In 2016, the company recorded a loss of NOK 22 million (NOK 19 million). Statnett's share constituted a loss of NOK 7 million (NOK 6 million).

Statnett SF has an ownership interest of 33.3 per cent in KraftCERT AS. The company aims to monitor energy companies' IT systems and deal with unwanted IT security incidents. In addition, the company will assist other players in the power industry in Norway with the handling and prevention of attacks on IT systems. In 2016, the company had a loss of NOK 1 million (zero million NOK).

Statnett SF has an ownership interest of 28.2 per cent in Nord Pool AS. Statnett's share of the profit in Nord Pool AS constituted NOK 9 million in 2016 (NOK 7 million).

#### Risk

Statnett practises unified risk management in a manner that reflects that the enterprise is responsible for critical infrastructure in society, and is in a phase with a significant construction programme, as well as an increase in the company's asset base. Statnett's risk management covers the enterprise's entire perspective, with focus on potential consequences for HSE, supply of electrical power, finance and reputation. Please see the chapter on risk management for more detailed information about the framework for Statnett's risk management and specific risks.

#### Corporate social responsibility

Statnett's social mission is to ensure a reliable supply of electricity, contribute to value creation in society through an efficient and well-functioning power system and pave the way for better environmental solutions. Corporate social responsibility (CSR) in Statnett is all about understanding the expectations of the community, and handling these expectations in a manner that generates mutual trust and

respect. By doing so, CSR will deliver performance excellence and capacity which will ensure that Statnett meets its main objectives.

Statnett reports on corporate social responsibility in accordance with the Global Reporting Initiative's (GRI G4) guidelines for the electricity sector (GRI Sustainability Reporting Guidelines & Electric Utility Sector Disclosures). Statnett believes that the reporting covers the requirements stipulated in Section 3-3c of the Accounting Act, adopted in 2013. Please see the description of CSR in Statnett's annual report for more information about corporate social responsibility.

### Climate and the environment

Statnett works systematically on preventive environmental initiatives to reduce the likelihood of serious incidents during construction and operation of electricity grids in Norway and to reduce the environmental impact of power transmission. Statnett's most important contribution to reduced greenhouse gas emissions is the development of next generations power system, which will facilitate connection of more renewable energy and development of sustainable solutions in line with government solutions. Statnett is also working on reducing its energy consumption and greenhouse gas emissions from daily operations. For a more detailed account of climate and the environment, please see the statement under Corporate Social Responsibility in the annual report.

### Corporate management

Good corporate governance is a precondition for stable value creation over time and helps ensure that Statnett provides products and services according to the requirements. Statnett's corporate management framework is based on the Group's management model, which clarifies the distribution of roles between the owner, the Board of Directors and the general management. Statnett adheres to the Norwegian State's Principles for Good Corporate Governance and follows the recommendations laid down by the Norwegian Corporate Governance Board (NUES). A separate chapter on corporate management in the annual report gives an account of Statnett's compliance with the NUES principles.

### Changes in the Board of Directors

At the General Meeting in June 2016, Egil Gjesteland and Maria Sandsmark were re-elected board members for another two years. Employee board members Ane Elgesem and Pål Erland Opgård stepped down from the Board and Karianne Burhol and Nils Ole Kristensen are the new employee representatives.

### Outlook

The government presented its Energy Report on 15 April 2016. The Energy Report confirms that the framework for Statnett's social mission remains unchanged. At the same time, faster external changes provide new challenges and opportunities. Climate policy affects how power is produced and consumed throughout Europe. Less expensive storage technology and digitisation allow for more efficient control of consumption and production and thus better grid utilisation. Digitisation and new technology will also impact development and maintenance.

Electrification, digitisation and economic growth increase the need for a reliable supply of electricity. Rollout of hourly meters and establishment of Elhub, increased need to exploit consumer flexibility and more distributed production will entail more extensive collaboration with local grid companies in Norway. The need to strengthen Nordic and European collaboration will increase as a result of the EU's focus on regionalisation and the need to handle changes in the power system that follow from more unregulated power, less nuclear power and increased power exchange with the Continent.

Society needs a grid that secures a reliable power supply and facilitates renewable energy projects and commercial development throughout the country. Statnett is currently in a period of historically high investment levels. Ørskog - Sogndal was commissioned in 2016, and several major investment projects will be completed during the period leading up to 2022, such as interconnectors to Germany and the UK, upgrade and reinforcements of the grid between Sauda and Kristiansand, a new power line from Ofoten and northwards, and the wind power operated development between Namsos and Surna. In addition, major projects will be implemented during the period, such as the Lyse – Fagrafjell power line and the Greater Oslo Grid Plan. The large project scope provides operating challenges for a generally highly utilised and ageing grid. Good planning of outages and a focus on preparedness will therefore be important in the years to come.

HSE will continue to have a high priority going forward. The measures resulting from the action plan that was adopted in 2016 are expected to provide a stronger HSE culture, clearer HSE requirements relating to contracts with suppliers, increased presence at construction sites, and ensure a more balanced project portfolio.

The adopted amendments to the Energy Act entail some minor changes in the extent of the transmission grid. From January 2017 licenses for cable interconnectors can be assigned to all companies that meet the requirements, and is this no longer limited to Statnett and companies controlled by Statnett. When the third EU energy market package is adopted into Norwegian law, Statnett will have to assume ownership of assets included in the new definition of the transmission grid, currently owned by other grid operators.

Statnett will continue to invest in ICT systems, R&D and technological development. Statnett aims to implement further digitisation, which will make it possible to adopt new functionality and services, and promotes increased collaboration with other TSOs and suppliers. One example of this is the cooperation between Svenska Kraftnät and Statnett concerning further development and management of a common Regulation and Market System (Fifty). R&D is an important instrument, both for development of market and system solutions and for new technology that can be used in upcoming development projects.

The considerable investments in the transmission grid in the time to come will affect the tariff level. The measures are based on a sound socio-economic foundation. Statnett strives to ensure a transparent and socio-economically beneficial stipulation of tariffs for all customer groups. Statnett is currently implementing a comprehensive

evaluation of the current tariff model to ensure that it gives the necessary socio-economic price signals and a prudent cost distribution between the grid users. Any changes in the tariff model will be implemented as of 1 January 2019.

Statnett is eager to maintain its position as one of the most cost-efficient transmission system operators in Europe through safe, efficient and cost effective grid development and asset management. The Group aims to increase efficiency by 15 per cent by the end of 2018, relative to comparable 2013 costs. Results so far show that Statnett is expected to reach this goal in 2018.

The Statnett Group has generally experienced a positive development in 2016. The Board of Directors would like to thank all employees for their great efforts and loyalty throughout the year, and look forward to continuing our work together to develop Statnett.

### Going concern

In accordance with Section 3-3a of the Norwegian Accounting Act, the Board of Directors confirms that the annual financial statements have been prepared on the assumption that the company is a going concern.

### Profit allocation

Statnett posted a profit after tax of NOK 668 million. Statnett's Board of Directors proposes a dividend of NOK 350 million, corresponding to 25 per cent of the dividend basis. The basis for the dividend is defined as the Group's net profit after tax, adjusted for changes in the balance for higher/lower revenue for the year after

tax. The proposed dividend is in accordance with the enterprise's adopted dividend policy, and is deemed to be prudent based on Statnett's equity and liquidity.

On the basis of the above, the Board therefore recommends that the annual profit from Statnett is allocated as follows:

(Amounts in NOK million)	
Dividend	350
To other equity	318
Total allocated	668

### Declaration from the Board of Directors and President and CEO

We confirm to the best of our knowledge that the annual accounts for 2016 have been prepared in accordance with IFRS, as well as additional information requirements in accordance with the Norwegian Accounting Act, and that the information presented in the accounts gives a true and fair view of the enterprise's and Group's assets, liabilities, financial position and result viewed in their entirety, and that the Board of Directors' report gives a true and fair view of the development, performance and financial position of the enterprise and Group, and includes a description of the key risks and uncertainties the Group is faced with.

Oslo, 30 March 2017

The Board of Directors, Statnett SF

Per Hjorth  
Chairman

Synne Larsen Homble  
Deputy chair

Maria Sandsmark  
Board member

Egil Gjesteland  
Board member

Kirsten Indgjerd Værdal  
Board member

Karianne Burhol  
Board member

Steinar Jøråndstad  
Board member

Einar Anders Strømsvåg  
Board member

Nils Ole Kristensen  
Board member

Auke Lont  
President and CEO



Statnett is gaining valuable experience through new types of cooperation which are established and formalised at the Nordic and European levels

# The Board of Directors

## **Per Hjorth**

### **Chairman**

#### **Elected in 2008, Chairman from 2015**

Per Hjorth is the Board Chairman of Newsec Norway, a consultancy and brokerage firm for commercial properties. He is also Chairman of the Executive Committee in the Nordic Newsec Group. Per Hjorth serves on a number of boards. He has held a number of senior executive posts within industry, finance and the energy sector. He was President and CEO of Nord Pool ASA until 2000. Per Hjorth holds a Master of Business and Economics from BI Norwegian Business School.

## **Synne Hombles**

### **Deputy chair**

#### **Elected in 2013, deputy chair from 2015**

Synne Hombles is chief officer for strategy and corporate functions in the NSB Group and responsible for strategy, legal affairs, HR and communication. She has previously held similar management positions in Cermaq ASA/Cermaq Group A.S. She was an attorney in the law firm Wikborg Rein from 1998-2006. Synne Hombles holds a cand. jur. law degree from the University of Oslo. She is a member of Norway's OECD national contact point for responsible business, appointed by the Ministry of Foreign Affairs.

## **Kirsten Indgjerd Værdal**

### **Board member**

#### **Elected in 2009**

Kirsten Indgjerd Værdal has been Director of Agriculture with the County Governor of Nord-Trøndelag since 2007. She has held several senior executive posts in the food and agriculture industry. Kirsten Indgjerd Værdal has served on several boards in the private and public sectors. She is an agronomist from Mære Agricultural College and also holds degrees in finance and corporate management from Nord-Trøndelag University College.

## **Egil Gjesteland**

### **Board member**

#### **Elected in 2012**

Egil Gjesteland is the owner of Gjesteland Consulting AS, operating in the oil and gas industry. He has worked for Statoil for more than

30 years and has held several positions, including IT manager and project manager for a number of oil and gas projects run by Statoil in Norway and abroad. Egil Gjesteland has been a lecturer at the BI MBA programme and at UC Berkeley. Egil Gjesteland is an engineer with a Master of Science from the Norwegian Institute of Technology (NTH).

## **Einar Anders Strømsvåg**

### **Board member**

#### **Elected in 2015**

Einar Anders Strømsvåg is the director of Statoil's group audit division. He has been with Statoil ASA since 1997, and has held various managerial positions. Einar Anders Strømsvåg has served on several boards, including the Executive Board of the Confederation of Norwegian Enterprise. He holds a Master of Business and Economics from the Norwegian School of Economics and is also a chemical engineer.

## **Maria Sandsmark**

### **Board member**

#### **Elected in 2013**

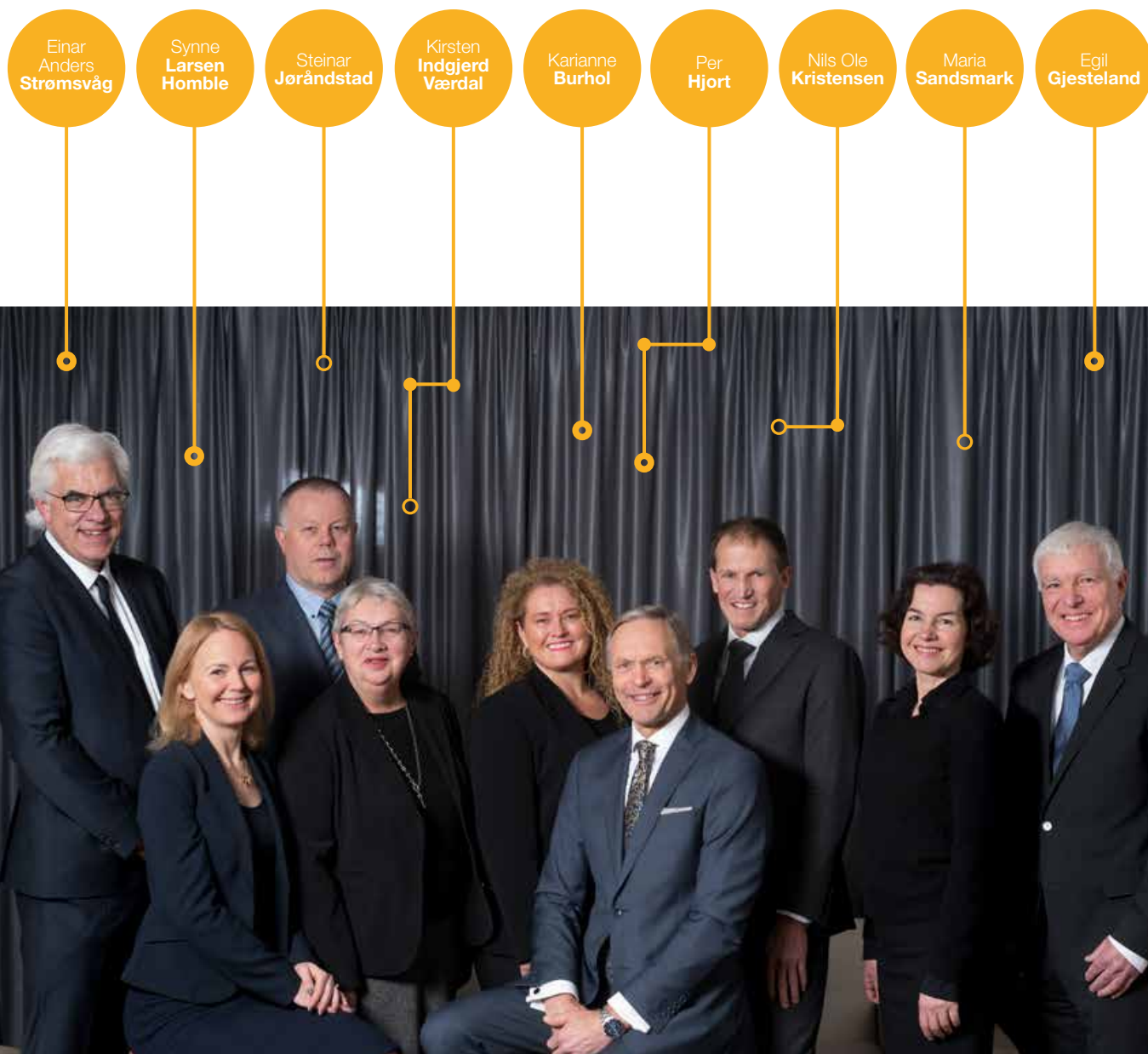
Maria Sandsmark is a visual artist and runs the art gallery Galleri Gnist AS. Maria Sandsmark has worked as a researcher on socio-economic analyses and R&D projects related to e.g. deregulated power markets. Key tasks also included quality assurance of major state investment projects through the Ministry of Finance's QA regime in the research company Møreforsking Molde. Maria Sandsmark holds a doctorate in economics from the University of Bergen.

## **Steinar Jøråndstad**

### **Board member, employee representative**

#### **Elected in 2004**

Steinar Jøråndstad is employed as team coordinator in Statnett's division for System Operations, Asset Management and Markets, and is also head of the Norwegian Electrician and IT Workers' Union (EL&IT) as well as a member of the Working Environment Committee. Steinar Jøråndstad, who began his career as an apprentice in 1981, has also served as main safety delegate in Statnett.



### **Karianne Burhol**

**Board member, employee representative**

**Elected in 2016**

Karianne Burhol has been an employee of Statnett since 2005. She is currently responsible for construction managers and power line project coordinators throughout the country. Since starting work for the company, she has also been project manager of major development projects, and been involved in HSE and quality system work. Karianne Burhol is a trained electrical power engineer from Oslo College of Engineering and has also studied administrative subjects at BI.

### **Nils Ole Kristensen**

**Board member, employee representative**

**Elected in 2016**

Nils Ole Kristensen started in Statnett in 2000. He has held various positions with the company including within tariffing, international consultancy services and engineering of substations. Prior to this, he worked for a period for the Norwegian Water Resources and Energy Directorate (NVE). He has previously headed Tekna's government affairs department. Nils Ole Kristensen is a chartered engineer with a degree in electrical power from Norwegian University of Science and Technology Trondheim.

# Statement of comprehensive income

Parent company				Group	
31.12.2015	31.12.2016	(Amounts in NOK million)	Note	31.12.2016	31.12.2015
<b>Operating revenue</b>					
5 717	6 412	Operating revenue regulated operations	4	6 446	5 747
321	338	Other operating revenue	4	232	159
<b>6 038</b>	<b>6 750</b>	<b>Total operating revenues</b>		<b>6 678</b>	<b>5 906</b>
<b>Operating costs</b>					
451	479	System services	5	479	451
466	642	Transmission losses	5	642	466
602	921	Salaries and personnel costs	6, 7, 20	887	591
1 488	2 113	Depreciation, amortisation and impairment	8	2 144	1 626
1 223	1 442	Other operating costs	24	1 374	1 058
<b>4 230</b>	<b>5 597</b>	<b>Total operating costs</b>		<b>5 526</b>	<b>4 192</b>
<b>1 808</b>	<b>1 153</b>	<b>Operating profit</b>		<b>1 152</b>	<b>1 714</b>
530	330	Financial income	10	292	509
811	667	Financial costs	10	661	813
<b>-281</b>	<b>-337</b>	<b>Net financial items</b>		<b>-369</b>	<b>-304</b>
<b>1 527</b>	<b>816</b>	<b>Profit before tax</b>		<b>783</b>	<b>1 410</b>
325	148	Tax	16	138	307
<b>1 202</b>	<b>668</b>	<b>Profit for the year</b>		<b>645</b>	<b>1 103</b>
<b>Other comprehensive income</b>					
1	-	Changes in fair value, held-for-sale investments	25	-	1
20	-22	Changes in fair value for cash flow hedges	12, 25	-22	20
-10	3	Tax effect	16, 25	3	-10
<b>11</b>	<b>-19</b>	<b>Other comprehensive income to be reclassified to profit or loss in subsequent periods</b>		<b>-19</b>	<b>11</b>
253	94	Changes in estimate deviations of pension liabilities	7, 25	94	253
-70	-24	Tax effect	7, 16, 25	-24	-70
<b>183</b>	<b>70</b>	<b>Other comprehensive income not to be reclassified to profit or loss in subsequent periods</b>		<b>70</b>	<b>183</b>
<b>194</b>	<b>51</b>	<b>Total other comprehensive income</b>		<b>51</b>	<b>194</b>
<b>1 396</b>	<b>719</b>	<b>Total comprehensive income</b>		<b>696</b>	<b>1 297</b>



# Balance sheet

Parent company				Group	
31.12.2015	31.12.2016	(Amounts in NOK million)	Note	31.12.2016	31.12.2015
<b>ASSETS</b>					
<b>Fixed assets</b>					
283	367	Intangible fixed assets	8	421	336
29 834	33 477	Tangible fixed assets	8	33 861	30 215
5 738	6 444	Plants under construction	9	8 473	6 553
879	1 221	Investment in subsidiaries	17	-	-
55	54	Investment in associates	17	90	90
-	85	Pension assets	7	85	-
5 397	3 628	Financial fixed assets	11, 12, 14, 15	3 494	5 213
<b>42 186</b>	<b>45 276</b>	<b>Total fixed assets</b>		<b>46 424</b>	<b>42 407</b>
<b>Current assets</b>					
1 337	2 728	Trade accounts and other short-term receivables	11, 12, 14, 15	1 288	764
306	315	Market-based securities	11, 12, 14, 15	731	680
1 441	1 798	Liquid assets	11	2 300	1 696
<b>3 084</b>	<b>4 841</b>	<b>Total current assets</b>		<b>4 319</b>	<b>3 140</b>
<b>45 270</b>	<b>50 117</b>	<b>Total assets</b>		<b>50 743</b>	<b>45 547</b>
<b>EQUITY AND LIABILITIES</b>					
<b>Equity</b>					
5 950	5 950	Contributed capital		5 950	5 950
7 315	7 677	Other equity accrued		7 917	7 614
-	-	Non-controlling interest		-	41
<b>13 265</b>	<b>13 627</b>	<b>Total equity</b>		<b>13 867</b>	<b>13 605</b>
<b>Long-term liabilities</b>					
968	1 145	Deferred tax	16	1 205	1 055
247	205	Pension liabilities	7	207	249
665	521	Other liabilities	21	521	665
24 266	25 957	Long-term interest-bearing debt	11, 12, 13, 15	25 957	24 266
<b>26 146</b>	<b>27 828</b>	<b>Total long-term liabilities</b>		<b>27 890</b>	<b>26 235</b>
<b>Current liabilities</b>					
4 235	6 874	Short-term interest-bearing debt	11, 12, 13, 15	6 676	4 023
1 624	1 788	Trade accounts payable and other short-term debt	11, 12, 13, 15	2 300	1 673
-	-	Tax payable	16	10	11
<b>5 859</b>	<b>8 662</b>	<b>Total current liabilities</b>		<b>8 986</b>	<b>5 707</b>
<b>45 270</b>	<b>50 117</b>	<b>Total equity and liabilities</b>		<b>50 743</b>	<b>45 547</b>

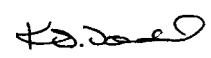
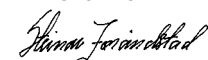
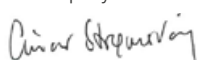
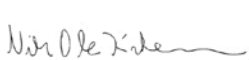
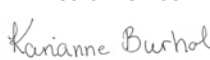
Oslo, 30 March 2017

The Board of Directors, Statnett SF


Per Hjorth  
Chairman

Synne Larsen Homble  
Deputy chair

Maria Sandsmark  
Board member

Egil Gjesteland  
Board member

Kirsten Indgjerd Værdal  
Board member

Steinar Jøråndstad  
Board member

Einar Anders Strømsvåg  
Board member

Nils Ole Kristensen  
Board member

Karianne Burhol  
Board member

Auke Lont  
President and CEO

# Statement of changes in equity

Parent company				Group						
Con-tributed capital	Other items	Other equity accrued	Total equity		Total equity	Non-con-trolling interest	Total equity allocated to owner of Statnett SF	Other equity accrued	Other items	Con-tributed capital
<b>5 950</b>	<b>-170</b>	<b>6 410</b>	<b>12 190</b>	<b>01.01.2015</b>	<b>12 629</b>	<b>78</b>	<b>12 551</b>	<b>6 771</b>	<b>-170</b>	<b>5 950</b>
-	-	1 202	1 202	Profit/loss for the year	1 103	-37	1 140	1 140	-	-
-	11	183	194	Other comprehensive income, note 25	194	-	194	183	11	-
-	-	-321	-321	Dividends declared	-321	-	-321	-321	-	-
<b>5 950</b>	<b>-159</b>	<b>7 474</b>	<b>13 265</b>	<b>31.12.2015</b>	<b>13 605</b>	<b>41</b>	<b>13 564</b>	<b>7 773</b>	<b>-159</b>	<b>5 950</b>
<b>5 950</b>	<b>-159</b>	<b>7 474</b>	<b>13 265</b>	<b>01.01.2016</b>	<b>13 605</b>	<b>41</b>	<b>13 564</b>	<b>7 773</b>	<b>-159</b>	<b>5 950</b>
-	-	668	668	Profit/loss for the year	645	1	644	644	-	-
-	-19	70	51	Other comprehensive income, note 25	51	-	51	70	-19	-
-	-	-357	-357	Dividends declared	-357	-	-357	-357	-	-
-	-	-	-	Purchase subsidiary	-77	-42	-35	-35	-	-
<b>5 950</b>	<b>-178</b>	<b>7 855</b>	<b>13 627</b>	<b>31.12.2016</b>	<b>13 867</b>	<b>-</b>	<b>13 867</b>	<b>8 095</b>	<b>-178</b>	<b>5 950</b>

# Cash flow statement

Parent company				Group	
2015	2016	(Amounts in NOK million)	Note	2016	2015
<b>Cash flow from operating activities</b>					
1 527	816	Profit before tax		783	1 410
-18	33	Loss/gain(-) on sale of fixed assets	8	33	-18
1 488	2 113	Depreciation, amortisation and impairment	8	2 144	1 626
-24	-	Paid taxes	16	-8	-37
338	336	Interest recognised in the income statement	10	322	327
30	19	Interest received	10	28	40
-366	-340	Interest paid, excl. construction interest	10	-340	-366
-141	87	Changes in trade accounts receivable/payable	11, 14	345	-121
-611	-120	Changes in other accruals	11	-72	-601
<b>2 223</b>	<b>2 944</b>	<b>Net cash flow from operating activities</b>		<b>3 235</b>	<b>2 260</b>
<b>Cash flow from investing activities</b>					
39	14	Proceeds from sale of tangible fixed assets	8	14	46
-5 112	-6 327	Purchase of tangible fixed assets, other intangible fixed assets and plants under construction	8, 9	-7 547	-5 676
-139	-142	Construction interest paid	9	-171	-144
-	-78	Purchase of subsidiary, net of cash acquired	17	-78	-
-160	-270	Capital contribution to subsidiary	17	-	-
-55	-6	Changes in long term loan receivables	11, 14	-14	-10
-443	-964	Changes in short term loan receivables	11, 14	-	-
38	29	Dividend received	10, 17	8	7
<b>-5 832</b>	<b>-7 744</b>	<b>Net cash flow from investing activities</b>		<b>-7 788</b>	<b>-5 777</b>
<b>Cash flow from financing activities</b>					
1 503	9 159	Proceeds from new interest-bearing debt	11, 13	9 159	1 503
-1 142	-2 692	Repayment of interest-bearing debt	11, 13	-2 692	-1 142
1 469	-941	Changes in collateral under CSA (Credit Support Annex) agreements	11, 13	-941	1 469
909	137	Proceeds from sale of market-based securities	11, 14	350	1 111
-226	-149	Purchase of market-based securities	11, 14	-362	-426
-321	-357	Dividend paid and group contributions		-357	-321
<b>2 192</b>	<b>5 157</b>	<b>Net cash-flow from financing activities</b>		<b>5 157</b>	<b>2 194</b>
<b>-1 417</b>	<b>357</b>	<b>Net cash flow for the period</b>		<b>604</b>	<b>-1 323</b>
2 858	1 441	Cash and cash equivalents at the start of the period	11	1 696	3 019
1 441	1 798	Cash and cash equivalents at the close of the period	11	2 300	1 696

Restricted bank deposit amounting to NOK 118 million for the parent company and NOK 120 million for the group is included in cash and cash equivalents as at 31 December, 2016.

Unused credit facilities of NOK 6 500 million are not included in cash and cash equivalents.



# Notes

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## Note Accounting principles

# 1

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.

### Basis for preparation of the financial statements

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.

All subsequent references to "IFRS" imply references to IFRS as adopted by the EU and the Norwegian Accounting Act.

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

- All derivatives, and all financial assets and liabilities classified as "fair value carried through profit or loss" or "available for sale", are carried at fair value.
- 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

#### 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 per cent of the voting shares. If Statnett owns less than 100 per cent of the voting shares, or, through agreement, has less than 100 per cent of the votes, further assessments will be made to determine whether the Group actually has controlling influence.

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.

The acquisition cost of shares in subsidiaries is offset against equity at the time of acquisition. Any excess value beyond the equity of the subsidiaries is allocated to the asset and liability items to which the excess value can be attributed. The portion of the acquisition cost in a business combination that cannot be attributed to specific assets, represents goodwill.

Statnett SF's Pension Fund is not part of the Statnett Group. Contributed equity in the pension fund is measured at fair value and classified as financial fixed assets.

#### Joint arrangements

A joint arrangement is an arrangement where two or more parties have joint control, and where the parties contractually agree to share control of the arrangements. Joint control is the agreed sharing of control of a joint arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

#### Joint operation

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.

The Group has joint operations concerning the construction and operations of foreign subsea cables.

#### 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, alone or together with others. Normally these will be companies where the Group owns between 20 and 50 per cent of the voting shares.

Associates are evaluated according to the equity method. This means that the Group's share of the result for the year after tax and amortisation of any excess value is reported in the income statement. The accounts of associates are restated in accordance with IFRS. In the consolidated balance sheet, ownership interests in associates are carried as financial fixed assets at historic cost plus accumulated profit less dividends and impairment if applicable.

On each reporting date, the Group considers whether there are any objective indications of impairment in value. If there are any such indications, the investment will be tested for impairment. Write-downs are made if the recoverable amount (highest of the fair value less sales costs and value in use) is lower than the recognised value.

## Note Accounting principles

# 1

### **Purchase/sale of subsidiaries and associates**

In the case of acquisition or sale of subsidiaries and associates, they are included in the consolidated financial statements for the part of the year they have been a part of or associated with the Group.

### **Investments in other companies**

Investments in companies in which the Group owns less than 20 per cent of the voting capital are classified as "available for sale" and are carried at fair value in the balance sheet if they can be reliably measured. Value changes are recognised under other comprehensive income in the statement of comprehensive income.

### **Investments in subsidiaries and associates in Statnett SF (parent company accounts)**

Investments in subsidiaries and associates are accounted for in accordance with the cost method in the parent company accounts. The group contribution paid (net after tax) is added to the cost price of investments in subsidiaries. Group contributions and dividends received are recorded in the income statement as financial income as long as the dividends and Group contributions 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.

### **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.

The acquired enterprise's identifiable assets, liabilities and contingent liabilities which satisfy the conditions for accounting according to IFRS 3, are recognised at fair value on the acquisition date. Goodwill arising as a result of 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.

### **Segment reporting**

The company 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.

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

### **Principles for revenue recognition**

Operating revenues are measured at fair value and recognised when they are accrued on a net basis after government taxes. Operating revenues are reported on a gross basis and consists of delivered energy multiplied with a tariff-model set through directives from the Norwegian Water Resources and Energy Directorate (NVE). In cases where Statnett acts primarily as a settlement function in connection with common grids and power trading, this is reported net.

Interest income is recognised as it is accrued. Dividends from investments are recorded as income when the dividends are declared.

Customer project revenue is recognised on a current basis based on the measurement of the estimated fair value. This means that revenue is recognised as the work is performed based on the degree of completion. The degree of completion is determined on the basis of the accrued costs of the executed work and estimated total project expenditure. Revenue is included in other operating revenues. Invoiced and accrued project revenues are included in trade accounts receivable.

Where projects are expected to make a loss, the entire expected loss is recognised as an expense.

## Note Accounting principles

# 1

### Taxes

Tax costs in the income statement encompass both the tax payable for the period and changes in the deferred tax liabilities/assets. Taxes payable are calculated on the basis of the taxable income for the year. Net deferred tax assets/liabilities are calculated on the basis of temporary differences between the accounting and tax values, and the tax loss carried forward.

Tax-increasing or tax-reducing temporary differences that are reversed or may be reversed are offset. Deferred tax assets are recorded when it is probable that the company will have a sufficient taxable profit to benefit from the tax asset. Deferred tax liabilities/assets that can be recorded in the balance sheet are carried at their nominal value on a net basis.

Property taxes are recorded in the income statement when Statnett reviews the invoice for the following period. Property taxes are other operating expenses.

### 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.

### Plants under construction

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 start off with a feasibility and alternative study. The project is recognised in the balance sheet 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 likely that the project will be implemented.

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

### Interest during the construction period

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. Interest is recorded in the income statement through depreciation based on the associated asset's anticipated economic life.

### Property, plant and equipment

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

Cost estimates for removal of tangible fixed 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 book value of the fixed asset. If a potential reduction is higher than the book value of the fixed asset, the excess amount is recorded in the income statement. If there is an increase in the book value, the Group will assess whether this is a depreciation indicator for the portfolio of fixed assets.

Gains or losses on the divestment or scrapping of property, plant and equipment are calculated as the difference between the sales proceeds and the fixed 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.

### Compensation

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



## Note Accounting principles

# 1

### Maintenance/upgrades

Maintenance expenses are recognised in the income statement when they are incurred. 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 to be periodic for the entire grid as the grid as a whole is regarded as a single cash-generating unit.

If the fixed 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. For intangible assets included in a business combination, acquisition cost is measured at fair value on the transaction date. 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.

### Goodwill

Goodwill is not amortised, but is tested for impairment annually. Goodwill does not generate cash flows independently of other assets or groups of assets, and is allocated to the cash-generating units expected to benefit from the synergy effects of the business combination that generated the goodwill. Cash-generating units allocated goodwill are evaluated for write-down annually, or more often if there are any indications of impairment in value. If the recoverable amount (the higher of the net sales and utility value) for the cash-generating unit is lower than the carrying value, the write-downs will first reduce the carrying value of any goodwill and then the carrying value of the unit's other assets, proportionally based on the carrying value of the individual assets in the unit. The carrying value of individual assets is not reduced below the recoverable amount or zero. Write-downs of goodwill cannot be reversed in a subsequent period if the fair value of the cash-generating unit increases. Impairment of value is included in the income statement as a part of write-downs.

### Write-down of property, plant and equipment and intangible assets other than goodwill

On each reporting date, the Group considers whether there are any indications of impairment in value for property, plant and equipment 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. Property, plant and equipment in the parent company and Statnett Rogaland AS is considered as one cash-generating unit and is assessed combined in each company since they have one combined revenue cap. For the other companies in the Group, each part of property, plant and equipment is assessed individually.

The recoverable amount is the higher of the net sales and utility value. To assess the utility value, estimated future cash flows are discounted to present value using a pre-tax discount rate that reflects the current market assessments of the time value of money and risks specific to the asset.

If the recoverable amount for a fixed asset (or cash-generating unit) is estimated to be lower than the carrying value, the carrying value of the fixed asset (or cash-generating unit) will be reduced to the recoverable amount. If an impairment in value is subsequently reversed, the carrying value of the fixed asset (cash-generating unit) will be increased to the revised estimate of the recoverable amount, but limited to the value that would be the carrying value if the fixed asset (or cash-generating unit) had not been written down in a prior year.

### Leasing

#### 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.

## Note Accounting principles

# 1

### 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.

#### 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.

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.

Capitalised development expenses are depreciated in a straight line over the estimated useful life of the asset.

#### Accounts receivable

Trade accounts are recorded in the accounts at nominal value less any losses from impairment in value.

#### Contingent assets and liabilities

Contingent liabilities are not recorded in the annual financial statements. Significant contingent liabilities are disclosed unless the probability of the liability is low.

Contingent assets will not be recorded in the annual financial statements, but will be disclosed if there is a certain degree of probability that it will benefit the Group.

Higher/lower revenues are contingent liabilities/assets in accordance with IFRS and are not recorded in the balance sheet.

#### Dividend (from the parent company)

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.

#### Pensions and pension liabilities

The Group's liability relating to pension schemes, defined as defined-benefit pension schemes, is recognised at the present value of the future retirement benefits accrued at the end of the reporting period. Pension assets are evaluated at fair value. The accumulated effect of estimate changes, changes in financial and actuarial assumptions and actuarial gains and losses, are recognised under other comprehensive income in the statement of comprehensive income.

Pension costs for the period are presented as salaries and personnel costs. The Group has chosen to present the net interest expenses element as salaries and personnel costs, as this provides the best information about the Group's pension costs.

Contributions to defined contribution plans are recognised as costs as they occur. Multi-employer plans are defined-benefit plan where the information is insufficient in order to account for the plan as a defined benefit plan. Such plans are recognised similar to a defined contribution plan.

#### Loans

Interest-bearing loans are recorded in the income statement as the proceeds that are received, net of any transaction costs. Loans are subsequently accounted for at amortised cost using the effective interest rate method, where the difference between net proceeds and redemption value is recognised in the income statement over the term of the loan.

## Note Accounting principles

# 1

### Financial instruments

The initial measurement of financial instruments is at fair value on the settlement date, normally at the transaction price.

- Financial assets and liabilities held for the purpose of profiting from short-term price fluctuations (held for trading purposes) or accounted for according to the fair value option are classified at fair value through profit or loss.
- All other financial assets with the exception of loans and receivables issued by the company are classified as available for sale.
- All other financial liabilities are classified as other liabilities and accounted for at amortised cost.

Gains or losses attributed to changes in fair value of financial instruments classified as available for sale are recognised as other comprehensive income until the disposal of the investment. The cumulative gain or loss on the financial instrument previously recognised in other comprehensive income will be reversed, and the gain or loss will be recognised in the income statement.

Changes in the fair value of financial instruments classified at fair value through profit or loss (held for trading purposes or fair value option) are recognised in the income statement and presented as financial income/expenses.

Financial instruments are included in the balance sheet when the Group becomes a party to the instrument's contractual terms. Financial instruments are eliminated from the balance sheet when the contractual rights or obligations have been fulfilled, cancelled, or transferred, or they have expired. Financial instruments are classified as long-term when they are expected to be realised more than 12 months after the balance sheet date. Other financial instruments are classified as short-term.

### Set-off

Financial assets are offset against financial liabilities if there is a legally enforceable right to set off the recognised amounts and the enterprise intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously. Statnett currently has no financial instruments that are set off and presented net in the balance sheet.

### Derivatives

Derivatives are recognised initially at fair value on the date when the contract is entered into and then measured at fair value on a current basis. Derivatives are accounted for as assets or liabilities when the company has no right or intention to settle the contracts net. Gains and losses resulting from changes in the fair value of derivatives that do not meet the conditions for hedge accounting are recorded in the income statement.

Embedded currency derivatives in contracts are separated and measured separately.

Statnett has entered into CSA agreements (Credit Support Annex) with major Counterparts. This involves collateral of existing derivatives at weekly settlement of unrealized surplus / deficit. Unrealized gains means that Statnett receives settlement that increases Statnett's bank-deposits and short-term debt. Unrealized losses means that Statnett pays settlement to counterparties that decreases bank- deposits and short-term receivables.

### Hedging

When entering into a hedging contract, the Group will formally identify and document the hedging contract that the Group will use hedge accounting for, as well as the risk that is hedged and the strategy for the hedge. Documentation includes identification of the hedging instrument, or the item or transaction that is hedged, the type of risk that is hedged, and how the Group will assess the effectiveness of the hedging instrument to counteract the exposure to changes in the hedged item's fair value or cash flows that can be attributed to the hedged risk. Such hedges are expected to be highly effective in counteracting changes in fair value or cash flows to the identified object, i.e. the hedging efficiency must be expected to be within the 80-125 per cent range. Moreover, it must be possible to reliably measure the efficiency of the hedges, and to assess them on a current basis to determine whether they actually have been highly effective throughout the entire accounting period they are intended to cover.

Hedges that fulfil the strict conditions for hedge accounting are accounted for as follows:

#### Fair value hedging

Changes in the fair value of the derivative classified as a hedging instrument are recorded in the income statement continuously. Changes in the fair value of the hedging instrument are recorded correspondingly.

For fair value hedging of items that are accounted for at amortised cost, the change in value is amortised in the income statement over the remaining period until maturity.

The Group discontinues fair value hedging if (1) the hedging instrument expires, is sold, terminated or exercised, (2) the hedging no longer fulfils the conditions for hedge accounting or (3) the Group cancels the hedging due to other reasons.

The Group uses fair value hedging primarily to hedge the interest rate risk for fixed interest rate loans and the currency risk for interest-bearing liabilities. Fair value hedging is also performed for specific acquisitions in foreign currencies for investment projects. Unrealised hedging gains/losses (currency futures) reduce/increase the cost price of the investments upon realisation.

## Note Accounting principles

# 1

### Cash flow hedging

The criterion for cash flow hedging is that the pending transaction must be likely, and that continuous evaluation shows that the hedging has been efficient. The effective part of changes in the fair value of the hedging instrument is recognised as other comprehensive income, while the ineffective part is recognised as financial income or cost.

Amounts that are initially recognised as other comprehensive income are reclassified and recognised in the income statement as financial income or cost when the hedged transaction is conducted.

If the expected future transaction is no longer expected to take place, amounts recognised earlier as other comprehensive income will be recognised in the income statement as financial income or cost. If the hedging instrument expires, or is sold, terminated or used, or Statnett chooses to discontinue the hedging relationship, even if the hedged transaction is expected to occur, accumulated gains and losses remain as other comprehensive income and are recognised in the income statement when the transaction is executed.

The Group uses cash flow hedging primarily to hedge the interest rate risk in respect of loans with floating interest rates.

### 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.

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.

Long-term interest-bearing debt in foreign currency is related to interest rate and currency swaps and treated as borrowings in NOK.

### Provisions

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.

### 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.

### 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.

## Note New and amended accounting standards

# 2

### New relevant accounting standards

The following new and amended standards and interpretations have been implemented for the first time in 2016:

- Investment in interests in a joint operation in which the activity of the joint operation constitutes a business - amendments to IFRS 11
- Equity method in separate financial statements - amendments to IAS 27
- Annual Improvements 2010-2012

The amendments have not implied changes to the accounting of present or previous periods and are not expected to imply changes to the accounting of future transactions.

### Changes to accounting standards and interpretations to be adopted in the future

The standards and interpretations that were adopted before submission of the consolidated accounts, but where the effective date is in the future, are stated below. The Group intends to implement the relevant amendments at the effective date. Regarding IFRS 16, the Group intends to implement the relevant amendments at the effective date, provided that the EU approves the amendments before the Group accounts are presented.

#### IFRS 9 Financial Instruments

IFRS 9 results in amendments to classification and measurement, hedge accounting and impairment. IFRS 9 will replace IAS 39 Financial Instrument: Recognition and Measurement. The standard shall be implemented retrospectively, with the exception of hedge accounting, but it is not a requirement to prepare comparative figures. The changes are effective for the year 2018 and thereafter.

The rules for hedge accounting shall mainly be implemented prospectively, with certain few exceptions. The Group has no plans regarding early implementation of the standard.

The Group is currently evaluating the potential accounting effects of IFRS 9. The preliminary assessment is that the standard may result in changes to classification and measurement of certain of the Group's financial assets. The accounting effects of these changes are expected to be limited as they relate to a minor part of the Group's financial instruments. In addition, the Group has identified a need for changes in reporting procedures to fulfil new and more extensive footnote requirements. Necessary changes will be implemented during 2017. The group will also consider if the standard gives opportunities for simplification of internal procedures related to hedge accounting.

#### IFRS 15 Revenue from Contracts with Customers

The IASB and FASB has published a new converged standard for revenue recognition; IFRS 15 Revenue from Contracts with Customers. The standard replaces all existing standards and interpretations relating to revenue recognition. The core principle of IFRS 15 is for companies to recognize revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration (that is, payment) to which the company expects to be entitled in exchange for those goods or services. With some few exceptions, the standard is applicable for all remunerative contracts and includes a model for recognition and measurement of sale of individual non-financial assets (e.g. sale of property, plant and equipment). IFRS 15 shall be implemented using either the fully retrospective or modified method. The standard is effective from 1 January 2018.

The Group is currently evaluating the potential accounting effects of IFRS 15. The preliminary assessment is that IFRS 15 can affect the Group's recognition of revenue from other services and customer projects that are included in the "Other operating revenue", but with small amounts. The Group does not expect that revenue from regulated operations will be affected.

#### IFRS 16 Leases

The standard replaces the existing IFRS standard for leases, IAS 17 Leases. IFRS 16 states principles for recognition, measurement, presentation and disclosures for leases for both parties in an agreement, i.e. the lessee and the lessor. The new standard states that the lessee is to recognize both assets and liabilities for most leases, a significant change from today's principles. For the lessor the accounting principles are unchanged compared to the principles under IAS 17 Leases. The standard is effective from 1 January 2019.

The Group is currently evaluating the potential accounting effects of IFRS 16. Lease rental payable for 2016 from operational lease agreements totaled NOK 73 million. The lease periods vary from a few months to 15 years. The effect on the balance sheet from recognizing assets and liabilities following these agreements is considered limited.

## Note Accounting estimates and assumptions

# 3

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.

Accounting estimates are used to determine some amounts that have an impact on the group's financial statements. This requires that the 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 the management's subjective and complex assessment, often related to factors encumbered by uncertainty. Statnett assesses such estimates continuously on the basis of previous results and experiences, consultations with experts, trends, prognoses and other methods which the management deems appropriate in the individual case.

Significant items relating to Statnett's use of estimates:

*(Amounts in NOK million)*

<b>Item</b>	<b>Note</b>	<b>Estimate/assumptions</b>	<b>Group Carrying value</b>
Other intangible assets	8	Estimate of recoverable amount and remaining useful life	368
Property, plant and equipment	8	Estimate of recoverable amount and remaining useful life	33 861
Pension assets	7	Financial and demographic assumptions	85
Pension liabilities	7	Financial and demographic assumptions	207
Asset retirement obligations	21	Estimate of removal costs, removal dates and price increases in the period leading up to removal	512

## Note Operating Revenues

# 4

### Operating revenues regulated operations

Statnett's revenues mainly derive from operations where the revenues are regulated by the Norwegian Water Resources and Energy Directorate (NVE). Statnett's actual revenue from the regulated operations derive from tariffs in the transmission and distribution grid and congestion revenues.

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 operating revenues from regulated operations and Statnett's permitted revenue. This difference is called higher or lower revenue and is reported as part of underlying profit and loss, but not the reported IFRS-result. Higher revenue occurs when Statnett's has higher actual operating revenues than the revenue cap set by the NVE for a particular year. Lower revenue means that Statnett's actual operating revenues are lower than the permitted revenue.

Pursuant to NVE regulations, any higher revenues, including interest, must be returned to the customers in the form of lower future tariffs, whereas lower revenues, 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, consequently representing a contingent obligation (in the event of accumulated higher revenue) or a contingent receivable (in the event of accumulated lower revenue). Consequently, an annual change in these items will not be included in the reported income statement.

### Permitted revenue

#### General

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

#### Permitted revenue – monopoly-regulated operations

Statnett owns transmission facilities and is a transmission system operator. These are monopoly-regulated operations. This means that the NVE sets an annual limit – a revenue cap – for the grid owner's maximum revenues. The basis for Statnett's permitted revenue is the revenue cap. The revenue cap is based on expenditure, including capital expenditure, for a retrospective period of two years. System operation costs are also included. Statnett's revenue cap is regulated to ensure that the enterprise has incentives for efficient operation. In addition to the revenue cap, Statnett's permitted revenue consists of the following: Actual property tax, transit costs and a supplement for investments. The supplement for investments shall ensure that the year's investments are reflected in the permitted revenue for the year the investment is put into operation. Furthermore, Statnett's permitted revenue is adjusted for interruptions through KILE (quality-adjusted revenue cap for energy not supplied).

#### Tariff revenues

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 on the basis of a tariff model, 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 Operating Revenues

# 4

### Operating revenues regulated operations

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

(Amounts in NOK million)

#### Parent Company

Operating revenues	D Grid	T Grid	Total 2016	D Grid	T Grid	Total 2015
Tariff revenues fixed element generation	46	1 481	1 527	45	1 438	1 483
Tariff revenues fixed element consumption	139	3 082	3 221	139	2 756	2 895
Other rental income	-	114	114	-	95	95
Tariff revenues energy element	-10	676	666	-5	461	456
Congestion revenues	-	1 170	1 170	-	1 067	1 067
Income from other owners in the regional and main grids	-51	-235	-286	-55	-194	-249
<b>Total operating revenues regulated activities</b>	<b>124</b>	<b>6 288</b>	<b>6 412</b>	<b>124</b>	<b>5 623</b>	<b>5 747</b>

#### Permitted revenue

Revenue cap without grid losses	119	5 001	5 120	81	4 457	4 538
Revenue cap, grid losses	11	594	605	9	449	458
Supplement to revenue cap	-14	1 700	1 686	9	1 201	1 210
<b>Total permitted revenue</b>	<b>116</b>	<b>7 295</b>	<b>7 411</b>	<b>99</b>	<b>6 107</b>	<b>6 206</b>

In 2016, Statnett had a lower revenue of NOK 999 million (NOK 489 million in 2015) that was not recorded to profit and loss. The difference between The Operating revenues regulated activities and the Permitted revenue, was reported as Underlying profit and loss.

This year's changed balance for higher/lower revenue (-/+)	D Grid	T Grid	Total 2016	D Grid	T Grid	Total 2015
This year's higher/lower revenue (-/+), not recorded to profit and loss	-8	1 007	999	-25	514	489
This year's provision for interest higher/lower revenue (-/+)	-	-12	-12	-	-25	-25
Higher/lower revenue decision (-/+)	-	16	16	-	-20	-20
<b>This year's changed balance for higher/lower revenue (-/+)</b>	<b>-8</b>	<b>1 011</b>		<b>-25</b>	<b>469</b>	<b>444</b>
Balance higher/lower revenue (-/+), incl. interest as at 1 Jan.	21	-1 367	-1 346	46	-1 836	-1 790
Changed balance for higher/lower revenue (-/+), incl. Interest	-8	1 011	1 003	-25	469	444
<b>Balance higher/lower revenue (-/+), incl. interest as at 31 Dec.</b>	<b>13</b>	<b>-356</b>	<b>-343</b>	<b>21</b>	<b>-1 367</b>	<b>-1 346</b>



## Note Operating Revenues

# 4

(Amounts in NOK million)

### Group

Operating revenues	D Grid	T Grid	Total 2016	D Grid	T Grid	Total 2015
Tariff revenues fixed element generation	46	1 481	<b>1 527</b>	45	1 438	<b>1 483</b>
Tariff revenues fixed element consumption	139	3 082	<b>3 221</b>	139	2 756	<b>2 895</b>
Other rental income	-	114	<b>114</b>	-	95	<b>95</b>
Tariff revenues energy element	-10	676	<b>666</b>	-5	461	<b>456</b>
Congestion revenues	-	1 170	<b>1 170</b>	-	1 067	<b>1 067</b>
Income from other owners in the regional and main grids	-51	-201	<b>-252</b>	-55	-194	<b>-249</b>
<b>Total operating revenues regulated activities</b>	<b>124</b>	<b>6 322</b>	<b>6 446</b>	<b>124</b>	<b>5 623</b>	<b>5 747</b>

### Permitted revenue

#### Revenue cap without grid losses

Revenue cap without grid losses	119	5 033	<b>5 152</b>	81	4 487	<b>4 568</b>
Revenue cap, grid losses	11	594	<b>605</b>	9	449	<b>458</b>
Supplement to revenue cap	-14	1 702	<b>1 688</b>	9	1 201	<b>1 210</b>
<b>Total permitted revenue</b>	<b>116</b>	<b>7 329</b>	<b>7 445</b>	<b>99</b>	<b>6 137</b>	<b>6 236</b>

In 2016, Statnett had a lower revenue of NOK 999 million (NOK 489 million in 2015) that was not recorded to profit and loss. The difference between The Operating revenues regulated activities and the Permitted revenue, was reported as Underlying profit and loss.

This year's changed balance for higher/lower revenue (-/+)	D Grid	T Grid	Total 2016	D Grid	T Grid	Total 2015
This year's higher/lower revenue (-/+), not incl in the income statement	-8	1 007	<b>999</b>	-25	514	<b>489</b>
This year's provision for interest higher/lower revenue (-/+)	-	-12	<b>-12</b>	-	-25	<b>-25</b>
Higher/lower revenue decision (-/+)	-	16	<b>16</b>	-	-20	<b>-20</b>
<b>This year's changed balance for higher/lower revenue (-/+)</b>	<b>-8</b>	<b>1 011</b>	<b>1 003</b>	<b>-25</b>	<b>469</b>	<b>444</b>

Balance higher/lower revenue (-/+), incl. interest as at 1 Jan.	21	-1 367	<b>-1 346</b>	46	-1 836	<b>-1 790</b>
Changed balance for higher/lower revenue (-/+), incl. Interest	-8	1 011	<b>1 003</b>	-25	469	<b>444</b>
<b>Balance higher/lower revenue (-/+), incl. interest as at 31 Dec.</b>	<b>13</b>	<b>-356</b>	<b>-343</b>	<b>21</b>	<b>-1 367</b>	<b>-1 346</b>

### Impact of grid outages on profit

The issue regarding how outages in Nyhamna in the event of system protection activation in the period leading up to 2012 should be handled with respect to the KILE scheme and system operation costs, was concluded by OED on 26 September 2016. The decision entails that KILE for prior years is to be adjusted down with NOK 20 million. The adjustment results in total higher revenue being reduced with NOK 12 million.

## Note Operating Revenues

# 4

### Operating profit within and outside grid activities

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
1 767	1 065	Operating profit within grid activities	1 066	1 666
41	88	Operating profit outside grid activities	86	48
<b>1 808</b>	<b>1 153</b>	<b>Total operating profit</b>	<b>1 152</b>	<b>1 714</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 per cent for net working capital. The invested grid capital is given as the initial historical acquisition cost. The share of common fixed assets is included.

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
28 365	31 763		31 858	28 467

### Return on invested grid capital

Return is defined as the operating profit/loss viewed in relation to the regulatory asset base. The operating profit/loss is given as the annual permitted revenue from own grid less costs of own grid.

Parent company			Group	
2015	2016	(Return in percentage)	2016	2015
7%	6%		6%	7%

### Other operating revenue

Other operating revenues are revenues outside of the regulated operations and consist of mainly external consultancy commissions, enterprise for the owner of distribution grids and rental income.

### Balance settlement

Statnett SF holds a separate licence to settle the regulating power settlement system in Norway. This involves effectuating a financial settlement of the difference the balance responsible market players have between planned acquisitions and liabilities and the actual measured values. The balance responsible market players are financial counterparties in the settlements and must provide collateral in accordance with the Balance Agreement. The collateral requirement is calculated weekly based on trading volume and market prices. Collateral is posted as a guarantee on demand or as a cash deposit in a pledged bank account. The amount of collateral posted totalled NOK 975 million at year-end. The collateral posting for balance responsible market players on the same date was NOK 562 million. All balance responsible market players had posted satisfactory collateral under the Balance Agreement.

In 2016, income for the balance settlement responsibility amounted to NOK 85 million, of which NOK 40 million were fee revenues.

## Note System services and transmission losses

# 5

### System services

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
20	16	Net regulating and peak power	16	20
104	85	Primary reserves	85	104
29	7	Secondary reserves	7	29
46	76	Tertiary reserves	76	46
30	109	Transit costs	109	30
173	146	Special adjustments	146	173
49	40	Other system services	40	49
<b>451</b>	<b>479</b>	<b>Total system services</b>	<b>479</b>	<b>451</b>

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.

#### 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 System services and transmission losses

# 5

### Transmission losses

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. 3.9 percent of the value of the facilities are owned by other companies than Statnett SF.

Parent company			Group	
2015	2016		2016	2015
2 513	2 611	Volume (GWh)	2 611	2 513
185	246	Price (NOK/MWh)	246	185
<i>(Amounts in NOK million)</i>				
466	644	Transmission losses	644	466
-	-2	Transmission losses result other	-2	-
<b>466</b>	<b>642</b>	<b>Total transmission losses</b>	<b>642</b>	<b>586</b>

## Note Salaries and personnel costs

# 6

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
963	1 069	Salaries	1 099	980
194	183	Employer's national insurance contributions (NICs)	188	197
-51	186	Pension costs (Note 7)	190	-49
109	121	Other benefits	75	80
<b>1 215</b>	<b>1 559</b>	<b>Total salaries and personnel costs</b>	<b>1 552</b>	<b>1 208</b>
-613	-638	Of which own investment projects	-665	-617
<b>602</b>	<b>921</b>	<b>Net salaries and personnel costs</b>	<b>887</b>	<b>591</b>
1 194	<b>1 283</b>	Number of full-time equivalents	1 323	1 226

### Loans to employees

Employees had loans in the company totalling NOK two million as at 31 December 2016. 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 Pensions

# 7

The parent company and subsidiaries have pension schemes entitling the employees to future pension benefits in the form of defined benefit and defined contribution plans. The Group's pension plans meet the requirements in the Norwegian Mandatory Occupational Pension Act.

In June 2015 Statnett made a decision to change the Group's pension plan from a defined benefit plan to a defined contribution plan. The transitioning to the defined contribution plan took place from 1 January 2016. Paid-up policies were then issued for earned pension contribution.

The defined contribution plan have a contribution level based on the maximum level of contribution in accordance with the "Defined pension contribution Act (Lov om innskuddspensjon)". Employees that are 52 years or older when the transitioning took place, remains in the defined benefit plan. For employees between 37 and 51 years of age a compensation plan was established in addition to the defined contribution plan. This arrangement is an unfunded defined benefit plan with yearly increase in compensation until 67 years of age. Payment under the compensation plan will take place at 67 years of age or earlier if the employee resigns. The defined contribution plan is managed by an insurance company (Storebrand).

The defined pension benefits are based on the number of service years and final wage at retirement age. The full retirement is 70 per cent 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.

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.

The Group management has supplemental pension agreements. For more information on pension arrangements for each member of Group management, see Note 20 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 lifelong 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, organized through a general office and financed through premiums stipulated as a percentage of the salaries.

The premium level has increased yearly 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 are determined after adjustment for deferred recognition in other comprehensive income of the effect of changes in estimates and pension plans, as well as discrepancies between the actual and expected interest income on pension assets. 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.

Employees who leave the group before retirement age receive a paid-up policy. The paid-up policies have been managed by the life insurance company Storebrand Livsforsikring AS, that issued the paid-up policies until 31 December 2013. For the employees that left the company, after 1 January 2014, Statnett SF's Pensjonskasse manage the paid-up policies. 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 on the payment of direct pensions or the payment of premiums for fund-based schemes are taken into account. The National Insurance contribution is a component of the company's benefit and is recorded as part of the pension liabilities.

## Note Pensions

# 7

### Pension costs

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
200	96	Defined benefit plan	97	202
20	5	Interest cost -(income)	5	20
-284	-	Effect of plan changes	-	-284
-	74	Defined contribution plan	76	-
13	12	Defined multi-employer plan	13	13
<b>-51</b>	<b>187</b>	<b>Pension costs</b>	<b>191</b>	<b>-49</b>
44	24	Employer's contributions	24	44
<b>-7</b>	<b>211</b>	<b>Total pension costs, incl. employer's cont.</b>	<b>215</b>	<b>-5</b>
<b>-253</b>	<b>-94</b>	<b>Changes in estimate variances in comprehensive income</b>	<b>-94</b>	<b>-253</b>

### Net estimated pension liabilities

Parent company			Group	
31.12.15	31.12.16	(Amounts in NOK million)	31.12.16	31.12.15
1 910	1 918	Estimated pension liabilities	1 934	1 930
-1 663	-1 798	Pension assets	-1 812	-1 681
<b>247</b>	<b>120</b>	<b>Net pension liabilities</b>	<b>122</b>	<b>249</b>
-	-85	Net pension assets - funded plan	-85	-
57	-	Net pension liabilities - funded plan	-	58
190	205	Unfunded pension	207	191
<b>247</b>	<b>120</b>	<b>Net pension liabilities</b>	<b>122</b>	<b>249</b>

### Funded and unfunded pension liabilities

Parent company			Group	
31.12.15	31.12.16	(Amounts in NOK million)	31.12.16	31.12.15
<b>Change in gross pension liability</b>				
2 701	1 910	Gross pension liability at 1 Jan.	1 925	2 720
243	106	Present value of the year's pension contributions	108	246
-684	-	Effect of plan changes	-	-684
-85	-	Service costs plan changes (short-term debt)	-	-85
63	52	Interest costs of pension liability	52	64
-253	-92	Actuarial gains and losses	-92	-255
-32	-18	Employer's contribution on premium paid	-18	-33
-43	-40	Disbursed pension/paid-up policies	-41	-43
<b>1 910</b>	<b>1 918</b>	<b>Gross pension liabilities as at 31 Dec.</b>	<b>1 934</b>	<b>1 930</b>

## Note Pensions

# 7

### Funded and unfunded pension liabilities

Parent company			Group	
31.12.15	31.12.16	(Amounts in NOK million)	31.12.16	31.12.15
<b>Change in gross pension assets</b>				
1 835	1 663	Fair value of pension assets at 1 Jan.	1 675	1 851
39	47	Interest income on pension assets	47	39
-400	-	Effect of plan changes	-	-400
-2	2	Actuarial gains and losses	2	-2
229	144	Premium paid	147	231
-38	-58	Pension/paid-up policies disbursed	-59	-38
<b>1 663</b>	<b>1 798</b>	<b>Fair value of pension assets as at 31 Dec.</b>	<b>1 812</b>	<b>1 681</b>
<b>247</b>	<b>120</b>	<b>Net pension liabilities as at 31 Dec.</b>	<b>122</b>	<b>249</b>

### Changes in estimate variances for the year

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
-150	48	Change in discount rate	48	-150
2	-3	Interest income on pension assets	-3	2
-56	-20	Salaries growth	-20	-56
-63	-59	Pension adjustments	-59	-63
118	-	Mortality table (K2013)	-	118
-104	-60	Effect of experience adjustment	-60	-104
<b>-253</b>	<b>-94</b>	<b>Total changes in estimate variances for the year</b>	<b>-94</b>	<b>-253</b>

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

	2016	2015
Discount rate corporate covered bonds (OMF)	2,60 %	2,75 %
Interest income on pension assets	2,60 %	2,75 %
Expected wage adjustments	2,00 %	2,25 %
Expected pension adjustments	1,25 %	1,50 %
Expected adjustment of basic amount (G) under NIS	2,00 %	2,25 %
Mortality table	K2013FT	K2013FT



## Note Pensions

# 7

### 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 2016 are based on the facts and circumstances at 31 December 2016. Actual results may differ significantly from these estimates.

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

(Amounts in NOK million, except per cent)

Parent company			Group	
140	-7,3 %	Discount rate increase 0,5 per cent	140	-7,3 %
-49	2,6 %	Expected salary increase 0,5 per cent	-49	2,6 %
-126	6,6 %	Expected pension increase 0,5 per cent	-126	6,6 %

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

	2016	2015
Property	9 %	8 %
Held-to-maturity bonds	12 %	17 %
Norwegian bonds	20 %	20 %
High-interest bonds	4 %	3 %
Foreign bonds	11 %	5 %
Bank deposits	1 %	2 %
Norwegian money market	9 %	10 %
Emerging Markets	7 %	6 %
Foreign shares	20 %	22 %
Norwegian shares	7 %	7 %
<b>Total</b>	<b>100 %</b>	<b>100 %</b>

### Members of the defined-benefit plan

Parent company		Group	
2015	2016	31.12.16	31.12.15
1 725	827	838	1 763
427	422	427	432
<b>1 298</b>	<b>405</b>	<b>411</b>	<b>1 331</b>

### Pension disbursement flow Statnett SF

The average weighted maturity for pension liabilities, related to the main scheme in Statnett SF, is estimated at 16 years based on the pension assumptions at 31 Dec. 2016. Average weighted maturity has been taken into account when choosing discount rate.

Statnett SF' Pensjonskasse does not compare the pension assets against the date of payments for the pension liabilities at 31. December 2016.

## Note 8 Tangible fixed assets and intangible fixed assets

# 8

Parent company	Power lines	Land and subsea cables	Main circuit equipment	Control and auxiliary equipment	ICT equipment	Buildings and land	Other assets and operation equipment	Total
<i>(Amounts in NOK million)</i>								
<b>Acquisition cost at 1 Jan. 2015</b>	<b>12 118</b>	<b>4 580</b>	<b>9 369</b>	<b>2 442</b>	<b>1 900</b>	<b>6 013</b>	<b>2 302</b>	<b>38 724</b>
Additions, acquisition cost	1 116	155	718	448	462	1 270	99	4 268
Disposals, acquisition cost	32	15	108	51	80	46	12	344
<b>Acquisition cost at 1 Jan. 2016</b>	<b>13 202</b>	<b>4 720</b>	<b>9 979</b>	<b>2 839</b>	<b>2 282</b>	<b>7 237</b>	<b>2 389</b>	<b>42 648</b>
Additions, acquisition cost	2 517	71	939	479	871	868	126	5 871
Disposals, acquisition cost	19	4	24	25	29	60	8	169
<b>Acquisition cost at 31 Dec. 2016</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>
<b>Accumulated depreciation and amortisation at 1 Jan. 2015</b>	<b>4 383</b>	<b>929</b>	<b>2 720</b>	<b>1 012</b>	<b>986</b>	<b>759</b>	<b>587</b>	<b>11 376</b>
Depreciation and amortisation	290	153	291	136	243	218	148	1 479
Disposals, depreciation and amortisation	28	14	111	50	80	30	11	324
<b>Accumulated depreciation and amortisation at 1 Jan. 2016</b>	<b>4 645</b>	<b>1 068</b>	<b>2 900</b>	<b>1 098</b>	<b>1 149</b>	<b>947</b>	<b>724</b>	<b>12 531</b>
Depreciation and amortisation	337	153	295	169	300	354	481	2 089
Disposals, depreciation and amortisation	8	3	35	21	27	13	7	114
<b>Accumulated depreciation and amortisation at 31 Dec. 2016</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>
<b>Book value at 31 Dec. 2015</b>	<b>8 557</b>	<b>3 652</b>	<b>7 079</b>	<b>1 741</b>	<b>1 133</b>	<b>6 290</b>	<b>1 665</b>	<b>30 117</b>
<b>Book value at 31 Dec. 2016</b>	<b>10 726</b>	<b>3 569</b>	<b>7 734</b>	<b>2 047</b>	<b>1 702</b>	<b>6 757</b>	<b>1 309</b>	<b>33 844</b>
<b>Of which intangible fixed assets</b>								
<b>Book value 31 Dec. 2015</b>	-	-	-	-	283	-	-	<b>283</b>
<b>Book value 31 Dec. 2016</b>	-	-	-	-	367	-	-	<b>367</b>
<b>Of which financial lease</b>								
<b>Book value 31 Dec. 2015</b>	-	-	-	-	116	120	178	<b>414</b>
<b>Book value 31 Dec. 2016</b>	-	-	-	-	155	-	-	<b>155</b>
<b>Of which asset retirement obligations</b>								
<b>Book value 31 Dec. 2015</b>	263	37	35	-	-	-	42	<b>377</b>
<b>Book value 31 Dec. 2016</b>	63	18	79	-	-	-	0	<b>160</b>
<b>Acquisition cost for tangible fixed assets fully depreciated, but still in use</b>	<b>176</b>	<b>325</b>	<b>290</b>	<b>434</b>	<b>671</b>	<b>355</b>	<b>405</b>	<b>2 656</b>
<b>Depreciation rate (straight-line)</b>	2%	2-7%	2-5%	3-13%	5-33%	0-7%	0-33%	

## Note 8 Tangible fixed assets and intangible fixed assets

# 8

Group	Power lines	Land and subsea cables	Main circuit equipment	Control and auxiliary equipment	ICT equipment	Buildings and land	Other assets and operation equipment	Total
<i>(Amounts in NOK million)</i>								
<b>Acquisition cost at 1 Jan. 2015</b>	<b>12 149</b>	<b>4 580</b>	<b>9 431</b>	<b>2 453</b>	<b>1 909</b>	<b>6 064</b>	<b>2 711</b>	<b>39 297</b>
Additions, acquisition cost	1 116	155	718	448	462	1 284	112	<b>4 295</b>
Disposals, acquisition cost	32	15	108	51	80	46	27	<b>359</b>
<b>Acquisition cost at 1 Jan. 2016</b>	<b>13 233</b>	<b>4 720</b>	<b>10 041</b>	<b>2 850</b>	<b>2 291</b>	<b>7 302</b>	<b>2 796</b>	<b>43 233</b>
Additions, acquisition cost	2 517	71	939	479	872	870	158	<b>5 906</b>
Disposals, acquisition cost	19	4	24	25	29	60	8	<b>169</b>
<b>Acquisition cost at 31 Dec. 2016</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>
<b>Accumulated depreciation at 1 Jan. 2015</b>	<b>4 402</b>	<b>929</b>	<b>2 726</b>	<b>1 014</b>	<b>988</b>	<b>767</b>	<b>676</b>	<b>11 502</b>
Depreciation and amortisation	293	153	294	137	244	219	174	<b>1 514</b>
Disposals, depreciation and amortisation	28	14	111	50	80	30	21	<b>334</b>
<b>Accumulated depreciation at 1 Jan. 2016</b>	<b>4 667</b>	<b>1 068</b>	<b>2 909</b>	<b>1 101</b>	<b>1 152</b>	<b>956</b>	<b>829</b>	<b>12 682</b>
Depreciation and amortisation	340	153	299	169	301	357	501	<b>2 120</b>
Disposals, depreciation and amortisation	8	3	35	21	27	13	7	<b>114</b>
<b>Accumulated depreciation at 31. Dec. 2016</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>
<b>Book value at 31. Dec. 2015</b>	<b>8 566</b>	<b>3 652</b>	<b>7 132</b>	<b>1 749</b>	<b>1 139</b>	<b>6 346</b>	<b>1 967</b>	<b>30 551</b>
<b>Book value at 31. Dec. 2016</b>	<b>10 732</b>	<b>3 569</b>	<b>7 783</b>	<b>2 055</b>	<b>1 708</b>	<b>6 812</b>	<b>1 623</b>	<b>34 282</b>
<b>Of which intangible fixed assets</b>								
<b>Book value 31 Dec. 2015</b>	-	-	-	-	283	-	53	<b>336</b>
<b>Book value 31 Dec. 2016</b>	-	-	-	-	368	-	53	<b>421</b>
<b>Of which financial leasing:</b>								
<b>Book value 31 Dec. 2015</b>	-	-	-	-	116	120	178	<b>414</b>
<b>Book value 31 Dec. 2016</b>	-	-	-	-	155	-	-	<b>155</b>
<b>Of which asset retirement obligations</b>								
<b>Book value 31 Dec. 2015</b>	263	37	35	-	-	-	42	<b>377</b>
<b>Book value 31 Dec. 2016</b>	63	18	79	-	-	-	-	<b>160</b>
<b>Acquisition cost for tangible fixed assets fully depreciated, but still in use</b>	<b>176</b>	<b>325</b>	<b>290</b>	<b>434</b>	<b>671</b>	<b>355</b>	<b>382</b>	<b>2 633</b>
<b>Depreciation rate (straight-line)</b>	2%	2-7%	2-5%	3-13%	5-33%	0-7%	0-33%	

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.

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 Plants under construction

# 9

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
5 095	5 909	Acquisition cost at 1 January	6 724	5 166
5 112	6 317	Additions	7 525	5 676
139	140	Capitalised construction interest	170	144
-303	-	Transferred to subsidiary	-	-
-4 125	-5 939	Transferred to tangible and other intangible fixed assets	-5 963	-4 152
-9	-24	Write-offs	-24	-110
<b>5 909</b>	<b>6 403</b>	<b>Acquisition cost at 31 December</b>	<b>8 432</b>	<b>6 724</b>
-171	41	Hedge accounting effects	41	-171
<b>5 738</b>	<b>6 444</b>	<b>Plants under construction at 31 December</b>	<b>8 473</b>	<b>6 553</b>
<b>Average capitalisation rate used to determine the loan expense that can be capitalised:</b>			<b>2016</b>	<b>2015</b>
			2,05%	2,32%

### Contractual obligations as at 31 December 2016

Contractual obligations as at 31 December 2016 amounts to NOK 16 014 million.

The reported obligation includes investment projects where future contractual obligations exceed NOK 50 million.

On 18 February 2016 Statnett entered into an agreement with BKK Nett AS concerning purchase of grid facilities that either are part of or will become part of the transmission grid. Purchase price for existing facilities, including plants under construction, also including Evanger station that was taken over when completed in 2016, amounts to NOK 440 million.

For the stretch Fana-Kollsnes-Mongstad which is under construction – and is not currently part of the transmission grid BKK Nett AS has a right to transfer the facilities effective from 1 January 2018. Estimated purchase price is NOK 1.5 billion. For the stretch Mongstad-Modalen the parties have agreed, pending Board approval, to enter into an option agreement within 1 April 2017, giving BKK the right to transfer the facilities in 2019.

In conjunction with the transfer agreement, the parties have agreed that BKK Nett AS will assist Statnett with operations, maintenance and preparedness for a time period of three years from 2016, with an option for Statnett to prolong the agreement with additionally two years. The agreement has an estimated annual cost of NOK 20 million.

## Note Profit/loss from financial instruments

# 10

This note shows the effects recognized in the income statement related to financial instruments. The table includes income statement effects of currency hedging derivatives related to procurement contracts resulting from operating activities and therefore classified as other operating expenses.

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
<b>Effects included in other operating costs</b>				
6	-7	Currency hedge ineffectiveness	-7	6
-10	22	Forward premium	22	-10
-	-3	Change in fair value of embedded derivatives	-3	-
-	5	Change in fair value of currency derivatives	5	-
<b>-4</b>	<b>17</b>	<b>Total included in operating costs</b>	<b>17</b>	<b>-4</b>
<b>Financial income</b>				
19	22	Income from investment in subsidiaries	-	-
7	8	Income from investment in associates	17	8
43	60	Interest income	39	44
23	-20	Change in value of derivatives	-20	23
432	241	Gain on currency exchange	252	436
6	19	Other financial income	4	-2
<b>530</b>	<b>330</b>	<b>Total financial income</b>	<b>292</b>	<b>509</b>
<b>Financial costs</b>				
-	-	Cost from investment in associates	7	-
519	531	Interest costs	527	514
-139	-141	Capitalised construction interest	-169	-139
419	255	Loss on currency exchange	270	424
12	22	Other financial costs	26	14
<b>811</b>	<b>667</b>	<b>Total financial costs</b>	<b>661</b>	<b>813</b>

## Note Overview of financial instruments

# 11

This note gives an overview of book value and fair value of financial instruments, including accounting treatment. The table also shows at which level in the valuation hierarchy the different measurement methods for the Group's financial instruments measured at fair value are classified, compared to how objective the measurement method is.

(Amounts in NOK million)

Parent company	Category	Measure- ment level	2016		2015	
			Book value	Fair value	Book value	Fair value
<b>Assets</b>						
<b>Fixed assets</b>						
Long-term receivables	Loans and receivables		57	57	44	44
Long-term receivables to subsidiaries	Loans and receivables		135	135	184	184
Subord. capital in Statnett SFs pension fund	Fair value through profit/loss	3	75	75	75	75
Financial assets available for sale	Available for sale	3	10	10	10	10
Derivatives	Fair value through profit/loss	2	3 351	3 351	5 084	5 084
<b>Total fixed asset investments</b>			<b>3 628</b>	<b>3 628</b>	<b>5 397</b>	<b>5 397</b>
<b>Current assets</b>						
Trade accounts receivable	Loans and receivables		272	272	189	189
Derivatives	Fair value through profit/loss	2	92	92	119	119
Short-term receivables to subsidiaries	Loans and receivables		1 494	1 494	454	454
Other short-term receivables	Loans and receivables		870	870	575	575
<b>Total trade accounts and other short-term receivables</b>			<b>2 728</b>	<b>2 728</b>	<b>1 337</b>	<b>1 337</b>
<b>Market-based securities</b>	Fair value through profit/loss	1	<b>315</b>	<b>315</b>	<b>306</b>	<b>306</b>
<b>Liquid assets*</b>	Fair value through profit/loss		<b>1 798</b>	<b>1 798</b>	<b>1 441</b>	<b>1 441</b>
<b>Liabilities</b>						
Long-term interest-bearing debt	Other liabilities	2	25 366	26 023	24 045	24 271
Derivatives	Fair value through profit/loss	2	591	591	221	221
<b>Total long-term interest-bearing debt</b>			<b>25 957</b>	<b>26 614</b>	<b>24 266</b>	<b>24 492</b>
Short-term interest-bearing debt	Other liabilities	2	6 613	6 549	4 019	4 032
Short-term interest-bearing debt to subsidiaries	Other liabilities	2	198	198	212	212
Derivatives	Fair value through profit/loss	2	63	63	4	4
<b>Total short-term interest-bearing debt</b>			<b>6 874</b>	<b>6 810</b>	<b>4 235</b>	<b>4 248</b>
<b>Trade accounts payable and other short-term debt</b>	Other liabilities		<b>1 788</b>	<b>1 788</b>	<b>1 624</b>	<b>1 624</b>
<b>Total measurement levels</b>						
<b>Level 1</b>			315	315	306	306
<b>Level 2</b>			-29 388	-29 981	-23 298	-23 537
<b>Level 3</b>			85	85	85	85

## Note Overview of financial instruments

# 11

(Amounts in NOK million)

Group	Category	Measure- ment level	2016		2015	
			Book value	Fair value	Book value	Fair value
<b>Assets</b>						
<b>Fixed assets</b>						
Long-term receivables	Loans and receivables		58	58	44	44
Subord. capital in Statnett SF's pension fund	Fair value through profit/loss	3	75	75	75	75
Financial assets available for sale	Available for sale	3	10	10	10	10
Derivatives	Fair value through profit/loss	2	3 351	3 351	5 084	5 084
<b>Total financial fixed assets</b>			<b>3 494</b>	<b>3 494</b>	<b>5 213</b>	<b>5 213</b>
<b>Current assets</b>						
Trade accounts receivable	Loans and receivables		265	265	166	166
Derivatives	Fair value through profit/loss	2	92	92	119	119
Other short-term receivables	Loans and receivables		931	931	479	479
<b>Total trade accounts and other short-term receivables</b>			<b>1 288</b>	<b>1 288</b>	<b>764</b>	<b>764</b>
<b>Market-based securities</b>	Fair value through profit/loss	1	<b>731</b>	<b>731</b>	<b>680</b>	<b>680</b>
<b>Liquid assets*</b>	Fair value through profit/loss		<b>2 300</b>	<b>2 300</b>	<b>1 696</b>	<b>1 696</b>
<b>Liabilities</b>						
Long-term interest-bearing debt	Other liabilities	2	25 366	26 023	24 045	24 271
Derivatives	Fair value through profit/loss	2	591	591	221	221
<b>Total long-term interest-bearing debt</b>			<b>25 957</b>	<b>26 614</b>	<b>24 266</b>	<b>24 492</b>
Short-term interest-bearing debt	Other liabilities	2	6 613	6 549	4 019	4 032
Derivatives	Fair value through profit/loss	2	63	63	4	4
<b>Total short-term interest-bearing debt</b>			<b>6 676</b>	<b>6 612</b>	<b>4 023</b>	<b>4 036</b>
<b>Trade accounts payable and other short-term debt</b>	Other liabilities		<b>2 300</b>	<b>2 300</b>	<b>1 673</b>	<b>1 673</b>
<b>Total measurement levels</b>						
<b>Level 1</b>			731	731	680	680
<b>Level 2</b>			-29 190	-29 783	-23 086	-23 325
<b>Level 3</b>			85	85	85	85

There has not been any transactions between the measurement levels during 2015 and 2016. During the period there has been no changes in fair value for financial instruments measured in level 3.

## Note Overview of financial instruments

# 11

### Financial assets and liabilities

The fair value of forward exchange contracts is determined by applying the forward exchange rate on the balance sheet date. The fair value of currency swaps and interest rate swap is calculated as the present value of future cash flows. Fair value is mainly confirmed by the financial institution Statnett has contracts with.

The fair value of financial assets and long-term liabilities accounted for at amortised cost has been calculated:

- using quoted market prices,
- using interest rate terms for liabilities with a corresponding maturity and credit risk, or
- using the present value of estimated cash flows discounted by the interest rate that applies to corresponding liabilities and assets on the balance sheet date.

In the case of financial instruments such as financial assets available for sale, trade account receivables and other short-term receivables, liquid assets, trade accounts payable and other current liabilities, it is assumed that the book value is the best estimate for fair value, due to the short-term nature of the items.

### 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 is measured using listed prices from active markets for identical financial instruments. No adjustments are made with 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.

Listed shares, bonds and certificates are considered level 1 because the securities are listed on the stock exchange and freely negotiable, and measured at the most current market price. Shares and ownership interests that are not listed on the stock exchange are assessed based on corporate accounts and are consequently considered to be at level 3.

Derivatives are considered level 2. The currency element of currency futures contracts is measured at observable market prices applying Norges Bank rates. Different maturity dates mean that an interest rate element is added which provides a calculation of the fair value of currency futures contracts.



## Note Derivatives

# 12

Derivatives are used in risk management to hedge risks related to interest and currency. The fair value of the derivatives fluctuates with underlying prices, and the footnote presents fair value at the balance sheet date.

### Fair value measurement

Foreign exchange forward contracts are measured at fair value based on observable forward rates on contracts with comparable 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.

*The derivatives relates to hedge relationships as follows:*

### Cash flow hedges

Statnett enters cash flow hedges to hedge interest rate risk on loans with floating interest. The interest rate risk is hedged using interest rate swaps where Statnett receives floating rate and pays a fixed rate.

All derivatives defined as hedging instruments in cashflow hedges are booked at fair value in the balance sheet, while changes in fair value are temporarily through equity over 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

Statnett enters fair value hedges to hedge interest rate risk on fixed rate loans and foreign currency risk on interest bearing debt in foreign currency.

Most of Statnett's debenture bond are fixed rate bonds. The interest rate risk is hedged with interest rate swaps where Statnett receives fixed rates and have payments in floating rate.

Underlying loans are booked at amortised cost.

Fair value hedges through foreign exchange forward contracts are also used to hedge currency risk related to investment contracts. Unrealised gains / losses on the forward contracts are included in plants under construction.

Negative interest development has resulted in hedge ineffectiveness on a SEK loan. Hedge accounting is terminated and the derivative is reported as free standing derivative. Unrealised gain subsequent to termination of hedge accounting, amounts to NOK 4 million.

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

Statnett also holds derivatives that does not qualify for hedge accounting under IFRS. However all derivatives are related to entered contracts.

These derivatives are measured at fair value and all changes in value are recorded periodically in the income statement. This type of derivatives are referred to as "Free standing derivatives".

### Embedded currency derivatives

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

### Interest rate and currency swaps

These are agreements where the contracting parties exchange currency and/or interest rate terms for an agreed amount over a defined future period.

All interest rate and currency swaps are related to underlying loans. Any loss/gain on the swap will therefore correspond to the gain/loss on the loan.

To reduce counterparty risk Statnett has reset the exchange rate on one interest and currency swap. The transaction had effect on cash, derivatives and related debt but had no income statement effect.

### Repayment profile for derivatives related to the debt of Statnett

(Amounts in NOK million)	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total Market value	Type of hedge accounting
Interest swap fixed to floating	-	50	260	193	-	503	Fair value hedge
Interest swap fixed to floating	-	-2	-	-	-	-2	Free standing derivatives
Interest swap floating to fixed	-	-109	-63	-	-	-172	Cash flow hedge
Interest and currency swap	83	556	458	220	1 267	2 584	Fair value hedge
Interest and currency swap	-	-	-	-73	-	-73	Cash flow hedge
Interest and currency swap	-	4	-	-	-	4	Free standing derivatives
<b>Total</b>	<b>83</b>	<b>499</b>	<b>655</b>	<b>340</b>	<b>1 267</b>	<b>2 844</b>	

## Note Derivatives

## 12

*Forward exchange options:*

Statnett makes use of forward exchange contracts in order to hedge the currency risk on transactions in currencies other than NOK.

A currency hedging in EUR is measured ineffective as per 31 December 2016 and no longer qualifies for hedge accounting.

<i>(Amounts in NOK million)</i>	Currency	Nominal amount currency	Hedging rate	Marked rate	Under 1 year	1 to 5 years	Total Market value
<b>Assets</b>							
Fair value hedge	EUR	42	9,09	9,19	4	1	5
Fair value hedge	SEK	17	0,93	0,95	-	-	-
Free standing derivatives	EUR	5	8,98	9,16	1	-	1
Embedded derivatives	EUR	23			3	4	7
Embedded derivatives	CHF	15			1	-	1
<b>Total assets</b>		<b>102</b>			<b>9</b>	<b>5</b>	<b>14</b>
<b>Liabilities</b>							
Fair value hedge	EUR	152	9,42	9,21	-28	-3	-31
Fair value hedge	SEK	1 016	0,99	0,96	-27	-1	-28
Free standing derivatives	EUR	23	9,40	9,16	-4	-1	-5
Embedded derivatives	EUR	21			-3	-1	-4
Embedded derivatives	CHF	15			-	-1	-1
<b>Total liabilities</b>		<b>1 227</b>			<b>-62</b>	<b>-7</b>	<b>-69</b>
<b>Total forward exchange options</b>					<b>-53</b>	<b>-2</b>	<b>-55</b>

## Note Interest-bearing liabilities

# 13

### Parent company

#### Repayment profile for interest-bearing debt

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

Maturity date (Amounts in NOK million)	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
<b>Fixed rate loans</b>						
Certificate issues	1 600	-	-	-	-	1 600
Bond issues	2 192	2 824	3 051	7 644	3 817	19 528
<b>Total fixed rate loans</b>	<b>2 192</b>	<b>2 824</b>	<b>3 051</b>	<b>7 644</b>	<b>3 817</b>	<b>19 528</b>
<b>Floating rate loans</b>						
Collateral under CSA agreements	2 729	-	-	-	-	2 729
Other interest-bearing debt*	261	159	62	370	-	852
Bond issues	-	1 843	-	-	-	1 843
Loans from financial institutions	92	895	1 637	3 656	-	6 280
<b>Total floating rate loans</b>	<b>3 082</b>	<b>2 897</b>	<b>1 699</b>	<b>4 026</b>	<b>-</b>	<b>11 704</b>
<b>Total short-term debt</b>	<b>6 874</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6 874</b>
<b>Total long-term debt</b>	<b>-</b>	<b>5 721</b>	<b>4 750</b>	<b>11 670</b>	<b>3 817</b>	<b>25 958</b>
<b>Total interest-bearing debt</b>	<b>6 874</b>	<b>5 721</b>	<b>4 750</b>	<b>11 670</b>	<b>3 817</b>	<b>32 832</b>

\*Statnett SF intra-group loans of NOK 198 million, payable on demand. In the balance sheet for Group these loans are eliminated.

Maturity of fixed interest of the loan portfolio	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
(Amounts in NOK million)	29 150	558	456	2 668	-	32 832

## Note Interest-bearing liabilities

# 13

Information about interest-bearing debt and derivatives	Principal debt Currency (Amounts in million)	Principal debt NOK (Amounts in NOK million)	Principal swap NOK (Amounts in NOK million)	Interest rate loan	Interest rate swap	Fair value Swap (Amounts in NOK million)
<b>Secures liabilities - fair value hedging</b>						
NOK	4 060	4 060	4 060	4,30 %	1,81 %	503
JPY	4 000	201	201	1,97 %	1,27 %	93
CHF	400	3 032	3 032	2,54 %	1,43 %	583
SEK	1 200	1 177	1 177	0,06 %	1,71 %	-36
USD***	1 080	7 208	7 208	3,17 %	2,18 %	1 750
EUR	70	532	532	2,38 %	1,98 %	194
<b>Secures liabilities - cash flow hedging</b>						
NOK	1 693	1 693	1 693	1,79 %	4,16 %	-172
USD***	360	3 039	1 693	2,79 %	2,26 %	-73
<b>Unsecured liabilities</b>						
NOK - floating interest rate	3 000	3 000	-	2,72 %	-	-
NOK - fixed interest rate	4 590	4 590	-	1,59 %	-	-
<b>Free standing derivatives</b>						
NOK	-	-	700	1,63 %	1,61 %	-2
SEK	-	-	180	0,00 %	1,32 %	4
<b>CSA</b>						
NOK	-1 142	-1 142		*		
EUR	-175	-1 587		**		
<b>Total</b>						<b>2 844</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)

\*\*\* Statnett signed in September 2016 an agreement for a new USPP loan (United States Private Placement) of USD 260 million, corresponding NOK 3 500 million. Statnett signed at the same time a combined interest rate and currency swap agreement.

## Note Interest-bearing assets

# 14

### Market-based securities

Parent company		<i>(Amounts in NOK million)</i>	Group	
Acquisition cost	Book value		Acquisition cost	Book value
76	72	Government	76	72
120	121	Municipality/municipal operations	145	146
51	51	Financial institutions, including banks	348	350
72	71	Private/industry	94	93
<b>319</b>	<b>315</b>	<b>Total bonds</b>	<b>663</b>	<b>661</b>
-	-	Norwegian equity funds	23	35
-	-	Foreign equity funds	18	35
-	-	<b>Total equity funds</b>	<b>41</b>	<b>70</b>
<b>319</b>	<b>315</b>	<b>Total market-based securities</b>	<b>704</b>	<b>731</b>

All market based securities are terminated i Norwegian kroner (NOK).

### Age distribution trade receivable

<i>(Amounts in NOK million)</i>	Not due	1-30 days	31-60 days	61-90 days	Over 90 days	Total trade acc. rcvb.
<b>Parent company</b>	259	13	-	-	-	<b>272</b>
<b>Group</b>	256	9	-	-	-	<b>265</b>

## Note Financial risk management

# 15

### 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 enterprise has liabilities and equity as specified in the balance sheet. The loan agreements do not impose any capital requirements on the enterprise which are expected to restrict the capital structure of the enterprise. 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, and in January 2014 the owner increased its equity contribution and reduced the dividend rate for the fiscal years 2013-2016. In connection with the National budget for 2017, this dividend policy extended to include 2017 and 2018. During this period expected dividend will be 25 per cent of the Group's net profit for the year, adjusted for the changed balance for higher/lower revenues after tax (underlying result). 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 in 2015.

### Overview of capital included in capital structure management:

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
24 266	25 957	Long-term interest-bearing liabilities	25 957	24 266
4 235	6 874	Short-term interest-bearing liabilities	6 676	4 023
1 747	2 113	Liquid assets and market-based securities	3 031	2 376
<b>26 754</b>	<b>30 718</b>	<b>Net liabilities</b>	<b>29 602</b>	<b>25 913</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.

Statnett reduces liquidity risk related to maturity of financial liabilities by having an evenly distributed maturity structure, access to several sources of financing in Norway and abroad, as well as 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 comprises of existing cash and cash equivalents (bank/time deposits, certificates and bonds) and a credit facility of NOK 6.5 billion. In January 2017 the credit facility increased to NOK 8.0 billion for additional 5 years. The credit facility has not yet been utilised. Liquidity is followed up continuously with weekly reporting.

Statnett SF has a high credit rating. Standard & Poor's og Moody's Investor Service have given Statnett SF credit ratings for long-term borrowings of A+ and A2 respectively. The high credit ratings provides Statnett SF good borrowing opportunities.

## Note Financial risk management

# 15

The table below shows 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 31 Dec. 2016.

(Amounts in NOK million)

### Parent company

As at 31 Dec. 2016	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
Interest-bearing debt and interest payments	7 494	8 054	8 625	11 467	4 218	39 858
Other liabilities	154	228	104	26	-	512
Trade acc.payable and other short-term debt	1 788	-	-	-	-	1 788
Derivatives	5 542	3 769	2 255	4 818	2 720	19 104
<b>Total</b>	<b>14 978</b>	<b>12 051</b>	<b>10 984</b>	<b>16 311</b>	<b>6 938</b>	<b>61 262</b>

Derivatives	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
Received	5 720	4 999	3 614	6 003	4 218	24 554
Disbursed	-5 542	-3 769	-2 255	-4 818	-2 720	-19 104
<b>Net derivatives</b>	<b>178</b>	<b>1 230</b>	<b>1 359</b>	<b>1 185</b>	<b>1 498</b>	<b>5 450</b>

(Amounts in NOK million)

### Group

As at 31 Dec. 2016	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
Interest-bearing debt and interest payments	7 292	8 054	8 625	11 467	4 218	39 656
Other liabilities	154	228	104	26	-	512
Trade acc.payable and other short-term debt	2 300	-	-	-	-	2 300
Derivatives	5 542	3 769	2 255	4 818	2 720	19 104
<b>Total</b>	<b>15 288</b>	<b>12 051</b>	<b>10 984</b>	<b>16 311</b>	<b>6 938</b>	<b>61 572</b>

Derivatives	Under 1 year	1 to 5 years	5 to 10 years	10 to 15 years	15 years +	Total
Received	5 720	4 999	3 614	6 003	4 218	24 554
Disbursed	-5 542	-3 769	-2 255	-4 818	-2 720	-19 104
<b>Net derivatives</b>	<b>178</b>	<b>1 230</b>	<b>1 359</b>	<b>1 185</b>	<b>1 498</b>	<b>5 450</b>

Group cash and cash equivalents consist of bank deposits.

## Note Financial risk management

# 15

### Credit risk

Statnett SF is exposed to credit risk through the investment of surplus liquidity with issuers of securities and through the use of various interest rate and currency derivatives. In order to limit this risk, Statnett has set credit limits based on the creditworthiness of counterparties, the maximum exposure for each counterparty and collateral agreements with the most significant counterparts (CSA agreements). Creditworthiness is assessed at least once a year, and the counterparty risk is continuously monitored to ensure that Statnett's exposure does not exceed the set credit limits and complies with internal rules.

### Maximum credit exposure

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
1 441	1 798	Liquid assets	2 300	1 696
306	315	Bonds and certificates	661	620
5 203	3 443	Derivatives	3 443	5 203
225	322	Long-term receivables, excl. derivatives	187	86
1 218	2 637	Trade accounts and other short-term receivables, excl. derivatives	1 196	646
<b>8 393</b>	<b>8 515</b>	<b>Total maximum credit exposure</b>	<b>7 787</b>	<b>8 251</b>

### 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. The liabilities undertaken by Statnett in foreign currencies in connection with investment projects are mainly hedged using currency swaps. All loans in foreign currency are converted into NOK using cross currency interest swap agreements. As at 31 Dec. 2015, the foreign exchange reserves not swapped or reserved for future obligations totalled NOK 150 million for the parent company and NOK 187 million for the Group. The reserves mainly consist of bank deposits. In addition, foreign equity funds and shares totalled NOK 34 million for the Group.

### 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 on the basis of daily averages of the five-year swap interest rate. In addition, the NVE interest rate comprises some fixed interest rates 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

The table below shows the average effective interest rate for the individual financial instruments for the full years 2015 and 2016. Statnett has had lower interest yield as a result of negativ interest on deposits in foreign currency.

Parent company			Group	
2015	2016		2016	2015
1,68%	2,60%	Bonds and certificates	2,42%	1,36%
0,47%	-0,20%	Deposits	0,16%	0,47%
-	-	Shares and equity funds	8,50%	10,64%
2,36%	2,05%	Loans	2,05%	2,36%



## Note Financial risk management

# 15

### Sensitivity analysis

#### Interest rate sensitivity

(Amounts in NOK million)

Parent company		Change in interest rate level	Group	
2015	2016	%	2016	2015
-8	-7	+1	-14	-15
8	7	-1	14	15

The table shows the sensitivity of the parent company and the Group to potential changes in the interest rate. The calculation takes into account all interest-bearing instruments and associated interest rate derivatives. It shows the effect on the result of a change in the interest rate levels as at 31 December 2016.

#### Exchange rate sensitivity

(Amounts in NOK million)

Parent company		Change in NOK exchange rate	Group	
2015	2016	%	2016	2015
-7	-8	+5	-19	-11
7	8	-5	19	11

The table shows the sensitivity of the company to potential changes in the exchange rate of the Norwegian Krone, if all other factors remain constant. 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 Taxes

## 16

## The tax expense comprises the following

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
1	-	Income tax	27	23
-	-1	Income tax previous years	-3	-
408	199	Change in deferred tax/tax benefit	165	373
-84	-50	Change in tax rates	-51	-89
<b>325</b>	<b>148</b>	<b>Tax</b>	<b>138</b>	<b>307</b>

## Tax payable in income statement

Parent company			Group	
31.12.15	31.12.16	(Amounts in NOK million)	31.12.16	31.12.15
-	-	Income tax payable on the profit of the year	27	23
-	-	Tax effect of Group contribution	-17	-8
-	-	<b>Taxes payable</b>	<b>10</b>	<b>15</b>

## Tax payable in the balance sheet

Parent company			Group	
31.12.15	31.12.16	(Amounts in NOK million)	31.12.16	31.12.15
-	-	Tax payable for the year	27	23
-	-	Tax payable on Group contribution	-17	-8
-	-	<b>Tax payable</b>	<b>10</b>	<b>15</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 25 per cent.

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
1 527	816	Profit before tax	783	1 410
412	204	Expected tax expense at nominal rate	202	381
<b>Effect on taxes of:</b>				
-6	-7	Permanent differences	-12	14
3	2	Share of profit/loss in associates	3	1
-	-1	Changes in previous years' taxes	-3	-
-84	-50	Changes in tax rates	-51	-89
<b>325</b>	<b>148</b>	<b>Tax</b>	<b>138</b>	<b>307</b>
<b>21 %</b>	<b>18 %</b>	<b>Effective tax rate</b>	<b>18 %</b>	<b>22 %</b>

## Note

## 16

**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 24 per cent as of 31. December 2016 (25 per cent as of 31. December 2015).

**Parent Company**

<i>(Amounts in NOK million)</i>	<b>31.12.15</b>	<b>Recognised</b>	<b>Other comprehensive income</b>	<b>Group contribution</b>	<b>31.12.16</b>
Current assets/current liabilities	1 299	-1 313	-	-	-14
Fixed assets	1 051	39	-	-	1 090
Pension liabilities	-62	9	24	-	-29
Other long term items	-1 044	1 195	-3	-	148
Group contribution	-	-	-	-	-
Tax loss carried forward	-277	218	-	-	-52
<b>Total</b>	<b>968</b>	<b>148</b>	<b>21</b>	<b>-</b>	<b>1 145</b>

**Group**

<i>(Amounts in NOK million)</i>	<b>31.12.15</b>	<b>Recognised</b>	<b>Other comprehensive income</b>	<b>Group contribution</b>	<b>31.12.16</b>
Current assets/current liabilities	1 299	-1 313	-	-	-14
Fixed assets	1 101	38	-	-	1 139
Pension liabilities	-63	10	24	-	-29
Other long term items	-1 013	1 168	-3	-	164
Tax loss/interest expenses carried forward	-271	210	-	6	-55
<b>Total</b>	<b>1 055</b>	<b>113</b>	<b>21</b>	<b>6</b>	<b>1 205</b>

**Deferred tax recognised in comprehensive income**

<b>Parent Company</b>			<b>Group</b>	
<b>31.12.15</b>	<b>31.12.16</b>	<i>(Amounts in NOK million)</i>	<b>31.12.16</b>	<b>31.12.15</b>
70	24	Change in estimate deviations of pension liabilities	24	70
10	-3	Changes in fair value for cash flow hedges	-3	10
<b>80</b>	<b>21</b>	<b>Total deferred tax recognised in comprehensive income</b>	<b>21</b>	<b>80</b>

## Note Investments in subsidiaries and associates

# 17

Statnett SF had the following investments at 31 December 2016:

Company	Business nature	Year of acquisition	Registered office	Ownership interest	Voting rights	Book value (Amounts in NOK thousand)
Statnett Transport AS	Transport and shipping	1996	Drammen	100 %	100 %	108 021
Statnett Forsikring AS	Insurance	1998	Oslo	100 %	100 %	30 200
NordLink Norge AS	Develop and operate national transmission grid	2010	Oslo	100 %	100 %	607 865
NorGer AS	General Partner	2010/2011	Oslo	100 %	100 %	29 947
NorGer KS	Limited activity	2010/2011	Oslo	100 %	100 %	154 413
Nydalshøyden Bygg C AS	Real estate	2013	Oslo	100 %	100 %	15 131
Statnett Rogaland AS	Develop and operate national transmission grid	2014	Sandnes	100 %	100 %	149 693
Elhub AS	Datahub for electricity metering data	2015	Oslo	100 %	100 %	125 470
<b>Total subsidiaries</b>						<b>1 220 741</b>
<b>Associates</b>						
Nord Pool AS	Marketplace	2002/2008	Bærum	28 %	28,2 %	36 320
eSett OY	Nordic Imbalance settlement	2013	Finland	33 %	33,3 %	16 891
Kraft CERT AS	IT security	2014	Oslo	33 %	33,3 %	819
<b>Total associates</b>						<b>54 030</b>
<b>Total subsidiaries and associates</b>						<b>1 274 772</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>2016</b>				
Nord Pool AS, 28,2%	80 217	16 441	-7 808	88 850
eSett OY, 33,3%	8 061	-7 244	-	817
Kraft CERT AS, 33,3%	1 678	-859	-	819
<b>Total associates</b>	<b>89 956</b>	<b>8 338</b>	<b>-7 808</b>	<b>90 486</b>
<b>2015</b>				
Nord Pool AS, 28,2%	72 850	14 315	-6 948	80 217
eSett OY, 33,3%	14 509	-6 448	-	8 061
Kraft CERT AS, 33,3%	1 667	-	-	1 667
<b>Total associates</b>	<b>87 359</b>	<b>7 867</b>	<b>-6 948</b>	<b>89 945</b>

### Purchase of subsidiary

On 1 December 2016 Statnett SF bought another 50 per cent of the shares in Lyse Sentralnett AS, and now owns 100 per cent of the shares. The company has changed its name to Statnett Rogaland AS.

## Note Joint Operations

# 18

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.

### **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 assets in the cables are included in the asset group "Land and subsea cables" in 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 submarine 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. The interconnector is planned to be in operation in 2020.

National Grid NSN Link Ltd (NLL) and Statnett SF plan to realize an HVDC interconnector between Kviteseid 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. The interconnector is planned to be in commercial 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 Related parties

# 19

As at 31 December 2016, 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 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:

Parent company	Subsidiary	Associate
Statnett SF	Statnett Transport AS	Nord Pool AS
	Statnett Forsikring AS	eSett OY
	Nydalshøyden	Kraft CERT AS
	Bygg C AS"	
	NordLink Norge AS	
	Elhub AS	
	NorGer KS	
	NorGer AS	
	Statnett Rogaland AS - (previously Lyse Sentralnett AS)	

*The subsidiaries are all wholly-owned by Statnett SF, though so that Statnett SF owns 100 per cent of the shares in NorGer AS and 90 per cent of the shares in NorGer KS. In addition, NorGer AS owns 10 per cent of the shares in NorGer KS. This entails that Statnett SF, including indirect ownership, also controls 100 per cent of the shares in NorGer KS.*

*Statnett SF has an ownership interest in Nord Pool AS of 28.2 per cent. Statnett SF has an ownership of 33,3 per cent in eSett OY and of 33,3 per cent in Kraft CERT AS.*

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. The services provided to Statnett SF also include preparedness services relating to cables. 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.

## Note Related parties

# 19

### Elhub AS

Elhub is 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 will become operational in October 2017.

Statnett SF is committed to providing the necessary funding of the project. The drawdown will be made at intervals ensuring that Elhub AS will be in a position to fulfil its own obligations. A fee equal to 0.21 per cent pa of unused credit facility will be charged by Statnett SF. Statnett SF also provides certain administrative services within ICT, legal, purchasing and finance.

### Statnett Rogaland AS (previously Lyse Sentralnett AS)

Statnett Rogaland AS is a wholly owned subsidiary as of year-end. Originally, Statnett SF had an ownership in the company of 50 percent, as of 1 December 2016 Statnett SF acquired the remaining 50 percent of the shares. The company name was changed from Lyse Sentralnett AS to Statnett Rogaland AS on 13 December 2016.

Statnett Rogaland AS owns the national transmission grid in Sør-Rogaland. A lease agreement has been entered into between Statnett Rogaland AS and Statnett SF whereby Statnett SF leases the national transmission grid in Sør-Rogaland on terms equal to those of other national transmission grid owners. Statnett SF provides project services and certain administrative services within ICT, legal, purchasing and finance.

The activity regarding the national transmission grid will be transferred to Statnett SF as per 1 January 2017. After the business transfer, Statnett SF will have the economic responsibility regarding the transmission grid. Statnett Rogaland AS will have limited operation when the transaction is completed.

### 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

### Dividend and group contribution

In 2016, Statnett SF has received dividends and group contribution from subsidiaries and associates at the amount of NOK 38 million.

### Statnett SF inter-company accounts

(Amounts in NOK million)	Trade accounts		Lending		Borrowing		Trade acc. Payable	
	2016	2015	2016	2015	2016	2015	2016	2015
Subsidiaries	11	79	1 628	637	198	212	11	56

### 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%

### Statnett SF's intra-group trading

(Amounts in NOK million)	Sales revenues		Operating costs		Financial revenues	
	2016	2015	2016	2015	2016	2015
Subsidiaries	106	108	163	169	57	24

(Amounts in NOK million)	Group Contribution received		Financial costs	
	2016	2015	2016	2015
Subsidiaries	21	20	4	5

(Amounts in NOK million)	Income from other owners in the main grids		Dividend received *)	
	2016	2015	2016	2015
Subsidiaries	34	30	9	3

# Note 20 | Remuneration/benefits to the Group management

## The Board's statement regarding salaries and other remunerations to Group management 2016

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".

### 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 SF. 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 enterprise's future salary and remuneration package for new members of Group management. The following guidelines are applicable for Statnett SF and subsidiaries:

**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 given, and 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.

This is applicable for Statnett SF and subsidiaries and will also be applicable for 2017.

### Existing arrangements for Group management

In addition to a fixed salary, the Group management is entitled to a company car and pension benefits and individual pension arrangements for salary beyond 12 times the Norwegian national insurance scheme basic amount. This is in compliance with agreements entered at an earlier stage. There is no bonus scheme or other incentive based schemes for Group management. The retirement age for the President and CEO and the Group management is 65. 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 changes in the company's defined pension scheme, explained in the 2015 Board statement, is also applicable for the members of Group management.

### Remuneration adjustment in 2016

The remuneration approval for Group management in 2016 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 2016.

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 2016 adjusted within the same limits as the rest of the Company.

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".

### 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.



# Note 20 Remuneration/benefits to the Group management

## Group management remuneration/benefits (Amounts in NOK)

		Board remuneration	
		2016	2015
<b>Board of Directors</b>			
Per Hjorth (Vice chair until June 2015, Chair from June 2015)	Chair	415 000	372 500
Kolbjørn Almlid (until June 2015)	Chair	-	202 000
Synne Larsen Homble (Vice Chair from June 2015)	Vice Chair	280 500	250 000
Kirsten Indgjerd Værdal	Board member	246 000	225 000
Egil R Gjesteland	Board member	281 000	275 000
Maria Sandsmark	Board member	263 500	255 000
Einar Strømsvåg (from June 2015)	Board member	281 000	130 000
Steinar Jøråndstad	Board member <sup>1)</sup>	261 000	255 000
Pål Erland Opgård (until June 2016)	Board member <sup>1)</sup>	133 000	260 000
Nils Ole Kristensen (from June 2016)	Board member <sup>1)</sup>	135 100	-
Karianne Burhol (from June 2016)	Board member <sup>1)</sup>	130 500	-
Trine Pande-Rølfesen (until February 2016)	Board member <sup>1)</sup>	-	220 000
Ane Meisingset Elgesem (from February 2016 until June 2016)	Board member <sup>1)</sup>	100 400	-
<b>Total remuneration</b>		<b>2 527 000</b>	<b>2 444 500</b>

All figures are exclusive of employer's NICs.

Deputy board members and observers do not receive remuneration.

Some board members receive compensation for their participation in the audit committee, remuneration committee or project committee. Board remunerations may therefore vary.

<sup>1)</sup> In the case of employee representatives, only board members' fees are stated.

Remuneration/benefits to the Group management/board	Salary	Other remuneration <sup>1)</sup>	Pension cost	Total remuneration	
<b>Group management</b>					
<b>President and CEO</b>					
Auke Lont	2 895 931	154 297	2 156 690	5 206 918	
<b>Executive Vice Presidents</b>					
Håkon Borgen	Technology and development	1 993 204	179 487	537 772	2 710 463
Øivind Kristian Rue	Market and Operations	2 146 624	176 552	1 186 919	3 510 095
Bente Monica Haaland	Strategy and Communications	1 700 389	144 300	378 838	2 223 527
Knut Hundhammer	Corporate Staff, CFO	2 321 637	114 923	719 992	3 156 552
Peer Olav Østli	ICT	1 797 035	136 142	851 686	2 784 863
Elisabeth Vike Vardheim	Constructions	1 988 674	190 819	607 259	2 786 752
<b>Total remuneration</b>		<b>14 843 494</b>	<b>1 096 520</b>	<b>6 439 156</b>	<b>22 379 170</b>

All figures are exclusive of employer's NICs.

# Note 20 Remuneration/benefits to the Group management

Remuneration/benefits to the Group management/board	Salary	Other remuneration*)	Pension cost	Total remuneration
<b>Group management</b>				
<b>President and CEO</b>				
Auke Lont	2 826 337	149 687	2 364 850	5 340 874
<b>Executive Vice Presidents</b>				
Håkon Borgen	1 941 681	173 328	701 894	2 816 903
Øivind Kristian Rue	2 062 457	158 404	1 249 546	3 470 407
Bente Monica Haaland	1 659 466	145 073	630 901	2 435 440
Knut Hundhammer	2 248 350	103 602	786 519	3 138 471
Peer Olav Østli	1 748 765	160 762	939 424	2 848 951
Elisabeth Vike Vardheim	1 929 758	182 735	642 100	2 754 593
<b>Total remuneration</b>	<b>14 416 814</b>	<b>1 073 591</b>	<b>7 315 234</b>	<b>22 805 639</b>

All figures are exclusive of employer's NICs.

\*) Included value of company car, 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 per cent 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 per cent 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 per cent 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 per cent of the amount that exceeds the final salary.</p> <p>From the age of 65, the full annual retirement pension is 66 per cent 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>

# Note 20 Remuneration/benefits to the Group management

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.

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.

Håkon Borgen is as of 1 January 2016 transferred to the enterprise's defined contribution scheme and related compensation plan.

## 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> 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 per cent 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 per cent 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 per cent 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 per cent 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 President:</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 per cent 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 as of 1 January 2016 transferred to 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 Other liabilities

# 21

### Parent company/Group

<i>(Amounts in NOK million)</i>	Asset retirement obligations	Other liabilities	Total
Liabilities at 1 January 2016	643	22	665
New or changed estimates	-23	-	-23
Amounts charged against liabilities	-93	-	-93
Reduction due to divestments	-54	-13	-67
Accretion expenses	39	-	39
<b>Liabilities at 31 December 2016</b>	<b>512</b>	<b>9</b>	<b>521</b>

### Expected timing of cash outflows

Time	<i>(Amounts in NOK million)</i>
2016 - 2018	233
2019 - 2021	239
2022 and thereafter	171
Not to be paid	22
<b>Total</b>	<b>665</b>

There are no differences between parent company and group.  
For expected timing of cash outflows, see note 15 Financial risk management.

See note 3 Accounting estimates and assumptions for an explanation of the most significant causes to uncertainty in the estimates.

## Note Secured debt and guarantees

# 22

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.

Statnett has given guarantees to ABN AMRO Bank N.V as security for the banks' financing of APX Shipping B.V. On behalf of Statnett SF and TenneT Holding B.V, APX Shipping B.V conducts trading and settlement of the NorNed interconnector on the energy exchange in Norway and the Netherlands. At the end of 2016, the guarantees are limited to 15 million Euro.

## Note **Contingent assets**

# 23

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 which solution Statnett is granted for a new termination of the power line between Bærum and Smestad at Smestad substation.

Statnett estimates that the entity will receive payments of 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 **Other operating costs**

# 24

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
51	64	Lease rental payable	73	57
303	308	Contracted personnel/consultants/ purchase of services	369	304
78	82	Insurance	32	76
197	284	Materials and subcontractors	293	211
202	220	Property tax	222	203
110	120	IT costs	124	111
282	364	Miscellaneous	261	96
<b>1 223</b>	<b>1 442</b>	<b>Total other operating costs</b>	<b>1 374</b>	<b>1 058</b>

### Operational lease agreements (maturity less than one year from balance sheet date)

Parent company			Group	
2015	2016	(Amounts in NOK million)	2016	2015
25	34	Buildings	43	31
19	20	Contracted communication	20	19
7	10	Miscellaneous	10	7
<b>51</b>	<b>64</b>	<b>Total lease rental payable</b>	<b>73</b>	<b>57</b>

### Operational lease agreements falling 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 our 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.

## Note Other operating costs

# 24

### Auditor's fee

Parent company			Group	
2015	2016	(Amounts in NOK thousand)	2016	2015
938	897	Statutory audit	1 228	1 345
287	325	Other attestation services	351	331
62	205	Tax-related assistance	205	62
280	334	Other assistance	334	280
<b>1 567</b>	<b>1 761</b>	<b>Total fees (excl. VAT)</b>	<b>2 118</b>	<b>2 018</b>

## Note Other comprehensive income

# 25

### Parent company/Group

(Amounts in NOK million)	Fair value of held-for-sale investments	Fair value of cash flow hedges	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>Book value 1.1.2015</b>	<b>6</b>	<b>-176</b>	<b>-170</b>	<b>-253</b>	<b>-253</b>	<b>-423</b>
Changes	1	20	21	253	253	274
Tax effect	-	-10	-10	-70	-70	-80
<b>Book value 31.12.2015</b>	<b>7</b>	<b>-166</b>	<b>-159</b>	<b>-70</b>	<b>-70</b>	<b>-229</b>
<b>Book value 1.1.2016</b>	<b>7</b>	<b>-166</b>	<b>-159</b>	<b>-70</b>	<b>-70</b>	<b>-229</b>
Changes	-	-23	-23	95	95	72
Tax effect	-	3	3	-24	-24	-21
<b>Book value 31.12.2016</b>	<b>7</b>	<b>-186</b>	<b>-179</b>	<b>1</b>	<b>1</b>	<b>-178</b>

## Auditor's report



Statsautoriserte revisorer  
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## INDEPENDENT AUDITOR'S REPORT

To the General Meeting of Statnett SF

### Report on the audit of the financial statements

#### Opinion

We have audited the financial statements of Statnett SF, which comprise the financial statements for the parent company and the Group. The financial statements for the parent company and the Group comprise the balance sheet as at 31 December 2016, the statements of comprehensive income, the statements of cash flows and changes in equity for the year then ended and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the financial statements of Statnett SF have been prepared in accordance with laws and regulations and present fairly, in all material respects, the financial position of the Company and the Group as at 31 December 2016 and their financial performance 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 in accordance with the ethical requirements that are relevant to our audit of the financial statements in Norway, and we have fulfilled our ethical responsibilities as required by law and regulations. We have also complied with our other ethical obligations 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. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the financial statements.

#### Tangible fixed assets and plants under construction

The carrying value of tangible fixed assets were MNOK 33 861 for the Group and MNOK 33 477 for the Parent Company. The carrying value of plants under construction were MNOK 8 473 for the Group and MNOK 6 444 for the Parent Company. Total additions to plants under construction in 2016, included capitalized construction interest, were MNOK 7 695 for the Group and MNOK 6 457 for the Parent Company. The considerations for determining the capitalization date and the choice of depreciation period are judgmental and complex.

Statnett's revenues are regulated by the authorities represented by the Norwegian Water Resources and Energy Directorate (NVE), and the capitalization date for construction projects and the determination of depreciation period have significant effect on the determination of the revenue cap. Due to the assets'

## Auditor's report



size and complexity, the degree of judgmental assessments and the influence on future revenue cap, this is considered a key audit matter.

We have tested the internal control and authorization routines, including verifying whether Statnett complies with its routines for entering into contracts, recognition and follow-up of projects. We tested the recognition of a sample of additions and disposals, assessed the capitalization date and useful lives and assessed the distinction between upgrades and maintenance. We have also compared project reports and project accounts against underlying documentation on a sample basis, discussed projects with project owners and evaluated the accounting treatment. We performed analytical audit procedures and evaluated the analyses performed by Statnett.

We refer to note 8 and 9 in the financial statement for additional information.

### Hedge accounting

Statnett uses financial derivatives to reduce risk related to interest and foreign currencies. The fair value of these derivatives can fluctuate considerably in line with changes in market prices. Financial instruments, which hedge interest and foreign currencies, are subject to complex accounting rules, and assessing the accounting treatment implies the use of judgments. The Company applies hedge accounting for cashflow hedges and fair value hedges, and in addition, Statnett has derivatives where hedge accounting is not applied. The complexity of the financing activities with related hedges, amounts involved and complex accounting rules make this a key audit matter.

We tested the internal control and authorization routines in the finance process, as well as verifying that Statnett complies with its routines related to the day-to-day accounting and follow up of derivatives. We tested a sample of hedging instruments against third-party confirmations, recalculated the fair values and considered whether the hedging documentation was adequate and compliant with current requirements pursuant to the accounting rules. We performed our own analytical audit procedures and we assessed the analyses performed by Statnett.

We refer to note 10, 11 and 12 in the financial statement for additional information.

### Other information

Other information consists of the information included in the Company's annual report other than the financial statements and our auditor's report thereon. The Board and CEO (management) is responsible for the other information. 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 management for the financial statements

Management is responsible for the preparation and 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 determine 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 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 Company or to cease operations, or has no realistic alternative but to do so.



## Auditor's report



### Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the 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 law, regulations and generally accepted auditing principles 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, 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 internal control;
- ▶ evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management;
- ▶ conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's 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 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 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.

## Auditor's report



### Report on other legal and regulatory requirements

#### Opinion on the Board of Directors' report and in the statements on corporate governance and corporate social responsibility

Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors' report concerning the financial statements and in the statements on corporate governance and corporate social responsibility, and the going concern assumption and proposal for the 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 have fulfilled their duty to ensure that the Company's accounting information is properly recorded and documented as required by law and bookkeeping standards and practices accepted in Norway.

Oslo, 30 March 2017  
ERNST & YOUNG AS

Finn Espen Sellæg  
State Authorised Public Accountant (Norway)

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

# Cost development

The Norwegian Water Resources and Energy Directorate (NVE) has submitted a report for consultation containing a review of its regulation of Statnett. In the report, the NVE concludes that it is difficult to give Statnett good efficiency incentives. Consequently, the NVE concluded that Statnett should publish a report every second year which provides a detailed description of cost developments for the previous five years, as well as prognoses for the activity level for the next five years. In addition to reporting on company level the development shall be shown per function. The functions are based on the division of activities of Transmission System Operators (TSO) in the European TSO benchmarking e3-Grid. This interim report is Statnett's response to the NVE's order for the period 2012-2021. The reporting covers all activities in Statnett SF. It does not cover activities in subsidiaries. However, the subsidiary NordLink Norge AS will affect Statnett's permitted revenue when the NordLink cable is commissioned in 2019.

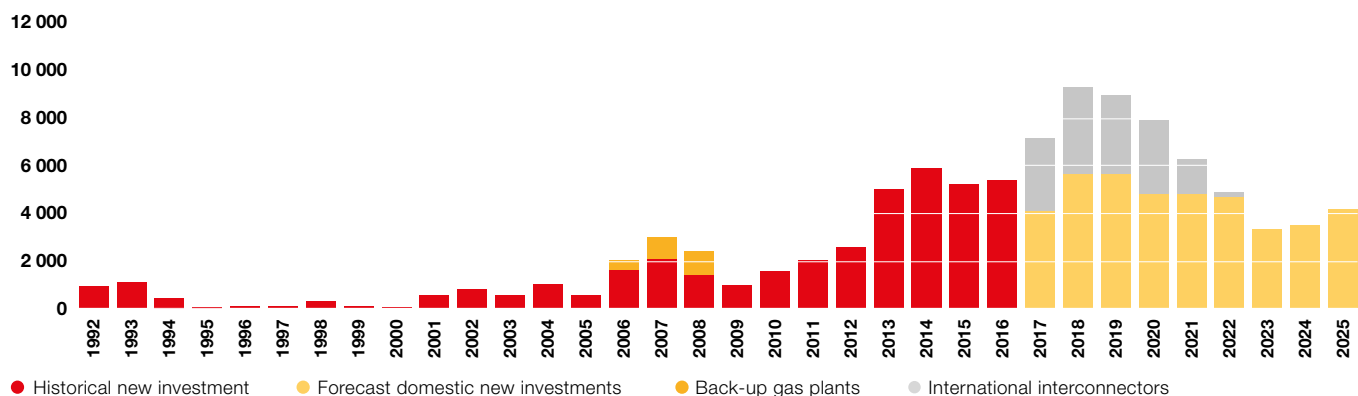
In 2014, Statnett reported operating costs developments for the 2007-2013 period to the NVE. Prior to 2013, Statnett was in a period dominated by growth in the company's activity and cost level. Increased focus on preparedness as well as on operation and maintenance resulted in a deliberate escalation of the cost level. Furthermore, growth was necessary due to increased tasks and

requirements relating to the enterprise, in order to upgrade the organisation to be able to implement the necessary investments and contribute to the development of the supplier markets. The need for transmission grid investments is described in more detail in Statnett's Grid Development Plan. Figure 1 shows historical and planned investments.

During the period 2013-2016, Statnett experienced further growth in its activities and tasks. Several projects were completed during the 2013-2016 period, including Varangerbotn - Skogfoss, Sima - Samnanger, the Eastern Corridor, Skagerrak 4, Ytre Oslofjord, Ørskog - Sogndal, parts of the Ofoten - Balsfjord power line and a number of minor projects. Major ICT projects were also completed during the period, including a new regulation and market system, "Fifty" (previously LARM), and parts of a new central operations system.

In December 2016, Statnett purchased the remaining 50 per cent of the shares in Lyse Sentralnett AS from Lyse Elnett AS, and the company changed its name to Statnett Rogaland AS. With effect from 1 January 2017, all transmission grid assets in Statnett Rogaland AS have been transferred to Statnett SF. Statnett SF has also taken over the remaining transmission grid assets in the region.

**Figure 1 Historical investment level and prognoses for new grid investments and larger reinvestments, based on the 2016 Updated Investment Plan – million 2016 NOK**



During the period, Statnett also acquired other transmission grid assets as a result of the Third Energy Market Package. So far, Statnett has acquired transmission grid assets from BKK Nett AS, EB Nett AS, Lærdal Energi AS, Odda Energi AS and small parts of Agder Energi Nett AS's transmission grid assets. In addition, Statnett acquired the enterprise Lofotringen, most recently the Kvitfossen - Kanstadbotn power line from Lofotkraft AS. Completion of the Kvitfossen - Kanstadbotn power line reinforced dual supply to Lofoten.

The investments during the period, as well as a strong focus on preparedness, operation and maintenance of the asset base, have helped improve security of supply in several regions in Norway. Furthermore, the development has promoted value creation in the affected areas and contributed to realisation of Norway's climate goals, particularly through investments that enable connection of new renewable energy.

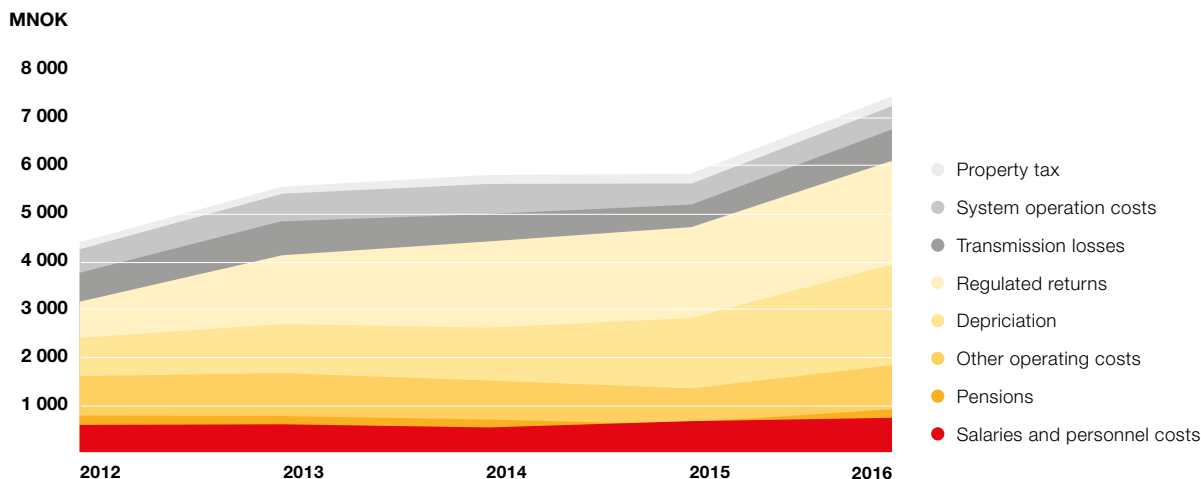
Cost effective construction and operation of the transmission grid is laid down in Statnett's articles of association and has high priority in the enterprise. In 2013, Statnett ranked among the most cost-efficient transmission system operators (TSOs) in Europe, based on figures from 2011. To ensure efficiency improvements also during a period of growth in the enterprise's activity level, Statnett established a programme in 2013 that aimed to improve cost-efficiency by 15 per cent. The programme enjoys strong support from the organisation and management, and the programme objectives will be realised by the end of 2018 through a combination of cost reductions, productivity improvements and quality improvements. One important instrument to realise efficiency improvements is the

company's effort to improve key processes, to ensure that the company's tasks are solved in the best and most efficient manner. The Group management follows up measures, progress and results through continuous performance monitoring, and the results are reported to the Board of Directors each quarter. The Ministry of Petroleum and Energy and the Norwegian Water Resources and Energy Directorate are kept updated about the programme and the results from the programme.

The programme has shown good results so far and Statnett is on track for meeting its target of 15 per cent efficiency improvement for the period 2013-2018. Operating costs in relation to the asset base (maintenance-intensive components) show an improvement of nine per cent in 2016 compared with 2013. Long-term financial prognoses prepared in the autumn of 2016 indicate a projected improvement in 2018 of 15 per cent, which will continue for the rest of the period. Construction cost estimates for investments, which measure the efficiency of much of Statnett's use of resources, indicate an improvement of 11 per cent at year-end 2016. The prognosis for 2018 indicates 15 per cent improvement compared with 2013.

The prognoses and expectations for the future shown here are based on Statnett's financial long-term plan from the autumn of 2016. The long-term plan was prepared based on the "Updated Investment Plan", submitted to the NVE in the autumn of 2016. During the spring of 2017, Statnett will submit a new Grid Development Plan for consultation, and the company will adopt a new corporate strategy and investment plan during the course of 2017. These processes may result in changes to the enterprise's plans and forecasts.

Figure 2 Historical cost developments Statnett SF



The plans are founded on an activity level that in turn is based on Statnett's strategy and expected scope of tasks established in the autumn of 2016. Costs and revenues also depend on parameters such as inflation, wage growth, power prices, market interest rates, as well as other parameters of importance to the reference rate used in the financial regulation of grid companies in Norway.

### 1 Company level developments

This chapter shows cost developments at company level. The chapter describes the historical development according to cost groups and expectations relating to future permitted revenue. There is also a detailed description of developments in wage costs, purchase of services and other operating costs. Furthermore, the chapter provides a statement of historical and anticipated developments in capitalisation and plants under construction, as well as higher/lower revenue.

#### 1.1. Historical costs – growth in capital expenditure

Figure 2 shows cost developments over the last five years. The Figure shows that the highest increase during the period was in capital expenditure, both capital wear (depreciation) and capital tied up (regulated return). Investment projects such as Sima - Samnanger, Ørskog - Sogndal, the Eastern Corridor as well as Skagerrak 4 are major projects commissioned during the period, resulting in an increase in the enterprise's return basis and depreciation. The increase in return basis for the period is described in more detail in Section 1.5. Tied-up capital (regulated return) also depends on the regulated reference rate (the NVE interest rate). This was particularly low in 2012. The model for stipulation of the interest rate was amended as of 2013.

Transmission loss costs fluctuate according to the power price and were consequently lower during the period. There was also a down-

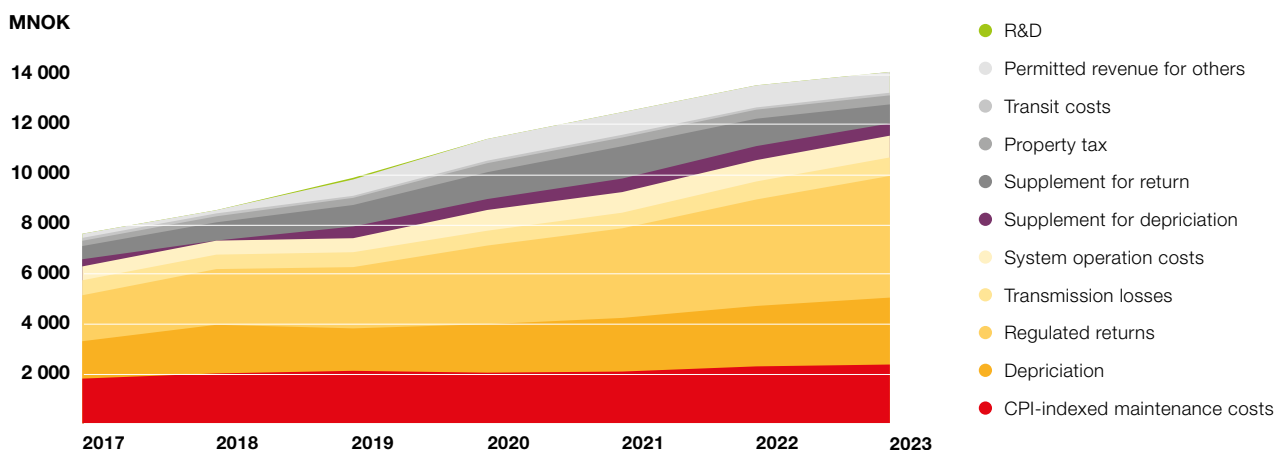
ward trend in system operation costs during the period. This was due to both hydrological conditions and changes in market solutions, e.g. as a result of measures in Statnett's efficiency programme which have reduced Statnett's costs. System operation costs are costs incurred by the transmission system operator in connection with balancing and operation of the power system. These mainly relate to purchase of reserves and regulation services. The system operator costs, which are referred to later in this interim report, are ordinary operating and investment costs pertaining to the function.

The internal efficiency programme, the "15% programme", resulted in a downward trend in operating costs – salaries and personnel costs, pension and other operating costs – in the period 2013-2015. These costs increased slightly in 2016. Other than a general rise in prices, the increase is mainly due to high breakdown costs and an increased asset base. The increased asset base is due to Statnett's takeover of transmission grid assets from other grid owners and commissioning of the company's new investments. Statnett has also started expanding the organisation for takeover of additional transmission grids in South-Western Norway and other places in Western Norway. In relation to the growth in the asset base (maintenance-intensive components) these costs are reduced with nine per cent compared to 2013. Furthermore, Statnett has been given additional tasks relating to implementation of European rules, including introduction of Network Codes and new common European trading solutions. This has also increased costs.

#### 1.2. Expected development – continued growth in capital expenditure

Figure 3 illustrates the expected development in permitted revenue for the 2017-2023 period, and the cost elements for the period. In the upcoming period, investments will drive developments in

Figure 3 Expected development in permitted revenue Statnett SF



permitted revenue. The capitalisation behind the increase in regulated return and future depreciation is described in more detail in Section 1.5. Through its internal efficiency improvement programme, Statnett has contributed to limiting the growth in investment costs and capitalisation for the upcoming five-year period. Statnett has e.g. managed to reduce the projected construction cost estimates by 15 per cent for 2018 compared with 2013 among other things by establishing a supplier market and conducting research into and qualifying new technological solutions.

### Operating costs

Consumer price index-adjusted (CPI) operating costs from two years back are included in Statnett's revenue cap. This item does not include depreciation, property tax or power purchases to cover transmission loss. This has been included in separate items in permitted revenue. System operation costs and transit costs are also included as separate items in Statnett's permitted revenue.

As of 2016, pension costs are included as a five-year average to even out any major fluctuations in allocated pension liabilities. For some years, however, provisions that emanate from the average period may still result in operating cost fluctuations from one year to the next.

Operating costs, corrected for historical pension fluctuations, will increase during the period due to inflation, wage growth and a higher workload in connection with Statnett's acquisition of transmission grid assets. Statnett focuses on efficiency improvement, and this is expected to give lower growth in operating costs than the increased activity for the period 2017-2021 (included in the 2019-2023 revenue cap).

### Depreciation and amortisation

Depreciation and amortisation of grid capital from two years back is included in the revenue cap basis. Depreciation and amortisation increases during the period as a result of investments. The licence for use 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 saleable value, which resulted in particularly high cost base depreciation for 2018.

### Supplement for depreciation and amortisation

The difference between depreciation and amortisation in the revenue cap year and depreciation and amortisation in the revenue cap (t-2) is included as a supplement to the grid companies' revenue cap. The supplement for depreciation and amortisation will increase during the 2017-2021 period (with the exception of 2018 as a result of high depreciation and amortisation in 2016).

### Regulated return

Return, equal to the NVE interest rate on reported grid capital from two years back, with a mark-up of one per cent on book value for working capital, is included in the grid companies' revenue cap. The return will increase during the period as a result of capitalised investments and higher interest rates. The return basis based on book value provides the highest return at the beginning of the asset's lifetime. This means that the increase in return in Figure 3 has a steeper growth than depreciation.

### Supplement for return

The difference between revenue cap return (t-2) and return from grid capital in the revenue cap year (t) is included as a supplement to the grid companies' revenue cap. The supplement for return will increase throughout the period due to commissioning of more assets than are depreciated, and a higher interest rate.

### Grid loss

Costs relating to coverage of transmission loss in the grid are set according to the volume two years back and the reference price for power, estimated based on the current year's power price and consumption pattern. Commissioning of NordLink will increase grid loss volume in 2020 (included in the 2022 revenue cap).

### System operation costs

Statnett's permitted revenue comprises 40 per cent of actual system operation costs and 60 per cent of the system operation norm stipulated by the NVE. The current norm is applicable until the end of 2017 and is NOK 600 million in 2013 NOK. Subsequently, the norm will be equal to the prognosis for actual system operation costs. Costs are expected to surge in 2020 as a result of all-year operation of NordLink.

Parameters used to calculate permitted revenue	2017	2018	2019	2020	2021	2022	2022
NVE interest rate (%)	6,27	6,47	6,46	6,89	6,97	6,97	6,97
Inflation (%)	2,00	2,10	1,90	2,50	2,50	2,50	2,50
Reference price power (NOK/MWh)	222	232	214	219	219	219	219

### Supplement for property tax

Statnett's estimates indicate that property tax costs will increase annually in the 2017-2021 period. The main reason for the increase is that property tax is likely to be levied on many of Statnett's new investments. Several municipalities will introduce property tax, and the property tax rate will increase in municipalities with a current rate below 7 %.

### Supplement for transit costs

The European Inter-Transmission System Operator Compensation (ITC) mechanism entails that TSOs in perimeter countries pay compensation to TSOs in countries hosting cross-border flows of electricity. As the grid owner in a perimeter country, Statnett pays annual transit costs, which are included in the permitted revenue as a supplement. We have assumed that the transit costs remain stable throughout the period.

### Permitted revenue for other transmission grid owners

Statnett SF collects permitted revenue for the entire transmission grid, including permitted revenue for other owners. It is assumed that Statnett SF will acquire the remaining transmission grid, and permitted revenue for other owners will consequently be reduced in the period leading up to 2019, while Statnett's permitted income will increase correspondingly. Concurrently, the permitted revenue will increase for the other owners as a result of commissioning of the NordLink cable. The cable is owned by NordLink Norge AS, a wholly-owned subsidiary of Statnett SF. The revenue cap for NordLink will principally be capital expenditure.

### Supplement for R&D costs

Research and development (R&D) costs in NVE-approved projects may be included as a supplement to the revenue cap in the same

year as they incur. Such costs will be deducted from the cost basis included in the revenue cap two years later. Approved R&D costs make up an insignificant share of Statnett's permitted revenue.

Moreover, it has been assumed that Statnett's efficiency will continue to be estimated at 100 per cent, 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 the NVE had estimated Statnett's efficiency lower, it would have had a negative impact on the revenue cap equal to the cost basis without grid loss multiplied by a percentage of 0.6 of the efficiency reduction. This has no impact on the supplements, and will in any case be included 100 per cent in permitted revenue.

### 1.3. Historical trends relating to salaries and personnel costs and purchase of services

Figure 4 shows trends in salaries and personnel costs, pensions and purchase of services. The figure only reflects costs related to operations, i.e. excluding costs reported as investment costs.

Net salaries and personnel costs excluding pensions increased during the period 2012-2016 due to a 30 per cent increase in the number of employees. Net salaries and personnel costs vary from year to year depending on how many hours are spent on investment projects and thus capitalised as investments. Net salaries and personnel costs were low in 2014 as a relatively large proportion of salaries and personnel costs was capitalised. In isolation, salaries and personnel costs increased due to a change in the differentiated employer's contribution scheme halfway through 2014. This resulted in a gradual increase in the level from 2013 to 2015 in the counties Troms and Finnmark. salaries and personnel costs increased from 2015 to 2016 due to an increased asset base and additional tasks, cf. Section 1.1.

**Figure 4 Historical trends relating to wage and staff costs, pensions and purchase of services**

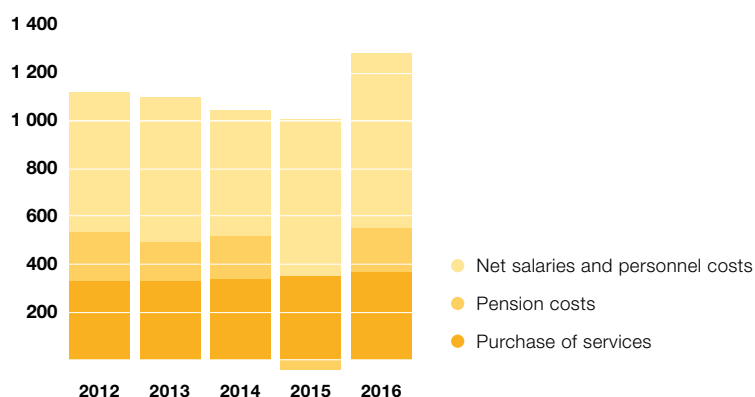
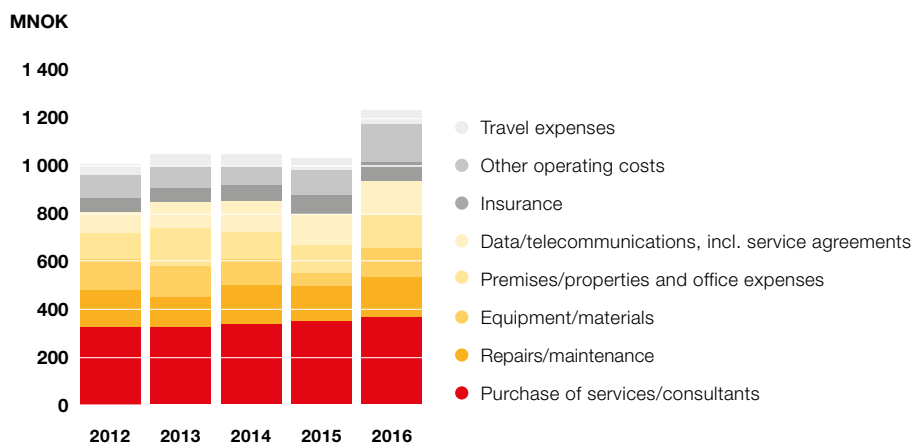


Figure 5 Other operating costs



Pension costs varied considerably from year to year due to changes in accounting policies (2012), changes in actuarial assumptions and changes to the pension schemes (2015). Pension costs were negative in 2015. This was due to a non-recurring effect of transitioning from a defined-benefit to a defined-contribution pension scheme, which affected most employees in the Group. There were only minor changes relating to purchase of services during the period.

At the beginning of the upcoming five-year period, net wage costs are expected to increase further from the 2016 level, due to an increase in personnel. The increase is primarily due to Statnett's recent and upcoming acquisition of more transmission grid assets. In 2013, Statnett SF owned 86 per cent of the transmission grid in Norway, measured according to its asset base. As of 1 January 2017, the enterprise has acquired another six per cent of the transmission grid. Statnett will take over the remaining transmission grid in the coming period, i.e. 8 per cent of the asset base measured in 2013<sup>1)</sup>. Statnett will also take over new transmission grid assets, such as the Honna substation from Agder Energi Nett AS, as well as Fana-Lindås (2018) and Lindås-Modalen (2020) from BKK Nett AS. As of 2017, transmission grid activities in the Rogaland area have been transferred from Statnett Rogaland AS (previously Lyse Sentralnett AS) to Statnett SF. Concurrently, an operations organisation must be established in Western Norway to prepare for the takeover of operation of grid assets in the area, including grid acquired from BKK Nett in 2016. In this connection, the parties have signed an operation, maintenance and preparedness agreement spanning a three-year period. Moreover, pension costs are expected to increase in line with the increase in the number of personnel.

A slight increase in purchase of services is expected in 2017 due to strengthened R&D work, increased focus on preparedness, upgrade and digitisation of a technical asset register, parallel operation of a new and old central operations system and a strong HSE commitment. Purchase of balancing services from eSett OY, Nordic Imbalance Settlement, will also result in an increase in purchase of services. Over the next two years, purchase of services is expected to decrease gradually and then remain stable. The reason for this reduction is e.g. full-scale commissioning of the new central operations system and several other internal improvement measures scheduled for completion during the period 2018-2019.

#### 1.4. Development - other operating costs

Figure 5 shows developments in other operating costs during the period 2012-2016. "Purchase of services / consultants" is described in Section 1.3. "Repairs/maintenance" and "equipment/materials" in 2016 were on par with 2012. These costs follow the activity level relating to grid maintenance and repairs, which has varied. Costs associated with premises/properties were higher in 2013 and 2016 than in the rest of period. The peak in 2013 was due to Statnett paying rent for a new headquarter in Nydalen Allé 33 while at the same time paying rent parts of the year for premises in Hoffsveien at Smestad. These rent payments ceased in 2014 when Statnett purchased Nydalen Allé 33. Rent payments increased in 2016 as the company needed to rent external offices in Nydalsveien 28 to accommodate more staff due to higher project activity. Costs associated with data/telecommunications and service agreements increased during the period due to growth in the number of users and systems. There has been a gradual increase in insurance costs due to an increase in the company's asset base.

<sup>1)</sup> Three owners of other transmission grids in Norway have applied to have their transmission grid assets reclassified as distribution grids. They own a total of 2.6 per cent of the 8 per cent not owned by Statnett.



Other operating costs were stable during the period 2012-2015. In isolation, sponsoring costs were reduced due to a new sponsoring strategy. Considered separately, other operating costs were high in 2014 and 2016 due to the accounting effects from non-efficient currency hedging in projects that did not satisfy requirements relating to hedge accounting in the balance sheet. For 2014, this was offset by a reversal of a provision from 2009 associated with notice of a penalty fee imposed following a breakdown of a cable across Ytre Oslofjord in 2008, after the Ministry of Petroleum and Energy upheld Statnett SF's appeal concerning the NVE's resolution regarding a penalty fee. Other operating costs were high in 2016 due to a negative accrual deviation arising from the sale of Noreveien 26 in Oslo.

In 2017, other operating costs are expected to be on a par with 2016. In the subsequent years, other operating costs are expected to follow the development described in relation to purchase of services in Section 1.3.

**1.5. Statnett paves the way for the transmission grid of the future**

Statnett will develop an infrastructure that will meet the power needs of the future – while at the same time operating the power system. The power system of the future must take into account several social considerations: a safe and reliable supply of electricity, a climate-friendly energy system as well as value creation and jobs. Consequently, Statnett must build a power grid which has been adapted to these considerations. Furthermore, Statnett must combine extensive automation and digitisation with improved market solutions, which together will provide a system that can

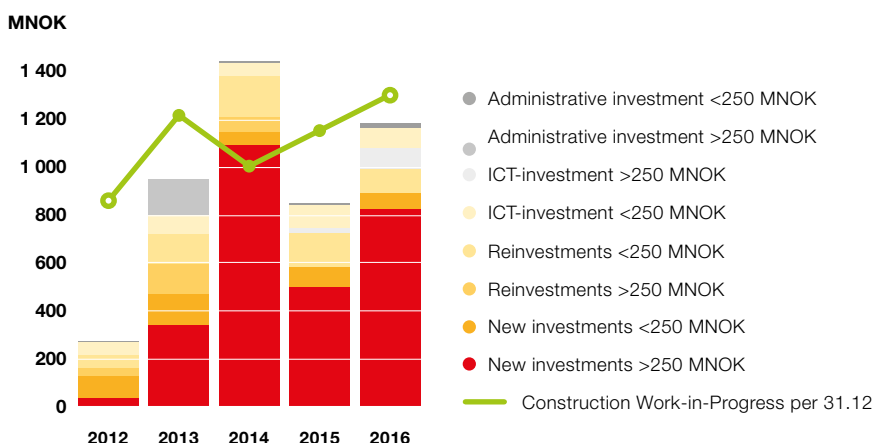
handle more variable power generation, high consumption and major consumption fluctuations, and that can be operated in an efficient manner.

During the period 2012-2016, the scope of projects in the execution phase grew considerably. At the same time, planning of new projects was still at a high level. Figure 6 shows the effect of the development on capitalisation and plants under construction during the period.

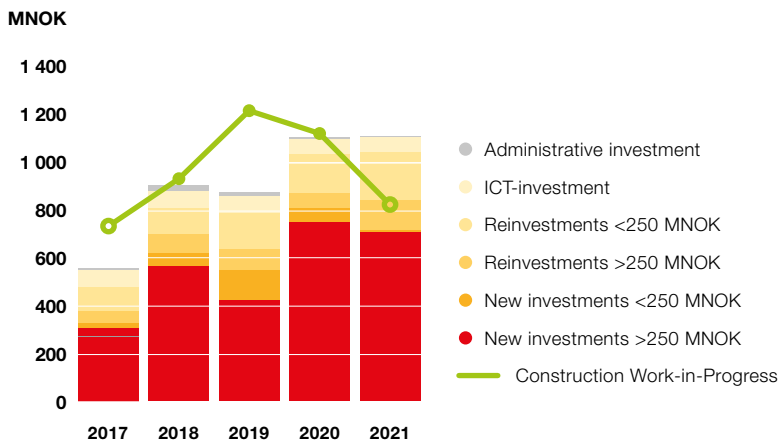
"Plants under construction" shows the balance for investment costs from assets under construction. Capitalisation takes place when an asset is commissioned. Investment costs for the commissioned asset are then reported in "Property, plant and equipment" instead of "Plants under construction". Upon capitalisation, the asset is written down and included in the basis for Statnett's permitted revenue.

Figure 6 shows that most of the capitalisation stemmed from major investment projects. Although a large part of the growth in asset base was due to major projects, some minor reinvestments were also made due to local needs for replacements. During the period, these reinvestments total approximately NOK 500 million per year. There was an increase in capitalisation of IT projects at the end of the period. This was mainly due to the development of a new regulation and market system and a new central operations system. Capitalisation from administrative investments was low, except in 2013 when Statnett purchased the headquarters in Nydalen in Oslo. Table 1 shows historical capitalisation years for investment projects above NOK 250 million during the period 2012 to 2016.

**Figure 6 Historical development - capitalisation and plants under construction**



**Figure 7 Expected development - capitalisation and plants under construction**



Capitalized Assets Projects >250 MNOK	Type of investment	2012	2013	2014	2015	2016
Outer Oslofjord, reinvestments interconnectors	Reinvestment	D	D	S		
Shunt reactors for voltage reduction	New investment	D	D	D	D	D
Sima - Samnanger, new 420 kV power line	New investment	D	S			
Varangerbotn - Skogfoss, new 132 kV power line	New investment	D	D	S		
Acquisition of Nydalen Allé 33	Administrative investment		S			
Ørskog - Sogndal, new 420 kV power line	New investment		D	D	D	S
Transformer capacity Eastern Norway	New investment		D	D	D	D
Ofoten - Balsfjord, new 420 kV power line	New investment			D	D	D
Skagerrak 4, cable to Denmark	New investment			S		
Eastern Corridor, voltage upgrades	New investment			S		
Western Corridor, voltage upgrades	New investment			D	D	D
Upgraded Operating Centre System	ICT-investment				D	D
Acquisition of transmission grid from BKK Nett	New investment					S
Acquisition of Kvitfossen - Kanstadbotn from Lofotkraft	New investment					S
Balsfjord - Skaidi, new 420 kV power line	New investment					D

**Table 1**  
Historical capitalisation for projects >NOK 250 million

D = part capitalisation, S = most recent actual capitalisation

<sup>2)</sup> Many new investments includes some elements of reinvestments

The duration from the last commissioning until the project is fully completed, depends on the complexity of the contract termination.

Construction of the transmission grid for the future will continue over the next five years. This will lead to increased activity in implementing as well as planning still will be at a high level. Figure 7 shows expected developments in capitalisation and plants under construction. The prognoses in Figure 7 and Tables 2 and 3 are based on the "Updated Investment Plan" which was submitted to the NVE in the autumn of 2016. During the spring of 2017, Statnett will submit a new Grid Development Plan for consultation and the company will adopt a new corporate strategy and investment plan during the course of 2017.

The increase in Plants under construction during the period leading up to 2019 is primarily due to construction of the North Sea Link, the Balsfjord - Skaidi power line, the Western Corridor, parts of the Greater Oslo Grid Plan and connection of wind power at Fosen. The subsidiary NordLink Norge AS is responsible for the international interconnector to Germany (NordLink), and the activities

are regulated with a separate revenue cap. Investments in the cable are not included in the tables and figures in this chapter.

Also in the coming period, major new investment projects are expected to contribute most to capitalisation. Table 2 shows historical capitalisation years for new investment projects above NOK 250 million during the period leading up to 2021.

Minor reinvestment projects are expected to increase in the period towards 2021, e.g. as a result of a number of investments in switchgear and control systems.

Capitalisation of new investment projects below NOK 250 million is expected to peak at around NOK 1.2 billion in 2019. Several substation and capacity increase projects are scheduled, in addition to purchases in connection with the Third Energy Market Package.

IT investments will be lower during the period, down from NOK 775 million in 2017 to approximately NOK 640 million in 2021. It is particularly monitoring of substations and system upgrades of

Capitalized Assets New investments >250 MNOK	2017	2018	2019	2020	2021
Shunt reactors for voltage reduction	D	S			
Ofoten - Balsfjord, new 420 kV power line	D	S			
Klæbu - Namsos, voltage upgrades	D	S			
Namsos - Nedre Røssåga, voltage upgrades	D	S			
Western Corridor, voltage upgrades	D	D	D	S	
Acquisition of Honna substation from Agder Energi	S				
Acquisition of Fana - Lindås from BKK Nett		S			
Namsos - Surna, new 420 kV power line		D	S		
Balsfjord - Skaidi, new 420 kV power line		D	D	D	S
Haugalandet, reactive compensation			S		
Greater Oslo Grid Plan; Liåsen, new substation			D	S	
Lyse - Fagrafjell, new power line and substation			D	D	D
Acquisition of Lindås - Modalen fra BKK Nett				S	
Isfjorden, new substation				S	
Salten, new substation				D	S
Cable to Englang (NSL)				D	S
Greater Oslo Grid Plan; Hamang new substation					D
Greater Oslo Grid Plan; Sogn - Ulven, interconnectors					D

**Table 2**  
Projected capitalisation new investments >NOK 250 million

D = part capitalisation, S = most recent actual capitalisation

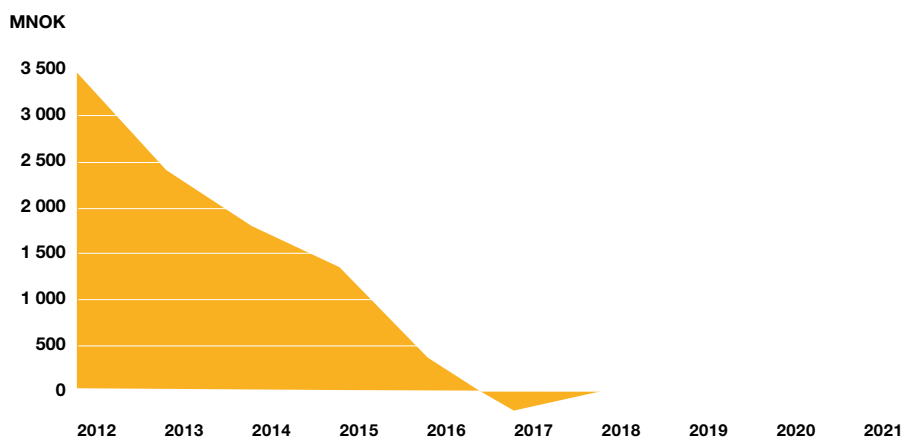
<sup>2)</sup> Many new investments includes some elements of reinvestments

Capitalized Assets Reinvestments >250 MNOK	2017	2018	2019	2020	2021
Sylling, reinvestment substation	D	D	D	S	
Inner Oslofjord, reinvestments interconnectors	D	S			
SVC Rød, Verdal og Sylling substations		D	D	S	
Greater Oslo Grid Plan; Sogn, reinvestment substation		D			S
Leirdøla, reinvestment substation			S		
Kristiansand, reinvestment control systems			D	S	
Greater Oslo Grid Plan; Smestad, reinvestment substation			D		S
Kobbelv, reinvestment substation				S	
Aurland I, II and III, reinvestment substation					S
Kvandal-Kanstadbotn, reinvestment 132 kV power line					D

**Table 3**  
Projected capitalisation reinvestments >NOK 250 million

D = part capitalisation, S = most recent projected capitalisation

**Figure 8 Higher/lower revenue balance as at 31 December.**



the central operations system that will increase the investment total over the first few years.

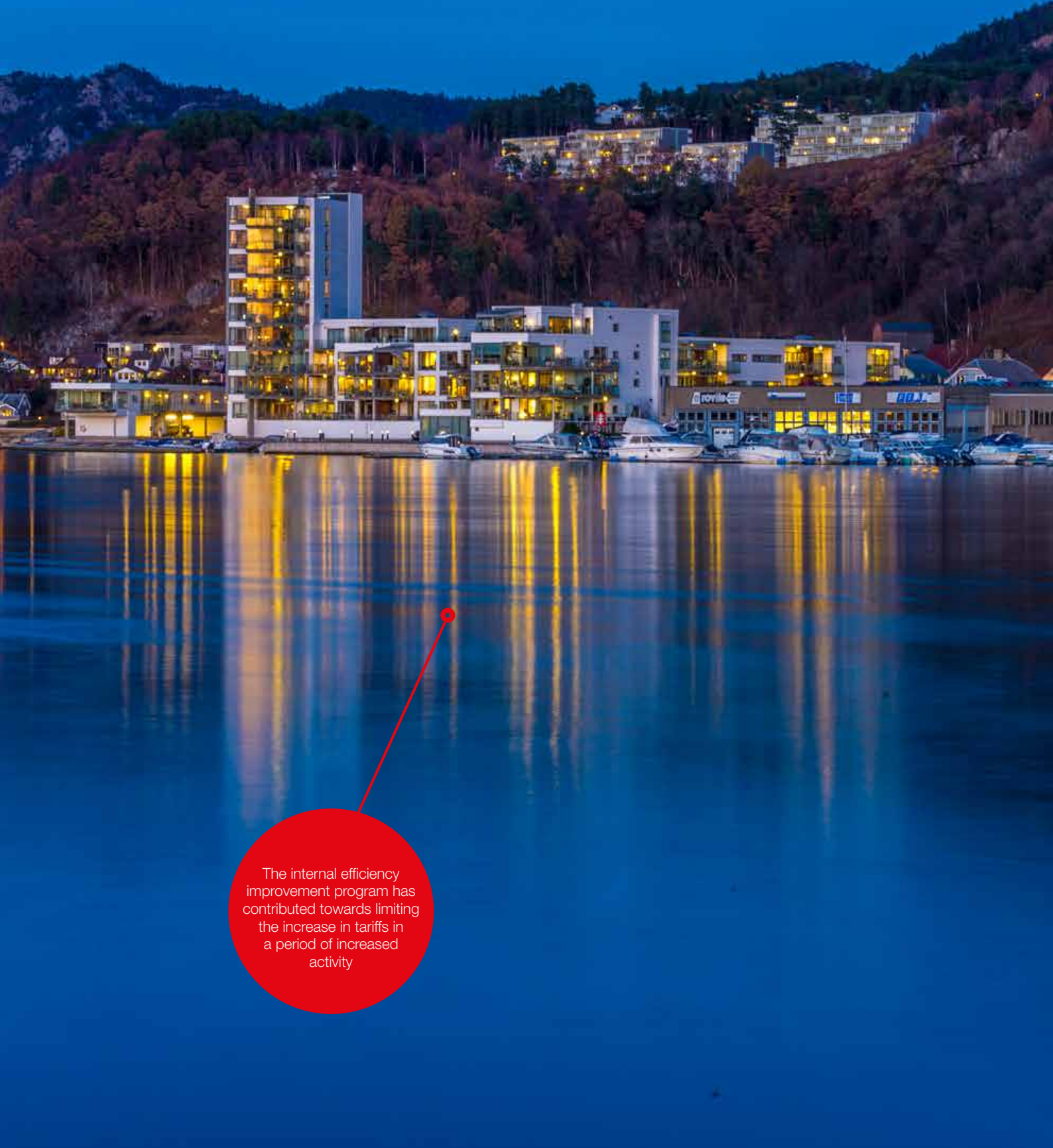
Table 3 shows projected capitalisation years for new investment projects above NOK 250 million during the period leading up to 2021.

Administrative investments are stable and expected to peak in 2018 and 2019 as a result of investments in administration buildings.

### 1.6. Higher revenue balance paid back over the course of 2017

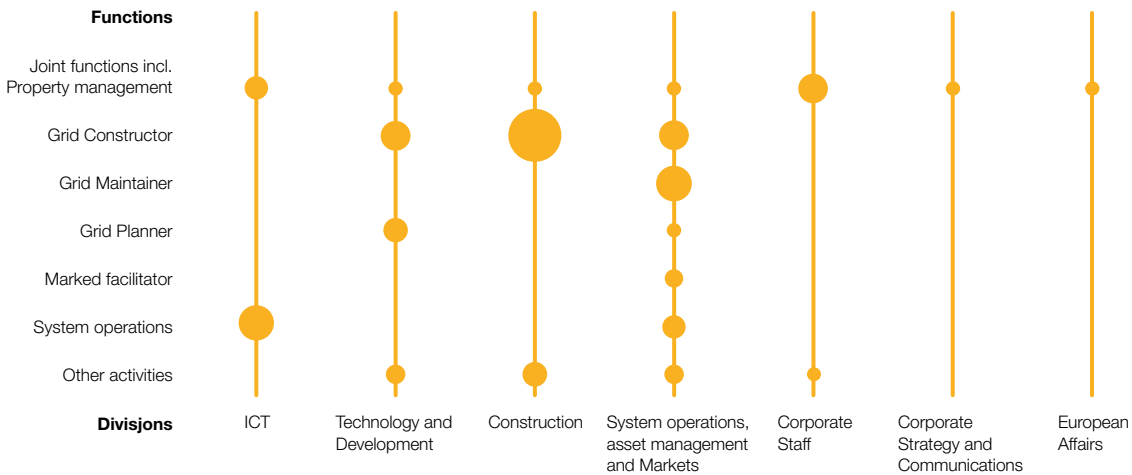
Since 2012, Statnett has prioritised repayment of higher revenue to the customers. As at 31 December 2016, the enterprise's higher revenue balance was NOK 343 million. The balance is expected to become lower revenue during 2017. Going forward, tariffs are expected to be set to ensure that the enterprise's higher/lower revenue is projected to be zero at the end of each year. Figure 8 shows the historical development in Statnett's higher/lower revenue balance and expected development over the next five years.

<sup>2)</sup> Many new investments includes some elements of reinvestments



The internal efficiency improvement program has contributed towards limiting the increase in tariffs in a period of increased activity

**Figure 9 Division activity within each function**



**2 Costs according to function**

In order to provide better insight into cost developments and activities during the 2012-2016 period and expectations for the coming five-year period in Statnett, the enterprise's activities have been split into functions. The functions are based on the division of TSO activities in the European TSO benchmarking e3-Grid. This chapter shows the correlation between Statnett's organisation and the functions, and the share of Statnett's activities within the various functions.

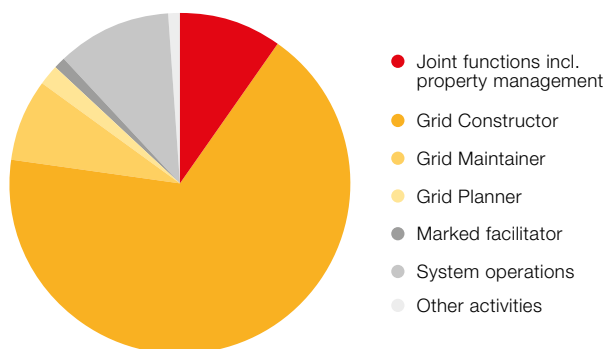
The subsequent chapters show historical cost and activity developments according to function. Comments have also been made concerning the anticipated cost and activity development at function level for the next five years.

**2.1. Correlation between Statnett's divisions and tasks solved in the various functions**

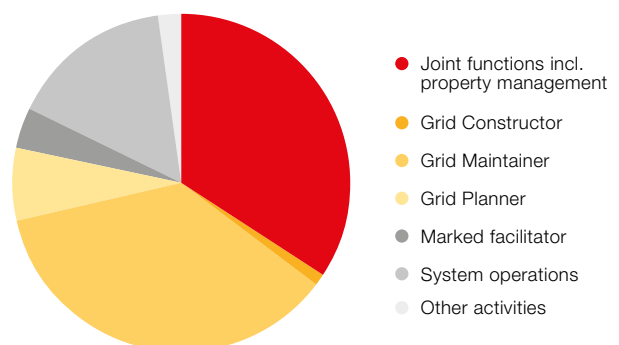
Figure 9 shows the correlation between the organisational structure in Statnett and the functions upon which the subsequent reporting is based. The size of the circles reflects how much resource (operations and investment costs) the division spent within each function in 2016. The smallest circles reflect use of resources below NOK 50 million, whereas the largest circles reflect the use of resources above NOK 1 000 million per year. It shows, e.g. that the System Operations, Asset Management and Markets division had activities within all functions, but that most of the resources were spent on operations and maintenance of grid assets in the maintenance function and reinvestments in existing assets in the Grid Constructor function.

The content in the individual function is described in more detail in the next chapters. The enterprise's divisions are described in more detail in "This is Statnett".

**Figure 10 Investment and operating costs in 2016 broken down for functions**



**Figure 11 Operating costs in 2016 broken down for functions**



**2.2. The functions' share of Statnett's costs in 2016**

Figure 10 shows that the largest share of the costs in 2016 was related to Grid Constructor. Significant investments in IT systems and system operator infrastructure resulted in them having the second largest share of the total costs for 2016. Furthermore, it is worth noting that investments in common ICT systems and administration buildings in 2016 contributed to relatively high total costs for joint functions and property management. Only operating costs are shown for Grid Maintainer and Grid Planner, as all new investments and reinvestments are included in Grid Constructor.

Only looking at operating costs, cf. Figure 11, the maintenance function was the largest, whereas joint functions including property management were the second largest. The system operator function was number three, and last came Grid Constructor.

**3 The maintenance function**

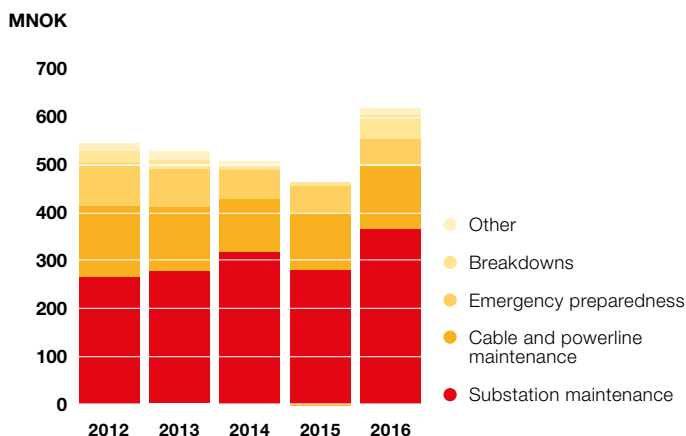
The maintenance function comprises all grid maintenance. Projects related to breakdowns are included. All hourly costs and material costs, as well as other resources used to maintain the grid, are included in the costs for this function. Also included are planned measures that will ensure a reliable supply of electricity and grid quality, such as technical inspection and forest clearing.

Most activities in this function have been included in Statnett's revenue cap cost basis. Some minor costs, such as loss in connection with sale of property, are not included in the cost basis pursuant to NVE rules.

**3.1. Costs in the maintenance function broken down for tasks**

Figure 12 shows cost developments for Grid Maintainer broken down for tasks. The Grid Maintainer only has operating costs, but in other functions both investment and operating costs are included.

**Figure 12 Grid Maintainer broken down for tasks**

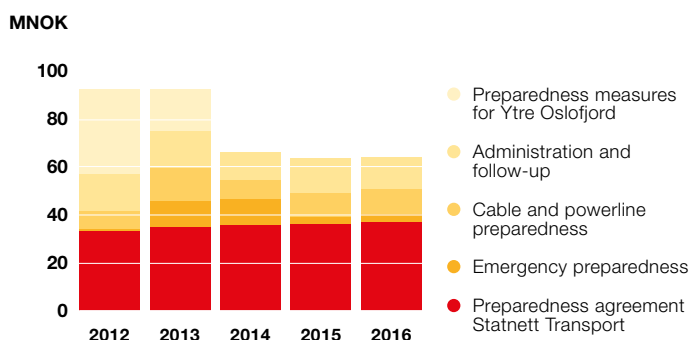


Reinvestments are reported under Grid Constructor. Costs and revenues are reported net.

Maintenance costs regarding the grid were stable during the period 2012-2015. These costs increased in 2016. The driver was primarily a larger asset base. Statnett acquired BKK Nett's transmission grid in the Bergen area and stepped up activities in the Rogaland area to prepare for takeover of Statnett Rogaland AS's transmission grid operations (previously Lyse Sentralnett AS). There was also an increase in the asset base in North-Western Norway in connection with commissioning of plants in the Ørskog - Sogndal investment project. The asset base also increased in Northern Norway following acquisition of the Lofotringen power lines, most recently the Kvitfossen - Kanstadbotn power line in 2016. Costs were particularly high for the NorNed cable in 2016. This was due to maintenance of the cable cover on the Dutch side of the border. Breakdown costs were high in 2016. Major breakdowns included breakdowns of the Hasle and Viklandet substations, breakdown of the power line in lower Røssåga and breakdown of the cable in Indre Oslofjord. Statnett is insured against breakdowns. Consequently, net breakdown costs are expected to be somewhat lower than the actual breakdown costs. The breakdown in Indre Oslofjord was not covered by the insurance, due to the old age of the asset. This means that even though breakdown refunds in 2017 will cover some of the other breakdown costs in 2016, the net costs for 2016-2017 will be relatively high.

Grid Maintainer costs are expected to fall in 2017, primarily because costs for the NordNed cable are projected to be normal. Costs are then expected to increase gradually during the rest of the period up to and including 2021, due to an increase in the company's asset base. In 2019, costs will be at the 2016 level in nominal NOK. In real NOK, costs will be below the 2016 level throughout the period.

**Figure 13 Emergency preparedness costs**



**3.1.1. Preparedness costs**

Preparedness costs consist of a preparedness agreement with Statnett Transport, costs associated with preparedness measures in Ytre Oslofjord in 2012 and 2013, other preparedness agreements and preparedness drills related to subsea cables, administration of the preparedness work and resources used to follow up and comply with preparedness regulations.

Emergency preparedness measures for Ytre Oslofjord include installation and elevation of an emergency cable. This was necessary to ensure security of supply during delayed deliveries from the supplier in the Ytre Oslofjord project. The measure resulted in high preparedness costs at the beginning of the period. An even amount of resources was used to follow up and comply with preparedness rules during the period. Substation preparedness costs were high in 2013 and 2014, due to the preparedness solution at Hamang substation. In 2013, cable and power line preparedness was high due to an offshore emergency preparedness drill. Total preparedness costs were stable during the period 2014-2016. Statnett has not separated all costs associated with preparedness measures and preparedness work. Consequently, the specification does not include all preparedness costs. Emergency storage rooms have e.g. been established, which have not been specified. These costs are mostly reported under Substation, Power Line and Cable Maintenance.

**3.2. The maintenance function broken down for cost types**

Figure 14 shows developments in full-time equivalents, salaries and personnel costs, purchase of services, other costs excluding purchase of services and other operating revenue. Only operating

costs are shown for Grid Maintainer, but in other functions, investment costs are also indicated. Full-time equivalents and salaries and personnel costs are adjusted for sale and purchase of hours between functions, thus reflecting all full-time equivalents and salaries and personnel costs in the respective function. Other operating revenues derive from profit from the sale of assets and breakdown refunds. The bars in Figures 12 and 14 are not directly comparable, as other operating revenues and costs are reported net in Figure 12, but reported gross in Figure 14. Salaries and personnel costs have also been adjusted for purchase and sale of hours in Figure 14.

Figure 14 shows that salaries and personnel costs have increased due to an increase in the number of full-time equivalents in 2015 and 2016. The growth in full-time equivalents was mainly due to an increase in personnel required to operate new transmission grid assets. In isolation, the wage level increased during the 2014-2015 period due to a change in the differentiated employer's contribution halfway through 2014. This resulted in an increase in salaries and personnel costs in Troms and Finnmark. Operating revenues were particularly high in 2015, due to major breakdown refunds from insurance claims. Purchase of services remained stable throughout the period. The preparedness agreement with Statnett Transport AS accounts for nearly half of the function's purchases of services. There was a downward trend in other operating costs excluding purchase of services during the 2012-2015 period, but costs increased in 2016 due to the reasons described above.

**4 Grid Planner**

The Grid Planner function comprises major parts of Statnett's responsibilities as Grid Planner. The planner function also comprises

**Figure 14 Grid Maintainer costs broken down for cost types**

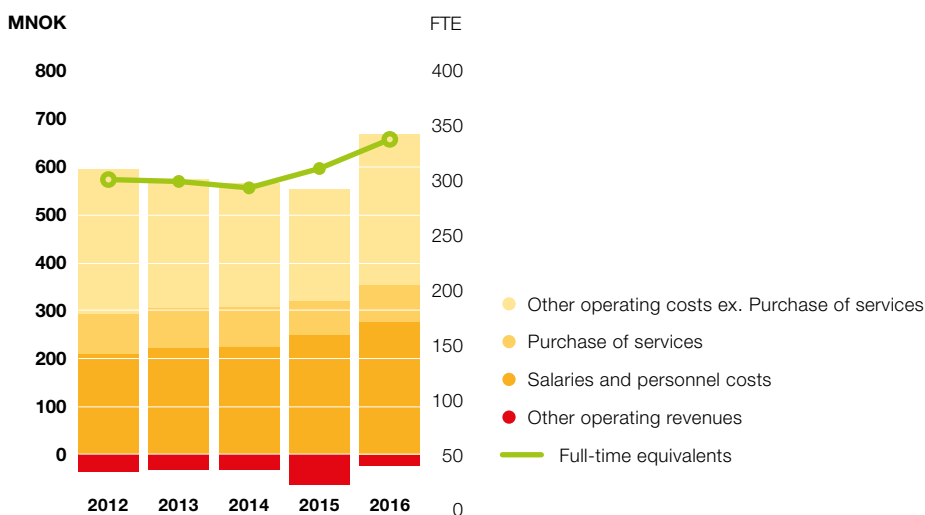
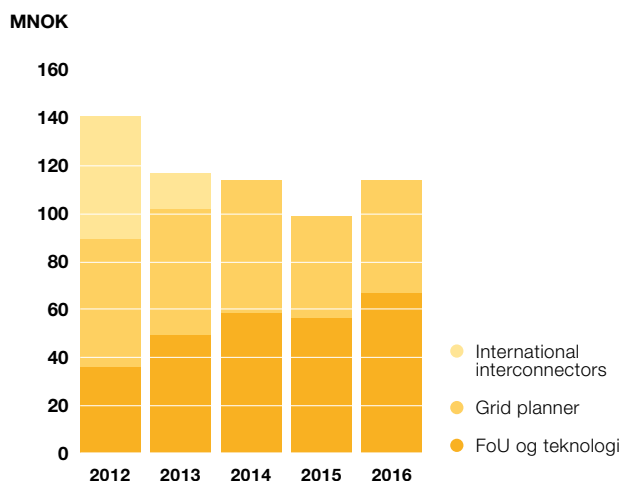




Figure 15 Grid Planner per task



the activities Research and Development, as well as technology standardisation and qualification.

The grid planner in Statnett plays a key role in exercising the enterprise's national responsibility for ensuring that the Norwegian power system is developed in a socially prudent manner. The function provides support in grid connection issues for power industry players who are planning to launch or further develop existing operations, and keeps track of developments in the need for grid connection and increased transmission capacity triggered by plans for new or changed generation or consumption. Furthermore, the Grid Planner is responsible for maintaining good relations with regional grid companies and for coordinating regional power system assessments. The function also provides consultation statements regarding other players' licence applications. The Grid Planner is responsible for preparing Statnett's external planning products (the Power System Assessment and Grid Development Plan). Furthermore, the Grid Planner is responsible for Statnett's concept and feasibility studies.

When it is highly probable that a project will be implemented, the project costs are capitalised as investment costs. Statnett usually starts capitalising costs as soon as the choice of concept has been made. From this time, the costs are no longer recognised under Grid Planner, but under Grid Constructor. For international interconnectors, costs are recognised as operating costs later on in the project development. Hence, they make up a significant share of the Grid Planner's costs in 2012 and 2013.

All operating costs reported under this function are included in the cost basis for Statnett's revenue cap.

#### 4.1. Grid Planner costs broken down for tasks

Grid Planner costs were considerably higher in 2012 than in the rest of the period, primarily as a result of international interconnectors being transferred to the Grid Constructor in 2013. Except for this, the Grid Planner costs remained relatively stable.

Statnett's focus on R&D and technology have resulted in several solutions that have made grid development and operations more efficient. New types of towers and foundations have been developed. Steel foundations are for instance being tested, which could entail savings of NOK 500 million on the Balsfjord-Skaidi power line alone. The development of lighter composite towers will also allow a much faster and safer construction process. Substantial costs may arise from disconnection of high-voltage power lines for maintenance or upgrading. Through its AUS project (live working), Statnett has developed methods which make it possible to perform work on a power line without having to disconnect it. The Voltage Upgrades programme has made it possible to reuse 30 per cent of the existing 300 kV towers in Norway, instead of having to construct new 420 kV towers. This saves billions and is highly beneficial for the environment and landscape, as less construction work will be necessary. A number of technology qualifications will be implemented in the next five years, such as new power line types and digitisation of substations. This is expected to result in substantial cost savings.

Costs associated with power system planning may increase over the next five years. The development depends on the grid development. However, analyses are required relating to maturing of new initiatives and assessments of grid alternatives as well as increased utilisation of the existing grid. In order to develop a larger portfolio of

innovative solutions for grid operations and development, Statnett is stepping up its R&D efforts over the next five years.

**4.2. Grid Planner costs broken down for cost types**

Figure 16 shows developments in full-time equivalents, salaries and personnel costs, purchase of services and other costs excluding purchase of services. There are no investments costs for the Grid planner, but in other functions, investment costs are also indicated.

Figure 16 shows an increase in salaries and personnel costs and full-time equivalents compared with 2013, whereas purchase of services decreased. Purchase of services includes R&D contracts. R&D costs increased from 2014, whereas other purchases of services such as consulting services, were reduced during the period. Purchase of consulting services was particularly low in 2015. For the Grid Planner, other operating costs excluding purchase of services were low throughout the period and negative in 2016. This was because funding for R&D projects from the Research Council of Norway and the EU was handled as a cost reduction, and because this was higher in 2016 than other operating costs excluding purchase of services.

**5 Grid constructor**

There are modest operating costs in the Grid Constructor function. Most of the costs related to grid construction projects will be capitalised as investment. The Grid Constructor function also includes purchase of grid assets. All costs in the function are included in the cost basis for Statnett’s revenue cap.

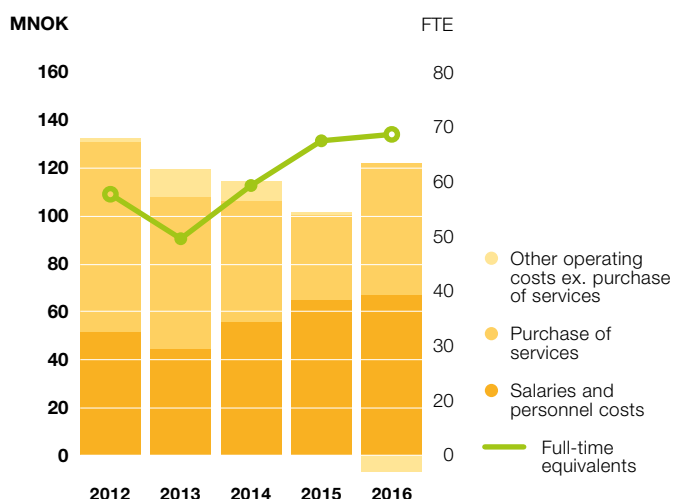
The investment level rose considerably up to 2013, and will remain at roughly the same level until the international interconnector to the UK, North Sea Link (NSL), has been completed. Construction shall be cost-efficient, and each project is followed up, with a particular focus on major projects. Progress in projects under development is published annually on [www.Statnett.no](http://www.Statnett.no), in connection with publication of the Grid Development Plan (GDP) and the Updated Investment Plan. For major, fully completed investment initiatives, the final cost and explanations of deviations from the licence decision and investment decision are presented in connection with publication of the GDP.

**5.1. Costs for the Grid Constructor, broken down for cost types**

Figure 17 shows developments in full-time equivalents, salaries and personnel costs, purchase of goods and other services without purchase of goods. For the Grid Constructor there will also be operating and investment costs.

Figure 17 shows costs in the 2012-2016 period. The investments were somewhat reduced in 2015. One reason for this was that the international interconnector project NordLink was demerged into the company NordLink Norge AS in 2015, and the investments accrued up to that time were transferred to the new company. This meant that investments were reduced by about NOK 170 million, in addition to the fact that 2015 investments in NordLink Norge were not included in the overall investments (NOK 460 million). Another reason was postponements in the Ørskog - Sogndal project. The increase in 2016 was largely due to NSL. Future developments in investment level follow from Section 1.5.

**Figure 16 Grid Planner broken down for cost types**



**Figure 17 Grid Developer broken down for cost types**

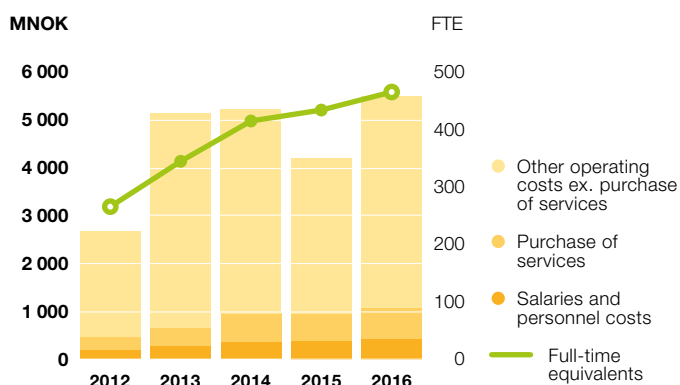
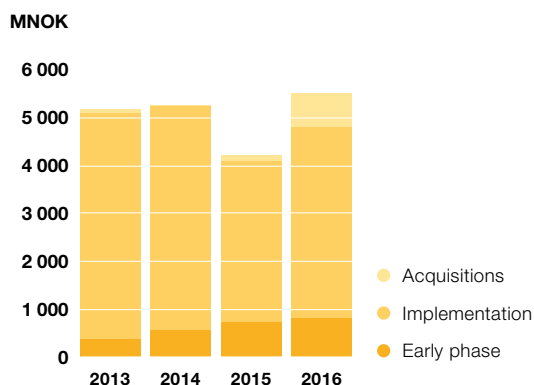


Figure 18 Development projects in phases



To enable us to increase our construction capacity, Statnett chose a strategy of outsourcing work, so that the supplier market was built up quite considerably after a more than ten-year period with hardly any grid development. In its early phase, a project will typically consist of construction client costs, which are a combination of internal hours and hired services from a consultancy firm. Statnett chose to have framework agreements with a number of technology/engineering companies in order to cover some construction client functions. Hence, nearly 50 per cent of construction client functions have been contracted in the market. This allows for a robust and flexible model where external construction client costs are scaled down when there is less activity, such as in 2015. Acquisitions of grid infrastructure are based on a strategy where purchasing and construction for most assets will be outsourced to suppliers. Total contracts are chosen for the construction of new substations. Total contracts are used for the construction of international interconnectors, which are segmented into smaller packages.

Construction client costs amounted to a fairly small proportion of investment costs in 2013. Several major projects reached their construction peak that year, or were close to it: Nye Ytre Oslofjord, Eastern Corridor and Skagerrak 4. The proportion of consultancy costs and internal hourly costs rose in the following year, as these projects entered their final phase and other major projects were in their early phase: Ofoten-Balsfjord, Western Corridor, NordLink, Klæbu-Namsos and North Sea Link.

Figure 18 shows investments in Statnett in the 2013-2016 period, broken down for purchase of grid assets, early phase project development and construction. The early phase is here counted from project start-up until the decision to start construction. This phase comprises e.g. working out the technical solution, negoti-

ating the major acquisition contracts and obtaining a licence and other necessary permits.

The implementation phase begins after the decision to start construction, and comprises building the grid asset up to commissioning and project completion. During the period, Statnett SF has built and acquired a number of grid facilities. At the end of 2012, Statnett owned about 10,900 kilometres of power lines and cables and 129 substations. During the period leading up to year-end 2016, the number of power line and cable kilometres owned by Statnett SF has increased to about 11 900 and the number of substations to 148. The number of power line and cable kilometres will increase by another 180 after the acquisition of transmission grid assets from Statnett Rogaland, and the number of substations will increase by six as of 1 January 2017. During the period leading up to 2021, the number of kilometres of owned power lines and cables is expected to increase to more than 14,000 kilometres. About 700 kilometres will be acquired through purchase of grid assets in connection with the Third Energy Market Package, whereas the rest will be acquired through new investments in power lines or cables. During the same period, the number of substations owned by Statnett SF will increase to approximately 200. Approximately 40<sup>3</sup> kilometres will be acquired through purchase of grid assets in connection with the Third Energy Market Package, whereas the rest will be acquired through new investments in substations.

## 6 System operator

The System Operator must make sure there is balance in the power system in Norway at all times. The System Operator handles congestion and ensures there are reserves to handle unforeseen incidents. The System Operator also does fault analyses and communication with and management of the power grid, cooperation

*Three owners of other transmission grids in Norway have applied to have their transmission grid assets reclassified as distribution grids. They own close to 500 km of power lines and six substations in the transmission grid.*

with adjacent grid owners, connection and disconnection of components and control with third party access to the grid.

Most of the activity in this function is included in the cost basis for Statnett's revenue cap. Certain minor costs, such as a loss when assets are sold, are not included in the cost basis in line with the provisions stipulated by the NVE. In the 2017-2021 period, Statnett will be cooperating with its sister company Svenska kraftnät on a new regulation and market system, Fifty. This means that some of the capital and operating costs will be transferred to commercial operation. In this report, all activity related to Fifty is included under System Operator. In future reports, the commercial part will be reported under the function for other activity.

**6.1. System Operator costs broken down for tasks**

Figure 19 shows cost developments for the System Operator broken down for types of tasks. For the System Operator, both investment costs and operating costs are included. Costs and revenues are shown net.

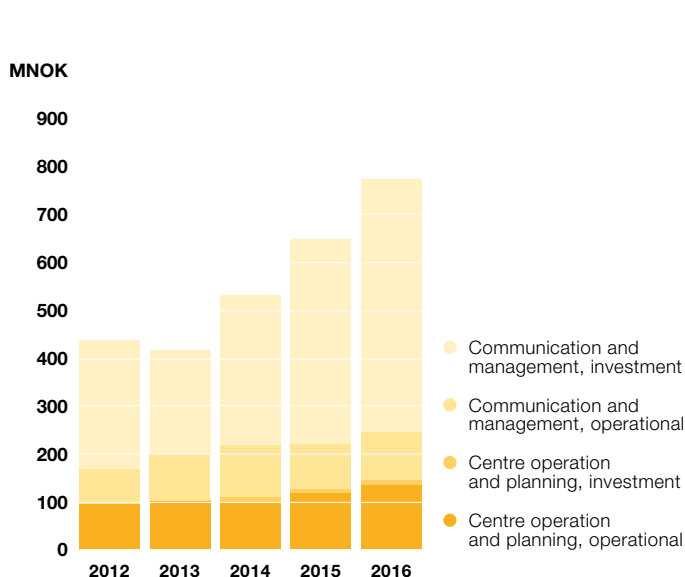
Operating costs related to communication and management of the power grid were stable in the 2013-2016 period, cf. Figure 19. These costs are expected to increase temporarily in 2017, as it will be necessary to operate the new and the old operating centre systems in parallel. Increased volume and functionality as well as new applications will lead to higher operating costs throughout the coming five-year period.

Investments related to ICT infrastructure for communication and management of the power grid rose in the period between 2013 and 2016. The increase stemmed from investments in a new regulation and market system, Fifty (previously LARM), and a new operating centre system. There was also a need for investments to meet the demands that follow from increased emergency preparedness requirements for monitoring substations and implementation of new EU rules in Norway and the other Nordic countries. Storms such as Dagmar and other strained situations demonstrated that Statnett needed to modernise and make our communication solutions more robust, while we also needed to establish redundant communication solutions. All this meant that the investment level increased during the period.

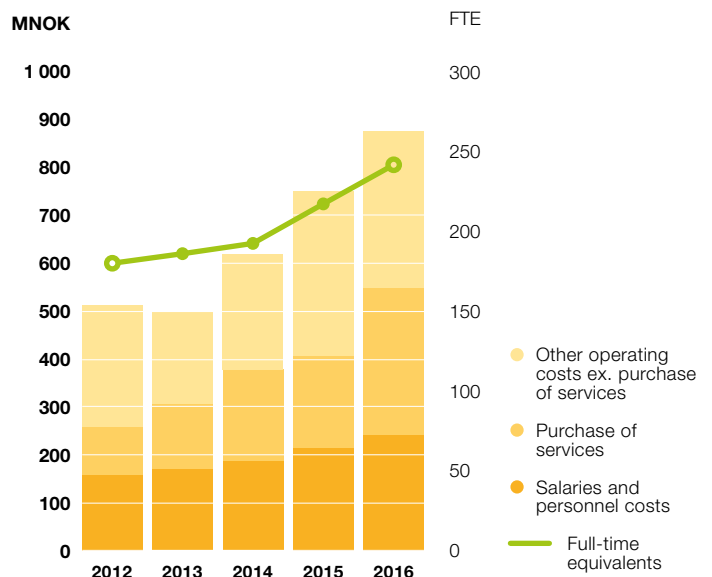
At the beginning of the coming five-year period the investment level is expected to increase even more, on account of completion of the new operating centre system, implementation of EU rules, more digitisation and further development of the regulation and market solutions that are needed for efficient performance of our system-wide responsibility. The investment level is expected to decrease somewhat towards the end of the period.

Costs for operation of the centres and day-to-day planning of the power system, i.e. planning the short-term balance – including planning outages and determining trading limits – increased in the 2013-2016 period. The increase in 2014 came mostly as a result of requirements for increased manning at the centres pursuant to external emergency preparedness rules. Half-way through 2014

**Figure 19 System Operator per task**



**Figure 20 System Operator broken down for cost type**





Statnett has high investment activity in the reporting periode

the system for differentiated employer contributions was changed. This in isolation gradually increased the level of wage costs in the operations centre for Northern Norway in 2014 and 2015. Operations costs rose further in 2015 and 2016 due to transition costs related to the merger of the regional centres in Northern and Central Norway and the establishment of a joint Nordic office in Denmark. This office will provide services such as security calculations during operations, coordinated capacity calculations, coordination of disconnection plans, analyses of effect balance and establish a joint grid model for Nordic Transmission System Operators.

Costs related to operation of the centres and planning in the coming five-year period are expected to remain at the same level as in 2016. These costs will go down, because the operating centre for Central Norway will be shut down, but this is expected to be offset by increased costs relating to the joint Nordic office and fault analysis.

**6.2. System Operator costs broken down for cost types**

Figure 20 shows developments in full-time equivalents, salaries and personnel costs, purchase of services and other costs without purchase of services. For the System Operator there are operating and investment costs.

Figure 20 shows that full-time equivalents and salaries and personnel costs increased throughout the period, particularly at the end. There was also an increase in purchase of services and other costs after 2013. The item above shows that the increase was mostly due to increased investment activity related to ICT infrastructure, the new regulation and market system and the new operating centre system.

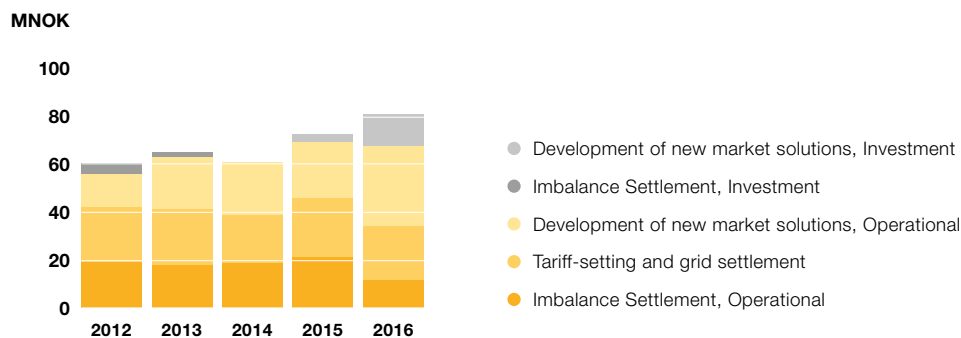
**7 market facilitator**

This function includes costs for setting tariffs and developing market solutions, as well as costs that come under Statnett's settlement licence: balance settlement, Ediel, electricity certificates and guarantees of origin. Settlement costs are not included in the cost basis for Statnett's revenue cap, but are retrieved through fees charged. Elhub AS will take over the invoicing of Ediel in 2018.

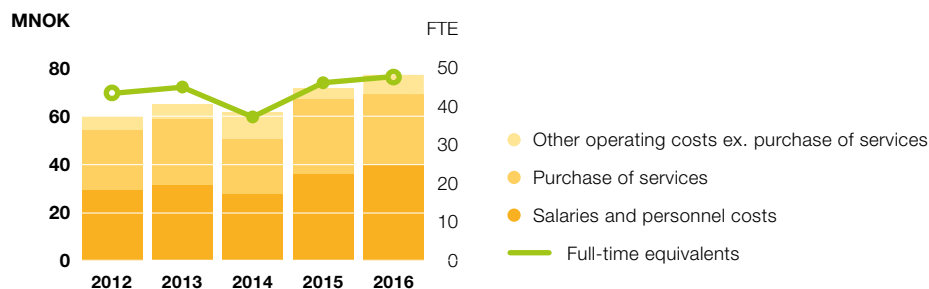
**7.1. Market Facilitator costs broken down for tasks**

Figure 21 shows cost developments for the Market Facilitator broken down for tasks. For the Market Facilitator there are operating and investment costs. Costs and revenues are shown net, but revenues from balance accounting have not been included as they vary a great deal due to the proportion of system operation costs that are covered through the balance accounting.

**Figure 21 Market Facilitator per task**



**Figure 22 Market Facilitator broken down for cost types**



Costs for the Imbalance Settlement were stable up to 2016. In 2016, there was a reduction in activities related to maintenance of systems that will not be used once eSett OY starts operating. From 2017 and onwards these costs will rise again to a

higher level than in 2015, as eSett OY begins to invoice Statnett for balance settlement services.

Tariff-setting costs were stable in the five-year period and are expected to remain stable going forward.

Costs associated with development of market solutions rose during the period, particularly in 2016. Some of the reasons were more work to do with implementation of EU rules, including XBID (a common European trading solution), as well as operating and investment costs related to flow-based market clearing. The main driver behind the cost increase was preparations for and introduction of systems for handling operation of the new international interconnectors. The latter includes both operating and investment costs, and they will increase in coming years.

**7.2. Market Facilitator costs broken down for cost types**

Figure 22 shows developments in full-time equivalents, salaries and personnel costs, purchase of services and other costs without purchase of services. For the Market Facilitator there are operating and investment costs.

Salaries and personnel costs and other operating costs increased during the period. Much work was carried out in 2014 that was

charged to the Grid Constructor function. A steeper increase is expected in the future, largely because of preparations for and introduction of systems for handling operation of the new international interconnectors. It will also lead to an increase in full-time equivalents.

**8 Joint functions including property management**

This function comprises joint functions in all divisions and contains resources that are used for administration of staff, the finance function, legal services, national as well as international public affairs, communication, organisational development, strategy work, property management HSE (Health, Safety and Environment), joint ICT equipment and services, and management. About half of these functions are to do with management of properties and administration buildings, plus joint ICT equipment and services.

Most of the activity in this function is included in the cost basis for Statnett's revenue cap. Certain minor costs, such as a loss when assets are sold, are not included in the cost basis, in line with the provisions stipulated by the NVE.

A key cost driver for Joint Functions is the total number of staff and activities generally in the company. High activity in grid development / investment activities will lead to a need for support from acquisitions, legal services, property management, accounting, financing, etc. The need for public affairs work is also impacted. Construction of energy transmission infrastructure is a disputed matter, cf. the Hardanger construction. A large number of projects under planning and construction entails a need for public affairs

**Figure 23 Growth in activity level and Joint Functions**

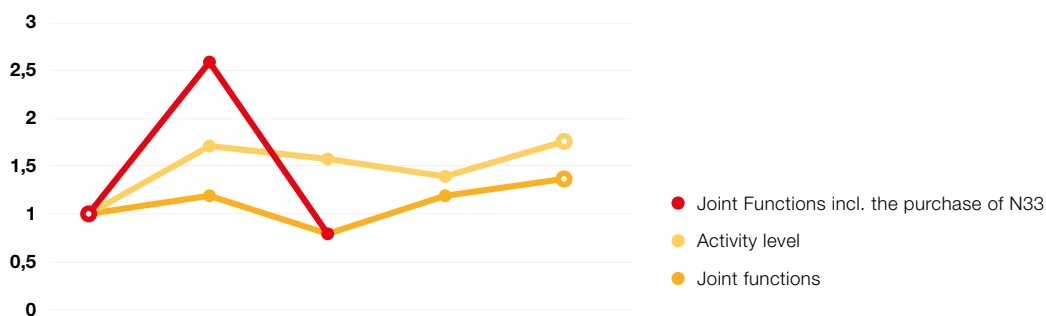
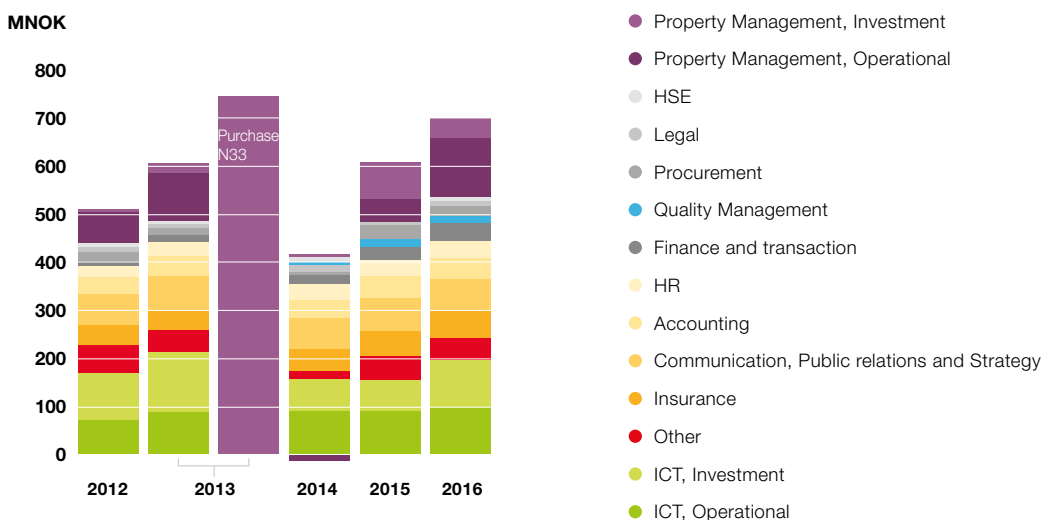


Figure 24 Joint Functions incl. property management per task



and communication support, so that Statnett can realise its task as efficiently as possible. This requires e.g. involvement of affected parties and stakeholders in an early phase, as well as openness and transparency. As a basis for its strategy work, Statnett must understand future needs in society, as well as developments in the framework conditions that are important to Statnett's activities, to ensure that Statnett's social mission can be achieved in an optimal and efficient manner.

The number of permanent employees in Statnett has risen from 994 to 1 306 during the 2012-2016 period. In the course of this period, Statnett has achieved the desired activity level in connection with investments and further development of the power grid, and this means that the need for support from Joint Functions is correspondingly high. Statnett has used a flexible model where parts of the increased need for resources have been acquired externally. Temporary needs for investments have, for instance, been covered by outsourcing tasks. Without this model, the increase in the number of employees would have been significantly higher.

Figure 23 shows lower growth in total controllable cost and investment costs in Joint Functions since 2012 than in the rest of the enterprise. This indicates that a higher activity level is now being supported by a lower growth in the joint functions. In 2013, Statnett purchased the headquarter in Nydalen Allé 33. If this purchase is taken into account, the increase in the activity level was higher in the Joint Functions than in Statnett overall in 2013.

### 8.1. Joint Function costs including property management broken down for tasks

Figure 24 shows cost developments broken down for tasks. For Joint Functions including property management, both investment costs and operating costs are included.

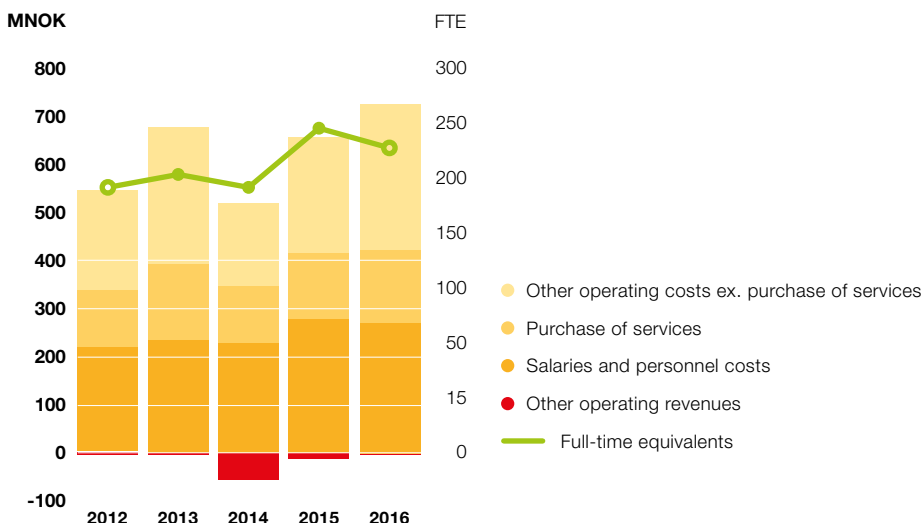
Operating costs for joint ICT increased in the period because of more staff and an increased focus on information security and enterprise architecture. Investments were especially high in 2013 on account of the upgrade in Statnett's ERP system (Enterprise Resource Planning), investments in ICT hardware in connection with relocation to our new headquarter in Nydalen, and investments in a new data warehouse. In 2014 and 2015, investment levels were lower. In 2016, investments were somewhat higher than in previous years due to acquisition of a new HR system.

During the coming five-year period, operating costs for joint ICT are expected to increase due to an increase in the number of users and new systems/applications. A higher investment level is expected at the beginning of the coming five-year period due to replacement of hardware (PCs and conference room equipment). Increased digitisation and introduction of new technology will also affect the investment portfolio in the time ahead.

Operating costs within property management were high in 2013 due to the rent for the new headquarter in addition to rent for premises at Smestad for the first quarter. The rent costs ceased in 2014, as Statnett purchased the headquarter in Oslo in December 2013.



Figure 25 Joint Functions incl. property management broken down for cost types



The profit from selling the building and land for our former headquarter led to negative operating costs in 2014. In 2016, operating costs rose because of the need to rent external offices in Oslo. In 2016 there was also a cost due to a negative accrual deviation associated with the sale of Statnett's former headquarter, Noreveien 26.

Investments within property management in 2013 were associated with relocation to the new headquarter. In 2015 and 2016, there were investments in property management in order to expand the administration building in Alta. In 2016 there were also costs relating to expansion of the administration building in Trondheim. Some investments are also expected in the administration buildings in Trondheim and at Sunndalsøra during the period leading up to 2020, although the level will probably be lower than in 2016.

Insurance increased steadily through the period, in line with the increase in Statnett's asset base. Insurance will continue to increase gradually in the coming five-year period because of a further increase in the company's asset base, cf. Section 1.5.

Transaction costs rose at the end of the period due to higher activity in order to purchase transmission grid in connection with the Third Energy Market Package. A change in the strategy for communication and stakeholder work led to reduced costs in this area during the 2013-2016 period. A higher focus on quality management meant that the costs for this increased at the end of the period. Much of the increase stemmed from the establishment of a three-year enterprise-wide initiative to improve central processes.

Acquisitions increased during the period in order to cover the need for high-quality, efficient acquisitions in the investment projects.

Other costs were low in 2014 because a 2009 allocation for a penalty fee following breakdown of a cable across Ytre Oslofjord in 2008, was reversed when the Ministry of Petroleum and Energy upheld Statnett SF's appeal concerning the NVE's decision to impose a penalty fee.

Joint Function costs including property management, but without insurance and joint ICT, will remain at the 2016 level during 2017, and will then fall. This reduction will be caused by less use of resources in most tasks, and completion of the enterprise-wide process improvement project. Resources spent on these tasks will remain at the lower 2018 level for the rest of the period.

## 8.2. Joint Function costs including property management broken down for cost types

Figure 25 shows developments in full-time equivalents, wage and staff costs, purchase of services, other costs and other operating revenues in the Joint Functions and property management. Other operating revenues are profits from sale of assets.

As will be seen from Figure 25, the activity level was low in this function in 2014. This is mainly because few investments were made in property management and joint ICT, combined with non-recurring effects. If one disregards non-recurring effects from the purchase/sale of assets, new headquarter and the 2014 reversal of the

Figure 26 Other Activity per task

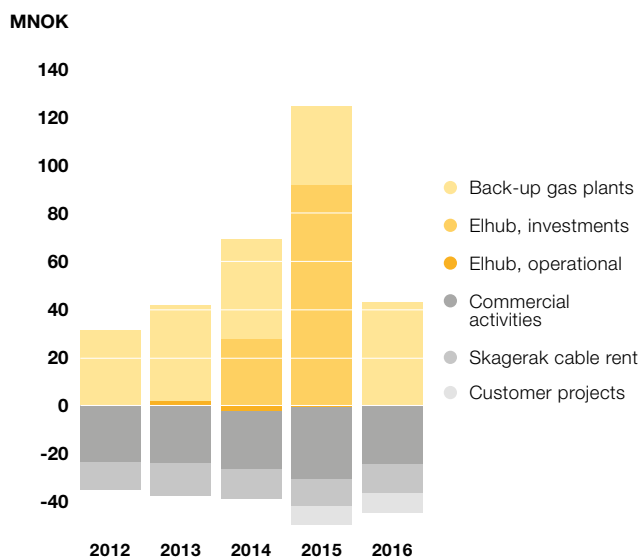
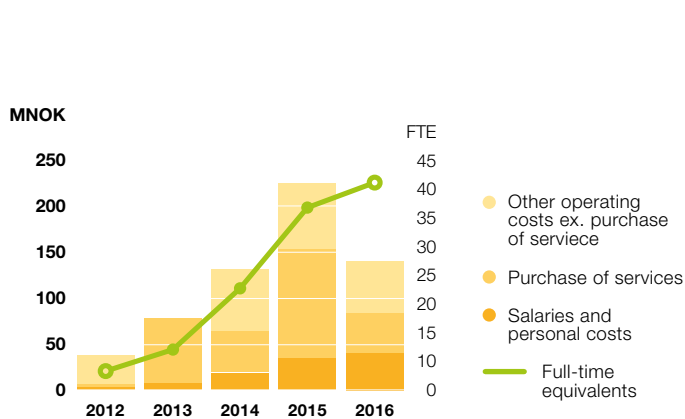


Figure 27 Other Activity broken down for cost types



allocation made for the penalty fee, there has been an underlying increase in full-time equivalents, salaries and personnel costs and other costs in the function, because greater activity in the other functions increases the need for joint services. However, the increase has been lower in this function than in Statnett generally, cf. Figure 23.

## 9 Other activity

That part of Statnett's activity which is not ascribed to another function, will be described here. This function includes some tasks associated with activity requiring a licence, including operation of the back-up gas fired power plants and the development of Elhub, before a separate company was set up to take over this task in the autumn of 2015 (Elhub AS), plus work with other grid companies in the Group. Sale of corporate services, such as accounting services, is also ascribed to Other Activity. In addition, Other Activity comprises commercial activity such as customer projects and sale of other services to non-affiliated companies, hiring out fibre and buildings, etc.

### 9.1. Other Activity costs broken down for tasks

Figure 26 shows the cost development for Other Activity broken down for tasks. Both operating and investment costs are associated with Other Activity. Costs and revenues are shown net.

Figure 26 shows net revenues and operating costs (excluding depreciation), and investments costs in Statnett's Other Activity.

Elhub AS was established in the autumn of 2015 and took over development of the data hub with the same name. Following that, the investment project was no longer a part of Statnett's Other Activity.

Costs from operation of the back-up gas fired power plants at Tjeldbergodden and Nyhamna were relatively stable during the period. After the commissioning of Ørskog-Sogndal in 2016, Statnett is no longer licensed to run the plants, and they are expected to be completely phased out in 2017-2018.

Statnett owns some of the Skagerrak cables in their entirety, but Energinet.dk covers one half of the operating and capital costs. Operating and capital costs covered by Energinet.dk are not included in the cost basis for Statnett's revenue cap.

Statnett's customer projects are mainly directed at grid companies in the Group, NordLink Norge AS and Statnett Rogaland AS (formerly Lyse Sentralnett AS). The net amount is fairly modest and represents a profit.

Commercial activity is profit from hiring out fibre, buildings, space in substations and towers, etc., plus profit from sale of services to group companies and non-affiliated companies.

### 9.2. Other Activity costs broken down for cost types

Figure 27 shows operating and investment costs in Statnett's Other Activity. Revenues are not included.

The increase in full-time equivalents during the period was related to customer projects in the Group, particularly investments in NordLink Norge AS and Statnett Rogaland AS. Statnett SF took over Statnett Rogaland's transmission grid assets and investment projects at the beginning of 2017, and costs related to those will in the future be included in the Grid Constructor and Maintenance function in Statnett. The full-time equivalents working with the NordLink cable are expected to increase markedly for some time, but will be phased out in 2020, which is when the investment project will be completed. In 2021 and later, the number of full-time equivalents is expected to be around the 2012 level. Wage and staff costs will develop along corresponding lines.

The Elhub investment project contributed with much of the increase during 2013-2015, particularly in 2015, cf. 9.1. We expect purchase of services and other operating costs to go down considerably from 2017, when all activity in Statnett Rogaland will be taken over by Statnett SF.

## 10 Summary

The report shows that Statnett has an increasing activity level in the report period of 2012-2021. This can mainly be attributed to an increase in fixed assets due to investments and acquisition of existing transmission grid assets. In addition Statnett has had been assigned new tasks. This has resulted in a strengthened security of supply in the transmission grid. In addition, Statnett has facilitated value creation and contributed towards the attainment of Norway's climate targets. Statnett has become a more efficient enterprise through its internal efficiency improvement programme, which contributes to a lower increase in the tariff base.

## Limitation of liability

*The Cost Report contains forward-looking statements and forecasts, including expectations and forecasts of investments and costs, regulated revenues and objectives as well as requirements associated with the efficiency improvement program. All forward-looking statements incorporated in the Cost Report are based on information held by Statnett, and express Statnett's view and evaluation, 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 the Cost Report to reflect any subsequent changes in the enterprise's expectations, incidents, or preconditions upon which the statements are based.*

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