



**Annual report 2019**

**FINGRID**

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# Operating environment and strategy

# Contents of the annual report and reporting principles

Fingrid's annual report for 2019 will be published in electronic format on the company's website. The annual report also includes Fingrid's corporate responsibility reporting and the corporate governance statement.

Fingrid draws up the consolidated financial statements and the half-year report in accordance with IFRS reporting standards accepted by the European Union and in accordance with the Finnish Securities Market Act. The consolidated financial statements include the parent company Fingrid Oyj and its wholly owned subsidiaries Finextra Oy and Fingrid Datahub Oy. The consolidated associated companies are Nord Pool Holding AS (ownership 18.8%) and eSett Oy (ownership 25.0%). The annual review and the financial statements of the Group's parent company and its subsidiaries are prepared in accordance with the Finnish Accounting Act and the guidelines and statements of the Finnish Accounting Standards Board. The information on personnel is based on the calculation systems used by human resources management, and the calculation of the relevant information is in compliance with the general guidelines of the Finnish Accounting Standards Board concerning the preparation of annual reviews. The environmental data is collected from the information reported to the authorities and from Fingrid's own data collection systems. An external emissions trading verifier has verified the company's carbon dioxide emission report.

Corporate responsibility reporting focusses on the main economic, social and environmental impacts of Fingrid Group's operations. The reporting applies integrated reporting principles, is in compliance with the Global Reporting Initiative (GRI) 2016, Core requirements, and has been verified by an independent third party. The boundaries of the social and environmental data do not include the associated companies. Requirements for corporate responsibility reporting by state-owned companies and environmental, social and governance (ESG) reporting guidance for stock exchanges are also taken into account. The annual report stands for a Communication on Progress (COP) report in compliance with the UN's Global Compact initiative.

# Fingrid in brief

Fingrid Oyj is Finland's transmission system operator. Our owners are the State of Finland and Finnish pension companies. Our mission is to secure a reliable supply of electricity in our society in all situations and to promote a clean, market-based power system.

A reliable supply of electricity is secured by transmitting electricity in the main grid, i.e. the high-voltage network, from production plants to industry and power companies that then transmit the electricity to homes. The nationwide main grid is the trunk network to which major electricity producers, industrial plants that use large amounts of electricity and electricity distribution networks are connected.

Fingrid guarantees a disturbance-free electricity supply in Finland. Electricity cannot be stored, which is why electricity production and consumption must be in balance at all times. Our company's statutory task is to take care of that round the clock.

Finland is part of the Nordic power system, which means that changes in production and consumption in our neighbouring countries also affect us. Electricity is continuously transmitted from one country to another, and Finland is also connected to the Central European power system with transmission connections. Finland also has transmission connections with Russia and Estonia. With cross-border connections, we can ensure system security even on the coldest winter days. Sufficient transmission connections are also the best way to secure the functioning of the market.

## Key figures:

- The company was established on 29 November 1996 and its operations began on 1 September 1997.
- The main grid encompasses approx. 14,100 kilometres of 400-, 220- and 110-kilovolt transmission lines, 115 substations, three HVDC connections and 10 of the company's own reserve power plants.
- Fingrid is owned by the State of Finland (direct holding), the National Emergency Supply Agency, Aino Holding Ky, Ilmarinen Mutual Pension Insurance Company and other institutional investors.
- Turnover amounts to EUR 789.4 (852.8) million.
- The balance sheet total is EUR 2.1 (2.1) billion.
- High credit ratings: 'AA-' S&P and 'A' Fitch Ratings
- At the end of the year, Fingrid had 380 (380) employees, 338 (327) of whom were permanent.

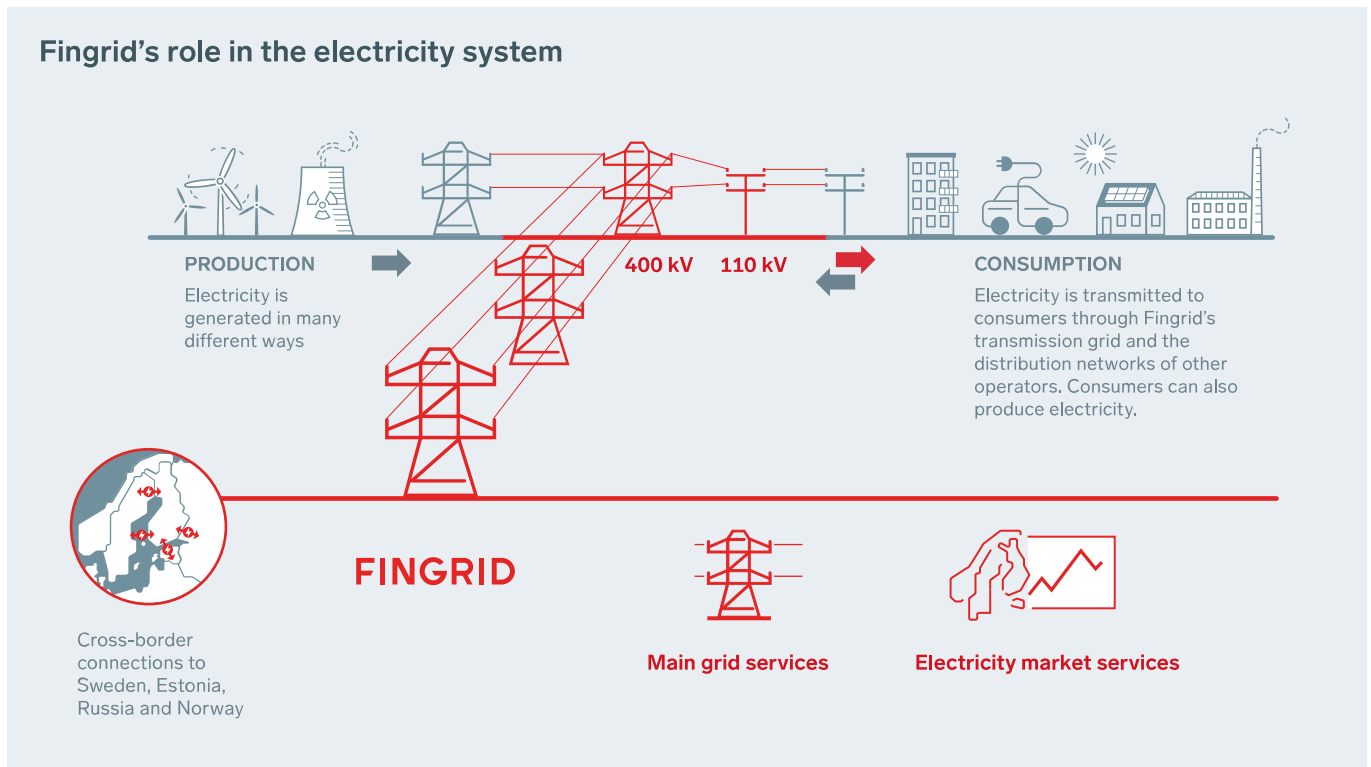


Image: Fingrid's role in the electricity system

# Vocabulary

**Aggregation:** Aggregation means combining regulation-capable, smaller electricity production, consumption and storage sites into larger entities that enable electricity trade in different electricity marketplaces.

**Balancing power markets:** The balancing power markets help maintain a balance in real time between electricity production and consumption. Fingrid orders up- or down-regulating power according to the needs of the electricity market. Up-regulation refers to an increase in generation or reduction in consumption. Down-regulation refers to a decrease in generation or increase in consumption.

**Clean power system (also low-carbon power system):** A power system where electricity generation is based on carbon-free production, such as wind, solar, biomass, hydro or nuclear power.

**CrossFlex project:** A flexible resource project in which the TSOs of Finland, Estonia and Åland aim at promoting the large-scale utilisation of the flexibility provided by distributed decentralised resources locally, nationally and between Finland and Åland as well as between Finland and Estonia.

**Day-ahead market:** The day-ahead market refers to an electricity marketplace where electricity is sold and purchased for different hours of the following day.

**Demand-side management:** Demand-side management means reducing the consumption of electricity or transferring it to another point in time based on price. Electricity consumption is reduced when the price in the electricity market is high.

**Digital fieldbus:** A substation which uses less copper wire for data transmission (measurement, protection). Copper wiring is replaced by optical fibre.

**Electricity exchange:** A public platform for selling and purchasing electricity.

**Electricity market participants:** Electricity producers, electricity retailers and electricity consumers – including households that participate in the electricity market.

**Emergency and Restoration network code:** Network code concerning the emergency and restoration of the electricity network.

**ENTSO-E:** ENTSO-E is the European Network of Transmission System Operators of Electricity. Its task is to develop the European Union's electricity market and to improve co-operation between TSOs. The organisation is headquartered in Brussels, Belgium.

**eSett:** A company that carries out the imbalance settlement of the Nordic electricity market parties' actual electricity consumption and production. eSett Oy is owned equally by the Nordic TSOs Energinet, Fingrid, Svenska Kraftnät and Statnett.

**GRI (Global Reporting Initiative):** Sustainability reporting standards that are used globally on a large scale.

**Horizon2020:** An international project financed by the EU Commission. The project aims at developing a new kind of platform for electricity market flexibility services and related processes.

**Imbalance power:** For the electricity consumer, imbalance power is the difference between the electricity purchased



and actual electricity consumption. For the electricity producer, it refers to the difference between the electricity sold and the actual electricity produced.

**Inertia:** In physics, inertia means an object's resistance to change in its velocity. Electricity grid inertia refers to the kinetic energy in the electricity grid. The energy is contained in machines at power plants and factories which rotate at the same frequency as the electricity grid. The rotating machines' mass produces inertia for the electricity grid.

**INTERRFACE project:** The European INTERRFACE flexibility services market platform project is one of the research projects financed under the EU's extensive Horizon 2020 programme. Fingrid and Elering are involved in the project, which seeks solutions for flexibility services market platforms that enable the utilisation of distributed resources for both maintaining power system balance and the needs of distribution system operators and balance responsible parties.

**IoT solutions in grid operations:** In future, the Internet of Things and digitalisation will help monitor the condition and lifecycle of substation equipment, making the substation condition management more effective and reducing transmission outages for customers.

**ITAMS:** International Transmission Asset Management Study. ITAMS evaluates the efficiency of TSOs' asset management. The study has been carried out five times, and Fingrid has placed at the top each time. Fingrid focusses especially on making use of digitalisation, which is one factor behind the good success in the study.

**Materiality analysis:** The materiality analysis is used to identify topics that are the most important for Fingrid's basic business and corporate responsibility. It includes an assessment of the substantial financial, social and environmental impacts of Fingrid's operations, as well as of the impacts on stakeholders' decision-making based on, among other things, operating environment and stakeholder analyses and a strategy update.

**Net Promoter Score:** The percentage of promoters, i.e. those willing to recommend the company, minus that of detractors. Example: if 42% are promoters and 6% are detractors, NPS is  $42\% - 6\% = 36\%$ . The maximum score is 100 per cent.

**Network codes:** The goals of the EU's third energy package adopted in July 2009 for an internal electricity market in the European Union. The main players preparing the network codes are the European Commission, energy sector control authorities through the co-operation agency ACER and European TSOs through their co-operation organisation ENTSO-E.

**PCI (Project of Common Interest) status:** Such status can be granted to projects that are essential to the EU's internal energy market and to achieving the targets of the EU's energy policies. Projects with PCI status can benefit from, among other things, faster permit processing, and they are entitled to later apply for financial support from the EU.

**Reserve markets:** The amount of electricity generated and the amount consumed must be equal at any given moment. The electricity market parties draw up an advance plan for balancing their consumption and production, but the balancing of deviations during each hour of operation requires reserves, which Fingrid acquires from the markets it maintains.

**SDG (Sustainable Development Goals):** In 2015, the UN member states agreed on the Agenda 2030 for sustainable development. It includes 17 global sustainable development goals to be achieved by 2030.

**Sector coupling:** Sector coupling combines electricity, gas, heating, cooling and transport systems into a smart integrated energy system. This increases the use of electricity, when electricity produced with zero emissions is used for reducing the emissions from other sectors.

**Security of supply:** Security of supply refers to how reliable the electricity supply is.

**Smart grid:** The smart grid, i.e. intelligent electricity system, is an electricity network that makes broad use of digitalisation and which is connected to electricity generation and consumption, and in future, increasingly to stored energy. Smart grids provide customers with more possibilities to actively participate in the electricity market.

**TCFD (Task Force on Climate-related Financial Disclosures):** International, voluntary disclosures of business risks and opportunities resulting from climate change for use by companies.

**TYNDP (Ten-Year Network Development Plan):** Europe-wide 10-year plan for grid development, drawn up by ENTSO-E, the European Network of Transmission System Operators of Electricity every two years.

**Weather-dependent electricity generation:** Electricity production capacity that is dependent on the prevailing weather conditions. Examples of weather-dependent electricity generation are wind and solar power, and some hydropower.

# Review by the President & CEO

## Fingrid faced with its biggest challenge ever

Finland wishes to be at the forefront of battling climate change and aims to achieve carbon neutrality by 2035. Fingrid is also working towards this goal. The biggest challenges are faced by the energy sector, which is the largest producer of greenhouse gas emissions in Finland. According to the Government Programme, “electricity and heat production in Finland must be made nearly emissions-free by the end of the 2030s while also taking into account the perspectives of national emergency supply and security of supply”. The most efficient way to reduce the energy sector’s emissions is to “clean” the power system and to use the produced clean energy to reduce emissions from industry, district heating and transport.

With our society being increasingly powered by electricity, electricity consumption will grow substantially in future. New electricity production is required to replace phased-out production capacity and, in the longer term, to meet increasing demand. Once completed, the Olkiluoto 3 nuclear power plant will significantly increase clean electricity production. In addition to this, wind power is establishing itself as one of the cornerstones of Finland’s electricity production alongside nuclear power. Hydropower plays an increasingly important role as balancing power. The energy system must be cleaned at a reasonable cost, in accordance with the principles of social fairness and without compromising the competitiveness of electricity-consuming industry.

## Fingrid as an enabler of change

Part of Finland’s national heritage, the electricity transmission main grid goes back 90 years. The main grid of the future will serve as a platform for a clean, emissions-free power system. Increasing amounts of electricity must be transferred from production plants to consumers and industry while making sure that the amount of electricity produced is, at any given time, exactly equal to the amount consumed. Fingrid develops the main grid in the long term so that the increasing clean electricity production can be connected to the grid and passed on to consumers and industry. In the next few years, we will be busy especially connecting wind power to the main grid and to the electricity market. The pace of wind power construction is so fast that, despite all our efforts, we may not be able to connect all of the projects to the main grid in a manner hoped for by wind power constructors.

Electricity production will have less flexibility to adapt to consumption, which means that the required flexibility must be provided by demand-side management and a well-functioning electricity trade in the European electricity markets. Fingrid is renewing the electricity market in a bid to find the most efficient balance possible between production and consumption, also going forward. Last-minute balancing is increasingly based on automatic adjustment instead of manual adjustment. Increasingly powered by electricity, society is more and more dependent on a reliable supply of electricity. We monitor the power system at all times and deal with disturbances efficiently so that society can count on a reliable supply of electricity also in future.

Change is picking up speed, but at the same time we must take care not to make any compromises on quality and occupational safety. For us, sustainability is not marketing communications. Sustainability means real, concrete actions when it comes to managing people, the environmental impacts of our operations and good governance. We recognise our key role in Finnish society now and in future: society’s best interest is inherent in all of our operations. Fingrid’s employees, who work at one of Finland’s greatest workplaces, are motivated by our important societal task and role in battling climate change – also in the new decade.

Jukka Ruusunen

President & CEO



# Operating environment

One of the world's largest nuclear power plants will be connected to Finland's power system in 2021. Wind power has become profitable on market terms, and the amount of electricity produced with wind energy is growing strongly. The use of coal as a fuel for electricity or heat generation will be banned as of 1 May 2029, the European clean energy package has been adopted and the "sector coupling" poised to renew the sector will integrate electricity, heating and electricity-powered transportation more efficiently than before. As the sector changes, Fingrid has gained new customers as a result of, among other things, restructuring and new players.

The power system is undergoing a major transformation and is at the heart of mitigating climate change. The energy transition has a growing impact on all of our daily lives. Tomorrow's clean power system will be based on nuclear power, hydropower, wind power and solar power. Electricity production will be more decentralised and weather conditions will dictate how much electricity will be produced and when. Society will be increasingly powered by electricity, with electricity being used to reduce emissions from transportation and heating.

In this major energy transition, Fingrid plays an active role in shaping a clean market-based power system. We work in close collaboration with the market participants, authorities and political decision-makers.

Our task in battling climate change is to create a platform for a clean power system. First of all, this entails taking care of Finland's main grid and developing it to meet future needs. We have invested in the development of the main grid for several years to enable the connection of clean energy to the grid and make it accessible to consumers and industry.

Secondly, the transformation of the power system also calls for major changes in the structures of the electricity markets. The inflexibility and increasing unpredictability of electricity production must, in future, be balanced by more extensive demand-side management and expanding electricity markets.

In summer 2019, Finland's Government Programme set forth a framework for the energy sector development goals, but also incentives to develop the sector towards the new goals. The measures will contribute towards reducing emissions from heating and transportation by using electricity. The goals set forth in the Government Programme will also promote the transition to a smart power system, improve the position of consumers and create conditions for a flexible power system, which will contribute towards an increasing use of renewables. The Government Programme sets forth goals for more extensive planning of the siting of wind power plants, which makes it possible for Finland to improve its self-sufficiency in electricity. Revised tax solutions, the development of demand-side management and seasonal storage of electricity, as well as the goals concerning electricity, heating, transport and Nordic co-operation will take Finland towards climate-friendly solutions.

When working on its strategy, Fingrid identified the following four megatrends that have a direct or indirect impact on our operations: climate change and the transformation of the energy system; security of energy supply and electricity dependency; globalisation and responsibility; and digitalisation.



## Climate change and transformation of the energy system

Finland's goal is to be a carbon-neutral society in 2035. The energy sector offers solutions for climate change mitigation. Clean, unbalanced and decentralised production is growing. Use of electricity in the heating and transport sectors is growing. The single European electricity market is increasing efficiency and the reliability of electricity supply, while also contributing to increasing the weather-dependent, renewable electricity generation.

The energy sector plays a key role in combating climate change. The structure of electricity production is changing: while the share of renewable energy is increasing, the production of adjustable fossil-fuel condensing power is on the decline. However, an increase in wind and solar power will result in a scarcity of flexibility and system inertia. Electricity price fluctuations will increase, which will create business opportunities for flexible production and consumption and energy storage technologies.

Fingrid does its part to combat climate change by building and maintaining the main grid. Fingrid's task is to connect the energy produced in a new way to the main grid and prepare for the decrease of flexible production capacity. The company develops the electricity market also for the needs of a low-carbon power system. Around 2,000 megawatts worth of connection agreements related to wind power were concluded in 2019. In 2019, Fingrid connected to the main grid 132 megawatts of wind power and finished the grid construction work that will enable the connection of the Olkiluoto 3 nuclear power plant to the grid.

## Security of energy supply and electricity dependency

Electricity consumption is increasing and society is demanding a secure and uninterrupted supply of electricity. Security of supply must be guaranteed in a changing power system that involves a lot of weather-dependent production. Security of energy supply and energy self-sufficiency are key themes.

Severe disturbances in the power supply are among the most serious security threats to a modern society. Electricity sector risks are being prepared for as part of the European Commission's clean energy Winter Package. The aim is to improve the security of electricity supply at the EU level and reinforce regional co-operation. Measures related to crises must be compatible with the rules for the EU's internal electricity market.

Fingrid's investments in the electricity network, promoting the markets and developing grid operations improve the reliability of the electricity supply and our preparedness in the face of crisis situations. In **risk and continuity management**, continuous preparations are made for serious disturbances to the power system in different threat scenarios. The company is actively involved in international co-operation to develop European network codes and preparing for power system disturbances in co-operation with the Baltic Sea region's TSOs.

## Globalisation and responsibility

Globalisation brings opportunities for service and equipment procurements, the labour markets and financing. Responsibility and increasing regulation will be highlighted in a global economy. Companies are providing solutions for society's challenges. Longer procurement chains and a global focus are posing challenges on responsible operations.

Increased workforce mobility is making energy companies more international. The global financial market offers a well-managed company with a high credit rating a flexible and affordable way of procuring financing. Responsibility is a key component of Fingrid's operations. The importance of openness is growing.

For Fingrid, globalisation brings new opportunities through an international offering and co-operation. The company has long been making use of international financing markets and is the first Finnish company to have issued a Green Bond. Fingrid's task as a responsible procurer of goods and services is to promote sustainable development and responsible

practices worldwide.

## **Digitalisation**

Digitalisation will renew the power system's and electricity market's practices and ways of operating. Digitalisation will increase the importance of information, information technology and telecommunications while enabling new kinds of business. Along with the growth in automation, the ways in which work is performed are also changing. It is increasingly important to manage knowledge capital and ensure cybersecurity.

From Fingrid's perspective, digitalisation enables even more productive operational processes, better customer service and more efficient sharing of market information. It also provides new tools for managing a changing and increasingly complex power system. Smart grid technology opens up new business opportunities for both current and new operators and, in turn, shapes Fingrid's customer field.

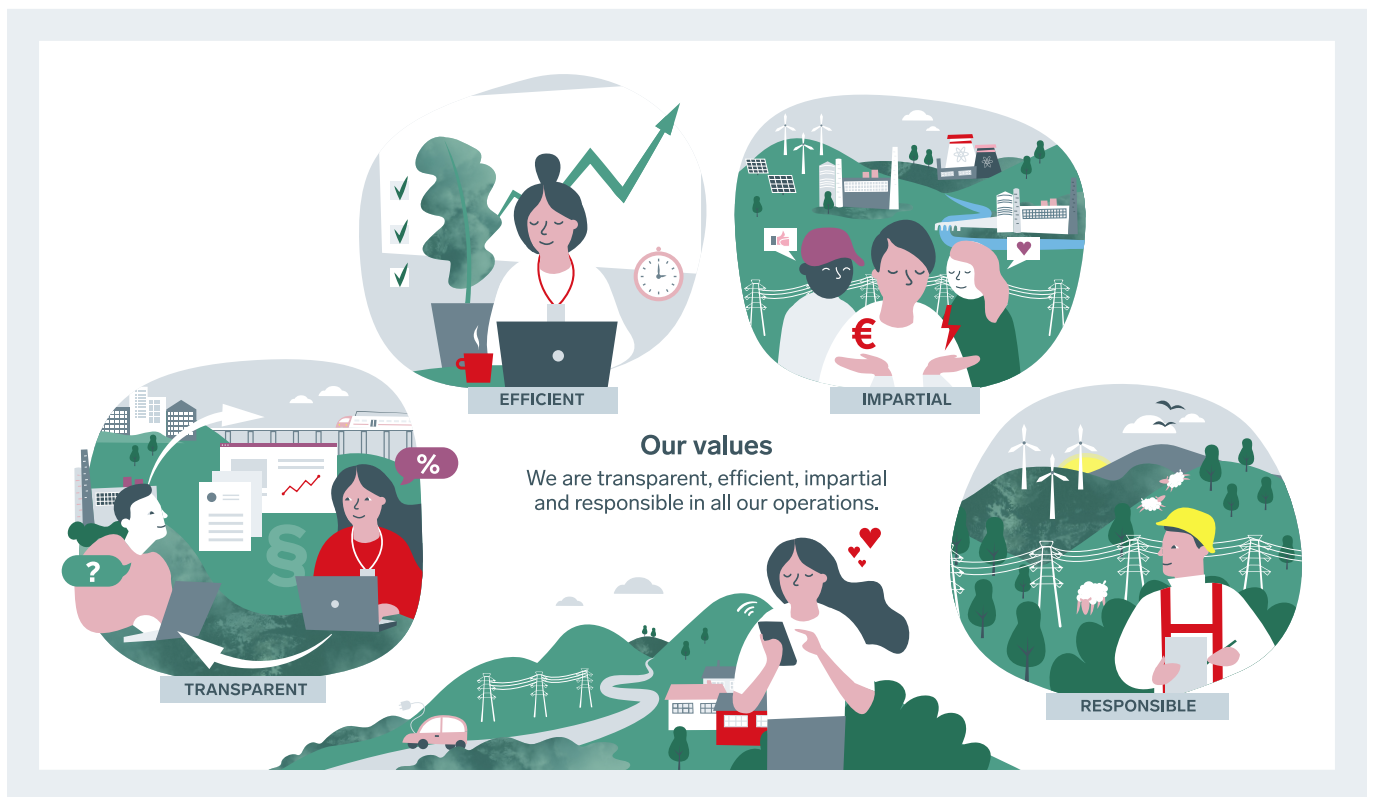
# Mission and business model

## Our mission

Fingrid is Finland's transmission system operator. We secure reliable electricity for our customers and our society and we shape the clean and market-oriented power system of the future.

## Our values

We are transparent, efficient, impartial and responsible in all our operations.



## Our vision

We are an exemplary transmission system operator.

A highly esteemed energy influencer in Finland and across the globe.

Known for its responsibility, efficiency and expertise.

Capable of reinventing itself and a profitable operator that embraces change.

## Business model

The purpose of the business model is to describe the most important material and immaterial resources at our disposal that are necessary for the business processes. The impact of Fingrid's operations and the **significant added value they generate** show in various ways throughout Finnish society.

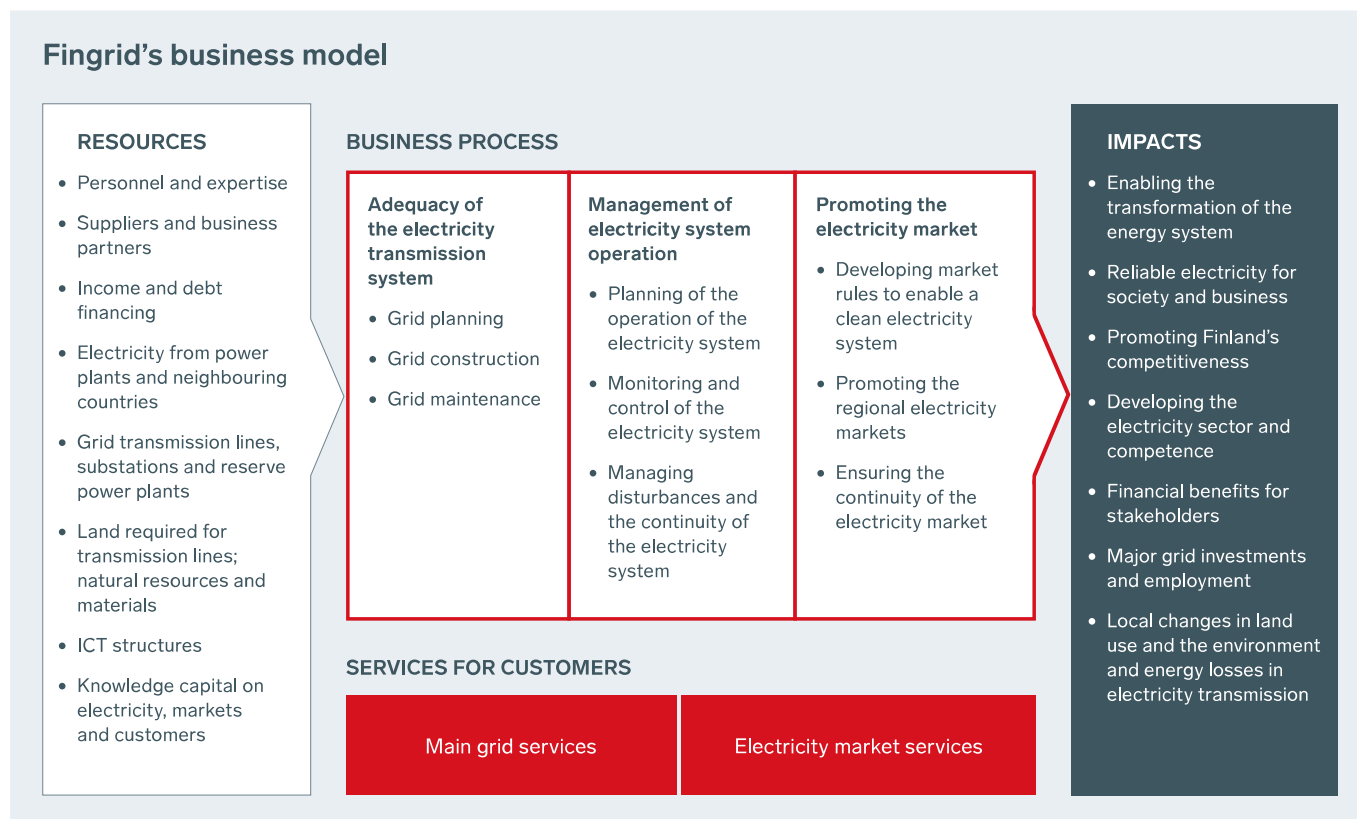


Image: Fingrid's business model

Our operations are based on Finnish and EU legislation. In accordance with the Finnish Electricity Market Act, we develop the main grid, maintain a balance between electricity consumption and generation and promote the preconditions for a well-functioning electricity market. The EU Electricity Regulation obligates us to co-operate within ENTSO-E, and regionally to improve the functioning of the internal electricity market. Our task is to participate in the drawing up and implementation of the market, operating and connection codes and the proposals prescribed in them. Fingrid's operations are supervised and regulated by the Energy Authority, which has granted the company a licence for grid operations.

# Materiality assessment

We have identified topics that are material to Fingrid's business and corporate social responsibility, and we have assured sufficient management practices, targets and indicators for them. The topics that are the most important, i.e. material, to us are presented in the section **Corporate responsibility**. The need for updates to the materiality analysis is assessed annually as part of the strategy process, based on an operating environment and stakeholder analysis and on the strategy update. Achieving the targets is the starting point for executive management's and personnel's remuneration.

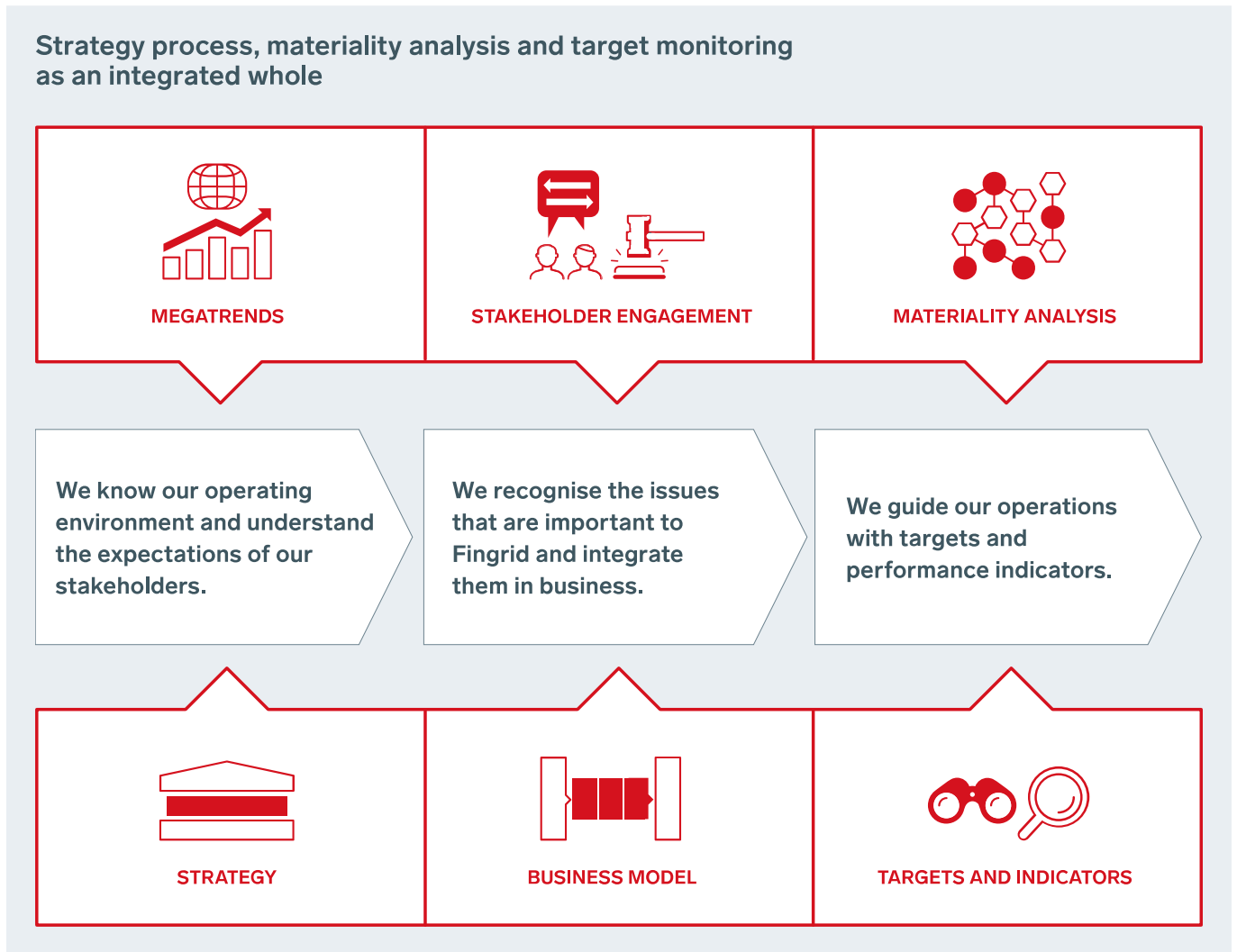


Image: Fingrid's strategy process, materiality analysis process and target monitoring as an integrated whole



# Value creation

Through its business, Fingrid creates significant shared value for its customers, employees, shareholders and the whole of Finnish society. The value created by Fingrid in 2019 is described below.

Every Finn can see the value of our work and a reliable electricity infrastructure because they can plug into a socket whenever they need power, which is not a given in all parts of the world. Our value for society stems from us maintaining an affordable and stable grid service pricing level, which plays a role in Finland's competitiveness.

We also create value for achieving climate goals by building a strong main grid that is necessary for clean electricity, and a well-functioning electricity market. The indirect positive handprint of our operations is considerable, taking into account the carbon dioxide emissions that can be avoided through clean energy connected to the grid. This topic is elaborated in more detail in the **Environment** section.

For 2019, we will pay the state and municipalities EUR 35 million in corporate income tax, which will be channelled back into Finnish society to build well-being. In addition to our employees, the service providers employed by our numerous projects also benefit from the value we create.

### Value created by Fingrid in 2019


<p><b>IMPACTS</b></p> <ul style="list-style-type: none"> <li>• Enabling the transformation of the energy system</li> <li>• Reliable electricity for society and business</li> <li>• Promoting Finland's competitiveness</li> <li>• Developing the electricity sector and expertise</li> <li>• Financial benefits for stakeholders</li> <li>• Major main grid investments and employment</li> <li>• Local changes in land use and the environment and energy losses in electricity transmission</li> </ul>	<p><b>CREATION OF VALUE</b></p> <p>Fingrid's nationwide main grid creates a platform for a clean power system. Around 150 kilometres of new grid transmission lines and 12 new or expanded substations.</p> <p>Electricity transmission reliability 99.9998%.</p> <p>Top performer in a cost efficiency study commissioned by European energy regulators. Third cheapest in ENTSO-E's European price comparison. Customers perceive that Fingrid works for the benefit of the whole of society (4.2/5).</p> <p>Employees perceive that Fingrid is a great place to work overall (96%). LTIF 5.5. Absences from work 1%. Number of training days on average 5/employee.</p> <p>One of Finland's largest corporate income tax payers (EUR 35 mill.). Payments to providers of capital EUR 171 mill.</p> <p>Investments in the main grid approx. EUR 107 mill. Fingrid personnel's person-years 336 and service suppliers' person-years 413.</p> <p>Direct CO<sub>2</sub> emissions and indirect emissions due to the company's own electricity consumption and losses 220,000 CO<sub>2</sub> equivalent tonnes. Waste utilisation rate 98% and recycling rate 89%.</p>	
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Image: Value created by Fingrid in 2019

# Strategy and management system

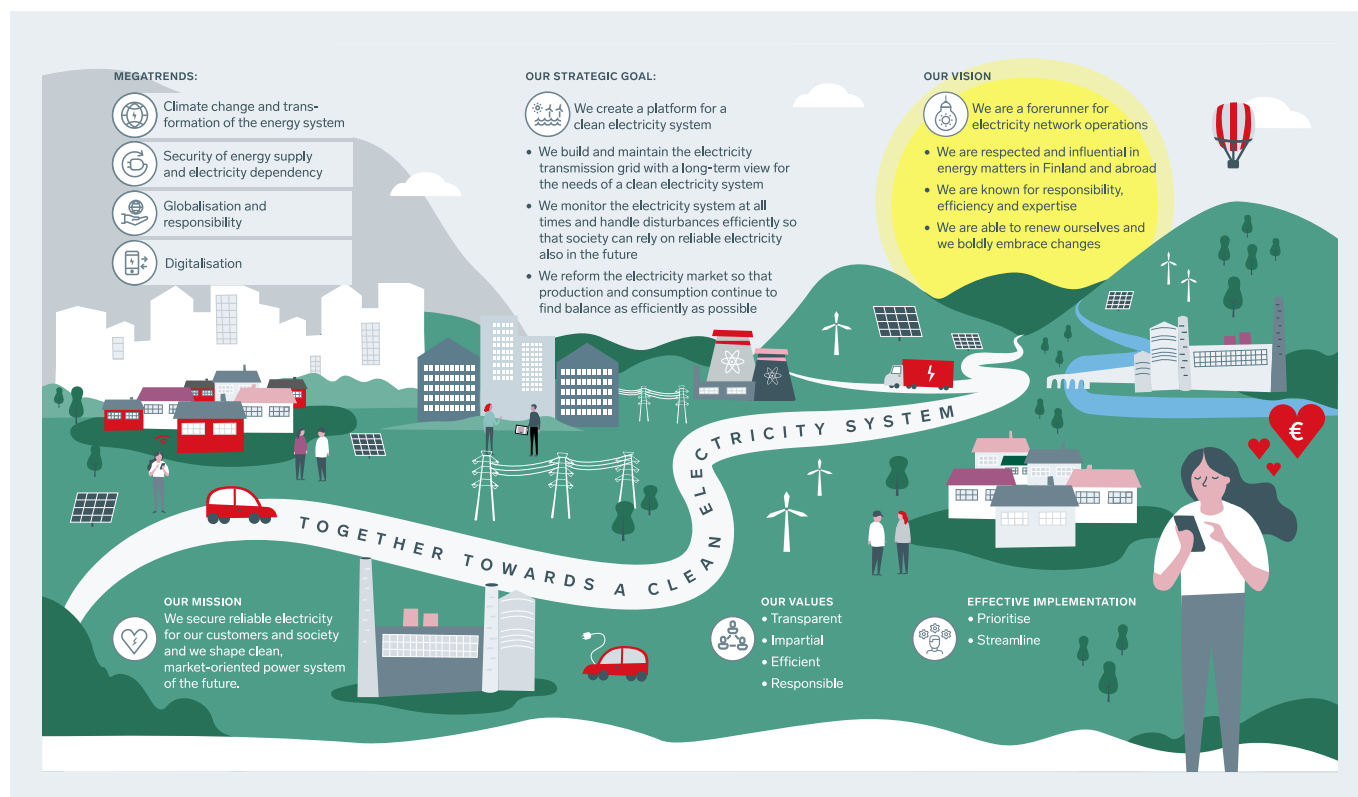


Image: Fingrid's vision and strategy

The clean power system requires a strong platform, in the creation of which Fingrid plays a major role. As stated in our vision, we wish to be a highly esteemed energy influencer in Finland and globally, and known for our responsibility, efficiency and expertise. In order to be able to take into account the changes in our operating environment and to reinvent ourselves, we must have the courage to make the necessary changes in our own operations as well.

We develop the power system and the electricity market rules together with our customers. We keep our customers informed of the development of European rules concerning the electricity industry, and we listen to our customers' views on European, regional and national proposals being prepared. We keep abreast of our customers' requests through Fingrid's Advisory Committee and two customer committees.

Fingrid's way of working has been formulated as follows:

*"We set bold and ambitious goals for our operations. Our corporate culture is open, collaborative, renewing and target-oriented and complies with good governance practices. We develop our operations for the long term and in a balanced way from the perspectives of our customers, society, finances and personnel. We seek quality and efficiency by combining our core expertise with that of the best players in the world. By operating responsibly, we earn the trust of our customers, society, shareholders and the work community."*

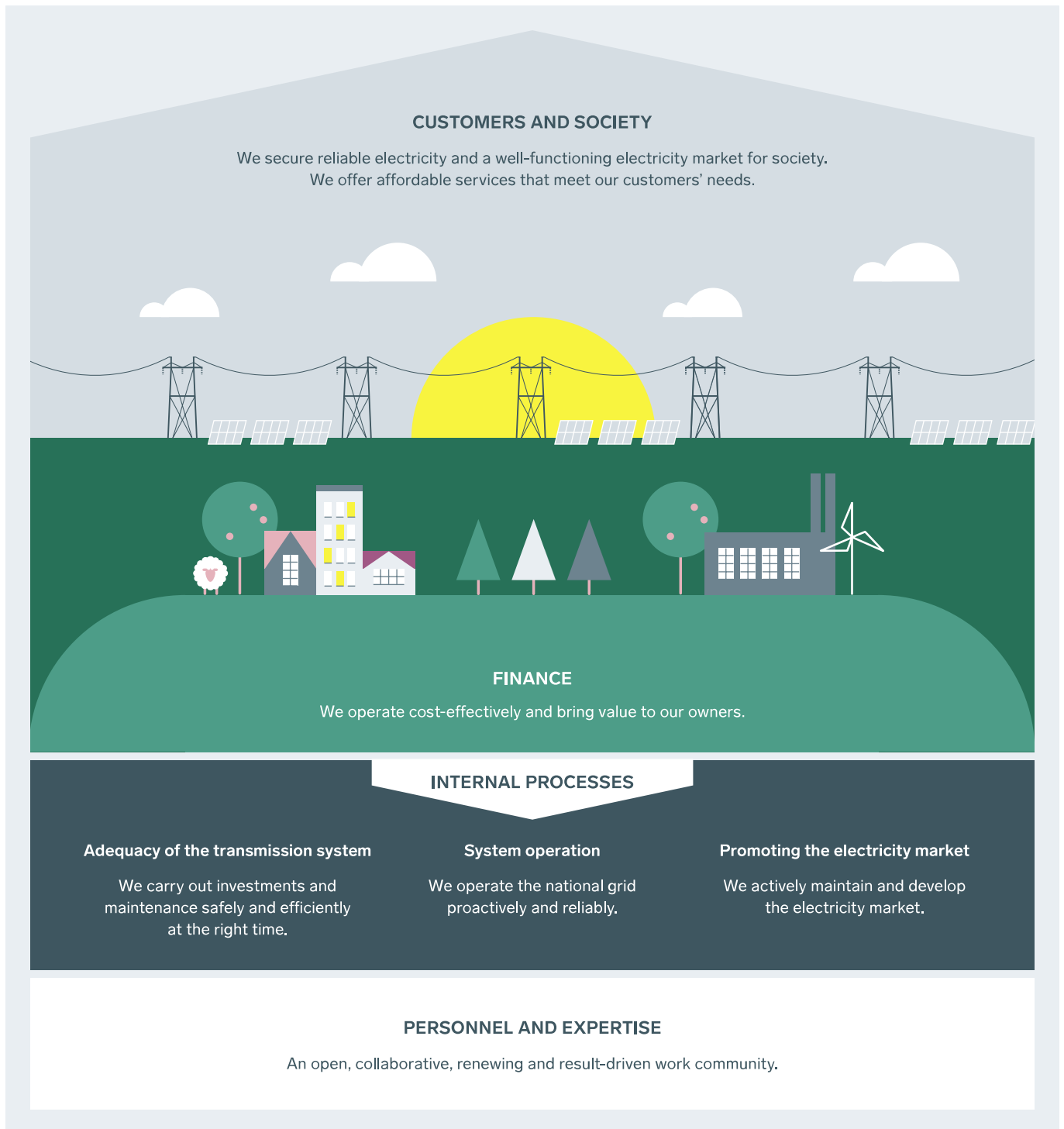


Image: Fingrid's strategy's four cornerstones and objectives

## Implementation of the strategy

The company's strategy is implemented through four perspectives: Personnel & Expertise, Customers & Society, Finance and Internal Processes. According to the approach chosen by Fingrid for implementing its strategy, all four perspectives are equal and are implemented and developed in a mutually balanced way in accordance with the strategy

house described above. In the strategy house, everything moves from the foundation all the way to the top: when personnel's well-being and competence are in order, the internal processes can function optimally, efficiently producing services and financial benefits for the shareholders, customers and the whole of society. The perspectives play a key role in the day-to-day **management** of the company.

Fingrid is a specialist organisation in which the objective of the Personnel & Expertise perspective is to maintain and develop an open, social, renewing and high-performing work community.

The internal processes perspective consists of ensuring transmission capacity, managing system security and promoting the electricity market. The perspective's key targets are as follows:

- Ensuring transmission capacity: We carry out investments and maintenance safely and efficiently at the right time.
- System security management: We operate the main grid proactively and reliably.
- Promoting the electricity market: We actively maintain and develop the electricity market.

The objective of the Finance perspective is to operate cost-effectively and create value for shareholders.

The top of Fingrid's strategy house is made up of the Customers & Society perspective, the objective of which is to secure reliable electricity and a well-functioning electricity market for society. We offer affordable services that meet our customers' needs.

The preparation of the goals and operations of each strategic perspective are steered by a steering group appointed by the company's executive management group, which ensures that matters are prepared comprehensively and executed efficiently using the best expertise. All work is primarily carried out based on the service principle, in the best interests of the company's customers. The key choices made during the company's strategy work are approached through each of the perspectives to establish the kind of measures that are required of each of them for the implementation of the strategy. We have made the following strategic choices:

### **Focusing on our core mission**

We excel in handling our core mission in a changing operating environment. We do not aim to expand into new businesses or to participate in competitive businesses.

### **Customer focus**

We develop our business operations and operating models with our customers in mind and for the benefit of the entire country.

### **World-class efficiency**

We innovatively utilise the best technologies and opportunities enabled by digitalisation. We keep the necessary core competence in-house. We co-operate with the best partners.

### **Market focus**

We apply a market-oriented approach in all areas, because we believe that well-functioning markets will produce the best and most innovative solutions.

### **Openness to integration**

We actively foster the integration of the electricity markets in Europe and the Baltic Sea area while also taking into account Finland's best interests.

### **Security and sustainability**

During the energy sector transformation, we will maintain the current good level of system security. Sustainability and safety are highlighted in everything we do.
















# Strategic targets and indicators






The company's strategic targets and indicators have been defined according to the perspectives: Customers & Society, Finance, Internal Processes and Personnel & Expertise.

	Our target in 2019	How did we do?	What is our aim in the short and long term?	UN Sustainable Development Goals
<b>CUSTOMERS &amp; SOCIETY</b>				
Impact of disturbances on the macro economy and customers	Economic disadvantage of disturbances in the transmission grid to customers less than EUR 7.5 million	The economic disadvantage to customers was EUR 5.2 million. 	Economic disadvantage of disturbances in the transmission grid to customers less than EUR 5.0 million	 
Customers' trust in Fingrid	Trust KPI in the customer survey: 4.0 (scale of 1–5)	The achieved grade was 4.0. 	cNPS score: 45 (scale of -100...100)	  
Tariff level	ENTSO-E Overview of Transmission Tariffs in Europe: top three in the benchmark group of 16 countries	Fingrid ranked 3 <sup>rd</sup> . 	Continuous target	
<b>FINANCE</b>				
Credit rating	To maintain Fingrid's credit rating at least at the A- level	The minimum credit rating level was exceeded. 	Continuous target	 
Dividend payout capacity	Dividend income in line with shareholders' targets	Dividend income in line with shareholders' targets was achieved. 	Continuous target	 
Cost-effectiveness	To maintain the current solid cost-effectiveness and to continuously improve productivity	Good cost-effectiveness was maintained. 	Continuous target	 
<b>INTERNAL PROCESSES</b>				






- the set target was achieved/exceeded
- the set target was nearly achieved; still a good outcome
- fell short of the set target, average outcome
- fell clearly short of the set target, unsatisfactory outcome
- failure to meet the set target, weak outcome



Implementation of capital investments	Implementation of the capital investment programme concerning the transmission grid to support the Finnish climate and energy strategy: investment projects on schedule and within budget	The capex projects proceeded on schedule and within budget. 	Continuous target	
Electricity market	Customer survey grade of 4.0 for Fingrid's success in promoting the electricity market (scale of 1–5)	The achieved grade was 4.0. 	Continuous target	
Procurement chain	No significant deviations or problems in contractor obligation or employment relationship matters	No significant deviations or problems in contractor obligation or employment relationship matters 	Continuous target	
			Coverage of supplier audits 95% of the value of mill deliveries in 2025	
Occupational safety	LTIF less than 5 by the end of 2019 (both Fingrid personnel and service providers)	LTIF was 5.5. 	LTIF of less than 5 by the end of 2020. The long-term goal is zero accidents.	
Land use and environment	No significant environment-related deviations	One environmental deviation stemming from the previous year that was rated as significant was discovered in 2019. 	Continuous target	
	General grade of 'good' in landowner surveys (scale of 1–5)	The overall grades varied between 3.6–4.3. 	Target 4.0 by 2025	
Efficiency in maintenance and physical asset management	Top three in international benchmark studies (ITOMS, ITAMS)	Placed in the top three. 	Continuous target	

-  the set target was achieved/exceeded
-  the set target was nearly achieved; still a good outcome
-  fell short of the set target, average outcome
-  fell clearly short of the set target, unsatisfactory outcome
-  failure to meet the set target, weak outcome

System security	System Average Interruption Duration Index (SAIDI) less than 3 minutes	SAIDI was 4.27 min. 	Continuous target	 
	Sufficiency of the system reserves at least 99.5%	Sufficiency was 99.81%. 	Continuous target	 
<b>PERSONNEL &amp; EXPERTISE</b>				
Workplace atmosphere	Top grade in the personnel survey	Innovation and work community culture 88% (0–100 GPTW) 	Continuous target	 
		Overall, this is a very good workplace 96% (0–100 GPTW) 		 
Leadership	Great Place to Work Finland survey, general category: among the top 10 (survey every two years)	Came in the 7 <sup>th</sup> place. 	Continuous target	 
			eNPS score: 60 (scale of -100...100)	 
Responsible operating methods	Grade 'good' for responsible operating methods in the personnel survey	The grade was 90% (0–100 GPTW) 	Continuous target	  

-  the set target was achieved/exceeded
-  the set target was nearly achieved; still a good outcome
-  fell short of the set target, average outcome
-  fell clearly short of the set target, unsatisfactory outcome
-  failure to meet the set target, weak outcome

# Management system

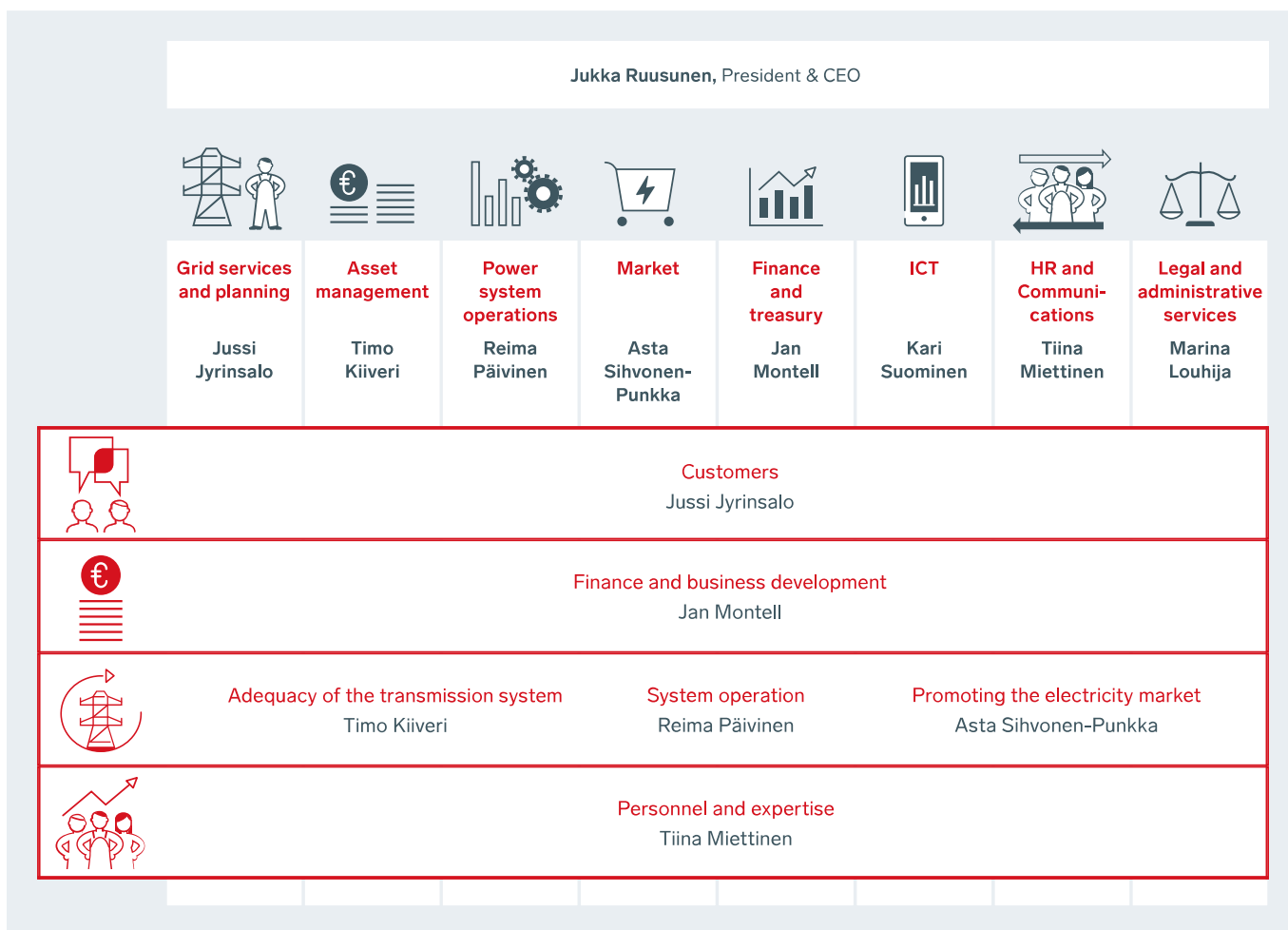


Image: Fingrid's management system in a matrix model

Fingrid operates in accordance with a matrix model where the strategy and organisation are paired. The model pushes collective efforts and shared goals to the forefront. A matrix organisation is challenging, but we have shaped the company into an agile and flexible player with a flat hierarchy. The strategy is implemented as a matrix organisation through four defined perspectives.

Personnel is organised according to functions such that managers are in charge of the annual planning and budgeting of the tasks in their respective area of responsibility and of implementing the action plans according to the business targets set forth in the strategy.

In the company's management model, managers have a dual role as heads of both operations and perspectives. The management system is described in more detail in the Management principle document.

The heads of functions are in charge of ensuring appropriate governance and decision-making procedures for their functions, as well as corporate responsibility, quality and cost effectiveness, correctness of the information required for monitoring the operations, risks and implementing practical risk management measures in compliance with the

principles of internal control, as well as risk management and Fingrid's other guidelines.

In the **matrix model, management** takes place through the selected perspectives: Personnel & Expertise, Customers & Society, Finance and Internal Processes. The chosen model ensures that the company's strategy is implemented in a balanced way.

## Instruction system

Fingrid's instruction system is composed of three levels: policies approved by the executive management group specify the principles approved by the Board of Directors and are complemented by the more detailed guidelines given by the perspectives and the business areas.

Fingrid's asset management has been certified according to ISO 55001:2014. The standard's requirements can be seen in the instruction system followed by the entire company.

### Management principle documents approved by Fingrid's Board:

- Fingrid's Code of Conduct
- Management principles
- Corporate financial and procurement principles
- Internal control and risk management principles
- Main grid development and maintenance management principles
- Principles for managing system security
- Principles for promoting the electricity market
- Insider guidelines

# Stakeholder engagement

Being open to stakeholders' expectations is an essential part of sustainable business. We have asked our stakeholders about their expectations towards Fingrid. We have taken these expectations into account as part of our materiality analysis. The starting point for the identification was to describe our stakeholders' expectations and reflect on Fingrid's means to meet them.

The operations of a TSO are bound to affect several third parties. In line with our values, we aim to engage openly, honestly and equally with our stakeholders. An appointed executive is in charge of our customer perspective, and the heads of functions oversee stakeholder activities within their own areas of responsibility. We gain insight into our stakeholders' opinions through various surveys. Our task is to serve primarily our direct customers, such as electricity producers, distribution network companies and major electricity consumers, but also other stakeholders, such as shareholders, landowners, authorities, financiers and service providers. Our operations are based on competent personnel who identify the impacts of their activities on the various stakeholders.

In terms of communications, our objective is to encounter our stakeholders in a timely fashion and disclose matters openly, ensuring that the right people are easy to contact. Our communications must be easy to understand and timely. Through quality communications, we can influence social debate, thus promoting the targets we have set ourselves and furthering our success in a task that bears great significance for society.

Different stakeholders have different expectations of Fingrid. Our customers expect Fingrid to secure a reliable electricity supply for the nation, a well-functioning electricity market, and affordable grid transmission pricing. Generally speaking, our stakeholders expect Fingrid to be a forerunner in transmission system operation on the increasingly international electricity market, which requires continuous development of our operations and our productivity. We proactively and thoroughly plan our capital expenditure on a sound financial basis, while also taking society's expectations into account. We ensure that investments in the transmission grid are made effectively and, from the perspective of the national economy, at the right time, to take care of the condition of the grid in a sensible manner. We are also expected to provide proactive and reliable electricity transmission, to keep the lights on in Finland and to ensure that the consumption and production of electricity in Finland's power system are always balanced.

Active co-operation with our stakeholders promotes the development of the electricity market. Ensuring a market-based approach benefits customers and enables the cost-effective transition to a clean power system. European legislation and regional solutions on market rules have a significant impact on the electricity markets. At Fingrid, we actively participate in the preparation and implementation of European legislation, striving to safeguard the best interests of our Finnish stakeholders. In electricity transmission connections between neighbouring countries and within Finland, we try to avoid transmission bottlenecks and to keep Finland as a single price area.

We develop **services** together with our customers. We take into account our customers' needs and their business challenges. The foundation for our customer work is listening and clear communication. We focus on operating fairly and taking into account the different needs of the industry players. We promote the creation of new services and we strive to enable new players to enter the electricity market.

**Financiers and credit rating agencies** as well as **shareholders** expect us to plan the company's finances, capital expenditure, risk management and financing in the long term. Our **decision-making and operations** are based on the right information at the right time and on our objective to be efficient, profitable and responsible.

Co-operation with **landowners and neighbours** living near our transmission lines is important to us. The land and trees

under the transmission lines remain the property of the landowner. We help landowners see where they can influence a transmission line project and encourage them to defend their rights. Respectful interaction with people and co-operation aimed at reducing the harm caused to humans and nature are pursued throughout the life cycle of the transmission line. We communicate actively with landowners, and based on the feedback we receive, we constantly develop our ways of operating when it comes to both our employees and the hundreds of people employed by various contractors within our projects.

**Contractors and service providers** are a significant resource for our company through their expertise and the work input we receive from them. Contractors and service providers mainly expect from us fair and timely payment of wages, a safe working environment and the possibility to anticipate future situations collaboratively.

We develop **our personnel's** expertise to achieve a work community that is productive, innovative and healthy. We ensure this through strategic management. Our employees interact with a number of different stakeholders on a daily basis. In our stakeholder engagement, we follow practices that are in line with the company's values. Good interaction must be the goal in all stakeholder engagement. Our employees have been trained on how to engage with stakeholders and we make sure that everyone is aware of our stakeholders' expectations and knows how to act responsibly. The executive management group reviews the success of stakeholder engagement twice a year.

## Results of stakeholder surveys

We regularly survey our stakeholders' satisfaction with Fingrid. The purpose of the surveys is to enable us to identify not only the successes and strengths but also the improvement areas. The feedback received can also be a source of tacit signals, suggesting, for example, what the sector should prepare for.

In 2019, Fingrid carried out exceptionally extensive surveys into the opinions of its various stakeholders:

### Employer brand survey

Overall rating for Fingrid's reputation 3.67/5.00

*"Fingrid's strengths as an employer are its good and equal treatment of people and good work atmosphere. Fingrid is also known as a financially stable and responsible player."*

### Luottamus&Maine survey, general public

Overall rating for Fingrid's reputation 3.20/5.00

*"The positive development of reputation is reflected as a more positive behaviour in times of recommendation and crisis, in particular."*

### Luottamus&Maine survey, policymakers

Overall rating for Fingrid's reputation 3.64/5.00

*"The sizable improvement in reputation is significant and is reflected in every aspect of reputation."*

### Customer satisfaction

NPS index 36

*"Customers consider Fingrid an open and collaborative player, which is why they are happy to recommend to others Fingrid's way of working with customers."*

### Authority survey

NPS index 49

*"A well-managed, expert organisation."*





### Media barometer survey

Overall rating for Fingrid's reputation among journalists 3,57/5,00

*“Among journalists, Fingrid’s reputation rose to a good level. In terms of media communications, Fingrid received the highest score for the reliability of communication.”*

### Landowner surveys concerning the transmission line projects completed during the year

The overall grades varied between 3.6–4.3 (on a scale of 1–5).

Fingrid’s key stakeholders and channels of engagement			
Stakeholder	Stakeholder’s expectations	Fingrid’s measures	Communication channels
 <b>Customers</b>	<ul style="list-style-type: none"> <li>Reliable electricity and a well-functioning electricity market</li> <li>Services that meet customers’ needs</li> <li>Affordable pricing</li> <li>Predictable operations</li> </ul>	<ul style="list-style-type: none"> <li>Co-operation in grid operations, maintenance and planning</li> <li>Customer service planning and continuous engagement</li> <li>Customer committees</li> <li>Customer events</li> <li>Customer and stakeholder questionnaires</li> </ul>	<ul style="list-style-type: none"> <li>Seminars by Fingrid and others</li> <li>Press releases</li> <li>Website</li> <li>Customer magazine</li> <li>Media publications</li> <li>Social media</li> <li>Newsletter</li> <li>Info sessions and meetings</li> </ul>
 <b>Landowners and neighbours</b>	<ul style="list-style-type: none"> <li>Responsible operating methods in land-use and environmental matters to reduce negative impacts</li> <li>Proactive and reliable contact</li> </ul>	<ul style="list-style-type: none"> <li>Operating methods that reduce land-use and environmental impacts</li> <li>Map feedback service</li> <li>Feedback surveys about completed investment projects</li> </ul>	<ul style="list-style-type: none"> <li>Direct contacts</li> <li>Landowner bulletins</li> <li>Events for the public and other events</li> <li>Official info sessions and other events</li> <li>Website</li> <li>Media publications</li> <li>Social media</li> </ul>
 <b>Personnel</b>	<ul style="list-style-type: none"> <li>Equal treatment and rewards</li> <li>Well-being in the work community</li> <li>Occupational safety</li> <li>Professional development opportunities</li> <li>Stable employment</li> </ul>	<ul style="list-style-type: none"> <li>Employee rewards and benefits</li> <li>Daily interaction, performance reviews and personnel events</li> <li>Personnel surveys</li> <li>Personnel association activities</li> <li>Alumni collaboration</li> </ul>	<ul style="list-style-type: none"> <li>Direct contacts</li> <li>Intranet</li> <li>Official info sessions and other events</li> <li>Website</li> <li>Social media</li> </ul>
 <b>Contractors and service providers</b>	<ul style="list-style-type: none"> <li>Occupational safety</li> <li>Responsible treatment of suppliers</li> <li>Predictability and continuity</li> </ul>	<ul style="list-style-type: none"> <li>Training and audits</li> <li>Promoting occupational safety</li> <li>Joint development projects</li> </ul>	<ul style="list-style-type: none"> <li>Direct contacts</li> <li>Fingrid’s seminars</li> <li>Website</li> <li>Media publications</li> <li>Social media</li> </ul>



 <p><b>Financiers and credit rating agencies</b></p>	<ul style="list-style-type: none"> <li>• Debt service consistent with agreements</li> <li>• Responsible business and good governance</li> <li>• Transparent reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Regular engagement and co-operation</li> </ul>	<ul style="list-style-type: none"> <li>• Direct contacts</li> <li>• Website</li> <li>• Media publications</li> <li>• Stock exchange releases</li> <li>• Official info sessions and other events</li> </ul>
 <p><b>Shareholders</b></p>	<ul style="list-style-type: none"> <li>• Responsible business and good governance</li> <li>• Improvement in productivity</li> <li>• Preservation of shareholder value and stable return development</li> </ul>	<ul style="list-style-type: none"> <li>• General meetings</li> <li>• Board work</li> <li>• Dividends</li> </ul>	<ul style="list-style-type: none"> <li>• Direct contacts</li> <li>• Fingrid's seminars</li> <li>• Press releases</li> <li>• Media publications</li> <li>• Website</li> <li>• Social media</li> <li>• Official info sessions and other events</li> </ul>
 <p><b>Policymakers</b></p>	<ul style="list-style-type: none"> <li>• Reliable electricity</li> <li>• Shaping the clean and market-oriented power system of the future</li> <li>• Well-functioning electricity markets</li> <li>• Participation in the electricity markets</li> </ul>	<ul style="list-style-type: none"> <li>• Contact with decision-makers</li> <li>• Reputation&amp;Trust survey of policymakers</li> </ul>	<ul style="list-style-type: none"> <li>• Direct contacts</li> <li>• Seminars by Fingrid and others</li> <li>• Press releases</li> <li>• Media publications</li> <li>• Website</li> <li>• Social media</li> </ul>
 <p><b>Authorities and organisations</b></p>	<ul style="list-style-type: none"> <li>• Promotion of common matters</li> <li>• Clear, reliable and timely communication</li> <li>• Expertise</li> </ul>	<ul style="list-style-type: none"> <li>• Working groups, committees and co-operation forums</li> <li>• Statements</li> <li>• Participation in the Power and District Heat Pool</li> <li>• Regular contact</li> </ul>	<ul style="list-style-type: none"> <li>• Direct contacts</li> <li>• Fingrid's seminars and other seminars</li> <li>• Press releases</li> <li>• Media publications</li> <li>• Website</li> <li>• Social media</li> </ul>
 <p><b>Other partners</b></p>	<ul style="list-style-type: none"> <li>• Expertise</li> <li>• Promotion of common matters</li> </ul>	<ul style="list-style-type: none"> <li>• Engagement with TSOs</li> <li>• Collaboration with ENTSO-E, RSC and other industry players</li> <li>• R&amp;D projects</li> <li>• Collaboration with learning institutes</li> <li>• Trade shows</li> </ul>	<ul style="list-style-type: none"> <li>• Direct contacts</li> <li>• Fingrid's seminars and other seminars</li> <li>• Press releases</li> <li>• Media publications</li> <li>• Website</li> <li>• Social media</li> <li>• Newsletter</li> <li>• Info sessions and meetings</li> </ul>



# Business operations

# Customers

Fingrid provides transmission grid and electricity market services to its customers: power companies, electricity-consuming industry and electricity market participants. Although Fingrid’s operations are largely based on performing statutory duties, we strive to put the customer first in the performance of our duties. At the same time, it is important that we serve all our customers fairly and equally.

In addition to being able to offer affordable services that meet customer needs, we value openness, trust and active interaction with our customers. We serve all our customers equally. We engage our customers in developing our operations through, for example, customer committees and network code reference groups. We also carry out extensive annual **customer surveys** to measure customers’ satisfaction with Fingrid and to collect feedback for developing our operations.

According to a study carried out by the European Network of Transmission System Operators for Electricity (ENTSO-E) in 2019, the transmission tariffs for electricity in the Finnish transmission system are the third lowest in Europe, compared with transmission grids of a similar size. The comparison included 36 countries. The three lowest-priced countries where the TSO offers services at all the highest voltage levels were Slovenia, Bulgaria and Finland. For 2020, the grid service fees will be maintained at the previous year’s level.

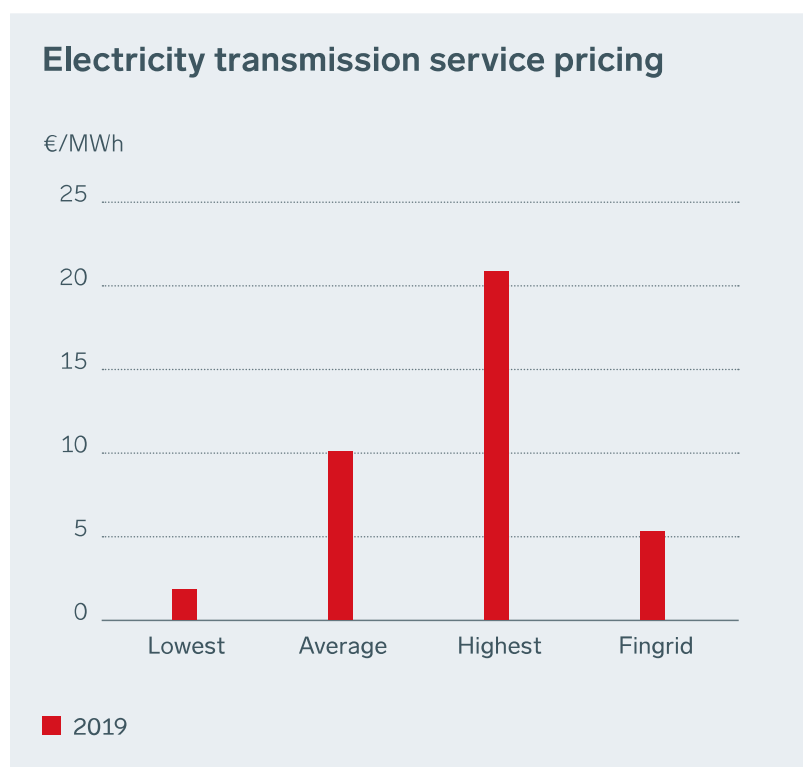


Image: Price of electricity service. Including costs related to grid operations, such as investments, loss power, system services, but not directly related to transmission system operation, such as public service obligations, feed-in tariff for

renewable energy, and peak load capacity. The comparison includes the EEA countries with a transmission system operator in charge of both a 110-kilovolt and 400-kilovolt structure. The 15 countries included in the comparison are: Belgium, Czech Republic, Denmark, Estonia, Finland, France, Hungary, Iceland, Ireland, Lithuania, Norway, Poland, Romania, Slovakia and the UK.

Fingrid does not sell electricity directly to consumers. The small proportion of the grid service fee in consumers' electricity bill is proof of operational efficiency. Sales, transmission and taxes each make up a third of the electricity price for consumers. In 2019, the grid service fee accounted for an average of 2.4 per cent of the total bill (in a calculation where the household consumer's consumption is approximately 5,000 kWh/year).

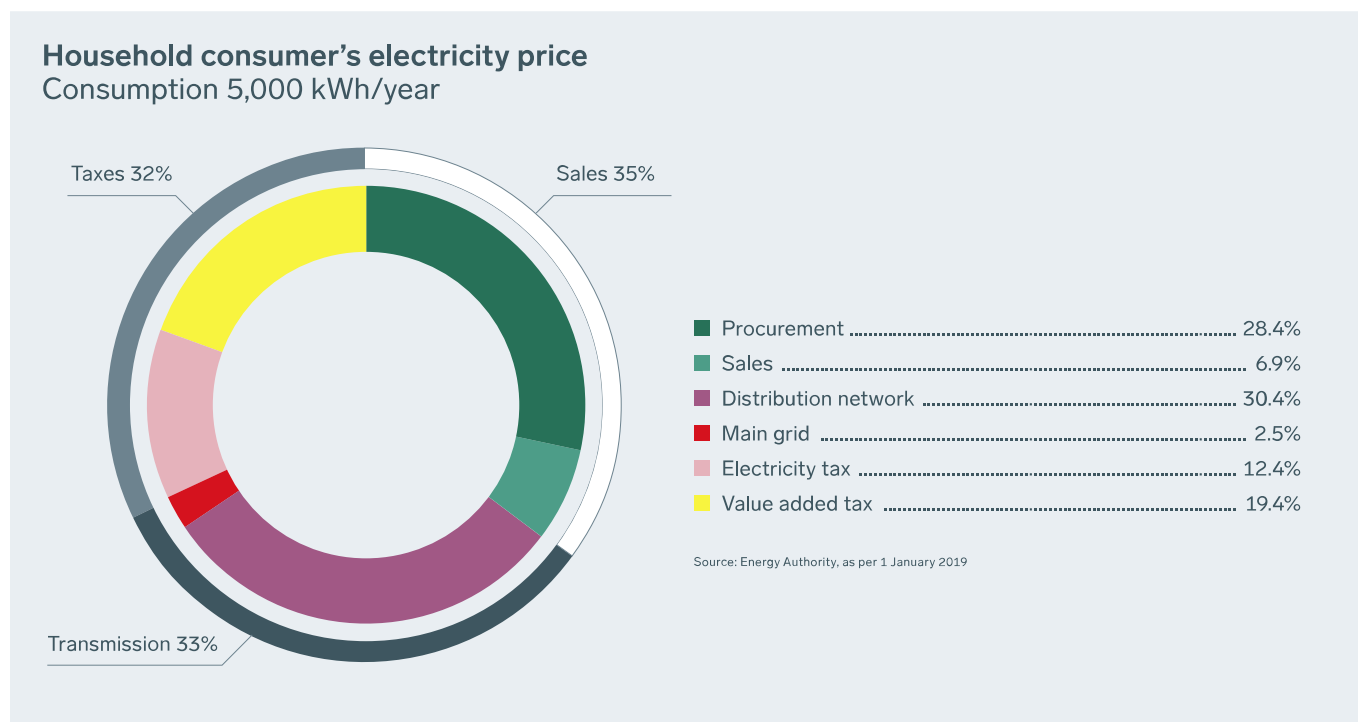


Image: Proportion of grid service fee in consumers' electricity price

During the year, we organised two major customer events and several info sessions and webinars targeted at smaller audiences concerning, among other things, the Datahub project and the 15-minute **imbalance settlement project**. The theme of the Fingrid Current event organised in spring was the 90-year-old main grid. The autumn event focused mainly on **sector coupling** and the transformation of the main grid into a part of the power system of the future.

Our customer base underwent a strong shift in 2019. Electricity retailer companies merged into larger entities, while new wind power operators entered the sector. Connecting wind power to the main grid kept our customer service personnel busy and new connection agreements worth some 2,000 megawatts were concluded during the year. The challenge is to build the new connections and to develop the main grid to meet new transmission needs. Market development projects, such as the Datahub and the 15-min imbalance settlement period, required a lot of discussions with our customers, as they will have large impacts on their metering and information systems.

## More than half of customers felt that operations had improved during the past year

According to the customer survey conducted in autumn 2019, customers' satisfaction with Fingrid has remained at the

previous year’s good level. According to the survey, customers perceive Fingrid as an open and co-operative player who works for the benefit of the whole of society and treats its customers equally. Fingrid’s services meet customer needs.

For the first time, we asked our customers to estimate how likely they would be to recommend Fingrid’s way of engaging with customers, based on the widely used **Net Promoter Score (NPS)**. The NPS scale is 0–10 and the result is obtained by subtracting the percentage of detractors (responses 0–6) from the percentage promoters (responses 9–10). Our NPS was 36, which is a good result for a natural monopoly, according to the company that carried out the survey.

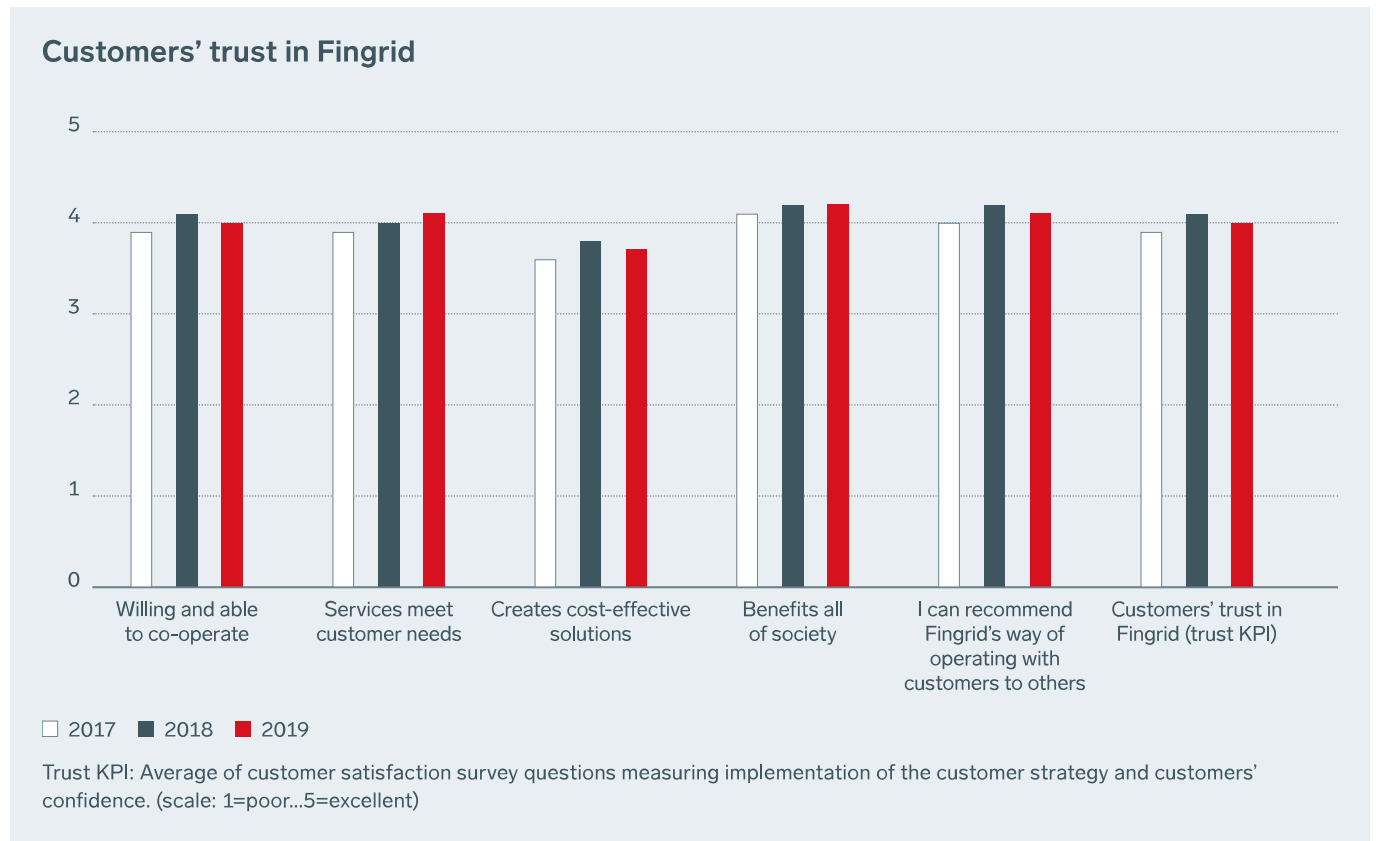


Image: Customers’ trust in Fingrid

### “A forerunner in Europe, but can always do better.”

In addition to number scores, we received a lot of open-ended feedback, both positive and negative, from the survey. Open-ended feedback is particularly valuable for developing operations. A few examples:

*“Fingrid employees are characterised by positivity, a desire to co-operate and, to a suitable extent, also openness.”*

*“A forerunner in Europe but can always do better.”*

*“In some respects, operations involve too much official formality. They should gain a more in-depth understanding of the customer field and customers’ challenges.”*

*“Fingrid operates openly and is able to co-operate. Many open events where information is shared, and future plans and changes are disclosed.”*

*“Expert service readily available with a spot-on attitude.”*

## Renewal of Fingrid’s services

In spring 2019, we asked our customer committees how they perceive Fingrid’s services. It turned out that the current division of Fingrid’s services is unclear and complicated for the majority of the committee members.

Based on the survey, we brought more clarity to Fingrid’s services and regrouped them into larger packages. Our service offering now consists of main services, which are grid services and electricity market services.

The task of grid services is to secure reliable transmission capable of meeting the needs of electricity companies and energy intensive industry. Our value proposition is to offer reliable and affordable electricity transmission.

The task of electricity market services is to offer all market participants a unified bidding area in Finland and the benefits of open European electricity markets. According to Fingrid’s value proposition, we are the most market favourable transmission company.

Going forward, we will develop services as packages and engage our customers even more in the actual service development work.

<p><b>Grid services</b></p> <p><b>Reliable and affordable electricity transmission</b> We secure reliable transmission capable of meeting the needs of electricity companies and energy intensive industry.</p>	<p><b>Electricity market services</b></p> <p><b>The most market favourable transmission company</b> We offer all market participants a “unified bidding area Finland” and the benefits of open European electricity markets.</p>
<p>We develop our services in close cooperation with our customers and take into account their different needs. Our tariffs are among the lowest in Europe.</p>	

### My Fingrid: for all data

My Fingrid, an electronic service portal, was released to all customers in May. The service was made more user friendly with the help of five pilot customers. In My Fingrid, customers can view, for example, electricity transmission metering, invoicing and reactive power information as well as disturbance and transmission outage information. Different data can also be updated and reported through the service.

The service is being developed continuously, and new functionalities will be added based on customers’ needs and wishes.

# Customer committees and Advisory Committee

The Advisory Committee and the three other customer committees (Grid Committee, Operations Committee and Market Committee) play an important role in ensuring interaction and that the customer's voice is heard.

The Advisory Committee deals with the company's entire field of operations and services offered to customers. The information addressed by the Advisory Committee is openly available to all stakeholders. In addition to the renewal of services, the Advisory Committee dealt in its meetings with, among other things, the investment needs and changes to grid operations arising from the increasing use of renewable energy, the company's readiness rehearsals and the energy companies' experiences concerning data management.

The customer committees deal with matters in their respective sectors. The customer committees will be renewed as of 2020 to meet the renewed services, which have been regrouped into two packages instead of three. The number of committees will be reduced from four to three and their tasks have been reviewed. The committees are advisory bodies that offer insights into Fingrid's operations and the services offered to customers.





## Advisory Committee

### Members 2019

Timo Honkanen, Turku Energia Oy (chair)  
Timo Jokinen, Inergia Oy  
Elina Kivioja, Vattenfall Oy  
Jarkko Kohtala, Elenia Oy  
Miika Lehtimäki, Boliden Oy  
Tony Lindström, Outokumpu Oyj  
Simon-Erik Ollus, Fortum Oyj  
Juha Rintamäki, Vaasan Sähköverkko Oy  
Matti Ryhänen, Savon Voima Verkko Oy  
Ilkka Tykkyläinen, Pohjolan Voima Oyj  
Antti Vilkuna, Suomen Voima Oy  
Mikko Vuori, UPM Communication Papers Oy

### Fingrid's members

Jussi Jyrinsalo  
Jukka Ruusunen  
Rami Saajoranta (secretary)



## Grid Committee

### Members 2019

Risto Lappi, Vantaan Energia Sähköverkot Oy (chair)  
Arto Gylén, PKS - Sähkösiirto Oy  
Hannu Halminen, Sallila Sähkösiirto Oy  
Ismo Heikkilä, Kemijoki Oy  
Anne Kärki, Outokumpu Europe Oy  
Tommi Lähdeaho, Elenia Oy  
Arto Nikkanen, LE-Sähköverkot Oy  
Jukka Rajala, EPV Alueverkko Oy  
Mikko Rintamäki, Kokkolan Energia Oy  
Esa Ukkonen, Stora Enso Oy  
Katja Virkkunen, Oulun Energia Siirto ja Jakelu Oy

### Fingrid's members

Timo Kiiveri  
Petri Parviainen  
Katariina Saarinen (secretary)



## Operations Committee

### Members 2019

Heikki Paananen, Elenia Oy (chair)  
 Tuomas Candelin-Palmqvist, Tuuliwatti Oy  
 Mikael Heikkilä, Fortum Oyj  
 Teppo Härkönen, Helen Sähköverkko Oy  
 Sakari Kauppinen, JE Siirto Oy  
 Petri Kopi, Kemira Chemicals Oy  
 Hannu Parkkonen, Kuopion Energia Oy  
 Pekka Pollari, UPM Energia  
 Pentti Rimali, Rovakaira Oy  
 Timo Torvela, Tuike Finland Oy  
 Juho Uurasjärvi, Turku Energia Sähköverkot Oy  
 Jarno Virtanen, Nivos Energia Oy

### Fingrid's members

Reima Päivinen  
 Jonne Jäppinen (secretary)



## Market Committee

### Members 2019

Johanna Haverinen, Keravan Energia Oy (chair)  
 Peter Fabritius, Valio Oy  
 Olli Hagqvist, Taaleri Oyj  
 Juha Keski-Karhu, Väre Energia Oy  
 Elina Lehtomäki, Caruna  
 Tomi Pesonen, Metsä Group  
 Heikki Rantamäki, Pohjois-Karjalan Sähkö Oy  
 Jan Segerstam, Empower Oyj  
 Harri Sirpoma, Helen Oy  
 Matti Sohlman, Pohjolan Voima Oyj  
 Sebastian Sundberg, Fortum Oyj  
 Ville Väre, Liikennevirta Oy / Virta

### Fingrid's members

Asta Sihvonen-Punkka  
 Maria Joki-Pesola (secretary)

# Finance and treasury

The objective of Fingrid's finance and treasury functions is to operate cost-effectively and create value for shareholders.

## Fingrid's business model and the regulation of transmission system operations

Fingrid constitutes a natural monopoly as referred to in the Finnish Electricity Market Act (588/2013), with duties defined in legislation. The company's operations, reasonableness in pricing and financial result are regulated and overseen by the Energy Market Authority. The Energy Market Authority determines Fingrid's allowable financial income over four-year regulatory periods (2016–2019 and 2020–2023).

Grid operations, in other words the transmission of electricity in the nationwide grid owned by the company, constitutes the bulk of Fingrid's turnover, profit and balance sheet. The allowed financial result from transmission system operations is calculated by multiplying the total adjusted capital invested in the transmission network operations (transmission network assets valued at the regulatory present value) with the reasonable rate of return defined by the Energy Market Authority. The reasonable financial result allowed by the regulation forms the basis of Fingrid's financial planning and pricing. The required amount of turnover can be calculated by adding up the operating expenses and the result.

Fingrid's turnover mainly constitutes from the pricing of the transmitted electricity, in other words the consumption of Fingrid's customers. Fingrid additionally charges **fees for output from and input into the grid**, and power generation capacity fees. The company determines in advance for the next year the unit prices for the transmission of electricity necessary to recover the required turnover. Fingrid's total costs consist of the operating expenses and finance costs and taxes, which are excluded from the regulatory calculations.

The so-called adjusted profit, realised in compliance with the regulation, is calculated by adjusting the parent company's operating profit according to the Energy Market Authority's regulation methods and by adding the impact, either positive or negative, of the incentives. The incentives include capex, quality, efficiency improvement and innovations incentives (R&D).

Any realised regulatory profit over a regulatory period that exceeds the allowed return constitutes a surplus that must be returned to the customers in the form of lower future prices. If the realised regulatory profit over a regulatory period is below the allowed return, this leads to a deficit which Fingrid may recover from the customers in the form of higher future prices. No regulatory surplus or deficit income is recorded in the financial statements. The aim of Fingrid's business operations is to achieve, as a rule, the allowed financial result each year.

## Corporate finance principles

Key long-term goals for Fingrid's financial control:

- Good cost-effectiveness, responsible operations and continuous improvement of productivity in order to maintain service pricing on a moderate level. The company aims at being among the most cost-effective TSOs in Europe and maintaining its grid pricing among the three most affordable in its peer group (companies with similar grids).
- High credit rating to ensure the availability of long-term decentralised funding, affordable funding costs and good debt service capacity.
- Creating shareholder value, which is achieved by maintaining the company's adjusted income on the level allowed by regulation and paying dividends that correspond to shareholders' profit targets.

## Cost-effective operational activities

Fingrid's cost-effectiveness is based on an operational model where the company merges its core competence with the best suppliers. Additionally, Fingrid actively co-operates to plan activities with its customers and innovates with third parties. This produces better and more efficient solutions in areas such as grid investments and development.

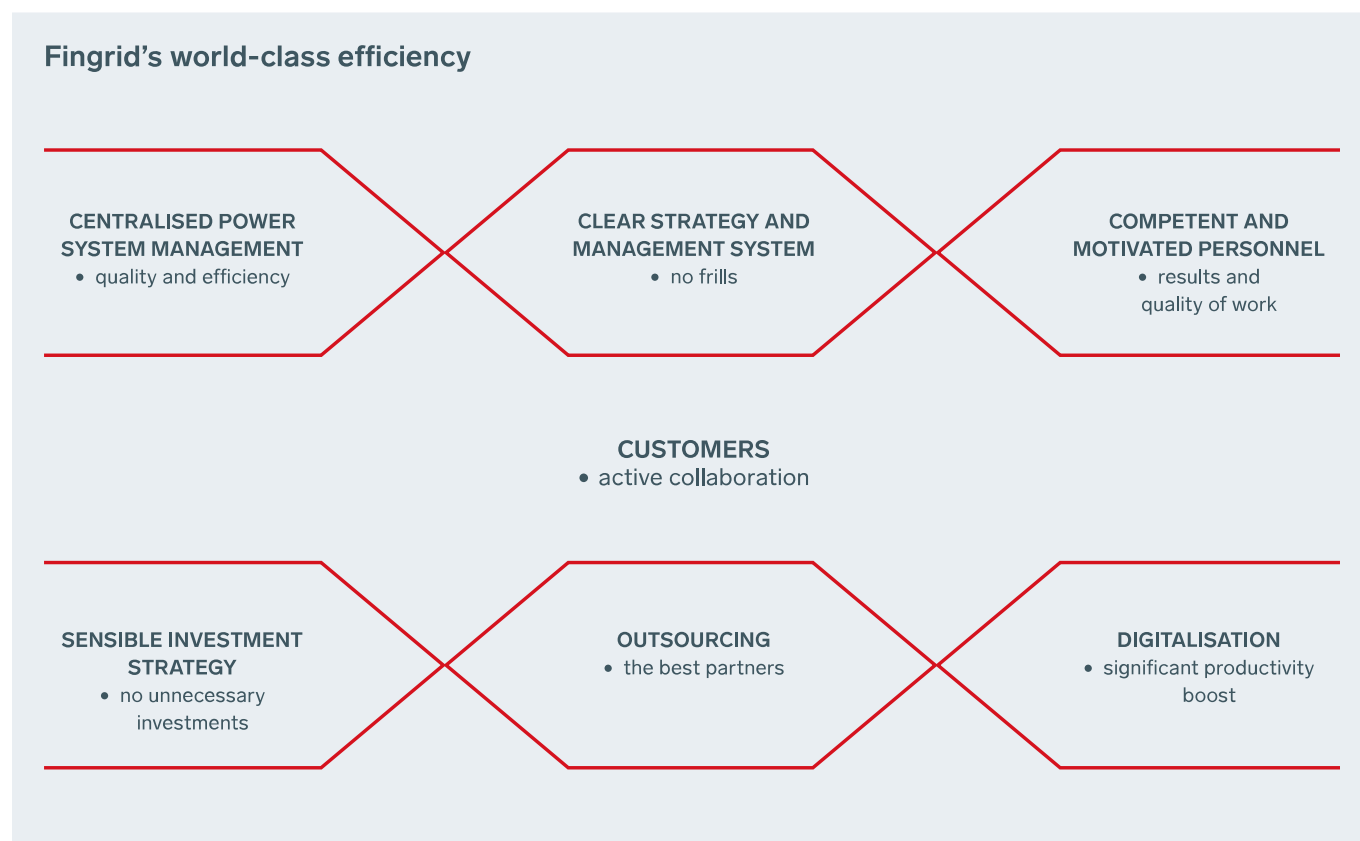


Image: World-class efficiency

Fingrid has outsourced operations such as grid construction and maintenance, which serves to optimise the use of financial and production resources in a scalable way. Monitoring and control of the grid is centralised in a single location. The company increasingly makes use of the possibilities created by digitalisation in areas such as grid maintenance and investments. A good example of this is [the digital substation pilot project](#). The company's management system is based on a matrix organisation and empowered experts to ensure effective engagement of the personnel across organisational boundaries. This increases the efficiency of operational activities.

## Pricing in transmission system operations

Fingrid aims to guarantee the stable pricing development of its services through long-term planning of the company's finances, capital expenditure, risk management and financing. Neither investment decisions nor any other decisions are dictated by our short-term financial targets.

The company's consistently high rankings in annual international comparison studies on the cost-effectiveness and quality of grid operators, and the international certification for the management of physical assets (ISO 55001) granted to Fingrid are indications of the cost-effectiveness of the company's operations and of its effective management of cost

and other risks related to grid assets. The Council of European Energy Regulators' (CEER) benchmarking study placed Fingrid among the most cost-effective TSOs in Europe in 2019.

Fingrid's grid prices generally apply one year at a time. The aim of the pricing is to secure as stable development as possible, despite market-term uncertainties. However, major volatility on the market may necessitate upward or downward price adjustments even within a single year. The pricing of imbalance settlement and cross-border transmission services is slightly more dynamic, reflecting the nature of these services and the need to respond to changes more quickly.

## Generation of economic value

Fingrid's profits are directed to the services procured from suppliers, payroll, payments to financiers, taxes and, finally, dividends to the owners, in other words the State of Finland and domestic pension and insurance companies. The company additionally carries out major capital expenditure each year in Finland.

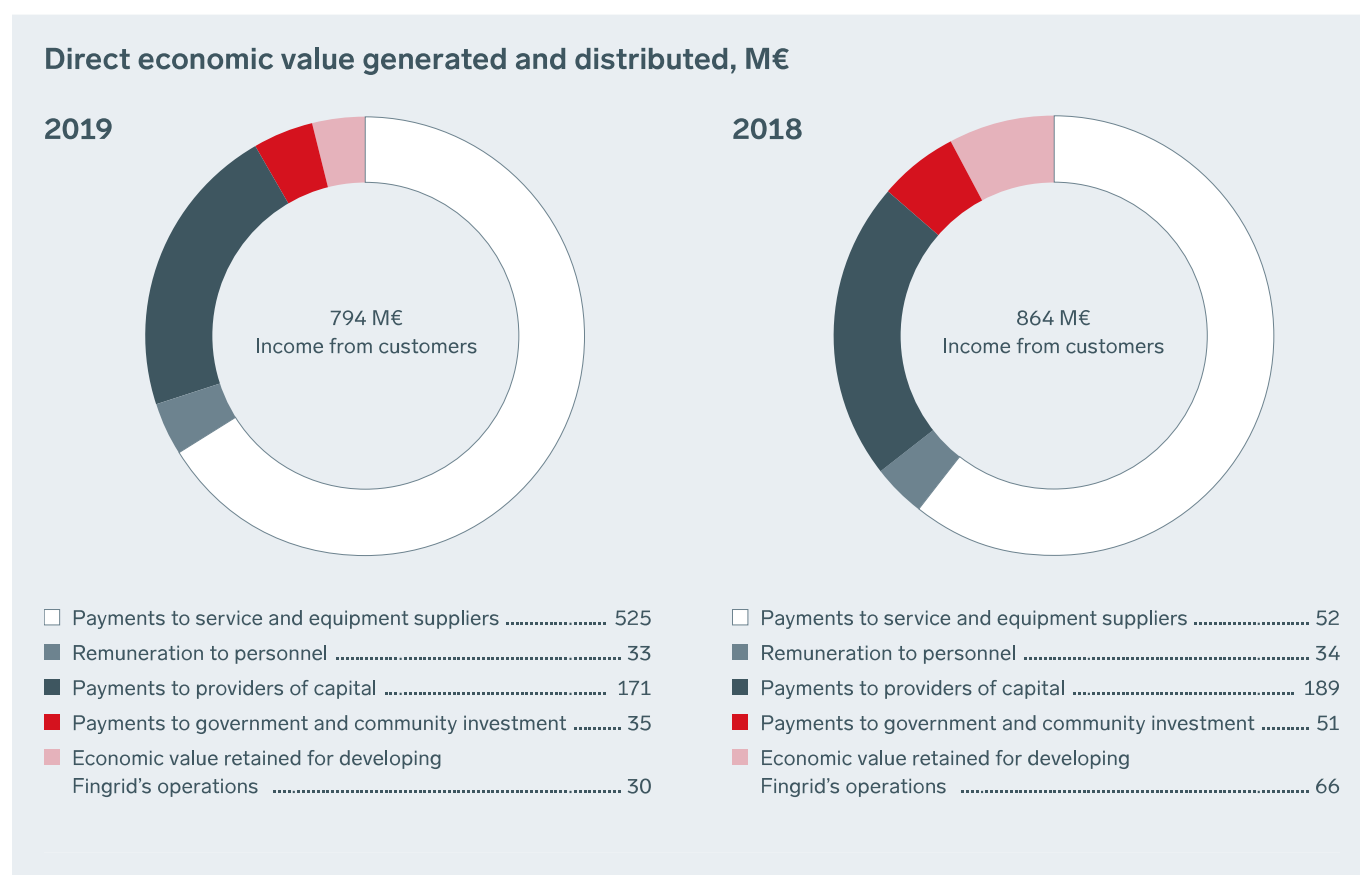


Image: Direct economic value generated and distributed

## Capital management

Equity and liabilities as shown in the balance sheet are managed by Fingrid as capital. The balance sheet according to the company's accounting is smaller than the balance sheet under the Finnish Energy Authority's regulations, in which grid assets have been measured at the regulatory present value in use. The company's borrowings are presented at their carrying amount also on the regulatory balance sheet. Equity on the accounting balance sheet is smaller than equity on



the regulatory balance sheet, which balances out the difference in the grid asset carrying amount and the value in use. The principal aim of Fingrid's capital management and grid asset management is to secure the company's ability to conduct uninterrupted operations, value retention and rapid recovery from any exceptional circumstances. A key goal is to maintain an ideal capital structure such that the company's credit rating remains solid, cost of capital remains reasonable, and the company can pay dividends to its shareholders.

The company aims to maintain a credit rating of at least 'A-'. The company has not set specific key figure targets for accounting balance sheet or regulatory balance sheet capital management, but instead monitors and controls the overall situation, for which credit ratings and their underlying risk analyses and other parameters create a foundation.

## Financing policy

The company takes advantage of the opportunities offered by credit ratings at any given time on the international and domestic money markets. Market-based and diversified financing is sought from several sources. The goal is a balanced maturity profile. Fingrid's existing loan agreements as well as debt and commercial paper programmes are unsecured and do not include any financial covenants based on financial ratios.

The company is exposed to various financing risks such as market risks, liquidity risks, counterparty risks and credit risks. The aim of financing risk management is to protect shareholder value by securing the financing required for the company's business operations, by hedging against the main financial risks and by minimising financial costs within the risk limits.

Fingrid operates in the debt capital, commercial paper and loan markets:

- For long-term financing (more than 12 months), the company has an international Medium Term Note Programme ("EMTN Programme"), totalling EUR 1.5 billion.
- For short-term financing (less than 12 months), the company has an international Euro Commercial Paper Programme ("ECP Programme") totalling EUR 600 million.
- Fingrid additionally has a domestic commercial paper programme totalling EUR 150 million.

Furthermore, Fingrid has bilateral long-term loan agreements with both the European Investment Bank (EIB) and the Nordic Investment Bank (NIB). To secure liquidity, the company has a revolving credit facility and overdraft facilities at its disposal.

## Green financing

Green financing is an important part of Fingrid's financing strategy and responsible operating model. Fingrid was the first Finnish company to issue a Green Bond in 2017. Green Bonds are used to finance projects that are expected to have long-term net positive environmental impacts. Green Bond projects connect renewable energy production to Fingrid's transmission network, reduce electricity transmission losses and create smart solutions that save energy and the environment. Fingrid annually reports on the impacts of its Green Bond projects by publishing a separate impact report on its website under Investors. As of 2019, the company also discloses the estimated amount of carbon dioxide emissions that have been avoided through these projects in carbon dioxide equivalent tonnes. The company's objective is to increase the share of green financing in its total financing.

# Financial result 2019

From the point of view of finances, 2019 turned out as expected. Transmission prices were lowered by an average of eight per cent starting from 1 January 2019. For 2020, the transmission pricing will stay at the level of 2019. Fingrid’s own calculations indicate a roughly EUR 15 million deficit for 2019 compared to the result allowed by the regulation. The company’s credit rating remained high, reflecting its strong overall financial situation and debt service capacity.

Fingrid is still one of the lowest-priced TSOs in Europe, while the company’s transmission reliability is among the best in the world. The company’s long- and short-term debt management and hedging against financing risks in the international capital markets continued according to plan. The effective use of capital employed is a key success factor for uninterrupted and continuously developing grid operations, and that will remain in our focus. Overall, the company’s finances and financing are on a stable footing, which enables a controlled transition to a clean power system.



Image: Turnover and profit from operations

The Group’s turnover was EUR 789.4 (852.8) million. Grid service income declined to EUR 385.0 (423.2) million, due to the reduced transmission fees. Electricity consumption in Finland totalled 86.1 (87.5) terawatt hours during the year.



Fingrid transmitted a total of 68.7 (68.6) terawatt hours of electricity in its grid, representing 76.0 (75.4) per cent of the total transmission volume in Finland (consumption and inter-TSO). Imbalance power sales amounted to EUR 346.7 (348.8) million, on a par with the previous year. Cross-border transmission income from the connection between Finland and Russia decreased to EUR 11.6 (35.5) million, as a result of the lower cross-border transmission tariff. The transmission tariff used in imports from Russia is based on the difference between Finland's and north-western Russia's area prices. Fingrid's congestion income from cross-border transmission lines totalled EUR 73.0 (29.6) million. The congestion income has been used, in accordance with the regulations, for the Forest Line connection's network investment and for the Alapitkä capacitor investment. EUR 72.4 million in congestion income was left unused and will be used for future investments to improve the functioning of the electricity market. Other operating income declined to EUR 4.2 (10.8) million. The decline resulted from a decrease in capital gains from the sale of fixed assets.

The Group's total costs amounted to EUR 678.1 (659.0) million. Imbalance power costs remained on the previous year's level and totalled EUR 323.5 (320.0) million. Loss power costs grew to EUR 53.9 (47.7) million. The realised average price of loss power procurement was EUR 39.57 (37.88) per megawatt hour. The cost of reserves to safeguard the main grid's system security remained on the previous year's level and amounted to EUR 55.9 (56.7) million. Depreciation totalled EUR 97.8 (99.7) million. Grid maintenance costs amounted to EUR 21.6 (21.2) million. Personnel costs declined to EUR 26.4 (32.2) million, mainly as a result of the capitalisation of personnel costs related to investment projects. A total of EUR 3.4 (3.6) million was used for R&D projects.

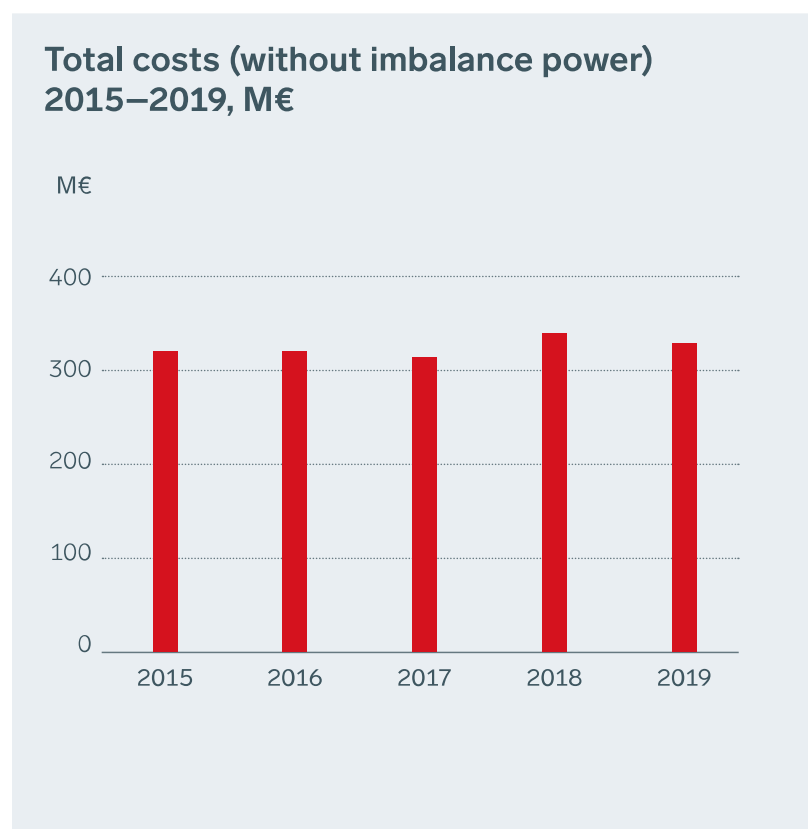


Image: Costs total (excluding imbalance power) 2015–2019

The Group's net financial costs in 2019 were EUR 10.1 (15.2) million, including a change of EUR 8.1 million (6.7) in the fair value of financial derivatives.

Fingrid's financial capital consists of equity and liabilities, in other words debt financing. In 2019, equity amounted to 32.0% and liabilities amounted to 68.0% of the consolidated balance sheet total. Equity according to the regulatory

balance sheet as required by the Energy Authority was 60.3% and the corresponding liabilities 39.7% in 2019.

Interest-bearing borrowings totalled EUR 1,120.0 (1,059.6) million, of which non-current borrowings accounted for EUR 884.7 (771.5) million and current borrowings for EUR 235.3 (288.1) million.

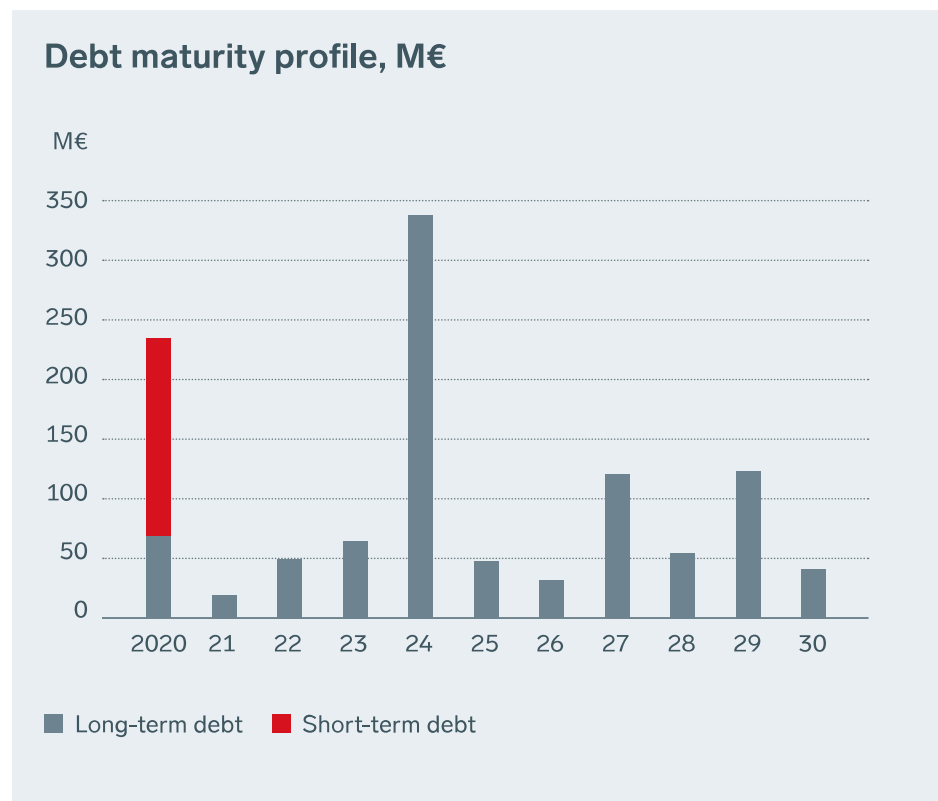


Image: Maturity profile of borrowings

The company’s liquidity remained good. Financial and cash assets recognised at fair value through profit or loss totalled EUR 82.8 (85.3) million on 31 December 2019. The company additionally has an undrawn revolving credit facility of EUR 300 million to secure liquidity (until 11 December 2022) and EUR 50 million in uncommitted overdraft facilities.

The counterparty risk arising from derivative contracts relating to financing was EUR 22.4 (14.3) million. Fingrid’s foreign exchange and commodity price risks were hedged.

Fingrid reports on its tax footprint and does not carry out special arrangements to minimise taxes. Dividends are mainly paid to the State of Finland and to Finnish pension insurance and insurance companies.

### Taxes 2015–2019, M€

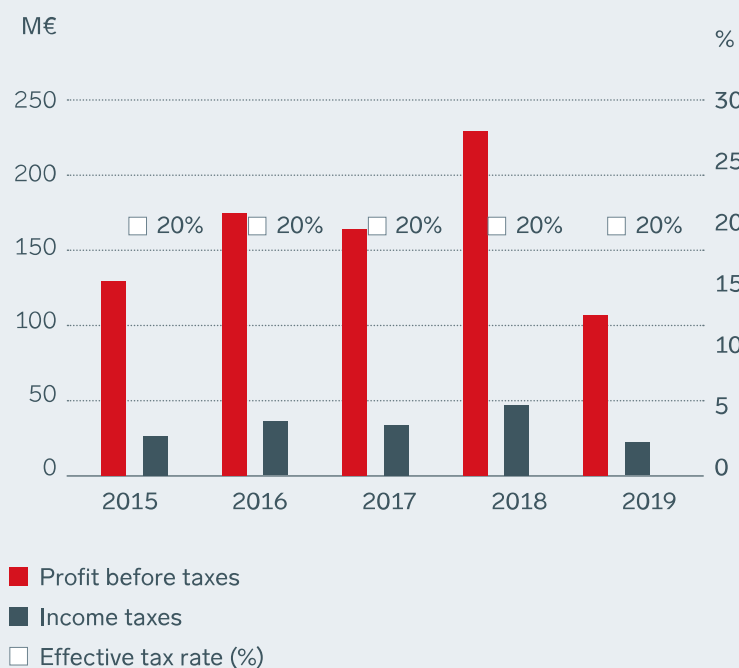


Image: Taxes in 2015–2019

### Profit before taxes

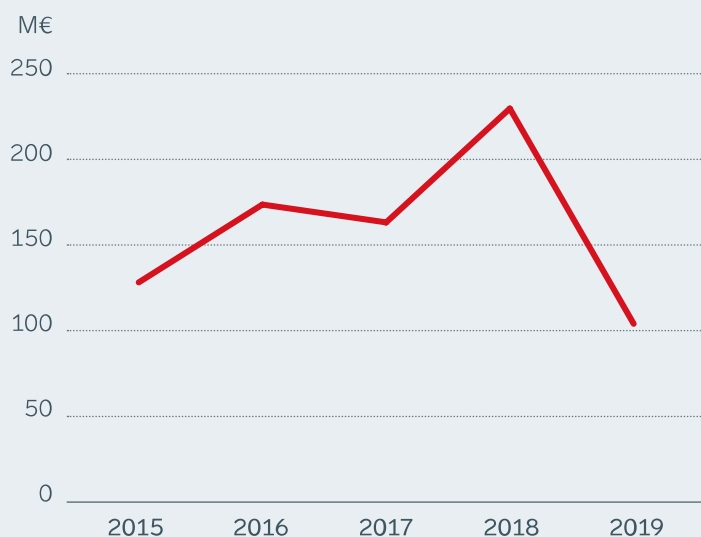


Image: Profit before taxes

Fingrid's tax footprint, MEUR		2019	2018	2017
Taxes payable				
	Income tax	34.96	50.42	39.42
	Unemployment insurance contributions	0.47	0.73	0.74
	Social security contributions	0.20	0.19	0.22
	Real estate tax	0.42	0.42	0.42
<b>Taxes payable total</b>		<b>36.04</b>	<b>51.75</b>	<b>40.80</b>
Taxes to be collected and remitted				
	Value added tax, net remitted	55.28	75.05	62.00
	Electricity tax (incl. emergency-preparedness contribution)	52.13	44.81	35.71
	Tax prepayments	8.10	7.70	7.23
<b>Taxes to be remitted total</b>		<b>115.51</b>	<b>127.56</b>	<b>104.95</b>

The summary includes taxes and charges that Fingrid is under legal obligation to pay or to collect the tax or payment in question. However, taxes that are included in the purchase price of a product or service and which Fingrid is not under legal obligation to declare are not included in the summary data. Most of the summary's taxes and charges concern Finland. The Group has had little business operations in Denmark since 2018, as a consequence of which a low amount of income tax has been paid to Denmark and a low amount of tax prepayments on the salaries paid to personnel in Denmark have been remitted. The Group's operations mainly concern Finland.

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### Dual listing both in Ireland and London

In January 2019, we concluded an evaluation regarding dual listing of Fingrid's debt issues and debt issuance programme. Based on the evaluation, Fingrid listed its EUR 1.5 billion Medium Term Note Programme on the Irish Stock Exchange, in addition to the London Stock Exchange. Fingrid's debt issues listed on the London Stock Exchange were also dual listed on the Irish Stock Exchange. Dual listing enables the trading of debt issues and new debt issue listings on these two stock exchanges.

### Fingrid signs loan agreements with EIB and NIB to reinforce the grid and support the integration of renewables

Fingrid and the European Investment Bank (EIB) signed a EUR 100 million loan agreement in support of reinforcing and developing Finland's electricity transmission network in February 2019. The projects to be financed with this loan facility will promote targets linked with renewable energy as well as increase the grid capacity to enable the integration of new production capacity.

In October 2019, the Nordic Investment Bank (NIB) awarded Fingrid a twenty-year EUR 100 million loan agreement to support the expansion and upgrades of the main grid.

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# Grid development and maintenance

We carry out investments and maintenance safely and efficiently at the right time. We build and maintain the main grid for electricity transmission according to a long-term approach to meet the needs of a clean power system. Going forward, Finland will substantially increase the share of wind power in electricity production. It is Fingrid's duty to ensure that the production capacity can be connected to the power system and the electricity market.

Finland's main grid is currently undergoing a **historic development stage**, where the grid construction mainly serves the needs of clean energy production. The main grid is being upgraded both between Finland and Sweden and within Finland along the north–south axis. The Coastal Line from North Ostrobothnia to the Pori area has been completed, the Forest Line from Oulu to Petäjavesi is under construction and doubling the Lake Power Line from North Ostrobothnia to Kuopio is at the planning stage. All the transmission connections to be built are necessary major investments to create the future main grid that will serve as a platform for clean energy.

Fingrid has great appreciation for the importance of grid maintenance. Notable successes in this respect include the excellent maintenance status of Finland's 90-year-old grid and the advanced age achieved by the Iron Lady, the country's first transmission line, which was dismantled only recently. Fingrid has been a global trail blazer in maintenance.

By international standards, grid asset management at Fingrid is world-class. The company placed at the top in the International Transmission Asset Management Study (ITAMS) in spring 2019.

Fingrid's asset management has been certified according to ISO 55001:2014 by Lloyd's Register Verification Limited. The certification was granted to Fingrid for the first time in 2016, and Lloyd's Register Verification Limited recertified Fingrid in autumn 2019.

## Environment and land use

Fingrid's land use and environmental policy aims at reduced environmental impacts in all grid investments as well as in grid maintenance. We require commitments in landowner engagement, respect of site-specific environmental values and proper waste and chemical disposal from external grid maintenance contractors and service providers by means of contractual terms, environmental training and audits.

In 2019, the statutory environmental impact assessment (EIA) for grid investments was initiated to reduce environmental impacts and to engage landowners in the projects related to the transmission line between Huittinen and Forssa and the third AC connection to Sweden, between Muhos and Ylitornio. In addition, three environmental assessments were completed. An expropriation permit ruling entitling to the construction and maintenance of the transmission line was received for four projects, the most significant of which was the Forest Line, running for more than 300 kilometres from Central Finland to Oulu. The **environment section** of this annual report offers more information on environmental and land-use topics.

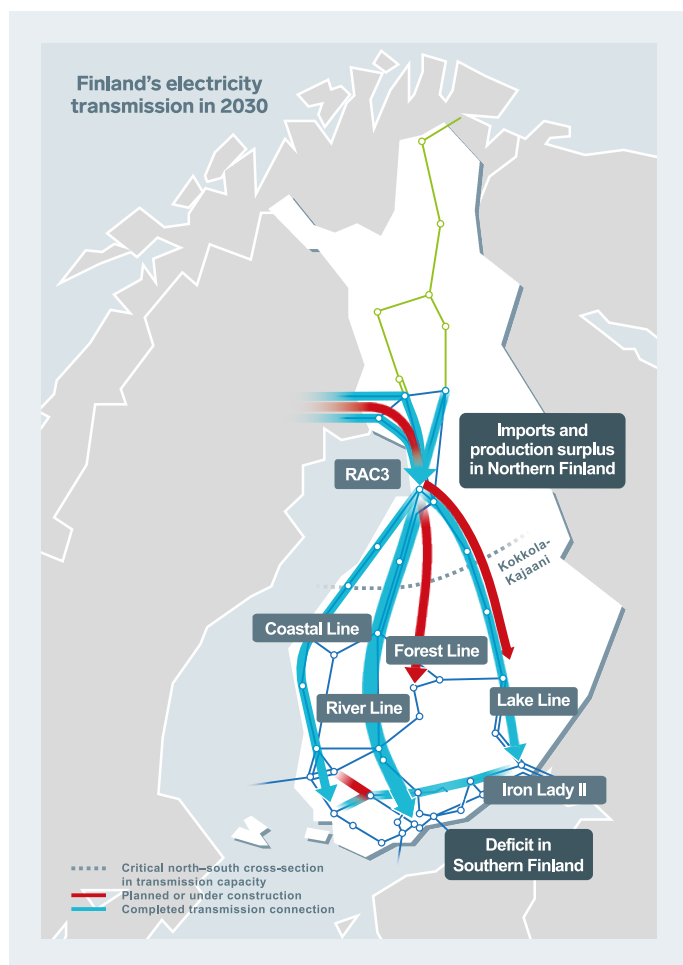


Image: Finland's electricity transmission in 2030

## Grid planning on the national and European level

Fingrid's annual capital expenditure in the main grid ranges roughly from EUR 100 to 150 million. Grid planning requires international and national co-operation between the various parties. A key tool for international grid planning is the European Ten-Year Network Development Plan (TYNDP) drawn up by ENTSO-E, the European Network of Transmission System Operators of Electricity. The latest TYNDP was published in November 2018. Fingrid was also involved in devising the plan.



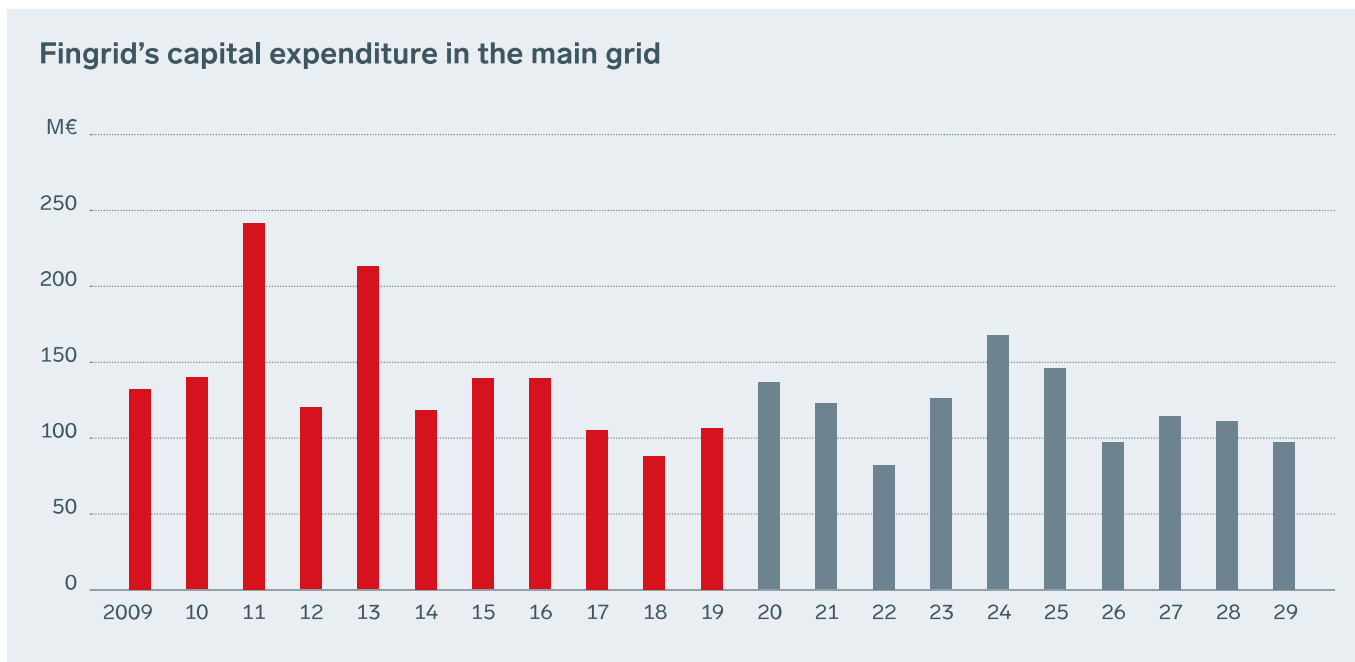


Image: Fingrid's capital expenditure in the main grid

The **TYNDP** contains a lot of information on the Europe-wide ten-year plan for transmission networks. The key items in this plan are the scenarios extending to 2030 and 2040. The plan provides a numerical run-down of the scenarios (production/consumption) and an analysis of the transmission needs called for in the power system on the European level. In addition to the European TSOs' in-house experts, several industry players and stakeholders were consulted to create the scenarios and a balanced overall assessment.

The Nordic TSOs co-operate closely in the area of grid planning. A **Nordic Grid Development Plan** drawing on both European grid planning and the national plans was published in the autumn of 2019. The Nordic TSOs have on-going investment projects worth around EUR 15 billion in total by 2028.

The guideline for Finland's domestic grid planning is **Fingrid's grid vision**, which currently extends to 2040. The grid vision is insight into the long-term development needs of the main grid, including follow-up plans for the current projects. The grid vision 2040 discusses several, very different scenarios for the development of electricity production and consumption. The scenarios include various forecasts for factors such as distributed generation, CO<sub>2</sub>-prices and the number of electric cars. The current grid vision is dominated by a transition from fossil fuels towards electricity production with zero carbon dioxide emissions. Carbon-free production is becoming more and more competitive.

Fingrid published a main grid development plan 2019–2030 in autumn 2019. The development plan sets forth Fingrid's main grid planning principles, grid development needs and planned investments for the next 10-year period. Taking a long-term approach to grid development ensures that the transmission network as well as the entire system meet the requirements set for them in a changing environment – enabling the main grid to continue to serve the customer and society in future.

### Fingrid successful in ITAMS

Fingrid again enjoyed an excellent ranking in the International Transmission Asset Management Study (ITAMS). ITAMS evaluates the efficiency of TSOs' asset management. The study has been carried out five times, and Fingrid has placed at the top each time. Fingrid focusses especially on making use of digitalisation, which is one factor behind the good success in the study.

Image: Asset management performance vs. operative performance vs. total costs €/total length of transmission lines. In the figure, red colour means that not all necessary data was available, while the different shades of grey do not stand for something significant. The size of the circles refers to the length of transmission lines. Image source UMS Group.



# Completed and ongoing projects

Transmission lines and substations were built extensively throughout Finland in 2019. A total of approximately 150 kilometres of new transmission lines were built and 12 new or expanded substations were completed.

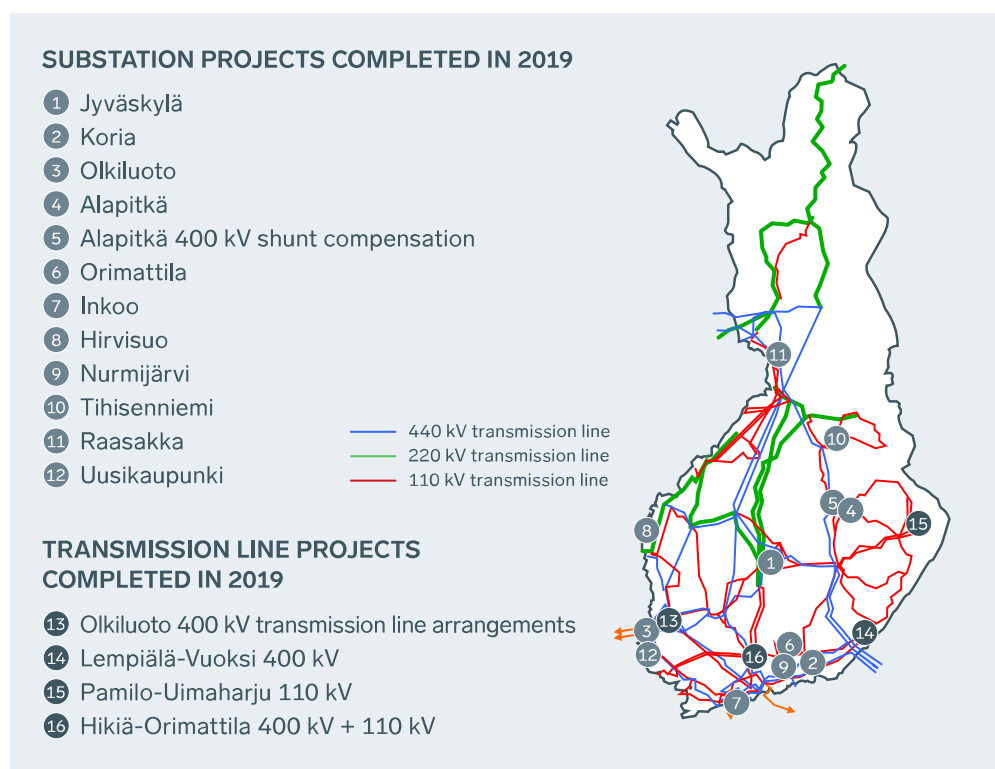


Image: Substation and transmission line projects

## Double redundancy for Fingrid’s Olkiluoto substation

The Olkiluoto substation’s ageing 400 kilovolt switching station at Eurajoki was replaced by two separate switching stations. The changes improved the Olkiluoto nuclear power plant units’ grid connection reliability, ensuring that the units can supply electricity to the system with no disturbances. Two new switchyard sections were commissioned in June 2019. The switchyard section was demolished, and the two switchyard sections were interconnected through autumn 2019. The work was completed in November 2019.

## Iron Lady II commissioned

The focus of our capital investment programme in recent years has been on rebuilding the first transmission line in Finland, more than 90 years old, originally built in the 1920s and dubbed the ‘Iron Lady’. The new transmission line will replace the old transmission line connection and reinforce the grid. The construction of the Iron Lady complex was focused on the 400 + 110 kilovolt transmission line between Hikiä and Orimattila and its last remaining section, between Hikiä (Hausjärvi) and Metsämarttila (Kärkölä). The Iron Lady II complex was completed in its entirety in December 2019.

## Forest Line: a giant effort with six sub-projects

In compliance with the Finnish government's policy programme, the percentage of wind power in Finland's energy production mix will substantially increase. We have for several years prepared to connect more wind power to the power system by systematically upgrading the grid. Fingrid's most significant and largest project is called the Forest Line, which runs from Oulu to Petäjävesi. The connection will increase the transmission capacity along the north–south axis, and it will be completed in its entirety in 2019–2022. The construction project has been divided into six separate subprojects, for which procurement agreements were made during 2019.

The Forest Line will help us to significantly increase the north–south transmission capacity. It will help keep Finland as a single price area and enable clean power production to be linked to the grid.

## Third AC interconnection with Sweden to improve transmission reliability

A third AC connection (RAC3) between Finland and Sweden which is important for the Nordic electricity market has proceeded as planned, in co-operation with Sweden's TSO. The transmission line from northern Finland to northern Sweden has proceeded to the environmental impact assessment stage. In 2019, the project received more than EUR 4 million in financial support from the EU for the technical assessment phase. The cross-border transmission connection is due for completion in 2025.

## Pernooskoski substation will enter the digital age

We will build a digital substation at Pernooskoski, in Kotka, in a bid to gain experience in the utilisation of a **digital fieldbus** in the substation environment. Our aim is to create a digitalised substation that is safe, environmentally sustainable, remote controlled and provides excellent cost effectiveness both in terms of capex and operational costs. The Pernooskoski substation is due for completion in 2020.

A digital substation requires less copper cabling, cable tray systems and smaller buildings than a conventional substation. The decreased material consumption provides tangible benefits in terms of lower environmental impacts from the equipment production and material transports.

The digital substation system is automatically monitored, which substantially decreases the need for equipment maintenance and visits to the substation. The customers benefit from digitalised substations in the form of better availability and increased reliability of the equipment.

## Construction of the new Imatra substation begins

The construction of Fingrid's new Imatra substation related to Iron Lady II is underway next to the Imatra hydropower plant. The construction will be carried with due respect for the historic protected milieu. The original buildings of the Imatra hydropower plant, which have architectural-historical value and are protected by the municipal master plan, are located next to the substation. The new substation will be commissioned in autumn 2020.

## Upgrading power supply to Tampere

Tampereen Sähköverkko, Elenia and Fingrid are together upgrading the Tampere area's electricity network. The city of Tampere's own electricity production is decreasing, while the region consumes more and more electricity along with the economic growth stoked by the city's attractiveness as a business location. Tampereen Sähköverkko (TSV), Elenia and Fingrid drew up a joint electricity network development plan for the area in 2019, as a result of which Tampere will

receive a 110-kilovolt transmission line to meet the area's electricity needs. The transmission line will be built in 2019–2020. The solution jointly developed by the three companies is cost-effective and has minimal environmental impacts.

## **Development on the Oulujoki river linked with the construction of the Lake Line**

We are modernising the grid around the river Oulujoki, which was built in the 1950s and is approaching the end of its service life. Two substations will be replaced, one substation will be expanded, and a new transmission line will be built.

The grid development measures have been planned in close co-operation with the local electricity producers and regional distribution network companies. The local electricity production mainly consists of hydropower, while new wind power projects are also planned to boost the existing wind power production.

The upgrades will change the regional grid voltage from 220 to 110 kilovolts. Voltage compatibility with the rest of the grid will enable a simpler and, from a systemic point of view, more efficient grid structure.

The transmission line, to be completed with 400 + 110-kilovolt structures, is an important long-term component in reinforcing the planned 400-kilovolt transmission line towards eastern Finland, the so-called Lake Line. The second stage of this project will entail a transfer of the operations of the Pyhäkoski substation to the new Pyhänselkä substation.

## **Transmission solution for Helsinki proceeding**

We continue to be involved in securing the Helsinki region's electricity supply with a new type of operating model under development, where the City of Helsinki, the region's distribution network company Helen Sähköverkko and Fingrid collaborate to carry out an infrastructure project that will serve the Helsinki region's electricity supply and facilitate land use. In connection with this, Fingrid is preparing to build a new 400 kilovolt cable link from Länsisalmi in Vantaa to Viikinmäki, with plans to have it up and running already in the latter half of the 2020s.

Based purely on the electricity production and consumption predictions for the Helsinki and Vantaa area, the new 400-kilovolt cable link would be needed by around 2035. However, Fingrid is prepared to speed up the construction of the new grid cable link and the new Viikinmäki transformer substation if the City of Helsinki and Helen Sähköverkko are willing to share the costs entailed by an accelerated schedule. The parties' common goal is to carry out the regional electricity network projects in a way that is compatible with urban development projects during the 2020s.

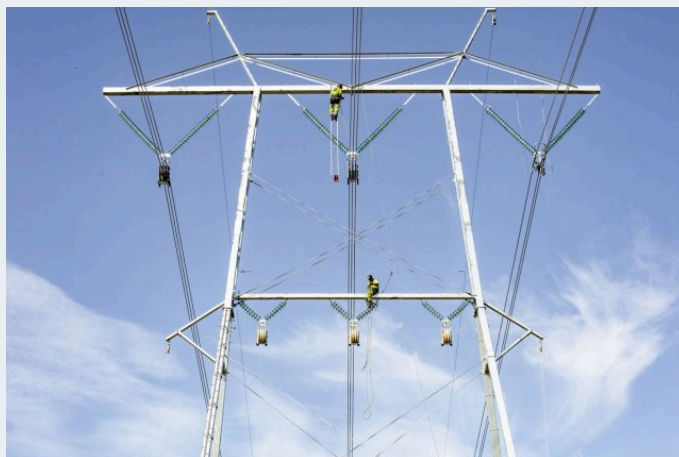
During the year under review, Fingrid, the City of Helsinki and Helen Sähköverkko together drew up a review of the specified transmission solution, based on which detailed planning can be started. In addition, the Uusimaa Centre for Economic Development, Transport and the Environment ruled in spring 2019 that no EIA is necessary for the 400-kilovolt cable link project in Helsinki.

## Main grid turns 90

Finland's main grid turned 90 on 16 January 2019: the first high-voltage transmission line, between Imatra and Turku, was started up in 1929. The main grid of the future will serve as a platform for a clean, emissions-free power system.

Finland's main grid was effectively built in four waves. The construction of large-scale transmission of electricity, marking also the beginning of the main grid, was started at the Imatra hydropower plant to provide a supply of electricity to industry and households in the late 1920s. The second wave was the construction of transmission connections from the Oulujoki and Kemijoki rivers, in the north of Finland, to meet the needs of growing metalworking and woodworking industries during the decades after the Second World War. The third wave of grid investments took place in the 1970s, when new hydropower resources available for harnessing became scarce and large coal-powered and nuclear power plants emerged as new sources of electricity. In the on-going fourth wave, Fingrid has extensively increased and upgraded grid capacity throughout the country as well as created cross-border interlinks to the neighbouring countries to serve the electricity markets and particularly clean production, in other words nuclear and wind power.

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# Investment decisions and planned investments

Five upcoming projects are in the general planning stage in 2020. They will proceed to the construction phase within the next few years, in accordance with the main grid development plan.

## **Digitalising maintenance management – Adopting IoT solutions: more automated maintenance management and data transfer**

We equipped nine of our substations with IoT sensors in 2019. The new IoT solutions aim at a new way of more proactive fault monitoring and thus more transparent equipment and asset management. This technology will save maintenance work and decrease fault-related disturbances as well as enable maintenance to be more precisely targeted to actual needs, which improves cost-effectiveness. Our vision is to fit all substations with IoT sensors and utilise the same technology also on transmission lines.

## **Aerial photography of the grid started**

During the year under review, Fingrid launched an aerial photography project on the main grid, in which all of the company's transmission lines will be photographed and laser scanned. The data obtained will be utilised extensively, from grid documentation to an accurate analysis of the trees on the edges of power line right-of-ways. The accurate data will enable more efficient and safer planning and implementation of the necessary maintenance measures. The extensive image database to be created will be utilised in a project planned to develop automatic detection of transmission line maintenance needs by means of image recognition.

## **Learning environment for maintenance work created in Tampere**

The professionals involved in grid and transmission line construction and maintenance are a fairly small group of specialists, which means that the availability of vocational training for builders and maintainers is rather limited. To improve the training possibilities for the industry, we have started co-operation with Tampere Adult Education Centre (TAKK), contractors and network operators. The co-operation will result in the construction of a voltage-free learning environment consisting of a 110-kilovolt substation and two transmission lines in Tampere. The facility will be available for contractors, network operators and learning institutions starting from autumn 2020.



# Reserve power provides security in disturbances

We own ten reserve power plants helping to secure reliable supply of electricity for our customers and society. The reserve power plants are rarely used but we maintain readiness at all times. When the need arises, Fingrid has roughly a 1,000-megawatt capacity reserve ready to be started up instantaneously.

The reserve power plants are only used in major disturbances of the power system, such as a large power plant being temporarily incapable of feeding electricity to the grid. The reserve power plants are not used for commercial electricity production. Another reason for maintaining and developing the reserve power plants is the unlikely, but nevertheless possible event of a major disturbance. Furthermore, we develop the reserve power plants to compensate for the reactive power generated in the power system.

We maintain up-to-date security standards at our reserve power plants. In 2019, we completed a scheduled upgrade project at the Naantali reserve power plant, with the main objective of improving environmental and fire safety. The project involved replacing the fuel oil and extinguishing systems, among other things. The planning of an upgrade project concerning the Vanaja reserve power plant was also started in 2019.

# Occupational safety

The safety of all personnel working on the grid and related systems is a number one priority for us. Our clear objective is to ensure that everyone leaves the Fingrid work sites healthy and uninjured every day. We continuously develop safer ways of working, practices and safety instructions in co-operation with our service providers. As in previous years, the number of occupational accidents involving Fingrid's in-house personnel remained low.

One of Fingrid's long-term goals is to improve the occupational safety culture and, in this way, achieve its zero-accident objective. In 2019, Fingrid's own personnel had no lost-time workplace accidents 0 (0). A total of 7 (4) lost-time workplace accidents were recorded among Fingrid's service providers. Among the lost-time accidents, one led to an absence from work of more than 30 days and was classified as serious. In addition, one workplace accident was classified as serious, because it caused a permanent impairment to the service provider's employee. The suppliers' and Fingrid's combined accident frequency rate increased from the previous year to 5.5 (3.2)/million worked hours.

Results from Fingrid's OHS development project:

- Safety observation campaign and OHS seminar
- Updated safety management system
- Updated contractual terms on safety
- Development of safe work practices and safety reporting
- Two issues of our occupational safety magazine "Safety on the lines"

**Lost Time Injury Frequency (LTIF) and workplace accidents**

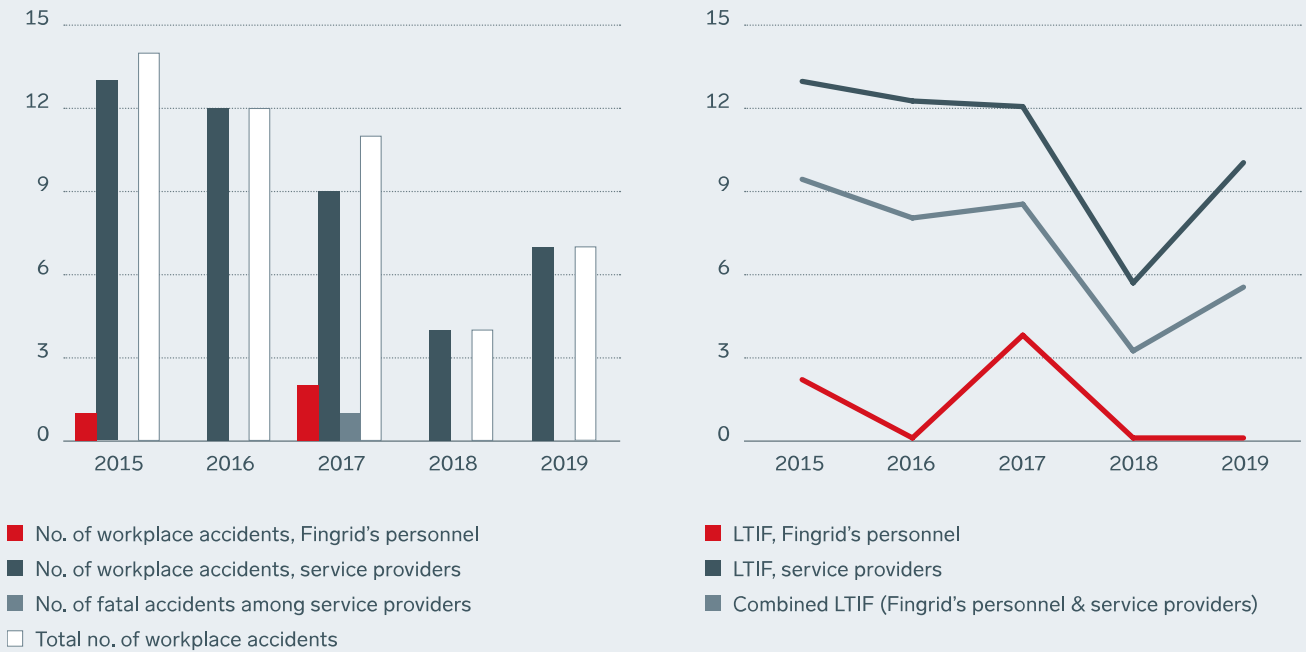


Image: LTIF and workplace accidents

**Nearly 600 proactive observations to improve safety**

As regards occupational safety, Fingrid monitors the development on the work sites using proactive indicators, which produce the metrics of the work done to improve safety. Safety observations provide information on latent hazards and make it possible to mobilise the entire personnel to improve safety at work. Nearly 600 safety observations were reported on Fingrid work sites in 2019.

# Power system

We operate the main grid proactively and reliably. Climate change is changing both the power system and customer behaviour. As a consequence of the structural change in production and consumption, power production and consumption are increasingly dependent on the weather. Evolving technology, real-time data and situational awareness enable new ways of operating. European **network codes**, a clean energy package, forms of Nordic co-operation and data protection requirements guide our grid operations, which we develop together with our customers.

It is crucial for society that the power system functions reliably, and that electricity is available every second for industry and citizens. A major challenge to the reliable supply of electricity is posed by the increase in weather-dependent renewable energy production while the production of adjustable condensing power has nearly ended. Flexible condensing power has traditionally been the cornerstone of energy supply security in Finland. New solutions for balancing production and consumption must be found and have indeed been successfully introduced. Perspectives related to the security of supply and exceptional situations must also be reassessed.

Society is becoming more and more electrified, as industrial, traffic-related and heating systems are more commonly electrically powered. Vital functions are increasingly reliant on electricity. This consequently increases the significance of a disturbance-free power system. The volume of renewable production increases and the capacity generated by renewables varies according to weather conditions. The change is enormous and in particular challenges the operational capability of our power system, where generation and demand must be in balance at all times. The change highlights the need for production capacity that can effectively react to the variations of generation and demand. Demand-side flexibilities are under development, but the capacities available through demand-side measures do not yet meet the adjustment needs. Advancing technology will support the change, however.

## Network codes set a 24-hour communication requirement

Due to our overall responsibility for the power system, we continuously seek to **reduce the possibility of a major blackout as well as improve our capability to restore power as soon as possible**. Important development projects related to this issue include the diversification of system defence tactics in the event of a major disturbance and the capability to operate and communicate without external power supply for 24 hours. These projects are progressing in extensive co-operation with other energy industry stakeholders.

Communication presents a particularly difficult challenge during an extended blackout. State Security Networks Group Finland (Suomen Erillisverkot), the national provider of safety and security critical ICT services, is significantly expanding its operations in the energy sector and will deliver a high-readiness network service solution for energy companies in 2019–2022. The high-readiness network has been developed as a service platform for critical management and leadership tasks and situational awareness, particularly in case of major disturbances in the power system. The network operates between the control rooms, linking up Fingrid, major distribution network companies and producers of electricity. The service platform also facilitates inter-service co-operation between authorities because the parties connected to the platform include rescue services, the National Emergency Supply Agency and the Defence Forces.

## Changing natural phenomena challenge electricity production

According to our assessments, Finland's supply of electricity will be sufficient to meet the demand even during the coldest spells of winter weather, if our power system and the electricity markets function normally. The demand for electricity can be met with domestic production and capacity imported from the neighbouring countries, provided that both of these sources are available.

The biggest change compared with the recent years is the increased risk of electricity shortage in the Nordics resulting from power plant closures. It is currently more difficult for Finland, a heavily imports-reliant country, to obtain imported electricity during the winter-time peak demand periods. Several Swedish power plants have been closed down, which has increased the risk of electricity shortages in the Nordics compared with previous winters. The Nordic wind power capacity has substantially increased and the availability of wind power during peak demand is a factor of key importance for the sufficient supply of electricity in the Nordic countries. The estimated need for electricity imports to the Nordics during peak demand of the winter 2019–2020 was up to 4,900 megawatts. The missing capacity is primarily procured from Central Europe.

As for Finland, however, the capacity needed during peak demand takes up nearly all of the domestic production capacity and the maximum capacity allowed by the cross-border interlinks. The risk of electricity shortage is at its highest when all of Finland experiences a long period of extremely low temperatures and the production or transmission systems of electricity simultaneously suffer from disturbances. Finland's estimated peak demand is roughly up to 15,300 megawatts, of which one fifth must be imported. The commissioning of the Olkiluoto 3 nuclear power plant in 2021 will significantly reduce the risk of electricity shortages in the future. Despite this, Finland will remain heavily reliant on imported electricity.

# Transmission grid

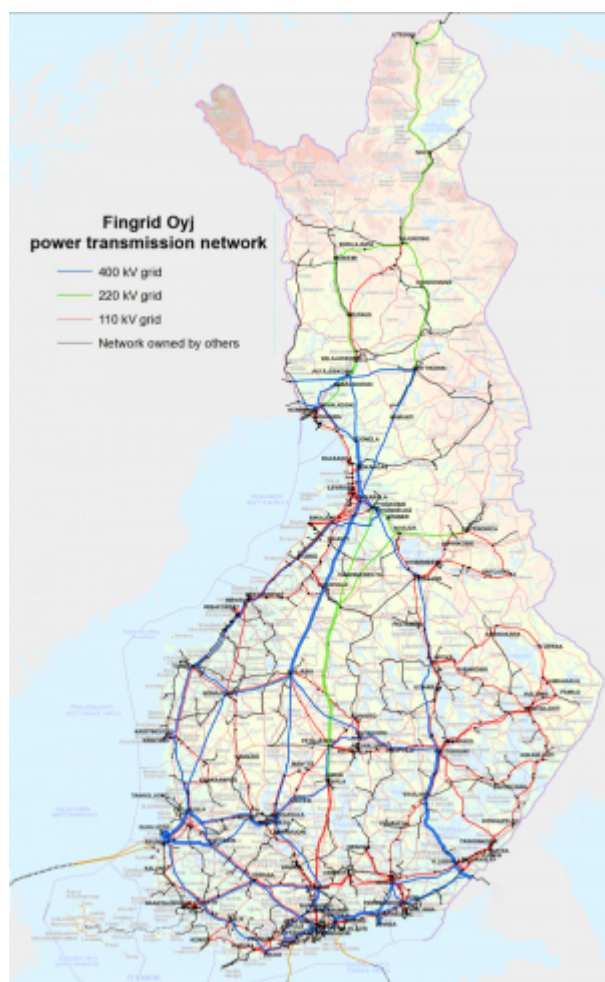


Image: Fingrid Oyj's transmission grid on 1 January 2020

## Demand essentially unchanged, increase in disturbances

The demand for electricity declined by approximately 1.5 (2) per cent compared with the previous year and totalled 86.1 (87.4) terawatt hours in 2019. Fingrid transmitted a total of 68.7 (68.6) terawatt hours of electricity in its grid, representing 76.0 (75.4) per cent of the transmission volume in Finland (consumption and inter-TSO).

The imported and domestically produced capacity was sufficient to meet the peak demand of 2019. The peak in electricity consumption, 14,542 (14,062) MWh/h was reached on Monday 28 January 2019 between 8 and 9 a.m., with Finland's electricity production contributing 10,978 MWh/h and the remaining 3,564 MWh/h being imported. The area price of electricity on the day-ahead market in Finland was €70.05/MWh during the peak consumption hour.

While the summer of 2019 was dry in Finland, the Nordic water resources were at a normal level overall, leading to lower wholesale prices for electricity in the Nordic countries compared to the previous year. This was reflected in the high volumes of electricity imported from the Nordic countries. The volume of electricity transmissions from Russia to Finland slightly increased from 2018. Electricity transmissions between Finland and Sweden consisted mostly of large imports to Finland. The electricity transmissions between Finland and Estonia were dominated by exports from Finland to Estonia. The transmission was steered by the markets and the weekly transmission direction varied according to the current market situation. The price differences between the Nordic countries in 2019, which were large at times, resulted mainly from a different electricity production structure. The Norwegian production is mainly hydropower, while both hydro and nuclear power dominate in Sweden. The prices of electricity were in both countries depressed by the very low variable costs of these forms of production. The price differences became particularly high when Finland's neighbours offered a large supply of hydro and wind power compared with the demand. Finland has often had to resort to also higher-cost forms of production because of the inherently higher dependence on electricity imports compared with the rest of the Nordics. Area prices between Finland and Sweden diverged in situations where the transmission capacity between the countries was insufficient to meet the demand for electricity. Another factor that has affected the Finnish electricity market is the decrease in imports from Russia. The decrease is due to Russia having started to subsidise its own production, which has increased the price of electricity in Russia.

Electricity imports from Russia increased slightly compared with 2018, and the intraday variations were large. The maximum transmission capacity was available almost throughout the year, with the exception of the annual maintenance work carried out at the Vyborg DC station and on the Russian grid in July, October and November. No export capacity to Russia was available. Maintenance-, capex- and fault-related transmission outages were implemented both on the cross-border connections between Sweden and Finland and on connections within the countries. The numbers and durations of the outages were at the normal level. The connections to Estonia and Russia were only subject to normal annual maintenance. Maintenance work has been scheduled on weekends and similar periods to limit the impact on the markets and electricity prices.

<b>Countertrade</b>	<b>1-12/19</b>	<b>1-12/18</b>	<b>10-12/19</b>	<b>10-12/18</b>
Countertrade between Finland and Sweden, €M	0.1	1.9	0.0	1.8
Countertrade between Finland and Estonia, €M	0.5	0.0	0.1	0.0
Countertrade between Finland's internal connections, €M	0.3	2.2	0.0	0.2
<b>Total countertrade, €M</b>	<b>0.9</b>	<b>4.1</b>	<b>0.1</b>	<b>2.0</b>

Finland's main grid operated reliably in 2019, at a high transmission reliability rate. The importance of electricity transmission reliability is illustrated by the fact that the cost of a nationwide major disturbance to customers and society at large would be in the region of EUR 100 million for each hour of outage.

There were no occasions calling for raised preparedness of disturbance clearing in 2019. We pro-actively raise our readiness when factors such as difficult weather are expected to pose challenges to grid maintenance to enable as rapid resolving and communication of disturbances as possible.

Our transmission reliability rate was 99.9998 (99.9999) per cent. Three significant disturbances took place on the transmission line between Siilinjärvi and Joensuu in eastern Finland in 2019, due to faulty equipment and natural phenomena.

An outage in a connection point in the grid caused by a disturbance in Fingrid's electricity network lasted an average of



4.3 (12.0) minutes, which is equal to the ten-year average. The cost of the disturbances (regulatory outage costs) was EUR 2.7 (1.5) million, and including the quick reconnections, EUR 5.2 million.

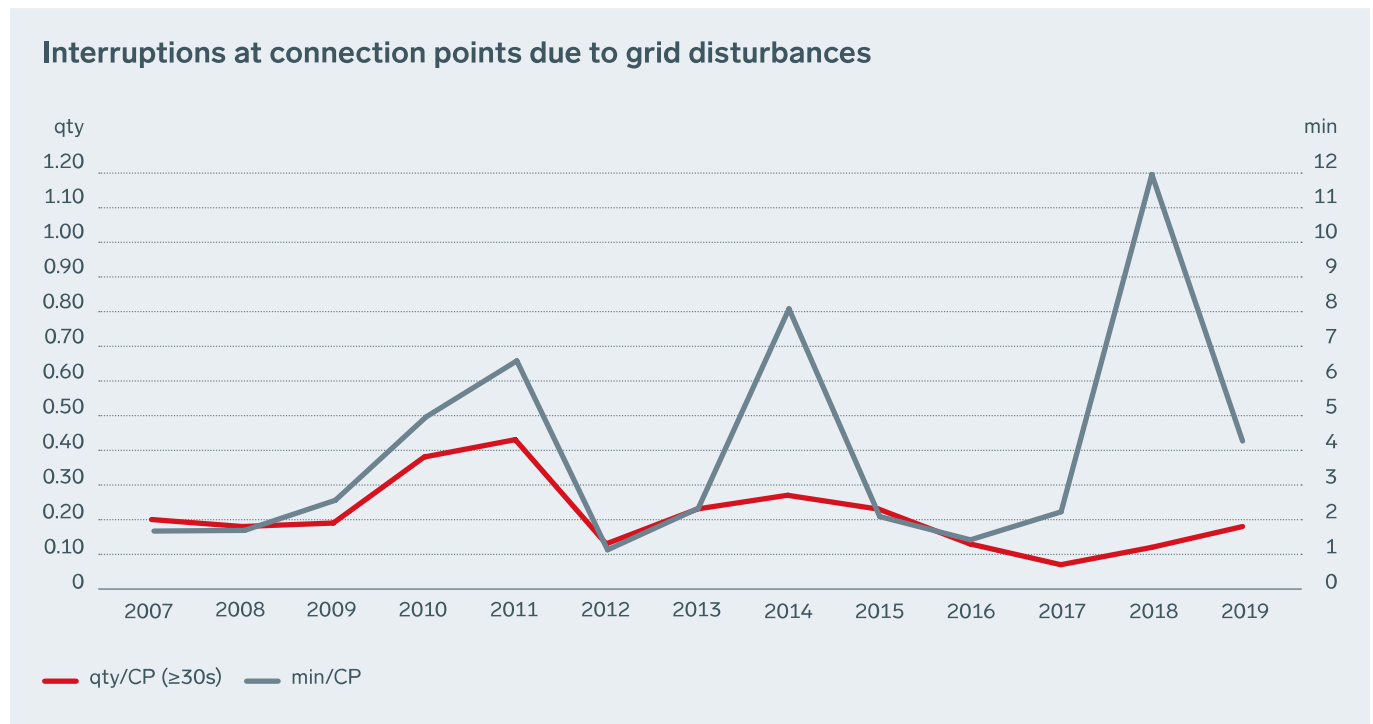


Image: Interruptions at connection points due to grid disturbances

The reliability and availability of DC connections was overall at a good level in 2019, except for the drawn out disturbance in the EstLink 2 connection that started in late December and extended to January 2020. The number of disturbances and the total duration of disturbances were on the same level as in 2018. Countertrade costs totalled around EUR 547,000 in 2019.

### HVDC disturbances, total duration and quantity

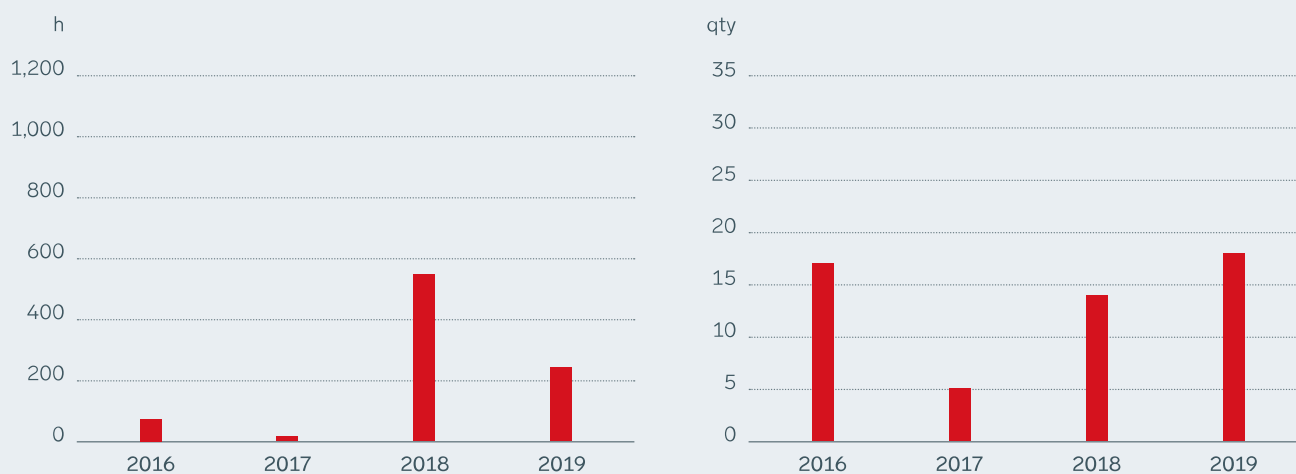


Image: Disturbances in the HVDC connections – total duration and number of disturbances

Countertrade costs amounted to EUR 0.9 (4.1) million. The number of disturbances resulting in countertrade costs was exceptionally low in 2019. Countertrade refers to special adjustments made to manage electricity transmission which are used to eliminate short-term bottlenecks, i.e. areas where electricity transmission is congested, from the grid. Fingrid additionally guarantees the cross-border transmission it has confirmed by carrying out countertrades, i.e. purchasing and selling electricity, up until the end of the 24-hour usage period. The causes of countertrade include outages and disruptions in power plants or in the grid.

Transmission outages in connection with capex projects took place throughout Finland. Demanding outages require careful advance planning and close co-operation with customers.

### Countertrade costs caused by HVDC disturbances

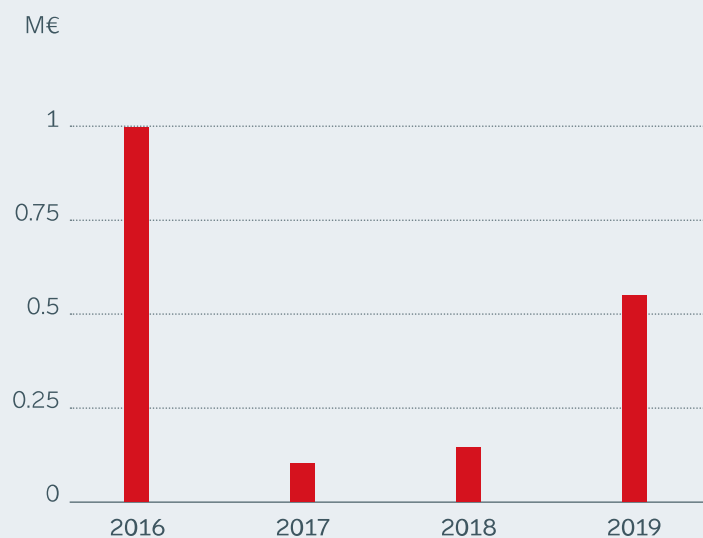


Image: Countertrade costs caused by HVDC disturbances

Reserves required to maintain the power balance of the power system were procured from Finland, other Nordic countries, Estonia and Russia. The availability of reserves was good, with the exception of the spring floods, which limited the availability of hydropower plants to reserve maintenance. Consumption is increasingly active in participating in the frequency containment reserve for disturbances. Sales of frequency-controlled reserves to Sweden grew compared to the previous year. In accordance with the agreement between the Nordic TSOs, hours for maintaining the automatic frequency-regulating reserve were added, and the procurement costs for the reserve type correspondingly increased compared to the previous year.

The volume of transmission losses in the grid remained at the level of the previous year, 1.3 (1.2) terawatt hours. This was 1.5 (1.3) per cent of the total volume of transmitted electricity. The annual variation of losses is affected by the Nordic electricity production situation, such as the volume of hydropower.

Power system operation	2019	2018	2017	2016	2015
Electricity consumption in Finland, TWh	86.1	87.4	85.5	85.1	82.5
Fingrids transmission volume, TWh	68.7	68.6	66.2	68.5	67.9
Fingrid's loss power volume, TWh, G4-EU12	1,335	1.2	1.2	1.3	1.4

<b>Electricity transmission Finland–Sweden</b>					
Exports to Sweden, TWh	0.5	1	0.4	0.3	0.2
Imports from Sweden, TWh	16.3	14.5	15.6	15.7	17.8
<b>Electricity transmission Finland–Estonia</b>					
Exports to Estonia, TWh	3.8	2.4	1.7	3.1	5
Imports from Estonia, TWh	0.3	0.9	0.9	0.7	0.05
<b>Electricity transmission Finland–Russia</b>					
Exports to Russia, TWh	0	0	0	0	0.02
Imports from Russia, TWh	7.5	7.9	5.8	5.9	3.9
<b>Electricity transmission Finland–Norway</b>					
Exports to Norway, TWh	0.1	0.1		0.1	0.1
Imports from Norway, TWh	0.2	0.2	0.3	0.2	0.1

### Regional JÄÄTYVÄ 2019 exercises proved the value of joint co-operation

The Power and District Heat Pool is a voluntary co-operation forum for public authorities and energy industry operators. The purpose of the pool is to promote **preparedness for various emergency scenarios**. It has over the last few years organised regional Jäätyvä exercises, in which Fingrid has been active both as an organiser and participant. The exercises test the municipalities', energy companies' and other businesses' capabilities to endure a two-week local blackout scenario.

The Jäätyvä exercises have made it clear that joint co-operation between the various industry players must be exercised regularly. It is also essential to make sure that all critical infrastructure operators use compatible communications and situational awareness systems. The systems exist, but it takes time before all the players critical to the functioning of society adopt them for day-to-day use.

It is a challenge for the entire society to plan how regional voice communication can be secured in an extended blackout scenario. Currently, the back-up power available at mobile base stations is sufficient to maintain operation for no more than a few hours.

### Making CO<sub>2</sub> emissions from electricity production visible

Global climate agreements are steering nations to find ways to minimise carbon dioxide emissions. The volume of carbon dioxide emitted by electricity production is a figure that interests many parties.

We started publishing real-time CO<sub>2</sub> emission data from electricity production in autumn 2019. Our real-time CO<sub>2</sub> calculation accounts for the emissions both from the electricity generated and electricity consumed in Finland. Our figures offer an indicative estimate of the environmental impacts from the produced and consumed electricity. The calculation is based on the data from Fingrid's operation control systems and the specified emissions factors.

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# Electricity market

The energy transformation has a powerful impact on the electricity market and its participants. The production structure is shifting towards clean and CO<sub>2</sub>-free forms of generation, which in Finland means a substantial growth in wind and nuclear power. The need for flexibility in the power system is increasing across the board, as the adjustable fossil fuel-based production decreases. Hydroelectric power will remain a key source of energy and flexibility. The role of the international electricity trade will become even more important. Demand-side participation in the electricity market as a source of flexibility will increase and the role of consumers will become more active.

The wholesale prices of electricity were slightly lower than in the previous year in both Finland and the other Nordic countries in 2019. However, the prices did not decline back to the pre-2018 level. The decline in the prices was impacted by the improved precipitation in the Nordics compared to 2018. The availability of wind power also had a clear impact on the area price of electricity in Finland at times. The prices of emissions rights remained on a par with the level they had attained in 2018.

Electricity market	2019	2018	2017
Day-ahead system price, €/MWh	38.94	43.99	29.41
Area price Finland, average €/MWh	44.04	46.8	33.19
Congestion income in Nordic countries, €M		281.98	265.8
Congestion income between Finland and Sweden, €M	130,995	56.47	50.98
Congestion hours between Finland and Sweden, %	40.1	23.6	26.8
Congestion income between Finland and Estonia, €M	14.97	2.79	0.52
Congestion hours between Finland and Estonia, %	11.8	5.4	1.4

## The most market favourable TSO

During 2019, Fingrid redefined electricity market services with its customers. We offer the electricity market participants a single bidding area for electricity trading in Finland. To increase the north–south transmission capacity, we are carrying out the 400-kilovolt **Forest Line** transmission project, which will help to keep Finland as a single electricity trading area.

Through Fingrid's transmission grid and the cross-border transmission lines, market participants gain access to and can reap the benefits of an open European electricity market. We are currently planning a new cross-border transmission line between Finland and Sweden, jointly with the Swedish TSO. The interlink is due for completion by 2025 and will increase the transmission capacity between Finland and Sweden by 800 megawatts once finished.

We provide the market with the highest possible transmission capacity at all times, which enables effective trading for the market participants. In 2019, the reliability of Estonia's DC connections was weaker than in previous peak years, but despite the challenging situations, the connections were efficiently restored for use by the markets. The usability and reliability of Sweden's DC connections have been at an excellent level.

## Electricity generation and demand guided by pricing

Finland is an integral part of the European electricity market. The auction system on the European day-ahead market, which covers more than 80 per cent of the estimated European demand, sets the prices and buying and selling volumes for each of the following 24 hours. A large, well-functioning market enables efficient entry into the market, on market terms, for the electricity from weather-dependent renewable energy sources. The electricity market also has a key role in making the power system cleaner and in electrifying other sectors such as heating, traffic and industrial processes.

The day-ahead market is complemented by the intra-day market based on continuous trading. The marketplace was taken into use in 14 European countries in 2018, including the Nordic and Baltic countries. Eastern Europe was coupled to the pan-European market in November 2019, which makes possible intra-day electricity trading using interlinks such as between Sweden and Poland as well as Lithuania and Poland.

In summer 2019, competition was enabled between power exchanges in Central Europe. Since then, electricity sellers and buyers have been able to choose their preferred power exchange. The implementation and testing of the system modifications required by the competition between power exchanges are underway in the Nordic and Baltic countries. In December 2019, Fingrid, together with the other Nordic and Baltic TSOs that hold shares in Nord Pool Holding AS, entered into a binding agreement to sell the majority of the company's shares to Euronext Nordics Holding AS, a Norwegian company fully owned by Euronext N.V. The background factor is EU regulation, which has driven the development of power exchanges from regional monopolies to competitive European marketplaces. Fingrid's strategy, as a natural monopoly, does not include owning competitive businesses.

In June, Fingrid announced that it would enable intraday trading within Finland until the start of the delivery hour. Finnish market participants have expressed a preference for having a possibility to trade closer to real time. The exact schedule depends on the decisions made by the power exchanges active in Finland to offer their customers a possibility to trade until the start of the delivery hour.

## Help from the markets to balance the power system

The shift into a clean electricity and power system requires updating in the electricity market structures and practices. It is necessary to update the market rules to ensure continued cost-effective and secure balancing of the power system in the future, as a growing share of the electricity production comes from variable renewable energy. Simultaneously, the electricity market is also being developed from the EU's common market point of view; the goal is to enable an efficient European common market for electricity.

During 2019, Fingrid actively developed the electricity markets as part of the Nordic imbalance settlement project and participated in European joint development work in **ENTSO-E**, the European Network of Transmission System Operators of Electricity. Fingrid has additionally implemented measures to promote the electricity market in Finland.

The Nordic imbalance settlement project automates the power system's imbalance settlement, in other words the real-time balancing of electricity production and consumption. The project also develops new Nordic marketplaces for



automatic and manual frequency restoration reserves. These marketplaces will enable TSOs to procure the reserves necessary for imbalance settling. The project also prepares the Nordic TSOs to join the pan-European reserve marketplaces currently under development.

Following the imbalance settlement project, the Nordic countries will implement a shorter imbalance settlement period enabling 15-minute trading and a new imbalance power model. The Nordic project's updated roadmap was published in November 2019. During 2019, a regularly meeting reference group composed of the key stakeholders was established for the project.

Finland is the only Nordic country to publish real-time balancing power pricing data. In 2019, Fingrid started to publish the price of the last activated balancing power bid whenever Finland is decoupled into a separate regulation area.

## All Nordics into joint imbalance settling

On 14 May 2019, the Danish TSO Energinet and the imbalance settlement company eSett's current owners Fingrid, Svenska kraftnät and Statnett signed an agreement according to which Energinet joined the Nordic Balance Settlement by becoming a co-owner of eSett Oy. Each party owns 25 per cent of the company. The Danish market participants will join the Nordic Balance Settlement in the fourth quarter of 2020 once the regulating authorities approve the new market processes.

## Adopting all sources of flexibility in the power system

The transformation of the electricity production structure, where inflexible capacity is replacing adjustable capacity, calls for enabling a market entry for new flexibility resources that are different from the past and often small in scale, and utilising them to balance the power system. Such flexibilities may include increasing or decreasing the production or the consumption, or charging up or discharging energy storage systems to balance the power system.

In autumn 2019, Fingrid launched a pilot where the minimum bid size in the balancing energy market was lowered from five to one megawatt. The purpose of the pilot is to ease entry to the balancing energy market and the transition towards the European balancing market.

The EU-funded **INTERRFACE** flexibility market project, a part of the broad-ranging **Horizon 2020** programme, continued in 2019. INTERRFACE involves testing a flexible market platform in Finland, Estonia and Latvia. The platform can be used by the TSOs and DSOs for procuring flexibility resources and it offers a marketplace for selling electricity from small-scale renewable sources or demand-side management services, for example.

The European Commission granted Project of Common Interest status to the preparations for the **CrossFlex** flexible resource project in October 2019. CrossFlex is a project proposal by Fingrid and the TSOs of Estonia and Åland with the aim of promoting the large-scale utilisation of the flexibility provided by distributed decentralised resources locally, nationally and between Finland and Åland as well as between Finland and Estonia.

Fingrid has been testing aggregation models in the balancing energy market and launched an independent aggregator pilot in the balancing energy market in 2019. The aim is to allow reserve providers to collect or aggregate decentralised flexible resources out of the balances of other electricity market participants. This enables new kinds of business models and makes it easier for new participants or resources to enter the reserve market. The aim is to continue the pilot project and expand it in 2020 to gain additional experience.

## Construction of Datahub moving forward

Fingrid is building a centralised information exchange system for electricity retail markets, Datahub, which will contain

data from about 3.7 million electricity metering points. In 2019, it became apparent that some distribution system operators and retailers will not be able to implement the necessary changes in their own customer and metering data management systems to reach Datahub readiness in time. The initial target go-live schedule for Datahub was April 2021. The new go-live date was confirmed in a Government Decree that entered into force in early December 2019. According to the decree, the Datahub will go live on 21 February 2022. Fingrid is co-operating closely with the entire sector to achieve a successful Datahub go-live.

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## ENTSO-E celebrating in Finland

ENTSO-E, the European Network of Transmission System Operators of Electricity, celebrated its tenth anniversary in 2019. Celebrations were held in Helsinki on 13 November 2019. Nearly 400 guests took part in the anniversary conference.

The ENTSO-E event at the opera house was one of the side events of Finland's EU Council Presidency. Guests were also invited to Helsinki City Hall.

The dark and gloomy November in Finland was the first impression of Finland for many of the visitors. Fingrid's presentation of Finland to the guests was slightly **tongue-in-cheek**.

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# Research and development

Amid the continuing shift in the energy industry, the need for innovation is greater than ever. Fingrid has the opportunity as well as the obligation to further the development of, for instance, a clean power system. In 2019, a total of EUR 3.4 (3.5) million was used for Fingrid’s own research and development. The projects are often carried out in co-operation with industry players and top experts to enable the industry to utilise synergy benefits and improve their impact. An estimated EUR 22 million was used for research and development projects (R&D) that Fingrid was involved in either directly or through a steering group in 2019. The majority of the projects span several years, but signs of the achievements of R&D work are already visible, making it possible to include renewable clean production as part of energy production, without compromising on the power system’s system security or cost-effectiveness. A focus on R&D work results in technical solutions, promotes the transfer to a clean energy system and creates new expertise and new business opportunities.

R&D work is integrated into the business operations. R&D projects are selected, on the one hand, based on short-term business needs and, on the other hand, on the company’s strategy and longer-term focal points.

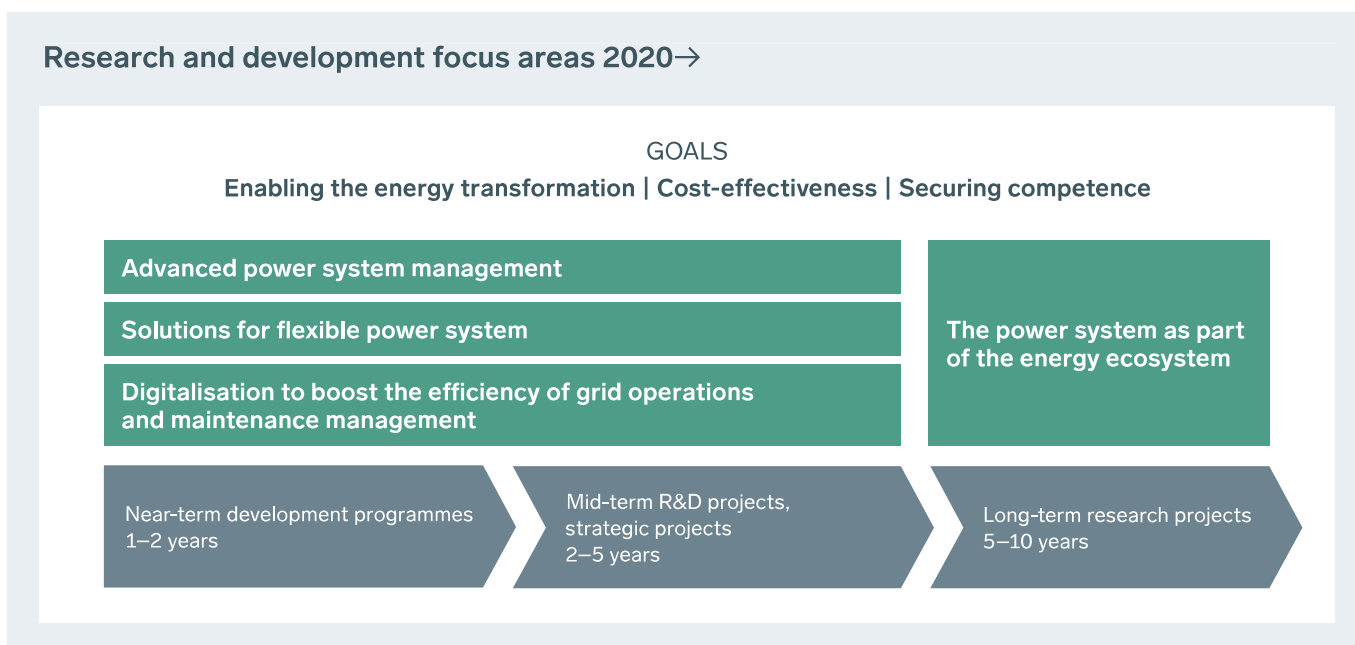


Image: Fingrid’s R&D focal points as of 2020

The financing of R&D operations draws on the financial instruments of, among others, the European Commission (**Horizon 2020**) and national financiers such as Business Finland. Additionally, the Energy Authority's innovation incentive enables investments in R&D operations by no more than one per cent of the turnover without the R&D costs weighing down **allowed return**.

During the year under review, there were more than 50 R&D projects underway. Close to 70 per cent of the projects were carried out using external workforce. The majority of the research and development projects are divided into four main groups: making the power system more flexible on market terms, securing the electricity supply in all situations, making data available to those who use it and improving the cost-effectiveness of maintenance management.

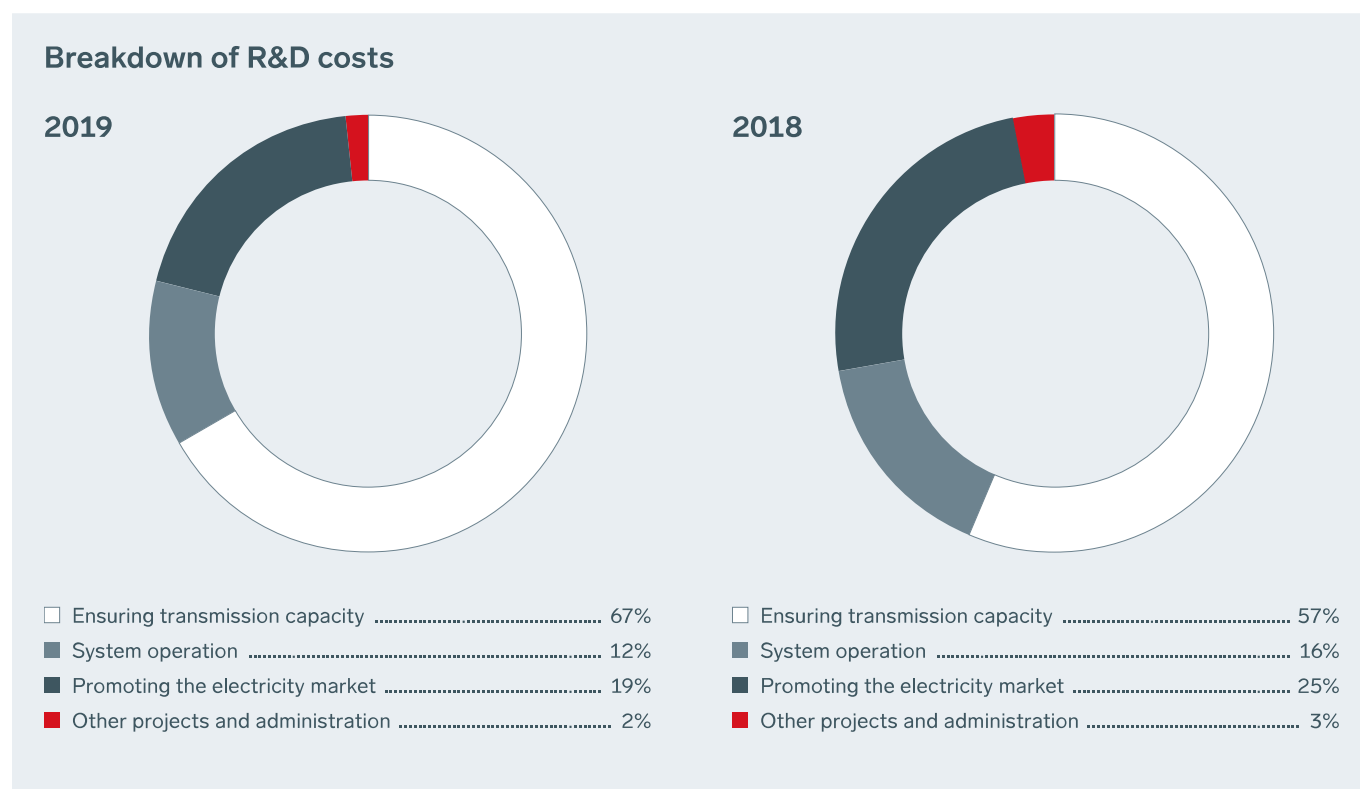


Image: The cost distribution of R&D projects by business area

## Flexible power system enables emissions-free electricity production

The **INTERRFACE** project seeks solutions for flexibility services market platforms that enable the utilisation of distributed resources for both maintaining power system balance and the needs of distribution system operators as well as balance responsible parties. Of the northern European TSOs, Fingrid and Elering are involved and INTERRFACE is one of the research projects financed under the European Union's extensive Horizon 2020 programme.

The **CrossFlex** project's aim is promoting the large-scale utilisation of the flexibility provided by distributed decentralised resources locally, nationally and between Finland and Åland as well as between Finland and Estonia. The extensive project was prepared collaboratively by the parties and the European Commission granted **Project of Common Interest status** to the CrossFlex flexible resource project in October 2019. CrossFlex is a project proposal by Fingrid and the TSOs of Estonia and Åland.

In addition to the above, the independent **aggregator pilot** to be launched in Finland is intended to ease entry to the

balancing energy market for small and decentralised flexible resources. The project enables new business models, and in 2019, it was expanded to include a larger target group than what was originally intended. Independent aggregators offer the owners of flexible resources options in offering flexible services and allow the participants to, for example, specialise in a specific technology. Flexible bids by participants outside the traditional chain of open deliveries require a significant overhaul of information systems, electricity markets' data exchange and reserve contracts, so that fair and effective operating methods can be ensured.

The market access of flexible resources was facilitated by piloting a **one-megawatt minimum bid size** on the balancing energy market instead of the earlier five-megawatt bid size. The goal of the pilot is to ease entry to the balancing energy market and the transition towards the European balancing markets. In addition, Fingrid enables **intraday trading** within Finland until the start of the delivery hour in a pilot that started in September 2019. Currently, intraday trading closes within Finland and at the Finland–Estonia border 30 minutes before the delivery hour. The purpose of this arrangement is to achieve more market-based flexibility.

Different products required for flexibility must be developed in order to correspond to the need as well as possible. Nordic TSOs are adopting a new type of Fast Frequency Reserve (FFR) to handle low-inertia situations. Low-**inertia** situations have become common in the Nordic power system and at times the volume of inertia is so small that current reserve products are unable to adjust quickly enough. A Fast Frequency Reserve allows large production units to operate in the power system also when the system has low inertia. During the year under review, a **thesis carried out for Fingrid** studied the developing flexibility products, which could offer local flexibility services that current products do not cover. The thesis proposed the development of three product categories: locational intraday, locational balancing products and competitive bilateral contracts.

Flexibility resources offered to the market will quickly become commonplace due to rapid technological development. Electricity storage is a key source of flexibility, in which electrical batteries enable extremely fast power control. Fingrid was involved in the three-year research project at the **Suvilahti energy storage facility in Helsinki**, which looked into how the energy storage facility can simultaneously adapt to different purposes and the needs of different parties. In addition to Fingrid, the project parties included Helen as the owner of the battery and Helen Sähköverkko as another party using the flexibility. The energy capacity of the energy storage facility is some 600 kWh. It can deliver and consume a maximum of 1.2 megawatts of active power and the maximum reactive power is 900 kvar.

## Real-time snapshot and preparing for exceptional circumstances secure a reliable supply of electricity

Fingrid took part in the **MIGRATE** project, in which it developed, as part of a larger whole, new methods for assessing the amount of inertia in a power system. The MIGRATE project studied the impacts of increased power production connected to the grid through power electronics, such as wind and solar power, on the use and protection of the power system and power quality. The new solutions developed in the project enable the connection of a larger volume of wind and solar power to the power system than before.

At Fingrid, **AI was used to improve** the forecast accuracy of Finland's electricity consumption. This gives a better picture of the power system's situation and improves the predictability of various operational situations.

The renewed **power quality measurement system** and new travelling wave fault locator improve the power quality monitoring and investigation of disturbances in Fingrid's main grid. The improved picture of the current situation also increases transmission reliability. Investments in new measuring equipment enable a more effective prediction, location and debriefing of faults threatening the grid. The electrical safety of the grid also improves.

The **FINEST19** and JÄÄTYVÄ 2019 training exercises developed operating models and practices for exceptional circumstances. The FINEST19 exercise addressed cooperation in responding to a critical infrastructure cyber crisis affecting both countries. The goal of the JÄÄTYVÄ exercise was to increase the operating capacity of authorities,

municipalities and businesses during a severe power outage. In addition, the exercise was used to develop the availability of technology and different IT systems during fault repairs.

An R&D project looked into preparing for long-term power outages, piloting a fuel cell solution to meet the 24-hour capability requirement for Fingrid's substations. The **Emergency and Restoration network code** provides a 24-hour operability requirement for "critical tools and facilities", control rooms and substations. The auxiliary energy of Fingrid's substations is secured mainly with batteries. Fingrid **piloted a methanol fuel cell** in order to ensure 24-hour capability of the Tuomela substation's 220-volt batteries. The fuel cell starts up automatically when it detects a disturbance in electricity transmission. The fuel cell derives its power for start-up from the substation batteries and once it starts up begins charging the batteries. The fuel cell produces energy from a water-methanol mixture.

Emergency preparedness has also been developed in a four-year project that ended in 2019 called "**HILP - Analysis of extraordinary events in power systems**". As a result of the project, a method was created with which the operating capability of a power system in exceptional circumstances can be analysed in order to assist decision-making. In addition to Fingrid, participants in the project were Statnett, Sintef, NTNU and NVE from Norway.

## **Data available to all – added value for customers, developers and market participants**

The **My Fingrid** electronic service portal was developed to be easier to use with the help of five pilot customers. My Fingrid contains transmission metering, invoicing and reactive power information as well as a new map service that features all of Fingrid's and Finland's distribution networks. My Fingrid serves users in various issues, all integrated in one location.

Fingrid increased **real-time market data of balancing energy**. This increased the transparency of the electricity markets and improved the joint operating capabilities of the markets for all participants.

Fingrid also started **publishing the real-time inertia of the Nordic power system** together with other Nordic TSOs. The new material can be downloaded from the **Open data** service and can be viewed on Fingrid's website.

Data on **carbon dioxide emissions from electricity production** was also made available in real-time. The volume of carbon dioxide emitted by electricity production is a figure that interests many parties with global climate agreements steering them to find ways to minimise carbon dioxide emissions.

## **Cost-effective maintenance management through digitalisation**

The objective of the project is to modernise asset monitoring through a modern solution. The maintenance of the grid is currently based largely on periodic inspections and measurements. This means that insight into the condition of equipment between measurements is inadequate and maintenance work is based on assumed averages for the entire equipment base. The project is developing a whole that utilises modern sensor technology, cloud platform solutions and real-time, comprehensively-produced condition data from various data warehouses. This enhances maintenance operations and improves system security, when changes can be addressed proactively. The project is based on agile development and new partnerships with different partners.

# Personnel

Our operations are based on an open, collaborative and high-performing work community. Our personnel are strongly committed to the company's vision and mission. The meaning of the work – responsibility for the functioning of the electricity system – has always been an integral part of our daily work. In addition, we work to achieve the clean power system of the future. The meaningfulness of the work inspires and creates a sense of belonging, as does the opportunity to carry out autonomous expert work.

Fingrid is a specialist organisation whose operations are strongly based on knowledge and expertise and people's ability to apply that knowledge in their daily work. The work requires solid factual expertise, but also the ability to interact and share information with other specialists.

## CEO of one's own work

Our experts are the CEOs of their own work, by which we mean taking responsibility for their work and developing it and for developing their personal expertise. The CEOs of their own work function autonomously and actively to achieve our shared goal.

Each Fingrid employee has extensive decision-making powers and we work independently in our own specialist roles, benefiting from the expertise and insight of our colleagues and networks. Work is naturally guided by a shared strategy and good governance practices.

For years now, we have been developing our management model to be as engaging as possible. In 2019, we asked our personnel what being the CEO of one's own work means to each of them. The responses highlighted taking responsibility for practically everything related to one's own work. Being the CEO of one's own work involves power and freedom, but also helping others and working as a team.

## Diverse knowhow and a strong substance

As technology and the entire operational environment evolve, working life changes continuously. Jobs are being replaced by robotics, but at the same time, new professions and tasks are emerging and competence requirements are changing. Social and interaction skills, as well as the capacity for renewal and critical thinking, will be increasingly highlighted in future. Independent decision-making by experts, and responsibility for work efficiency and personal development will increase.

Fingrid responds to changes by offering its employees opportunities to develop and grow their competence. The approach of securing expertise as a strategic choice improves the quality of personnel planning and helps the company to better prepare for future needs. Fingrid takes a broad view of learning and development: we offer opportunities precisely for on-the-job learning with the help of demanding tasks, diverse projects and job rotation.

At Fingrid Academy we offer all specialists training and coaching programmes related to supporting the company's strategy. For several years now, we have focussed especially on, for example, developing the communication, interaction and engagement skills of specialists. By doing this, we want to meet the changing requirements of working life and the



energy industry and coach our experts to be influencers who are capable of communicating understandably, transparently and quickly through different channels.

In 2019, Fingrid Academy offered coaching for supervisors, project management coaching, the Loikka training programme for increasing specialists' communication and engagement skills, training in O365 tools, language and multicultural coaching and unit-specific coaching mainly related to change, work community and emotional skills. We invest more than a million euros annually to develop both the work community and each employee's personal development. In addition to shared training provided by the company, personnel can take the initiative by proposing specific training to boost their know-how. In 2019, each Fingrid employee received an average of 5 (5) days of training.

### Gathering together the entire personnel

We value the possibility to gather together all our employees in one place every year. During the training day held in spring 2019, we discussed the company's culture, among other things. Apart from business talk, it is also important to boost team spirit.

Photo: Employees doing urban orienteering in the Töölönlahti area, involving several physical and mental challenges



## Bold supervisory work

Our operations are characterised by an open and flat hierarchy. Supervisors hold a key role in managing the work community culture and communication. This is why the company focusses on training and guidance for supervisors. The daily management and leadership skills of supervisors play a key role in ensuring our work community's job satisfaction and ability to cope at work.

During the year under review, supervisors were offered a coaching programme called Johtamisen polku ('Management path'), which put the emphasis on bold supervisory work and performance management. The purpose of the supervisor training was to develop supervisors' readiness to function as the employer's representative, improve expertise and performance management skills, provide the tools and confidence to manage challenging leadership situations and improve supervisors' presentation, negotiation and facilitation skills.

Our personnel is always ready to develop our operations. Our investment rate and major changes in our operating environment have caused a lot of rush and scheduling pressure in recent years. The strong prioritisation of tasks has been used to control rush; supervisors hold a key role in this challenge. In 2020, supervisors' rule for their team members is "effective implementation: prioritise and facilitate". In other words, the idea is to focus on completing the basic task and to try and make daily work run smoother and do the most important jobs first. Supervisors are

responsible for ensuring that nobody becomes overstressed.

## Well-being through flexibility

Fingrid's value proposition to its customers is: Fingrid delivers. The same value proposition applies to employees. The company wants to take care of its personnel. Our goal is to support employees' overall well-being, maintain a good work atmosphere and management, to be flexible according to individual needs and to support recreational activities.

Fingrid's employees have access to a wide range of comprehensive occupational healthcare and well-being services that aim to support their work capacity and well-being, regardless of the location. Our goal-oriented well-being activities bring results, and our people understand the value of self-care. The number of absences due to illness has been remarkably low for many years now, and the high age of retirement and the lowest possible disability pension contribution category bear further testimony to the well-being of our employees.

We monitor the work atmosphere and success of leadership through annual personnel surveys. We carried out a Great Place to Work employee survey during the year under review and the response rate was 93.4 per cent. Based on the GPTW survey results, employees consider Fingrid to be a good place to work overall. Our overall result, i.e. the TrustIndex, was slightly better this year (88) than in the previous year (87). Compared to other Finnish companies, the result is excellent.

Fingrid is a good workplace due to its management approach, skilled people and good colleagues, trust, good tools, the meaningfulness of work, a clear vision, listening to employees, flexible working hours and a friendly work atmosphere. Improvement areas included a more even distribution of workloads and resourcing, improving information flow concerning changes and between different units and increasing flexibility. In terms of background variables, the overall results for men and women were exactly the same, but there were, however, clear differences between men and women in the case of individual questions. Also, the results between different units showed significant changes.

The safety of all personnel working on the grid and related systems is a number one priority for us. We continuously develop safer ways of working, practices and safety instructions in co-operation with our service providers. As in previous years, the number of occupational accidents involving Fingrid's in-house personnel remained low. A total of 4 (6) accidents took place, 3 of which occurred during business trips and one at the workplace. Only one accident led to an absence. Absences due to accidents or illnesses accounted for 1 (1) per cent of working time during the year.

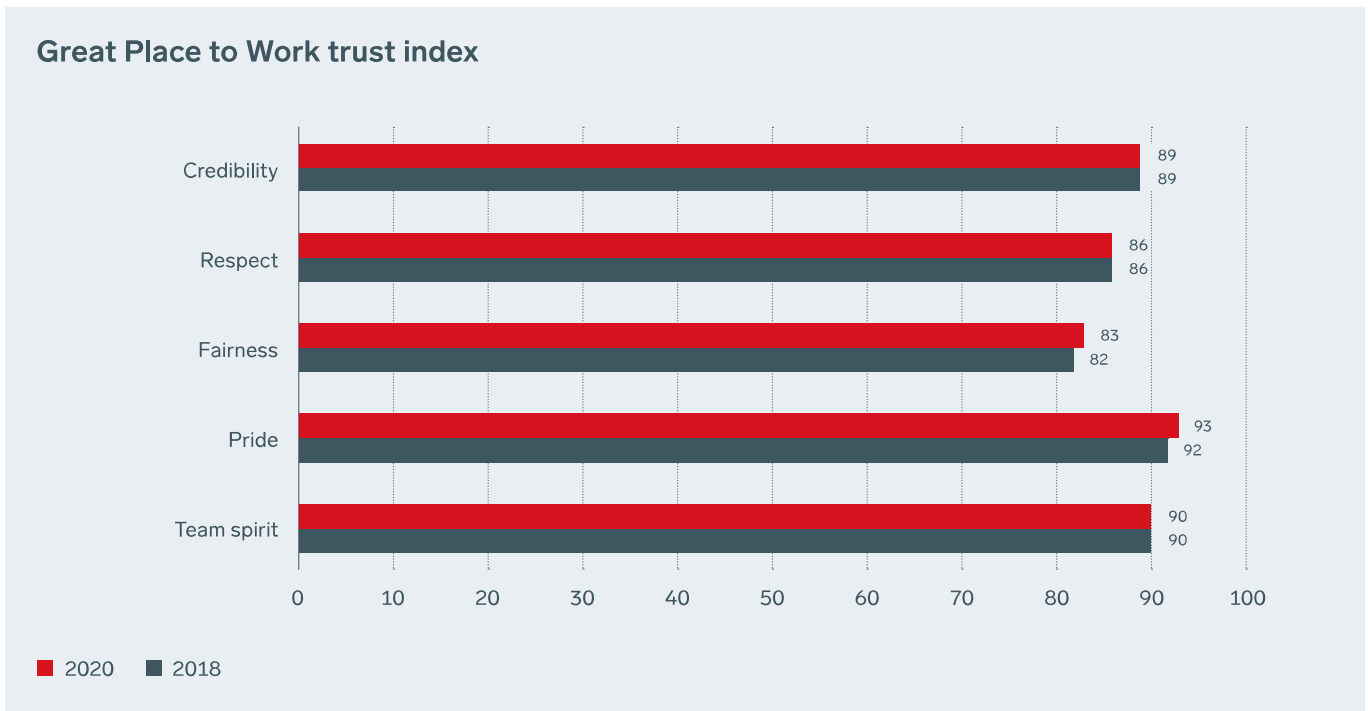


Image: Great Place to Work trust index

### Recognition and awards

In February 2019, Fingrid was awarded as one of Finland’s most inspiring workplaces for the third year in a row. Fingrid placed third in the Responsible Summer Job campaign in the medium-sized company category. We were successful especially due to the experience of fairness and impartiality. We came in 7th in the medium-sized companies category of the Great Place to Work Finland 2020 survey.



### Diversity

Fingrid is committed to promoting diversity in everything it does. The company guarantees equal opportunities, rights and treatment to all employees and makes use of its personnel’s diverse expertise. In accordance with our employer promise, we have a collaborative atmosphere where the organisational culture and management practices are respectful, fair and tolerant to all.

Fingrid treats its employees and all co-operation partners in a non-discriminatory way regardless of their age, gender, nationality, ethnic origin, language, beliefs, religion, health, sexual orientation, political background, socioeconomic status or marital status.

Our personnel is diverse in terms of its age structure: we have both recent graduates and long-standing industry veterans. Our age range is from 20 to 75. In terms of education, our personnel mostly hold tertiary education degrees, but the degrees vary all the way from vocational degrees to researchers. Women make up a regrettably small proportion of personnel, which is typical of our industry, however. We hope to attract more women to the technical sector, which is why we have been involved in the Women-in-Tech campaign for several years. Of the executive management group, 3/9 are women and of the Board of Directors 3/5 are women.

## Remuneration

Showing appreciation for good work is equally about daily recognition and the company's remuneration practices. Through compensation and remuneration, we encourage our personnel to work productively and develop operations. Our goal is to be a competitive wage payer in the energy industry, although not a wage leader. We monitor the competitiveness of our monetary remuneration through various studies. The average salary of our company specialists was EUR 5,100 per month in 2019.

Our company's monetary remuneration system consists of a monthly salary, annual merit pay and incentive bonuses for daily management, the purpose of which is to encourage employees to be enterprising and continuously perform well. The company annually sets aside 2 per cent of the payroll for incentive bonuses.

The merit pay, which is at most equal to one month's pay, is based on shared strategic indicators, which are system security (as few disturbances in the main grid as possible), the operating of the electricity markets (as few transmission restrictions disrupting the markets as possible), the company's result and customers' trust in the company. In 2019, the shared indicators determined 80 per cent of the merit pay result, in addition to which each person had a personal performance indicator with a 20 per cent weight.

At Fingrid, tax-free and taxable company benefits, excellent opportunities for training, goal-oriented career planning and work rotation are part of non-monetary remuneration. Non-monetary remuneration also covers statutory and non-statutory holidays, comprehensive health and well-being services, family services and flexible working hour and work arrangements.

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### Introduction of personnel fund

Fingrid introduced a new alternative for paying quality bonuses. The personnel decided to establish a voluntary personnel fund. The operations of the fund are based on the Personnel Fund Act. The fund receives and invests the bonuses paid by the company in the long term. The objective of the fund is to contribute to the company's long-term commitment to its employees and to the employees' commitment to the company.

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## New tasks

Fingrid's personnel increased, as in several previous years, due to the company's new responsibilities and growth in the

volume of the operations. The energy transition requires new expertise. Especially growth in wind power requires additional resources for analysing electricity transmission needs and also for operating the power system, and the construction of additional substations.

In 2019, altogether 7 professionals were hired both in grid operation business processes and in IT tasks. The average turnover of personnel was 5.13 per cent in the year under review. At the end of the year, Fingrid Oyj employed 364 industry experts and Fingrid Datahub Oy employed 16.

In a bid to find new talent, we are making long-term efforts to develop our employer image. Our activities during the year included several recruitment fairs and student events, the production of videos to present our professions and the clarification of our employer branding communications. Young students are an important target group for us, which is why we offer a relatively high number of summer jobs and trainee opportunities across Finland, considering our size – in 2019 to around 40 young people. For a few years now, we have actively participated in, for instance, the Responsible Summer Job campaign to give a good example of a responsible employer for young people.

Fingrid's culture in a nutshell\*:

- team spirit, community spirit, sense of community
- openness, the right to speak, honesty
- trust & respect
- responsibility
- Fingrid's values
- down to earth, relaxed, human

\* Source: Personnel responses at the 2019 training day

# Risk management at Fingrid

Fingrid’s internal control and risk management principles, which are approved by Fingrid’s Board of Directors, were updated during the year to respond to the evolving demands of the operating environment. Risk management as a whole was re-assessed on that basis. The assessment of key risks has been revised, the process has been made more efficient and the measures have been specified.



Image: Fingrid’s societal responsibility as the foundation for risk management

## Risk management governance

Fingrid is responsible for the functioning of Finland’s electricity system and is essentially a risk management company. Risk management is planned and governed comprehensively. The objective is to comprehensively identify, assess and monitor, as well as safeguard against, various threats and risks that are directed at the company’s operations, personnel and property as well as risks which also have impacts on the environment and society. Ensuring systematic corporate safety & security is a part of risk management.

Continuity management is included in comprehensive risk management, and its objective is to improve the organisation’s readiness and to prepare, in the best possible way, for the realisation of various risks and ensure the continuity of operations in such situations.

The planning of comprehensive risk management during normal times contributes to the contingency planning during societal state of emergency as required of a company with duties critical to the national security of supply.

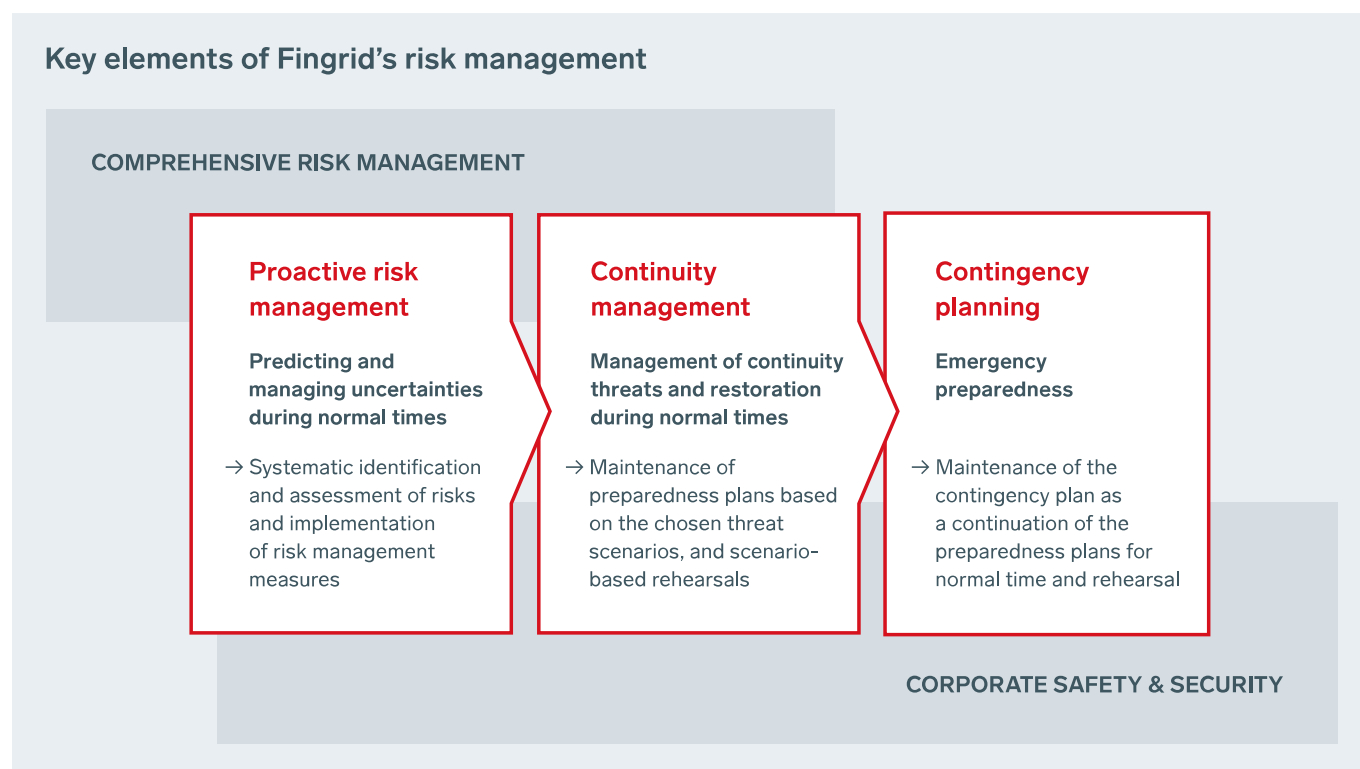


Image: Key elements of Fingrid's risk management

## Proactive risk management

The company's risks are divided based on significance into strategic and major business risks to be reported to the company's Board of Directors, and operational risks.

Risks are identified and assessed in a consistent manner as part of the company's strategy process and in connection with significant changes affecting business operations. Risk management measures are planned, entered and followed up on regularly in the risk management system. This system was modernised during the year under review.

Risks identified in the risk assessment are classified in relation to the risk management measures into one of three groups:

- risk factors that are deemed significant in terms of their impacts and which are to be transferred, if possible, by contracts, insurance, derivatives or similar means,
- risk factors that are deemed moderate in terms of their impacts and which are under the company's control through clear controls and other practical measures, and
- risk factors deemed minor in terms of their impacts but which require monitoring.

The company's risk management is continuous, and the objective is to engage the entire personnel to identify the risks associated with the company's operations and implement risk management measures as part of their day-to-day work. An overall risk assessment is carried out annually based on an assessment of the operating environment. The planning of risk management measures is part of strategy implementation planning. In order to manage the risks with significant impacts, risk management projects are launched as needed on the company level in order to arrange supplementary measures and monitoring.

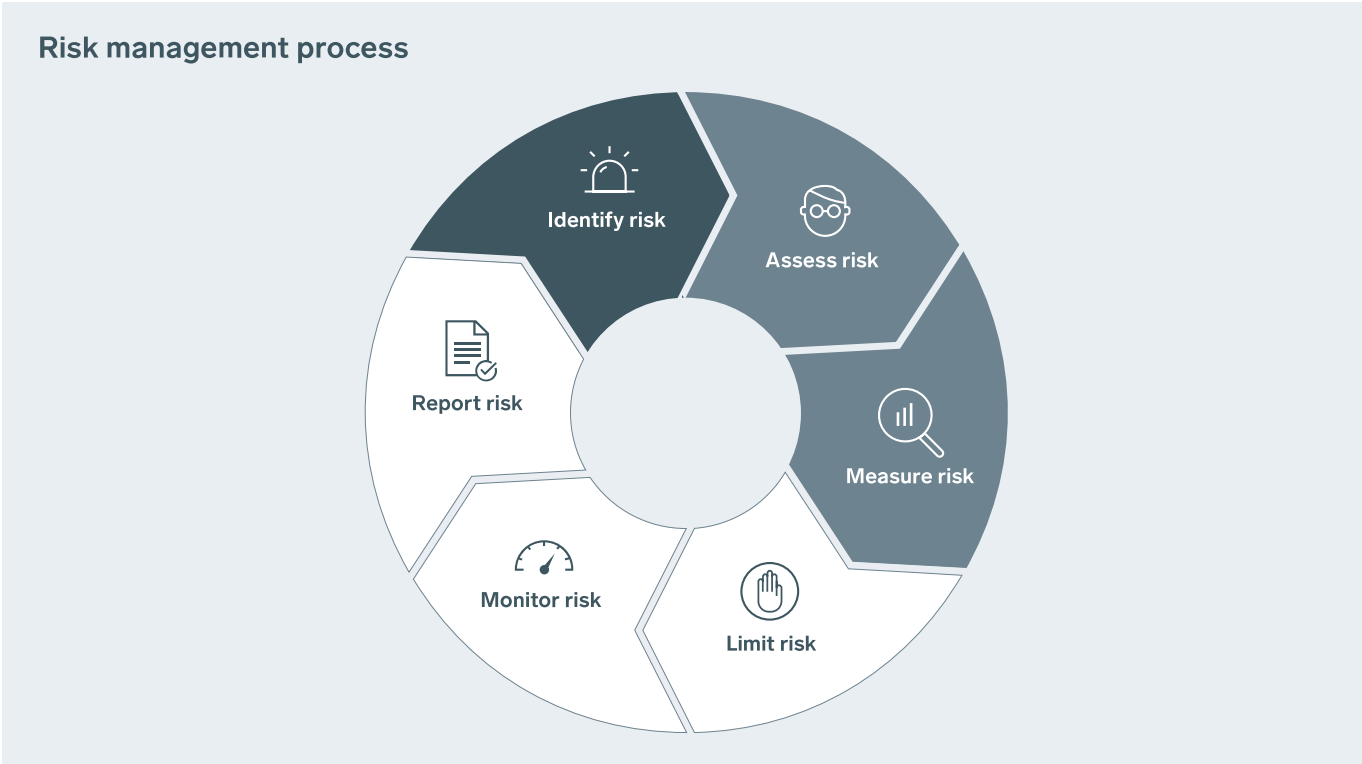


Image: Risk management processes

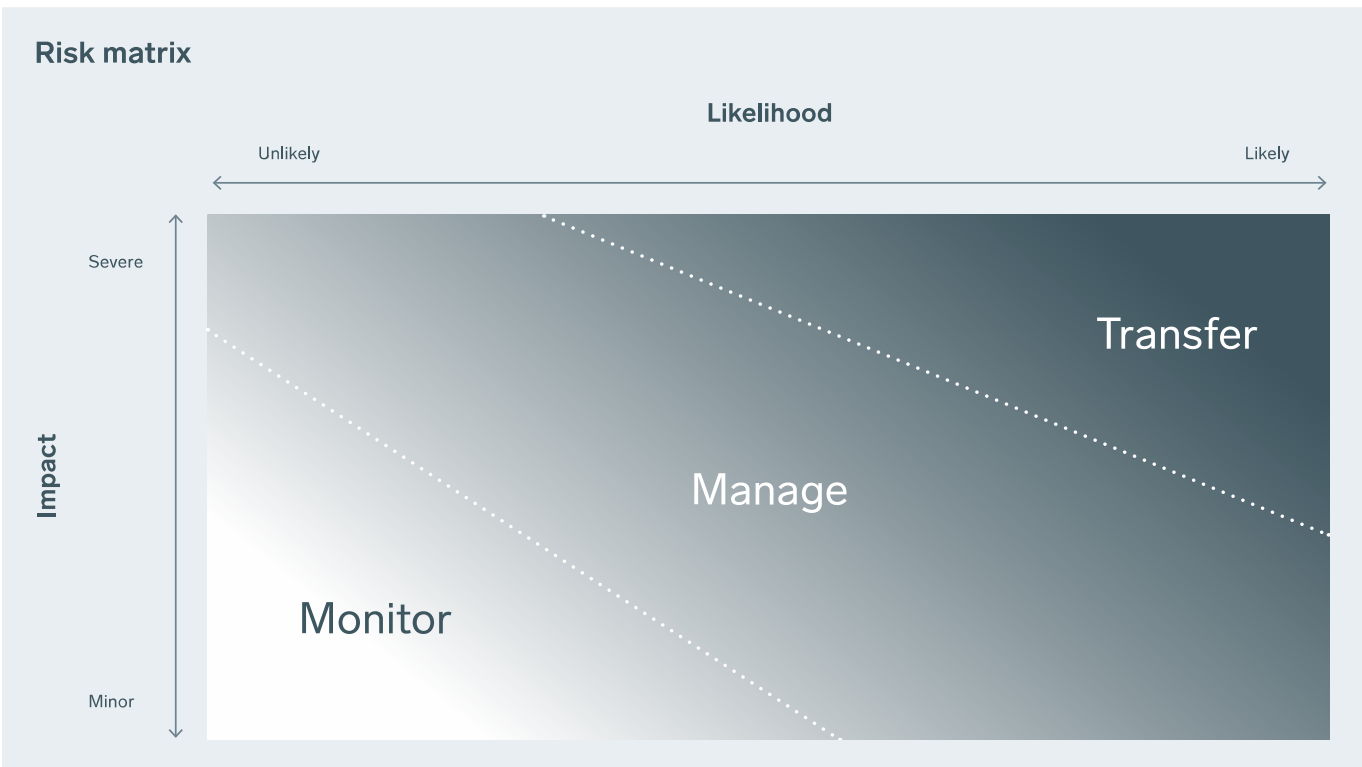


Figure: Fingrid's risk matrix



Both strategic and financially significant business risks are reported to the company’s Board of Directors annually. Risk reporting is supplemented in connection with significant business projects and changes in the operating environment.

As a general rule, risks are protected against if the costs that the protection entails are justified in relation to the magnitude of the risk. Risks related to major personal injury and environmental damage are always protected against.

Risk protection takes place by reducing the likelihood of an adverse event and/or its impacts on Fingrid and society. The most important protection measures are:

- supporting Fingrid’s risk management culture and improving employees’ risk awareness,
- comprehensive strategy work and operational planning,
- influencing the regulation of operations,
- limiting risk through contractual arrangements,
- developing technical solutions and operations and changing procedures,
- auditing operations and reporting on and monitoring the implementation of measures and
- derivatives and insurance policies.

## Continuity management

Continuity management, included in comprehensive risk management, is used to reduce the direct impacts of a realised risk and to accelerate recovery from an adverse event. The planning of continuity management is based on threat scenarios that are created based on a risk and operating environment analysis. The scenarios are used to assess the company’s ability to maintain the functionality of critical processes and systems during emergencies when proactive risk management has failed. Among the scenarios that must be analysed are the loss of business premises or IT systems, a prolonged major disturbance or extreme weather conditions.

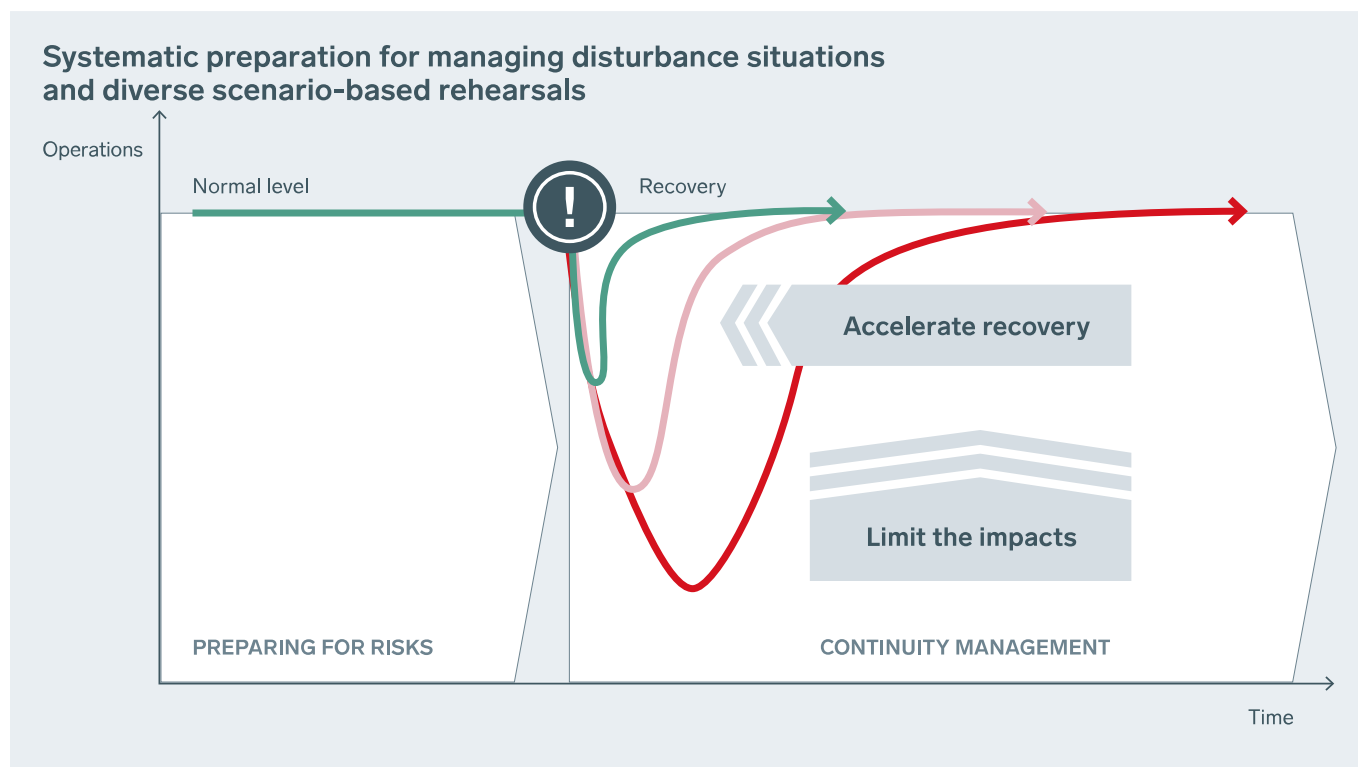


Image: Objectives of continuity management

The technical and administrative preparedness required by proactive risk management and, in particular, continuity management are guided on the company level by the preparedness policy, and by the preparedness plan that the company maintains in accordance with the Finnish Electricity Market Act.

The threat scenarios are decided on as part of the company's strategy, and the necessary recovery plans are drawn up and the implementation of the plans are rehearsed for the most significant continuity threats. The rehearsals are planned together with the company's preparedness unit.

## Contingency planning

Fingrid is a company with duties critical to the national security of supply and must be able to continue its operations even during emergencies while the Finnish Emergency Powers Act is in effect. Fingrid maintains a contingency plan as part of the preparedness plan as referred to in the Finnish Electricity Market Act. Fingrid is an active participant in the collaboration to develop the energy sector's preparedness operations and, together with the National Emergency Supply Agency, governs the authorities' and Finnish industries' joint Power and District Heat Pool, which co-ordinates emergency preparedness. In recent years, the Pool has invested in major preparedness rehearsals, called 'Jäätävä', for municipal, emergency rescue and law enforcement authorities, and for the Finnish defence forces and energy companies.

## Corporate safety & security

At Fingrid, corporate safety & security and the related preparedness and co-operation with authorities are planned and managed as part of the company's overall risk management. Essential elements of corporate safety & security planning and operations guidance are electrical safety and occupational safety, the safety of properties and premises, information security, personal and travel safety, emergency rescue operations and internal and external protection against crime related to the company's business.

## Risk Controls

Risk management controls that are significant in terms of the company's operations and finances are described and implemented by process and function to support good governance, overall efficiency, the quality of internal control and operational audits.

The preparation and description of decision-making controls take into account the segregation of duties, as well as existing approval authorisations and other factors that ensure appropriate decision-making. The effectiveness of the existing controls is assessed regularly.

The company complies with the Board-approved insider guidelines and related party principles, as well as separately maintained guidelines concerning conflicts of interest and judicial disqualification.

Risk management at Fingrid is described in more detail on the company's [website](#).



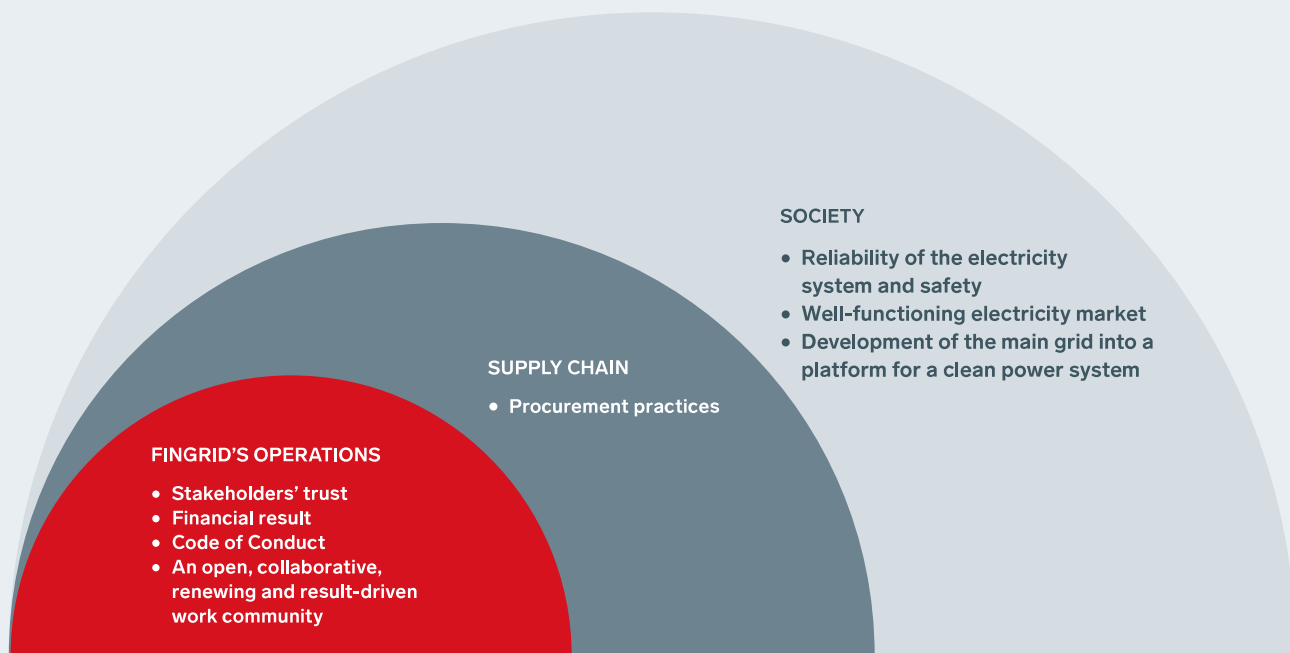
# Sustainability

# Corporate responsibility

We responsibly take care of people and environmental impacts and comply with good governance practices while securing a reliable supply of electricity for everyone in Finland and building the clean power system of the future. For us, responsibility is a team effort, which requires the commitment of the entire personnel and the participation of our business partners.

We have recognised the key topics in terms of accomplishing Fingrid's strategy and functioning daily business and set goals for them. We promote through our operations particularly the UN's global Sustainable Development Goals (SDGs) related to climate actions, energy and infrastructure. A summary of the achievement of our goals is reported in the section [Strategy and management system](#). In 2019, we updated our materiality analysis, highlighting Fingrid's and the main grid's key role in achieving Finland's climate goals. The executive management group reviewed the need for an update as part of the strategy process and took into account the entire value chain, corporate responsibility's strong link with the strategy and business and Fingrid's ability to create value.

**Fingrid's material corporate responsibility topics**



**Fingrid promotes in particular these UN's Sustainable Development Goals**



Image: Fingrid's material corporate responsibility topics

During the year under review, we developed responsible business practices and sustainable development through many small and large actions. The personnel's well-being was reflected in the upbeat chatter in the hallways and the low number of absences due to illness. Also, the results of the personnel survey support our observations. We highlighted the importance of people's diversity in our operating methods and organisational culture. We were given responsibility and freedom in terms of when, where and how we performed our work. We also received international recognition for building a good place to work, i.e. the Great Place to Work® certification, which proves our personnel trust and feel that many things in our work community are good. The grade for responsible operations in the personnel survey was high, at 90 per cent.

Safety and security were highlighted in everything we do and we created a safety culture together with our contractors and service providers. We reduced the environmental impacts in accordance with our land use and environmental policy and the precautionary principle, by taking protected natural sites into account starting with project planning and by taking care of work sites' material efficiency and chemical safety. From an environmental and climate viewpoint, we simultaneously created a significant positive impact by building, based on our investment programme, a strong main grid, to enable clean electricity to flow freely and to help Finland achieve its climate goals. A reliable main grid is a condition for a functioning society and indications of our success in this task are, in addition to high system security, our excellent ranking in the International Transmission Asset Management Study (ITAMS) and the ISO 55001 certification for the management of physical assets carried out in 2019. A summary of the value created by Fingrid through its business is available [here](#). Corporate safety & security was a focus of the internal audit, as were crisis communications, use of the procurement system and the administration process for Datahub. We also established an internal data protection group.

In procurements we set sustainability requirements related to human rights, working life, occupational safety, environmental issues and anti-corruption in accordance with the United Nations' Global Compact. We verified compliance with sustainability requirements through dozens of risk-based audits. As part of the procurement process, we checked regularly that elected suppliers are not subject to mandatory exclusion criteria based on procurement legislation for special sectors or international sanctions. Following a competitive tendering process, expert, outsourced workforce, including from abroad, were employed on the grid's work and maintenance sites in various parts of Finland. Nine work sites were audited to verify compliance with contractor obligations, occupational safety and environmental management. Special attention was paid to risk assessments, safety plans for specific work phases and the use of chemical safety data sheets already during induction. In addition, key foreign subcontractors from the Baltics and Poland, as well as the cleaning service company used by the company, were audited by a third party, focussing especially on employment matters and wages. In international goods sourcing, third-party supplier audits were carried out at 20 production plants in a total of 11 countries, and three follow-up audits were carried out in order to rectify any observed non-compliances. The audits covered both Fingrid's direct contractual partners and their suppliers. Deviations were largely linked to occupational health and safety, management systems, working hours and payroll practices. We interrupted procurements from one supplier and required measures for the co-operation to continue. Our experts also observed occupational safety and working conditions in connection with technical factory tests.

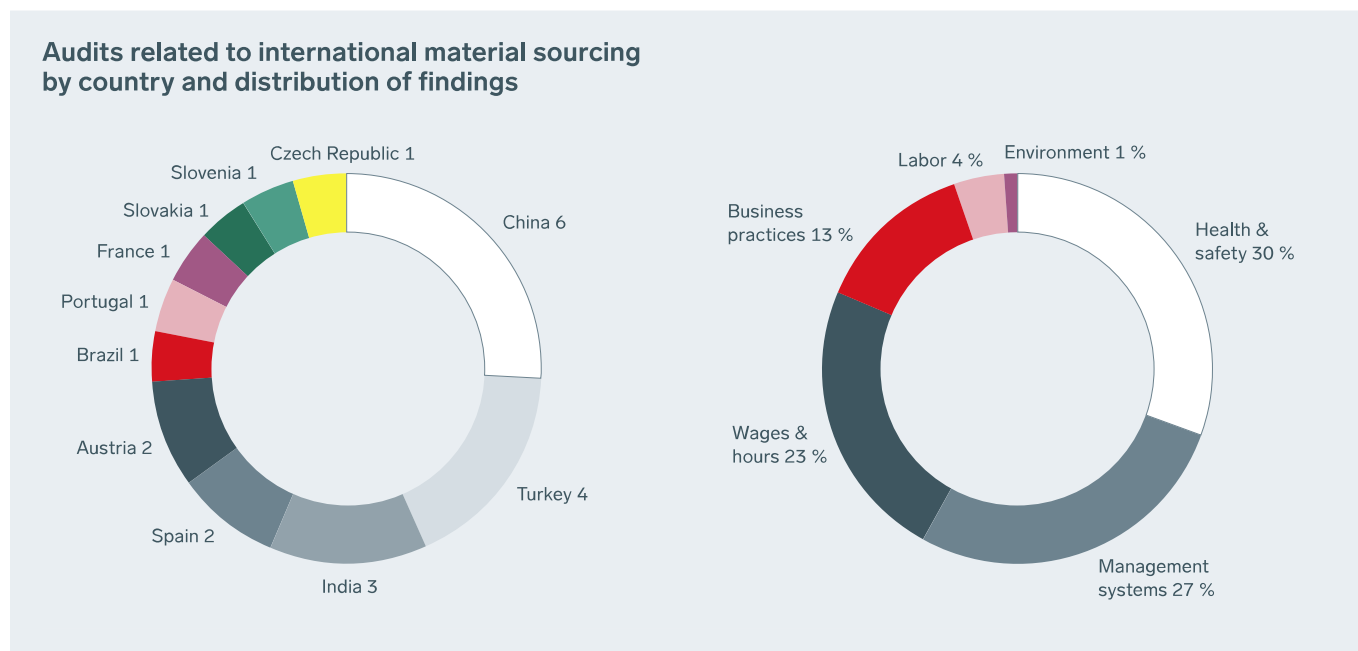


Image: Audits of international goods procurement by country and distribution of findings



To ensure our understanding of human rights, we have carried out an assessment in compliance with the due diligence process recommended in the UN's Guiding Principles on Business and Human Rights, and we also updated our action plan in 2019. We built trust and co-operated in our basic task with numerous transmission line right-of-way neighbours, authorities, customers and many other stakeholders. When looking for a route for a transmission line required for the energy and climate transition, we end up on land owned by someone else. From the very start of a project, we involve landowners and, for example, when we began the environmental impact assessment for the Huittinen-Forssa transmission line project, we sent more than 400 letters to landowners, and using the feedback, updated the route options to be reviewed in the environmental impact assessment. We also encouraged and supported the use of power line right-of-ways for the benefit of people and nature, for example, as a heritage habitat or wetland to increase biodiversity.

In our societally important core mission and as a natural monopoly, sustainable and responsible finances are important. The Council of European Energy Regulators' (CEER) benchmarking study placed us among the most cost-effective TSOs in Europe in 2020 and electricity transmission prices will remain at their current level in 2020. The section **Financial result 2019** contains our account of our tax footprint. Dividends are mainly paid to the State of Finland and to Finnish pension insurance and insurance companies.

During the year under review, climate change and sustainable financing were key issues on legislators' and investors' agenda. The new Government Programme contains, in addition to carbon neutrality, corporate responsibility entries on the development of binding corporate responsibility regulation and an analysis of EU-level corporate social responsibility legislation based on due diligence. At Fingrid, we developed our climate calculations and reporting and reported on the economic risks and opportunities of climate change for the first time in our new **Task Force on Climate-related Financial Disclosure (TCFD) fact sheet**. Our corporate responsibility reporting as a whole is integrated into Fingrid's annual report. To ensure transparency and comparability, we report in accordance with the international Global Reporting Initiative (GRI) framework. The GRI Content Index compiles our reported sustainability data and provides links to the data's location. The Report of the Board of Directors also includes non-financial information. The corporate responsibility reporting for 2019 was assured externally.

Corporate responsibility and compliance management is integrated with Fingrid's management system and **risk management** practices. The starting point is Fingrid's strategy where responsibility is a corporate-level strategic choice and one of the company's values. According to Fingrid's vision, the company and its employees are known for their responsible business practices. Fingrid's Board of Directors approves the company's Code of Conduct, monitors the responsibility of operations and ensures that corporate responsibility management is integrated into business operations. Corporate responsibility is reported on to the Board of Directors over the course of the year as required and separately in an aggregate form once a year. Corporate responsibility aspects are also included in the Board of Directors' decision-making process when making decisions about, for example, investments. The President & CEO and the heads of functions are each responsible for compliance management and corporate responsibility issues within their areas of responsibility. The executive management group regularly reviews corporate responsibility issues, and alongside profitability, social issues and environmental impacts are taken into account in a balanced manner in decision-making. **Responsibility impacts the remuneration of the President & CEO and the company executives and in 2019 responsibility was linked even more closely to the remuneration of executives**. The Compliance and Responsibility Team headed by the company's general counsel is responsible for company-level development and reporting and an appointed development manager is responsible for coordination.

Every Fingrid employee makes a commitment to comply with our Code of Conduct, which is based on the United Nations' Global Compact initiative and the principles guiding business operations and human rights. During the year under review, we drew up ethical principles for the use of artificial intelligence and participated in a corporate AI ethics challenge. Our managers and the entire work community ensured that behaviour is in line with the Code of Conduct, relying also on online training. We also implemented online training for the whole personnel on corporate responsibility. A confidential and independent reporting channel was in place for reporting suspected breaches against the Code of Conduct. We improved its accessibility for external stakeholders by increasing the reporting channel's visibility on our website and by promoting awareness of security and safety and the importance of reporting suspected misconduct among our suppliers. In 2019, no breaches of anti-competition laws, complaints related to the privacy of private

individuals, corruption incidents, human rights violations or discrimination incidents occurred in Fingrid's operations.



**COMMUNICATION ON PROGRESS**

This is our **Communication on Progress** in implementing the principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

Image: United Nations Global Compact emblem

### Future influencers in responsible summer jobs

In 2019, Fingrid came in third in the category for large companies. In their assessments, Fingrid's summer workers especially referred to their experience of fairness and impartiality, which were judged to be the best in the category for large companies. Also, induction and guidance as well as general satisfaction were high up in summer employees' responses.

In summer 2019, altogether around 40 summer employees worked at Fingrid's various locations. The jobs were related to power line and substation asset management, planning and monitoring clearing in power line right-of-ways, design and operation of the power system, grid services and the electricity market. Summer work also took place in ICT and various tasks in communications and information management.





# Environment

Fingrid’s operations have a significant positive impact on the environment and climate. By reinforcing the electricity transmission grid for the needs of clean electricity production, we help Finland reach its climate goals. When building and maintaining the main grid, we take landowners and other stakeholders into account, and we reduce environmental impacts at all stages of the main grid’s life cycle in accordance with Fingrid’s land-use and environmental policy. Key aspects include a thorough environmental impact assessment (EIA) and preparedness for environmental risks. Our reserve power plants have an ISO 14001 environmental certification.

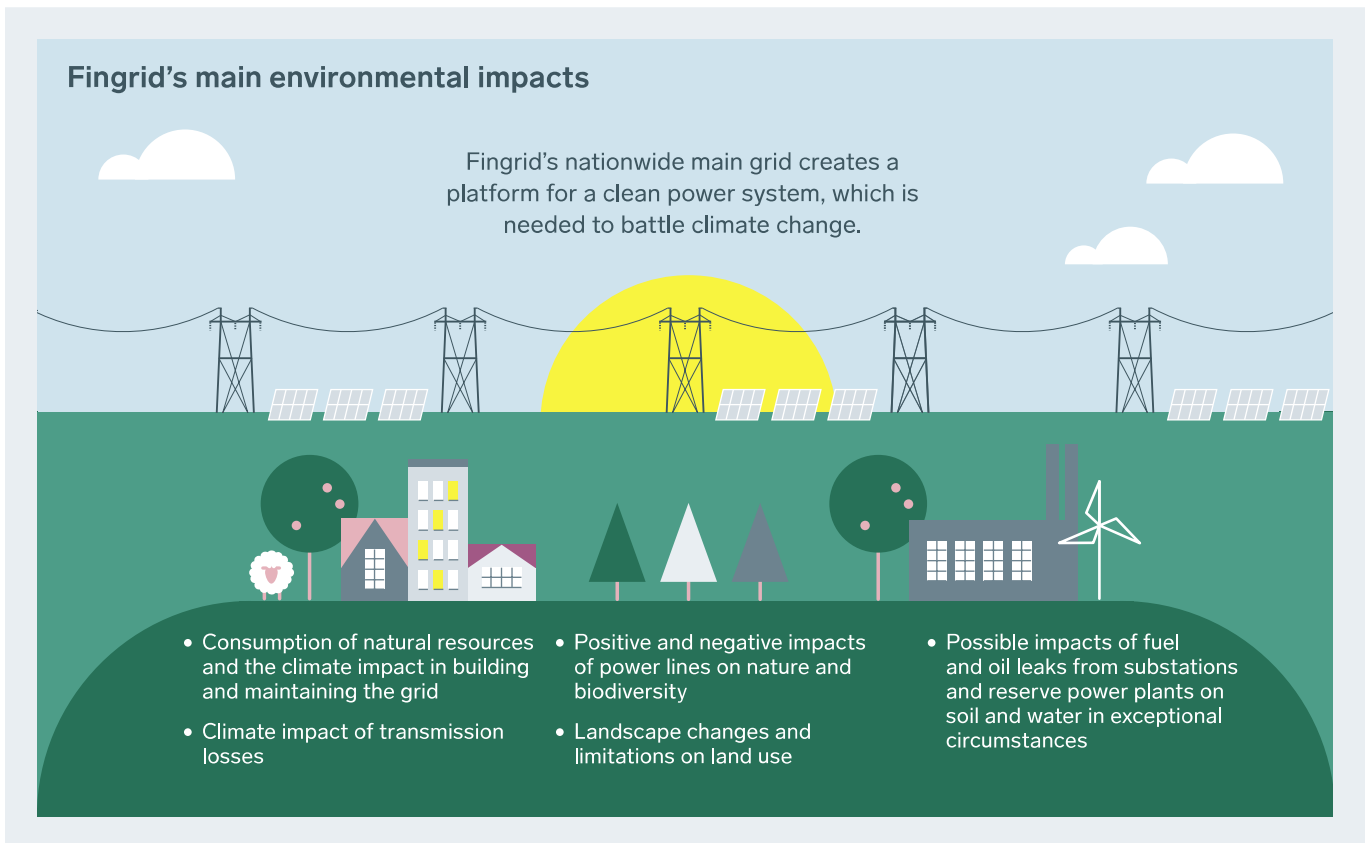


Image: Fingrid’s key environmental impacts

2019 was a memorable year in terms of climate and environmental issues. The European Parliament declared a global climate emergency. Weather phenomena affected people all over the world. The Government Programme contained the goal of a carbon neutral Finland in 2035. We are one of the key players in Finland’s energy and climate policy, as the transmission grid under Fingrid’s responsibility must be sufficient to enable Finland to reach its climate goals. We must succeed in connecting clean power to the main grid and also ensure its secure transmission from electricity producers to consumers.

Several grid projects are underway to strengthen the main grid. In order to take into account environmental impacts, environmental reports were drawn up on transmission line projects with minor impacts in Muhos and Simo and from Oulu to Ii. An EIA was conducted to assess the human and environmental impacts of the transmission line project from Huittinen to Forssa and the transmission lines for Sweden’s third AC connection from Muhos via Keminmaa to Ylitornio. We informed local residents beyond statutory practices through land-owner letters and local newspaper ads, and the projects were presented in three public events that were open to all. Involving landowners is very important in terms of

ensuring that the power line adapts to the environment, taking into account various perspectives and stakeholders.

We committed the external contractors and service providers responsible for the grid to environmentally responsible operating practices in line with Fingrid’s land-use and environmental policy through contractual terms, training and audits. All personnel working at Fingrid’s work sites completed online training on environmental matters. Service providers received environmental training when investment projects were started, and environmental aspects were monitored at the work site as part of work site monitoring. Compliance with environmental requirements, occupational safety and contractor obligations were verified in a total of nine audits. Two audits on overall safety and several audits related to the ISO 14001 environmental management system were carried out at reserve power plants.

Our goal is to complete grid investment projects and maintenance without any significant environmental deviations. No significant environmental damage occurred during the year under review, but one incident classified as significant that had occurred in the previous year surfaced during the year, where dismantled conductor material was ground up and spread into the surroundings by the tracks of a harvester, over an area of around three hectares. The surroundings have been cleaned and the landowner will be compensated for the damage. Materials from work sites were recycled as efficiently as possible when building new grid sections and substations or dismantling old structures. In 2019, co-operation with a new material recycling service provider was begun. In addition to careful sorting, our goal is to improve logistics related to material transports and to develop investment project processes so that, for example, concrete and brick could be utilised increasingly in civil engineering. The total volume of waste during the year was approximately 13,920 tonnes, of which 98 per cent was utilised in some way and 89 per cent was recycled.

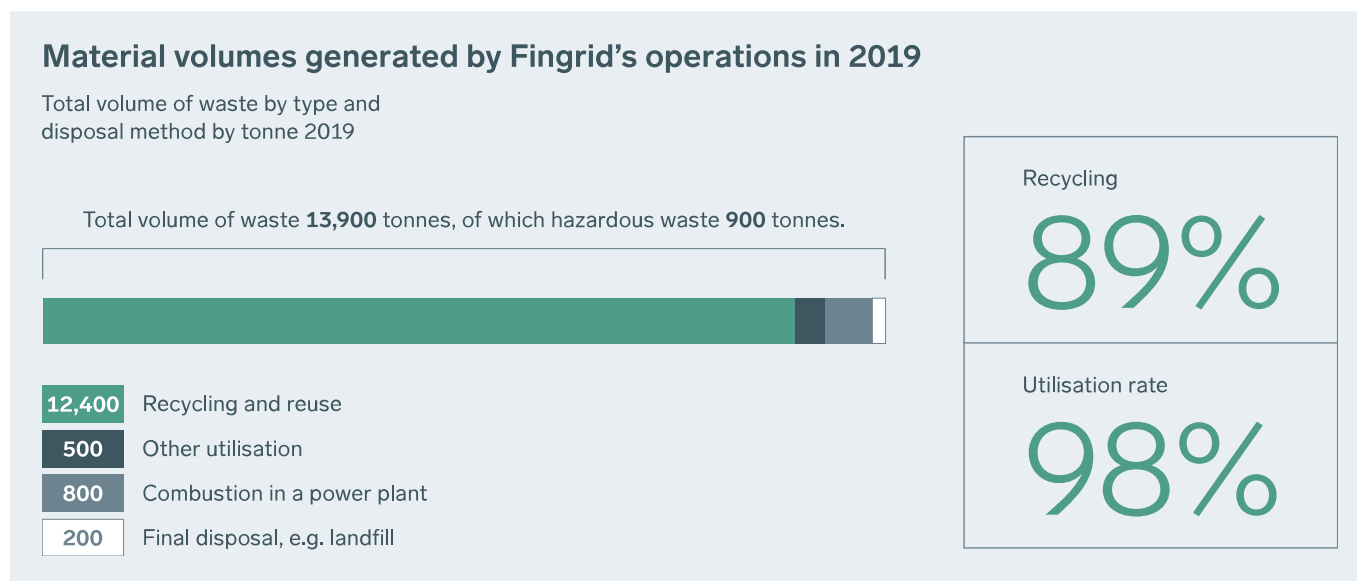


Image: Material volumes generated by Fingrid’s operations in 2019

In order to be able to build, operate and maintain a transmission line, Fingrid expropriates a right-of-use to the transmission line area. An expropriation permit ruling was given for the Forest Line, Pyhänselkä–Nuojuankangas, Kontiolahti–Uimaharju and Imatra–Huutokoski transmission lines. An expropriation permit application was submitted for the transmission line projects Pyhänselkä–Nuojuankangas, Imatra–Huutokoski and Kontiolahti–Palojärvi. The expropriation compensation process was completed for the transmission line projects Lieto–Forssa and Elovaara–Pinsiö. Nine hearings in accordance with the Finnish Expropriation Act were held with landowners.

In accordance with our land-use and environment policy, our goal is successful interaction with landowners and neighbours of transmission line right-of-ways. We conducted landowner surveys on our finished transmission line projects during the year and our grades were good at 3.6–4.3 (on a scale of 1–5). Landowners’ development expectations were related to communication and agreements concerning the use of access roads, the moving around of

our site teams and the progress of the work.

We instructed service providers working on power line maintenance and trimming vegetation to take landowners and natural sites into account and to take care of waste and chemicals. Using the power line right-of-ways, we can also protect biodiversity, which is decreasing worldwide. The right-of-ways are cleared regularly to be open and light and can act as a replacement habitat for species threatened by disappearing meadows or the drainage of peatlands. In a bid to increase the utilisation of right-of-ways, we offered landowners information both in connection with our projects and through our other communications initiatives and we granted them initial funding for managing the right-of-ways as heritage habitats. We also created a new idea card for the landscaping of right-of-ways in yard areas.

People are concerned about the electromagnetic fields in the vicinity of our power lines. We updated our communications material to correspond with the legislation amended in late 2018, which concerns the protection of the public from non-ionised radiation from the electromagnetic fields of power lines. We continued to publish, jointly with an independent expert party, status reports on global, medically oriented research on electromagnetic fields. There is no new, conflicting evidence of the health impacts.

Fingrid actively participates in land-use planning to ensure safety and land-use reservations for the grid. In 2019, Fingrid issued about 240 statements on land-use plans and environmental impact assessments. In addition, we directed the construction and operations taking place near grid installations by issuing roughly 440 statements that included safety instructions and land-use restrictions. We were also part of the stakeholder forum for the total reform of the Land Use and Building Act and in the monitoring group for the amendment of the Finnish Expropriation Act.

The construction and use of the main grid necessary for the achievement of the climate goals result in emissions. Fingrid has been reporting on its climate impacts according to the Global Reporting Initiative (GRI) and the Greenhouse Gas Protocol (GHGP) since 2011. In 2019, we disclosed the business risks and opportunities related to climate change also in accordance with the Task Force on Climate-related Financial Disclosures framework. In our [TCFD fact sheet](#) we have compiled our climate goals and information on how climate change impacts are taken into account in Fingrid's administration, strategy and risk management.

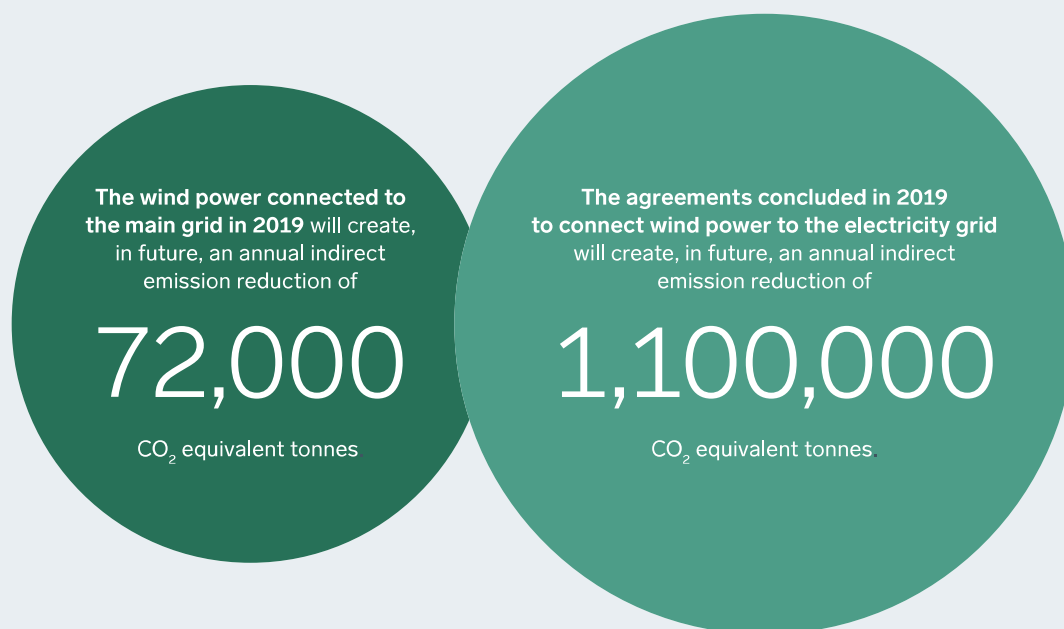
In 2019, altogether 132 megawatts of wind power were connected to Fingrid's main grid, which will indirectly avoid emissions worth around 72,000 carbon dioxide equivalent tonnes in the coming years. In addition, Fingrid concluded during the year agreements on connecting a total of approximately 2,000 megawatts of wind power production to the electricity grid. Once realised, this will lead to a substantial positive climate impact, indirectly avoiding emissions worth around 1.1 million carbon dioxide equivalent tonnes.

## Fingrid's carbon handprint

Carbon handprint means the positive climate impacts, i.e. the emission reduction potential of activities.

In 2019, altogether 132 megawatts of wind power were connected to Fingrid's main grid. During the year, Fingrid concluded agreements on connecting a total of approximately 2,000 megawatts of wind power

production to the electricity grid, including the wind power connected through the distribution network companies. Once realised, this will lead to a substantial positive climate impact.



**This equals the annual carbon footprint of some 110,000 Finns.  
A Finn's carbon footprint is approximately 10 CO<sub>2</sub> equivalent tonnes on average.**

Image: Fingrid's carbon handprint

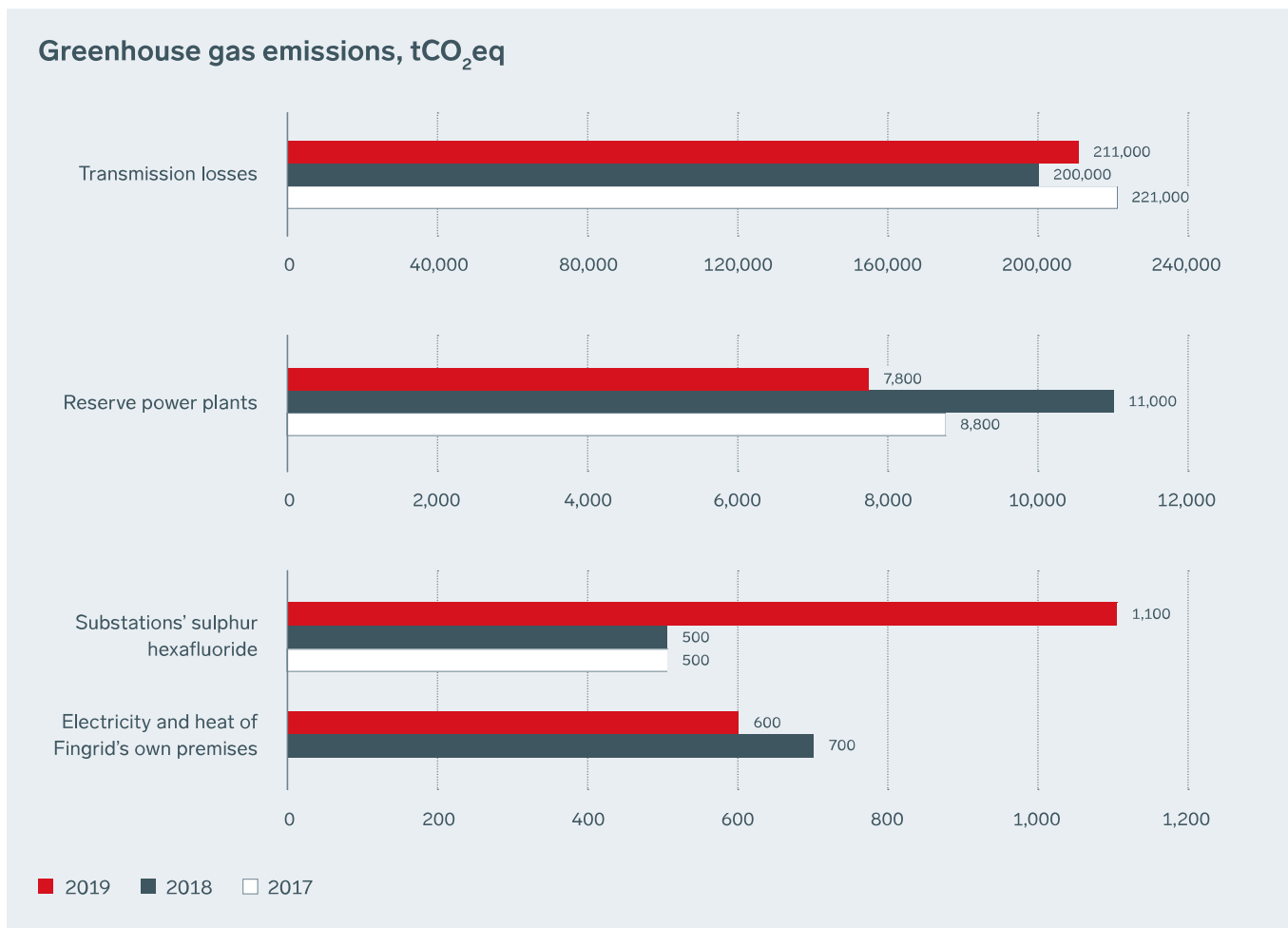


Image: Fingrid's greenhouse gas emissions

Fingrid's carbon dioxide emissions in 2019 totalled approximately 220,000 carbon dioxide equivalent tonnes. Roughly 0.4 per cent of Finland's greenhouse gas emissions are our emissions. We joined the energy efficiency agreement of Finnish industries for 2017–2025, originally with a target of cutting energy use by six per cent. In 2019, we set 12.9 per cent in energy savings as our overall target, as the original target was already exceeded during the first two agreement years through the power increase investments and changes to the anti-icing system at the Forssa reserve power plant as well as transmission line construction and upgrades.

The majority of our emissions (approx. 96%) were caused indirectly by the electricity production required to replace power losses taking place during electricity transmission. We minimise losses by making energy-efficient grid investments and equipment procurements and by developing the power system for the addition of renewable electricity generation to the main grid. The transmission loss carbon footprint will be reduced when the electricity production structure changes and the grid investments necessitated by the changes are carried out. During the year under review, we also added real-time power production carbon emissions data to the status of the Finnish power system.

In addition, greenhouse gas emissions are caused by the reserve power plants used in serious disturbances of the power system and by the powerful greenhouse gas used in substation equipment, sulphur hexafluoride (SF<sub>6</sub>). Our SF<sub>6</sub> gas emissions were approximately 45 (21) kilograms. At the end of 2019, there was a total of approximately 46 (44) tonnes of SF<sub>6</sub> gas at our substations, and the long-term annual leakage rate has been very low, less than 0.2 per cent on average, representing the top results of the international ITOMS comparison.

Other indirect emissions resulted from business travel and procurements. We developed our related emissions reporting as especially the production of aluminium and steel for power line towers and conductors is energy intensive. The material procurements (towers, conductors and foundations) for the approximately 150 new transmission line kilometres taken into use in 2019, resulted in emissions of some 40,000 carbon dioxide equivalent tonnes.

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### Demolished concrete used for civil engineering

Two major demolishing projects were carried out in 2019 when substations' old control room buildings were demolished. The projects' goal was to utilise the demolition material for civil engineering on the same plot to the highest degree possible. Using demolished bricks and concrete as a civil engineering material is sensible both financially and in terms of the environment as it reduces the amount of virgin aggregate required and significantly decreases the transport of waste material and virgin aggregate.

The goal was easily met in both projects when the brick and concrete material was used in the base course of the road and field structures instead of natural aggregates. In 2019, around 5,000 tonnes of natural aggregate were saved. There have been positive experiences of using concrete in civil engineering from earlier years on a smaller scale when the concrete foundations demolished at several substations' switching station were used in civil engineering.

### Environmental safety improves at Naantali reserve power plant

In 2019, an environmental and renovation project was carried out at the Naantali reserve power plant, which involved the replacement of fuel systems, extinguishing systems and auxiliary energy systems that had reached the end of their lives. The modernisation of the systems significantly improved the chemical risk management of the plant and will ensure the safe use of the plant also in the future.

Fingrid's reserve power plant in Naantali was inaugurated in 1974 and it is located near the Naantali power plant and oil refinery. The station's capacity is 40 megawatts. The station has two gas turbine units based on aircraft engines, which served on the wings of aircraft before being transferred for use in the reserve power plant. The plant has an environmental permit and its environmental matters are managed in compliance with the ISO 14001 environmental management system.

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# Corporate responsibility GRI disclosures

## GENERAL DISCLOSURES

Standard	GRI content	Location	Additional information	Global Compact
<b>Organisaational profile</b>				
GRI 102-1	Name of the reporting organisation		Fingrid	
GRI 102-2	Activities, brands, products and services	<b>Fingrid in brief</b>		
GRI 102-3	Location of the organisation's headquarters		Fingrid's headquarters are located in Helsinki.	
GRI 102-4	Number of countries where the organisation operates, and names of countries where it has significant operations and/or that are relevant to the topics covered in the report	<b>Fingrid in brief</b>		
GRI 102-5	Ownership and legal form of the organisation	<b>Fingrid in brief</b>		
GRI 102-6	Markets served	<b>Fingrid in brief</b>		
GRI 102-7	Scale of the organisation	<b>Fingrid in brief</b>		
GRI 102-8	Number of employees by employment type and employment contract, by region and by gender			6

	2019	Men	Women	2018	Men	Women	2017	Men	Women
Permanent	338	261	77	327	251	76	308	237	71
	89 %	77 %	23 %	86 %	77 %	23 %	87 %	77 %	23 %
Temporary	42	28	14	53	40	13	47	34	13
	11 %	67 %	33 %	14 %	75 %	25 %	13 %	72 %	28 %
Full-time	359	277	82	349	268	81	328	249	79
	94 %	77 %	23 %	92 %	77 %	23 %	92 %	76 %	24 %

Part-time	21	12	9	31	23	8	27	22	5
	6 %	57 %	43 %	8 %	74 %	26 %	8 %	81 %	19 %
<b>Total</b>	380	289	91	380	291	89	355	271	84
Average	384			376			352		

**PERSONNEL BY LOCATION**

	2019	2018	2017
Helsinki	322	325	303
Hämeenlinna	16	16	16
Oulunsalo	13	11	11
Petäjävesi	14	15	14
Rovaniemi	1	2	1
Vaasa	2		
Varkaus	12	11	10

Number of contractors' employees by employment type, contract and region

Reporting covers the service providers' working hours included in Fingrid's internal monitoring. In 2019, grid building and maintenance operations amounted to roughly 702,000 work hours, equalling 413 man-years.

6

**PERSONNEL AND SERVICE PROVIDERS, MAN-YEARS**

	2019	2018	2017
Man-years, Fingrid's personnel	336	338	321
Man-years, service providers	413	413	440
<b>Man-years total</b>	749	751	761

GRI 102-9

The organisation's

Fingrid requires that its service and goods suppliers commit to Fingrid's Supplier Code of Conduct or with their own similar code. The Code covers



supply chain

issues such as business practices, human rights, labour rights, occupational safety and the environment. The Supplier Code of Conduct is applied to procurements worth at least EUR 30,000 and they are linked to material, equipment, ICT etc. purchase agreements. Fulfilment of the requirements is monitored on a risk basis. The Code of Conduct is a condition for being included in supplier registers used in recurring substation and power line procurements. In addition, contractual partners are subject to separate contract terms related to the use of subcontractors and workforce, and to occupational safety and environmental matters. Building work on the grid is carried out on a project basis, in separate substation and transmission line projects as well as in so-called turn-key contracts. The main contractor, acting in the role of Fingrid's contractual counterparty, is in charge of the detailed design, the procurement of material and equipment as well as building and installations until commissioning. The main contractor on a specific project may have several subcontractors; the contractual partner must submit the most significant subcontractors for approval by Fingrid. The qualifications of the contractors and service suppliers carrying out grid construction and maintenance are verified primarily by means of various supplier registers and shortlisting procedures. A validation system to ensure the proper qualifications of employees for performing maintenance on power lines and substations is also in place. Fingrid has around 30 direct contractual partners (>€100,000/year), the 15 biggest of which account for roughly 98 per cent of the total financial value of the procurements. There are two companies with regional contracts on transmission line maintenance and four companies with regional substation maintenance contracts. Both the contractors' and subcontractors' use mostly Finnish workforce for grid building work. A substantial number of non-Finnish workers, from countries such as the Baltics and Poland, work mainly on transmission lines, but to some extent also at substations. Grid maintenance suppliers and their suppliers use Finnish workforce. Some non-Finnish personnel is used in clearing of right-of-way under the transmission lines and in areas requiring special expertise.

GRI 102-10	Significant changes to the organisation's size, structure, ownership, or supply chain during the reporting period	<b>Report of the Board of Directors</b>	No significant changes
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Number of residential, industrial,

institutional  
and  
commercial  
customer  
accounts

CUSTOMERS CONNECTED TO THE GRID	December 2019		December 2018		December 2017	
	Customers	Connection points	Customers	Connection points	Customers	Connection points
Distribution networks	62	409	62	406	62	412
Production	32	60	30	58	34	58
Industry	25	49	25	50	24	48
Institutional customers	1	43	1	43	1	43
<b>Total</b>	120	561	118	557	121	561

	Length of above and underground transmission and distribution lines	<b>Fingrid in brief</b>	The transmission grid owned by Fingrid encompasses approximately 14,100 kilometres of 400-, 220- and 110-kilovolt transmission lines, plus 115 substations, and 3 HVDC stations.
	Allocation of CO <sub>2</sub> e emissions allowances or equivalent, broken down by emissions trading scheme	<b>Report of the Board of Directors</b>	Fingrid's reserve power plants are included in the European Union's emissions trading system. The accuracy of the measuring and reporting systems for fuel consumption is verified by an accredited emissions trading verifier. A total of 5,142 (8,223) units (tCO <sub>2</sub> ) of emission allowances were returned, 100% of which consisted of purchased emission right units. Fingrid has not been granted free-of-charge emission rights for the emissions trade period 2013–2020. Purchased emission rights units amounted to 7,000 in 2019. Emissions trading had minor financial significance for Fingrid.
GRI 102-11	Application of the precautionary principle	<b>Corporate Governance Environment</b>	The precautionary principle is included in Fingrid's Code of Conduct and the UN's Global Compact initiative, which Fingrid has committed to. The environmental impacts of new transmission lines are determined according to an EIA procedure as required under the legislation on the environmental impact assessment procedure or, for projects with minor impacts, by means of an environmental study. Fingrid's reserve power plants are subject to an environmental permit.
GRI 102-12	Externally developed principles or other initiatives to which the organisation subscribes or which it endorses	<b>Review by the President &amp; CEO Report of the Board of Directors Corporate responsibility Environment</b>	Global Compact initiative Energy efficiency agreement of Finnish industries 2017–2025
GRI 102-13	Memberships in associations and advocacy organisations		ENTSO-E (European Network of Transmission System Operators – Electricity), Finnish Energy Industries, Cigré (International Council on Large Electric Systems), FIBS Corporate Responsibility Network

**Strategy and analysis**

GRI 102-14	Toimitusjohtajan katsaus	<b>Review by the President &amp; CEO</b>	
GRI 102-15	Key impacts, risks, and opportunities	<b>Strategy Operating environment Report of the Board of Directors</b>	

**Ethics and integrity**

1-10

GRI 102-16	Values, principles, standards, and norms of behaviour	Corporate responsibility	
GRI 102-17	Mechanisms for advice on ethical and lawful behaviour and for reporting concerns about unethical or unlawful behaviour		Advice in applying Fingrid's Code of Conduct is available to Fingrid's employees from the company's legal services. Suspected behaviour that goes against Fingrid's Code of Conduct must be reported to a supervisor or Fingrid's management without delay. An independent reporting channel is also in use. No reports were made via the channel during the year. Suspected breaches are investigated with confidentiality and discretion, ensuring that no negative consequences befall the person reporting the behaviour. Behaviour that goes against the Code of Conduct will lead to a discussion with the supervisor and, if necessary, other disciplinary measures.
<b>Governance</b>			
GRI 102-18	Governance structure and committees	Corporate Governance	
GRI 102-19	Delegating authority	Corporate Governance Corporate responsibility	
GRI 102-20	Executive-level responsibility	Corporate responsibility	
GRI 102-22	Composition of the highest governance body	Corporate Governance	The report includes the composition of the Board of Directors and independence of Board members.
GRI 102-23	Chair of the highest governance body	Corporate Governance	
GRI 102-24	Nominating and selecting the highest governance body	Corporate Governance	The report accounts for the selection of Board members and the related criteria.
GRI 102-25	Avoidance of conflicts of interest	Corporate Governance	
GRI 102-26	Role of the highest governance body in setting	Corporate Governance Corporate responsibility	

	purpose, values and strategy		
GRI 102-29	Highest governance body's role in identifying and managing risks	Corporate Governance Report of the Board of Directors	The reports account for the Board of Directors' responsibilities in the arrangement of risk management.
GRI 102-30	Effectiveness of the risk management processes	Corporate Governance Report of the Board of Directors	
GRI 102-31	Frequency of risk reviews	Corporate Governance Report of the Board of Directors	The reports account for the Board of Directors' role in the approval of risk management principles and in the definition of risks and their management measures as well as implementation.
GRI 102-32	Approval of the sustainability report	Corporate Governance	The executive management group approves the corporate responsibility reporting.
GRI 102-35	Remuneration policies for the highest governance body and senior executives	Remuneration statement	The statement accounts for the principles of remuneration policies and systems for the Board of Directors and senior executives.
GRI 102-36	Process for determining remuneration	Remuneration statement	The report describes the approval process of remuneration systems and forms of remuneration.
<b>Stakeholder engagement</b>			
GRI 102-40	List of stakeholder groups	Stageholder engagement	
GRI 102-41	Employees covered by collective bargaining agreements		Fingrid complies with the collective labour agreement for salaried employees and senior professional employees in the energy industry. These agreements cover the entire personnel excluding top management. <span style="float: right;">3</span>
	Fingrid's contractors' personnel covered by the collective labour agreements by		According to the Act on the Contractor's Obligations and Liability when Work is Contracted Out, the entire chain of contractors at Fingrid's work sites is obligated to operate in compliance with applicable Finnish collective labour agreements both regarding Finnish and non-Finnish workforce.

	country		
GRI 102-42	Identifying and selecting stakeholders	Stakeholder engagement	
GRI 102-43	Approach to stakeholder engagement	Stakeholder engagement	
GRI 102-44	Key topics and concerns raised through stakeholder engagement	Stakeholder engagement Customers Corporate responsibility Environment	
<b>Report profile</b>			
GRI 102-45	Entities included in the consolidated financial statements	Contents of the annual report and reporting principles	
GRI 102-46	Defining report content	Strategy Materiality assessment	Fingrid's materiality analysis is evaluated annually to ensure that it is up to date as a part of the strategy process, and the executive management group confirms the most important issues concerning Fingrid's operations as well as the adequacy of the management approach for these issues. The assessment of the economic, social and environmental impacts of Fingrid's operations, as well as the impacts on stakeholders' decision-making, takes into account the strong connection between sustainability, strategy and business and its impact on Fingrid's ability to create value, as well as the value-chain-wide requirements of the GRI reporting guidelines. A thorough materiality analysis was conducted in 2014, which included a broad background analysis, meetings attended by dozens of experts from Fingrid, and a stakeholder survey sent out to roughly 700 individuals.
GRI 102-47	Material topics	Corporate responsibility	The matters prioritised as material for Fingrid and their corresponding GRI reporting aspects are presented in the GRI Content Index.
GRI 102-48	Restatements of information		Any changes to information from previous reports are stated in connection with the relevant information.
GRI 102-49	Changes in reporting		There were no significant changes in the material topics and topic boundaries from previous reporting periods.
GRI 102-50	Reporting period		The reporting period covers the financial period 1 January to 31 December 2019.

GRI 102-51	Date of most recent report		The previous annual report was published on 14 March 2019.
GRI 102-52	Reporting cycle		The annual report is published every year.
GRI 102-53	Contact point for questions regarding the report or its contents		Feedback and questions about the annual report and Fingrid's corporate responsibility can be sent to <a href="mailto:viestinta@fingrid.fi">viestinta@fingrid.fi</a> .
GRI 102-54	Claims of reporting in accordance with the GRI Standards		This report has been prepared in accordance with the GRI Standards: Core option.
GRI 102-55	GRI content index	<b>Corporate responsibility GRI disclosures</b>	
GRI 102-56	External assurance	<b>Independent Assurance Statement</b>	Corporate responsibility reporting is assured externally.

**MATERIAL TOPICS**

<b>MATERIAL TOPICS FOR FINGRID</b>	<b>MANAGEMENT PERFORMANCE PROCEDURE AT FINGRID</b>	<b>FINGRID'S MANAGEMENT INDICATORS</b>	<b>MATERIAL TOPICS FOR FINGRID'S OPERATIONS</b>	<b>DISCLOSURE OF MATERIAL INFORMATION FOR FINGRID'S OPERATIONS</b>
An open, collaborative, renewing and high-performing work community	Management principles HR policy Equal opportunity and non-discrimination plan	Workplace atmosphere: result of personnel survey	GRI: Employment	GRI 102-8 Number of employees and contractors by employment type and employment contract, by region and by gender
		Management: ranking in the Great Place to Work Finland survey		GRI 102-41 Employees covered by collective bargaining agreements  GRI 401-1 Total number and rate of new employee hires and rate of employee turnover by age

				group, gender and region
				Percentage of employees retiring within the next 5 and 10 years
			GRI: Education	GRI 404-1 Average hours of training per year per employee by gender, and by employee category
				GRI 404-2 Programmes for upgrading employee skills and transition assistance programmes
			GRI: Diversity and equal opportunities	GRI 405-1 Diversity of governance bodies and employees
				GRI 405-2 Ratio of basic salary and remuneration of women to men
The company's Code of Conduct	Fingrid's Code of Conduct Management principles Internal control and risk management principles HR policy Digital security policy Data management policy	Grade for responsible operations in personnel survey	GRI: Ethics and integrity	GRI 102-16 Values, principles, standards, and norms of behaviour
				GRI 102-17 Mechanisms for advice on ethical and lawful behaviour and for reporting concerns about unethical or unlawful behaviour
			GRI: Non-discrimination	GRI 406-1 Incidents of discrimination and corrective actions taken
			GRI: Anti-corruption and anti-bribery	GRI 205-3 Confirmed incidents of corruption and actions taken
			GRI: Public policy	GRI 415-1 Political contributions



			GRI: Anti-competitive behaviour	GRI 206-1 Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes
			GRI: Customer privacy	GRI 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data
			GRI: Socioeconomic compliance	GRI 419-1 Significant fines and non-monetary sanctions for non-compliance with laws and/or regulations
Financial result	Management principles Corporate Finance and Financing Principles Financing policy	Credit rating	GRI: Economic performance	GRI 201-1 Direct economic value generated and distributed
		Dividend payout capacity		GRI 201-4 Financial assistance received from government
		Cost-effectiveness		
Stakeholders' trust	Fingrid's Code of Conduct Land use and environment policy Communications policy	Trust KPI in the customer survey	GRI: Stakeholder engagement	GRI 102-43 Approach to stakeholder engagement GRI 102-44 Key topics and concerns raised
		ENTSO-E: ranking in price level comparisons		
		Landowner survey grade	Local communities	GRI 102-43 Approach to stakeholder engagement GRI 102-44 Key topics and concerns raised
			GRI: Stakeholder engagement	Number of residential, industrial, institutional and commercial customer

				accounts
				Results of surveys measuring customer satisfaction
Procurement practices	Fingrid's Supplier Code of Conduct Procurement policy	Deviations or problems in contractor obligation or employment relationship matters	GRI: Procurement practices	GRI 102-9 Description of the supply chain
Development of the main grid into a platform for a clean power system	Main grid development and maintenance management principles Contingency policy Company security policy Grid planning, construction, maintenance management policies	Implementation of capital investments Maintenance efficiency: ranking in international benchmarks (ITOMS, ITAMS)	GRI: Economic performance	GRI 201-1 Direct economic value generated and distributed
		Environmental deviations	GRI: Environmental Compliance	GRI 307-1 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations
			GRI: Biodiversity	GRI 304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
			GRI: Waste	GRI 306-2 Waste
Well-functioning electricity market	Principles for promoting the electricity market Loss power procurement policy Transmission capacity allocation and congestion management policy	Grade for developing the electricity market in the customer survey	GRI: Stakeholder engagement	GRI 102-43 Approach to stakeholder engagement  GRI 102-44 Key topics and concerns raised
Reliability and security of the electricity system	Principles for managing system security Reserve policy Contingency policy Reserve power plant management policy Company security policy	Grid disturbances: financial harm to customers	GRI: Indirect economic impacts	GRI 203-2 Significant indirect economic impacts
		System security: System Average Interruption Duration Index in connection points	Electricity availability and transmission reliability	Power outage frequency Average power outage duration
		Sufficiency of the system reserves	Demand-side management	
			System efficiency	Transmission and distribution losses
			Research and development	R&D activities and expenses related to

			electricity supply
		Lost-time injuries frequency	GRI: Occupational health and safety GRI 403-2 Work-related injuries
			GRI: Customer health and safety Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases
			GRI: Energy GRI 302-1 Energy consumption GRI 302-2 Energy consumption outside of the organisation GRI 302-3 Energy intensity
			GRI: Emissions Allocation of CO <sub>2</sub> e emissions allowances or equivalent, broken down by emissions trading scheme GRI 305-1 Direct greenhouse gas (GHG) emissions (Scope 1) GRI 305-2 Energy indirect greenhouse gas (GHG) emissions (Scope 2) GRI 305-3 Other indirect greenhouse gas (GHG) emissions (Scope 3) GRI 305-4 GHG emissions intensity GRI 305-7 NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions

**Standard    GRI content    Location**

**Additional information**

Management approach

GRI 103	Disclosures on Management Approach	<a href="#">Strategy</a> <a href="#">Strategic targets and indicators</a> <a href="#">Personnel</a> <a href="#">Corporate responsibility</a> <a href="#">Environment</a> <a href="#">Corporate Governance</a> <a href="#">Report of the Board of Directors</a>
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**ECONOMIC RESPONSIBILITY STANDARDS**
**Economic performance**

GRI 201-1 Direct economic value generated and distributed, €1,000

**1,000 €**

<b>Income from customers</b>		<b>2019</b>	<b>2018</b>	<b>2017</b>
Turnover		789,356	852,784	671,992
Other operating income		4,221	10,800	2,933
	Contributions received	-290	-186	-170
Dividend income		881	645	1,119
Income from investments and loans		169	170	478
<b>Total</b>		<b>794,337</b>	<b>864,213</b>	<b>676,353</b>

**Payments to suppliers**

Purchases, materials and services		490,861	482,873	331,839
Other costs		63,007	7,211	32
	Changes in fair value	-26,585	37,083	8,884
	Voluntary	-1,469	-1,697	-1,617

	additional personnel expenses and compensation for expenses (excl. training)			
	Real estate tax	-421	-417	-421
	Contributions	-10	-25	-28
<b>Total</b>		525,383	525,028	370,683

**Remuneration to personnel**

	Salaries, remunerations, social security contributions	31,129	32,190	29,385
	Voluntary additional personnel expenses and compensation for expenses (excl. training)	1,469	1,697	1,617
<b>Total</b>		32,598	33,887	31,002

**Payments to providers of capital**

	Dividend <sup>1</sup>	148,249	171,440	173,518
	Finance costs	22,539	17,299	18,663
<b>Total</b>		170,788	188,739	192,181

**Payments to government and community investment**

	Income tax for the financial year	34,957	50,421	39,423
	Real estate tax	421	417	421
	Contributions and sponsoring	10	25	28
<b>Total</b>		35,389	50,863	39,872

<b>Retained added value for developing Fingrid's operations</b>	30,179	65,695	42,614
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The reporting on economic impacts does not include Fingrid's capital expenditure, which has been accounted for elsewhere in this annual report.

<sup>1)</sup> = The dividend for 2019 is the Board of Directors' proposal to the Annual General Meeting

GRI 201-4	Financial assistance received from government, €1,000	<b>Financial statements, note 2, other operating income, Financial statements, consolidated cash flow statement</b>
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Contributions received, €1,000	2019	2018	2017
Tekes	0	0	25
EU: Horizon 2020 Framework Program	149	28	0
National Emergency Supply Agency	141	145	145
EU: Connecting Europe Facility (CEF Energy) grant	610	0	0
<b>Total</b>	<b>900</b>	<b>173</b>	<b>170</b>

#### Indirect economic impacts

GRI 203-2	Significant indirect economic impacts	<b>Power system</b>
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#### Procurement practices

GRI 103	Management approach	<b>Report of the Board of Directors Strategy Corporate responsibility GRI index</b>	See GRI 102-9
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**Anti-corruption** 10

	Confirmed incidents of corruption and actions taken	
GRI 205-3		No incidents of corruption during the reporting period.

**Anti-competitive behaviour**

	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	
GRI 206-1		No legal actions during the reporting period.

**Electricity availability and transmission reliability**

		Grid development and maintenance
GRI 103	Management approach	Power system

**Demand-side management**

		Power system
GRI 103	Management approach	Electricity market

**Research and development**

		Research and development
GRI 103	Management approach	

**System efficiency**

	Transmission and distribution losses	
		Power system
GRI 103		See also GRI 302-1

**ENVIRONMENTAL RESPONSIBILITY STANDARDS**

**Energy** 7, 8

GRI 302-1, 302-2	Energy consumption within and outside of the	
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organisation

ENERGY CONSUMPTION		2019	2018	2017
Direct				
Light fuel oil	t	1,600	2,900	1,800
	GJ	68,800	123,800	77,400
Indirect				
Electricity transmission energy losses	GWh	1,335	1,222	1,223
	GJ	4,810,000	4,400,000	4,400,000
Energy produced with the fuels consumed by leased reserve power plants	GWh	1.0	1.0	1.0
	GJ	4,000	4,600	3,200
Reserve power plants' auxiliary energy	GWh	10	9	10
	GJ	34,300	31,800	37,100
Reserve power plants' district heating	GWh	0.5	1	1
	GJ	1,700	2,100	2,300
Electricity of Fingrid's own premises	GWh	2	3	3
	GJ	8,500	10,100	10,500
District heating of Fingrid's own premises	GWh	1	1	1
	GJ	4,200	4,300	4,200

2019: Fingrid's environmental data reporting encompasses the entire company, except for the data on substation auxiliary energy and the related carbon dioxide emissions. The electricity and heat of the premises and the related carbon dioxide emissions are included for the first time in the annual report for 2019. The compilation of data concerning the substations will be developed in the coming years.

GRI 302-3		Energy intensity		
ENERGY INTENSITY		2019	2018	2017
Fingrid's total energy consumption divided by net sales	GJ/€1,000	6.2	5.4	6.7



Water		7, 8
GRI 303-1	Water consumption	Water consumption and waste water are not essential factors in electricity transmission or in the operation of substations and reserve power plants. Household water is consumed at our facilities, substations and reserve power plants.

Biodiversity		8
GRI 304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	

	2019	2018	2017
Grid transmission lines in protected areas and Natura sites <sup>1)</sup> km	260	260	260

Reported transmission line kilometres in protected and Natura areas.

<sup>1)</sup> Less than 2% of Fingrid's transmission lines are located in a nature reserve or Natura site. Protected areas amounted to around 10 per cent of Finland's total area in 2019.

Emissions		7, 8
	Greenhouse gas emissions	

GREENHOUSE GAS (GHG) EMISSIONS	2019	2018	2017
Direct emissions (Scope 1), tCO <sub>2</sub> e	6,000	8,500	6,500
Energy indirect emissions (Scope 2), tCO <sub>2</sub> e	214,000	204,000	225,000

<b>Total (Scope 1 and 2), tCO<sub>2</sub>e</b>	220,000	213,000	232,000
Muut epäsuorat päästöt (Scope 3), tCO <sub>2</sub> -ekv <sup>1)</sup>	41,000	1,000	1,000
<b>Total (Scope 1, 2 and 3), tCO<sub>2</sub>e</b>	261,000	213,500	232,500

<sup>1)</sup> The Scope 3 emissions for 2019 include, for the first time, also the emissions from purchased transmission line materials

GRI 305-1 Direct  
GHG  
emissions  
(Scope 1)

Direct emissions (Scope 1)	2019	2018	2017
Reserve power plant fuels, tCO <sub>2</sub> -e <sup>1)</sup>	5,000	8,000	6,000
Substations' sulphur hexafluoride, tCO <sub>2</sub> e	1,000	500	500
<b>Total, tCO<sub>2</sub>-ekv<sup>2)</sup></b>	6,000	8,500	6,500

<sup>1)</sup> The figure for 2019 is preliminary, the conclusive figure will be confirmed in the emissions trading verification. The figures for 2017 and 2018 have been restated based on more accurate information.

GRI 305-2 Energy  
indirect  
GHG  
emissions  
(Scope 2)

Indirect emissions (Scope 2)	2019	2018	2017
Transmission losses, tCO <sub>2</sub> -e	211,000	200,000	221,000
Energy produced with the fuels consumed by leased reserve power plants, tCO <sub>2</sub> e	1,100	1,200	1,000
Reserve power plants' auxiliary energy, tCO <sub>2</sub> e	1,500	1,400	1,900
Reserve power plants' district heating, tCO <sub>2</sub> e	80	100	100
Electricity Fingrid's own premises, tCO <sub>2</sub> e	400	500	500
District heating of Fingrid's own premises, tCO <sub>2</sub> e	200	200	200
<b>Total, tCO<sub>2</sub>e</b>	214,000	204,000	225,000

<sup>1)</sup> According to Statistics Finland, the total CO<sub>2</sub> equivalent emissions in Finland in 2018 were 56.5 million carbon dioxide tonnes. The share of Fingrid's Scope 1 and 2 emissions of all Finnish CO<sub>2</sub> emissions amounted to approximately 0.4% in 2018. Fingrid's carbon dioxide emissions calculations are based on the EU emissions trading system (EU-ETS) and on the international Greenhouse Gas (GHG) Protocol standards. The emission factors used in Fingrid's CO<sub>2</sub> calculations are based on the latest factors from Statistics Finland, the average emission factors of electricity procurement and district heat production for Finland, and IPCC 2013 (AR5) Global Warming Potentials (GWPs). The calculation of electricity CO<sub>2</sub> emissions applies a rolling average of the last five years recorded in statistics; the presented Scope 2 emissions figure is location-based. Emissions in 2019 were calculated using Statistics Finland's emissions factor of 158 kg CO<sub>2</sub>/MWh. District heating CO<sub>2</sub> emissions were calculated using the emissions factor of 164 kg CO<sub>2</sub>/MWh published by the Finnish Energy Industries for the last three statistical years.

GRI 305-3 Other indirect GHG emissions (Scope 3)

Other indirect emissions (Scope 3)	2019	2018	2017
Business travel (flights and kilometre-reimbursed business trips), tCO <sub>2</sub> e <sup>1)</sup>	800	800	640
Purchased transmission line materials, tCO <sub>2</sub> e <sup>2)</sup>	40,600		
<b>Total, tCO<sub>2</sub>e</b>	<b>41,000</b>	<b>800</b>	<b>640</b>

<sup>1)</sup> The figure for 2018 has been restated due to a change in the principles for calculating flight-related emissions

<sup>2)</sup> Reporting was started in 2019

GRI 305-4 GHG emissions intensity

GREENHOUSE GAS EMISSIONS INTENSITY		2019	2018	2017
Fingrid's direct (Scope 1) and	gCO <sub>2</sub> e/kWh	3.2	3.1	3.5

indirect (Scope 2) GHG emissions divided by amount electricity transmitted				
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GRI 305-7 NO<sub>x</sub>, SO<sub>x</sub>  
and other significant  
air emissions

Reserve power plants' sulphur dioxide and nitrogen oxide emissions	2019 <sup>1)</sup>	2018 <sup>2)</sup>	2017
Sulphur dioxide, SO <sub>2</sub> , tonnes	0.7	1.3	0.9
Nitrogen oxides, NO <sub>x</sub> , tonnes	26	49	30

<sup>1)</sup> Figures for 2019 preliminary; final figures will be confirmed in regulatory reporting

<sup>2)</sup> The figures for 2018 have been restated after the completion of the calculation

**Effluents and waste**

8

Total  
weight  
of  
waste  
by type  
and  
disposal  
method  
GRI 306-2

Total weight of waste by type and disposal method	2019	2018	2017
Total waste volume, tonnes	13,900	11,900	9,900
By type of waste:			

Hazardous waste, tonnes	900	900	500
Ordinary waste, tonnes	13,000	11,000	9,400
By disposal method:			
Recycling and reuse, tonnes	12,400	7,400	8,500
Other utilisation, tonnes	500	1,000	900
Combustion in a power plant, tonnes	800	100	20
Final disposal, e.g. landfill, tonnes	200	3,400	480
Recycling rate, %	89	62	85
Utilisation rate, %	98	71	95

GRI 306-3	Significant spills	<b>Report of the Board of Directors Environment</b>	One environmental deviation stemming from the previous year that was rated as significant was discovered in 2019.
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**Environmental compliance**
**8**

GRI 307-1	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	No fines or sanctions during the reporting period.
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**SOCIAL RESPONSIBILITY STANDARDS**
**Employment**
**6**

GRI 401-1	Total number and rate of new employee hires and rate of employee turnover by
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age group,  
gender and  
region

TYPES OF EMPLOYMENT	2019	2018	2017
New permanent employment contracts	20	24	18
Number of expired employment contracts, incl. retired employees	19	12	8
Retired	3	4	1
Average retirement age	63	66	63
Average length of employment* (y)	11	12	12
Number of persons made redundant	0	0	0
Incoming turnover rate	5.9 %	7.3 %	5.8 %
Outgoing turnover rate	5.6 %	3.7 %	2.6 %

2019: Incoming and outgoing turnover rates not reported by age group and gender. The report accounts for absolute values; percentage rates not reported due to a low turnover rate.

\* Fingrid was established in 1996 and its operations started in 1997. The personnel were transferred to the company as serving employees.

#### NEW, PERMANENT EMPLOYMENT CONTRACTS, BY AGE GROUP

	2019	2018	2017
	No. of people	No. of people	No. of people
Under 29 yrs.	5	2	5
30–39 yrs.	8	17	7
40–49 yrs.	6	4	4
50–59 yrs.	1	1	1
60–69 yrs.	0	0	1

#### NUMBER OF EXPIRED PERMANENT

2019	2018	2017
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**EMPLOYMENT CONTRACTS  
BY AGE GROUP**

	<b>No. of people</b>	<b>No. of people</b>	<b>No. of people</b>
Under 29 yrs.	3	1	0
30–39 yrs.	8	6	3
40–49 yrs.	4	3	3
50–59 yrs.	1	1	1
60–69 yrs.	3	1	1

Percentage of employees retiring within the next 5 and 10 years	Percentage of employees retiring within the next 5 years, %:	14 %
	Percentage of employees retiring within the next 10 years, %:	26 %
	*The estimate is based on the lowest age that one can retire on old-age pension according to the statutory pension system.	
Number of work days of contractors' and contractors' employees working in construction, operation and maintenance duties	The report accounts for the total working hours of service providers, see GRI 102-8	
Proportion of suppliers' and contractors' employees who have taken part in occupational safety training	<b>Grid development and maintenance</b>	The report accounts for an OHS development project.

Occupational health and safety 6

GRI 403-2	Type of injury and rates of injury (LTIF), occupational diseases, lost days, and absenteeism, and total	<b>Grid development and maintenance Personnel Report of the Board of Directors</b>
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number of work-related fatalities, by region and by gender

NUMBER OF OCCUPATIONAL ACCIDENTS AND ABSENCES DUE TO ILLNESS	2019		2018		2017	
	1% / 2.6 days/person		1% / 3.2 days/person		1% / 3.2 days/person	
	Workplace	Business travel	Workplace	Business travel	Workplace	Business travel
Absences due to illness						
Accidents resulting in absence from work	0	1	0	1	2	0
Accidents not resulting in absence from work	1	2	2	3	0	4
LTIF (accidents/ million work hours)*	0	2	0	2	4	0
Work-related fatalities	0	0	0	0	0	0
Occupational diseases	No cases		No cases		No cases	

\* LTIF in line with Zero Accidents criteria. No occupational diseases diagnosed in 2019. The report accounts for the number of accidents, LTIF, fatalities and percentage of absences due to illness.

Contractors' and suppliers' OHS-related performance

**Grid development and maintenance**

The report accounts for the number of accidents, LTIF and fatalities

**Training and education**

6

GRI 404-1 Average hours of training per

year per  
employee by  
gender, and  
by employee  
category

NUMBER OF TRAINING HOURS BY EMPLOYEE GROUP AND GENDER	2019	2018	2017
	h	h	h
Number of training hours by gender, women	48	40	34
Number of training hours by gender, men	31	39	32
<b>EDUCATION LEVEL OF PERMANENT PERSONNEL</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
Basic and secondary education	18	20	20
Lowest level of tertiary education	31	32	33
Bachelor's degree	118	116	109
Master's degree	159	150	137
Post-graduate degree	8	9	9
Training days per person	5	5	4

GRI 404-2 Programmes **Personnel**  
for  
upgrading  
employee  
skills and  
transition  
assistance  
programmes  
that facilitate  
continued  
employability  
and the  
management  
of career  
endings

## Diversity and equal opportunities

6

Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity

GRI 405-1

Corporate  
Governance

AGE DISTRIBUTION OF PERMANENT PERSONNEL	2019	2018	2017
Under 29 yrs.	29	28	27
30–39 yrs.	98	98	86
40–49 yrs.	101	99	91
50–59 yrs.	75	67	75
60–69 yrs.	35	35	29
Average age	44	44	44

GENDER DISTRIBUTION BY EMPLOYEE GROUP	2019		2018		2017	
	Men	Women	Men	Women	Men	Women
Board of Directors	2	3	3	3	3	2
Management	6	3	6	3	6	3
Senior salaried employees	254	64	244	64	230	59
Salaried	1	10	1	9	1	9

employees		
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The Board of Directors and personnel groups reported by gender. The age distribution of permanent personnel reported. (number of people)

GRI 405-2 Ratio of basic salary and remuneration of women to men **Remuneration statement**

**Non-discrimination 6**

GRI 406-1 Incidents of discrimination and corrective actions taken No incidents of discrimination during the reporting period.

**Local communities 1**

Result of landowner survey **Environment**

**Public policy 10**

GRI 415-1 Total value of political contributions by country and recipient/beneficiary Fingrid does not provide any direct or indirect support, including non-monetary support, to political activities.

**Customer health and safety**

Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases **Power system** No cases of personal injury to the public during the reporting period. No claims related to incidents of this kind were presented to the company during the reporting period.

**Availability**

Power outage frequency **Power system**

Average power outage duration **Power system**

**Customer privacy**

GRI 418-1	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	No incidents during the reporting period.
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**Socioeconomic compliance**

GRI 419-1	Significant fines and non-monetary sanctions for non-compliance with laws and/or regulations	No significant fines or sanctions during the reporting period.
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# Independent assurance statement

## To the Management and Stakeholders of Fingrid

### Scope and Objectives

The Management of Fingrid Oyj commissioned us to perform a limited assurance engagement over the responsibility information presented in Fingrid's Annual Report 2019 ("the Report") and specified in the Corporate responsibility GRI disclosures for the reporting period 1st January to 31st December 2019. The assurance engagement was conducted in accordance with the AA1000 Assurance Standard (2008) with 2018 addendum, and as a type 2 engagement and the International Standard on Assurance Engagements (ISAE) 3000 revised – 'Assurance Engagements other than Audits and Reviews of Historical Financial Information'.

We have duly performed an independent external assurance, the objective of which was to evaluate:

- Fingrid's adherence to the AA1000 Accountability Principles (2018) of inclusivity, materiality, responsiveness and impact;
- the reliability of performance information presented in the Report according to the Principles for defining report quality defined the GRI Standard 101 Foundation (2016); and
- the compliance with the GRI Standards in accordance criteria at the Core option.

### Responsibilities

Fingrid's Management is responsible for the preparation of the Report and the performance data and statements presented therein, which the Executive Management Group of Fingrid has approved. Our responsibility as assurance providers is to express a conclusion based on our work performed. The criteria used for our assessment include the GRI Standards (2016) and Fingrid's own internal reporting guidelines.

### Assurance Provider's Independence and Competence

We have conducted our assessment as independent and impartial from the reporting organisation. We were not committed to any assignments for Fingrid that would conflict with our independence, nor were we involved in the preparation of the Report. Our team consists of competent and experienced corporate responsibility reporting experts, who have the necessary skills to perform an assurance process.

### Basis of Our Opinion

Assurance providers are obliged to plan and perform the assurance process to ensure that they collect adequate evidence for the necessary conclusions to be drawn. The procedures selected depend on the assurance provider's judgement, including their assessment of the risk of material misstatement adhering to the reporting criteria.

Our opinion is based, among other things, on the following procedures performed:

- Interviews with senior management representatives to gain an understanding of the major impacts, risks and opportunities related to Fingrid's corporate responsibility agenda;
- Assessment of the procedures Fingrid has in place to ensure the inclusivity of stakeholder engagement processes, the identification of material stakeholder expectations, the responsiveness to stakeholder concerns and the

- assessment of impacts;
- Interviews with Fingrid's specialists responsible for corporate responsibility performance data collection and calculations;
- Review of systems and procedures to generate, collect and report corporate responsibility performance data for the Report;
- Reviewing data at source and following this through to the responsibility information presented in the Report;
- Reviewing whether the evidence, measurements, and scope of the performance data is prepared in accordance with the Criteria; and
- Reviewing the Report and narrative accompanying the performance indicators in the Report with regard to the Criteria.

### **Inherent limitations**

Our assurance relies on the premise that the data and information provided by Fingrid to us as part of our review procedures have been provided in good faith. Because of the selective nature (sampling) and other inherent limitations of both procedures and systems of internal control, there remains the unavoidable risk that errors or irregularities may not have been detected. For instance, greenhouse gas (GHG) emissions calculations are subject to inherent limitations, given the nature and the methods used for determining such data. Finally, the selection of different but acceptable measurement techniques may result in materially different measurements.

### **Conclusions**

#### *Adherence to AA1000 Accountability Principles*

- *Inclusivity:* Fingrid has a stakeholder engagement process in place in order to understand stakeholder expectations, and it has committed to active stakeholder dialogue.
- *Materiality:* Fingrid has defined material corporate responsibility reporting topics as a part of the strategy process.
- *Responsiveness:* Fingrid has policies and procedures in place to respond to stakeholder's expectations.
- *Impact:* Fingrid has identified impacts related to the material corporate responsibility topics and has committed to manage and disclose comprehensive and balanced information on these impacts.

#### *Corporate responsibility performance data*

We have reviewed the basis of the corporate responsibility information provided in the Report. Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Report is not fairly stated and has not been prepared, in all material respects, in accordance with the reporting criteria.

#### *GRI Standards in accordance criteria*

The Report complies with the GRI Standards: Core option.

### **Observations and Recommendations**

Based on our limited level assurance engagement, we present the following observations and recommendations, which do not affect the conclusions presented above.

- Fingrid has an important role in society and as an enabler of the energy system transition to mitigate climate change. In 2019 Fingrid has expanded activities in measuring and reporting climate impacts in accordance with its role. We recommend that Fingrid defines measurable targets to describe long-term work developing the electricity

system to support transition towards climate neutrality

- Fingrid's results in different areas of corporate responsibility have been in the line with the targets set for 2019. We encourage Fingrid to further develop even more challenging and longer-term corporate responsibility targets compatible with the company's basic task.
- Compliance and corporate responsibility management is integrated Fingrid's management system and risk management. Based on due diligence approach Fingrid has established the responsibility requirements for its suppliers and business partners. We recommend that Fingrid continues efforts to develop safety culture among contractors and service providers and ensuring responsibility in the supply chain.

Helsinki, Finland, 31st January 2020

Mitopro Oy

Mikael Niskala

*Independent Sustainability Practitioner*

Tomi Pajunen

*Independent Sustainability Practitioner*





# Governance

# Board of Directors



**Juhani Järvi, Chair**

M.Sc. (Finance), born in 1952  
Board member as of 6 June 2014  
Main position: Board work



**Päivi Nerg, Deputy Chair**

M.Sc. (Agr. & For.), born in 1958  
Board member as of 28 March 2018  
Main position: Permanent Under-Secretary, The Ministry of Finance 2018-



**Anu Hämäläinen**

Master of Science (M.Sc.), Economics, born in 1965  
Board member as of 6 April 2016  
Main position: Wärtsilä Corporation, Vice President, Group Treasury and Financial Services & Support



**Sanna Syri**

Doctor of Science in Technology, b. 1970  
Board member as of 14 April 2015  
Main position: Aalto University, Professor, Energy Technology and Energy Economics, School of Engineering 2010-



**Esko Torsti**

Lic.Pol., born in 1964

Board member as of 22 March 2012

Main position: Ilmarinen Mutual Pension Insurance Company, Head of Non-listed investments 2006-

**Marina Louhija**

LLM, born in 1968

Secretary of the Board

General Counsel, Fingrid Oyj

# Executive management group



**Jukka Ruusunen**

Doctor of Technology, born in 1958  
President & CEO since 2007  
Member of the executive management group since 2007, employed by Fingrid since 2007



**Timo Kiiveri**

M.Sc. (Tech.), MBA, born in 1967  
Senior Vice President since 2019, Asset Management  
Member of the executive management group since 2019, employed by Fingrid 2019



**Jussi Jyrinsalo**

Licentiate in Technology, born in 1964  
Senior Vice President since 2005, Customers and Grid Planning  
Member of executive management group since 2005, employed by Fingrid since 1997



**Marina Louhija**

LLM, General Counsel since 2013, legal and administrative affairs, born in 1968  
Member of the executive management group since 2017, employed by Fingrid since 2009  
Secretary of the company's Board of Directors since 2013



**Tiina Miettinen**

M.Sc (Politics), M.Sc (Knowledge Management), born in 1963  
Senior Vice President since 2013, HR and communications  
Member of the executive management group since 2013, employed by Fingrid since 2007



**Jan Montell**

M.Sc. (Finance), born 1968  
Chief Financial Officer (CFO), since 2013  
Member of the executive management group starting since 2013



**Reima Päivinen**

M.Sc. (Tech.), born in 1958  
Senior Vice President since 2005, Power System Operations  
Member of the executive management group since 2005, employed by Fingrid since 1997



**Asta Sihvonen-Punkka**

Licentiate in Economics, M.For, born in 1962  
Executive Vice President since 2019, Markets  
Member of the executive management group since 2016, employed by Fingrid since 2016



**Kari Suominen**

M.Sc. (Tech.), MBA, born in 1964

CIO since 2013, ICT

Member of the executive management  
group since 2013



# Corporate Governance Statement

## 1. General

Fingrid is a public limited company whose governance is based on the Finnish Limited Liability Companies Act, the Market Abuse Regulation, the Securities Market Act, its articles of association and its shareholder agreements. Fingrid complies in its operations with the Corporate Governance Code for Finnish listed companies published by the Securities Market Association because the company has issued bonds listed on the Ireland and London Stock Exchanges. This corporate governance statement has been drawn up in accordance with the recommendations and reporting requirements of the Corporate Governance Code 2015 (“Corporate Governance Code”), in addition to which the recommendations of the Corporate Governance Code 2020 have been taken into account in part. Fingrid’s shares are not subject to public trading.

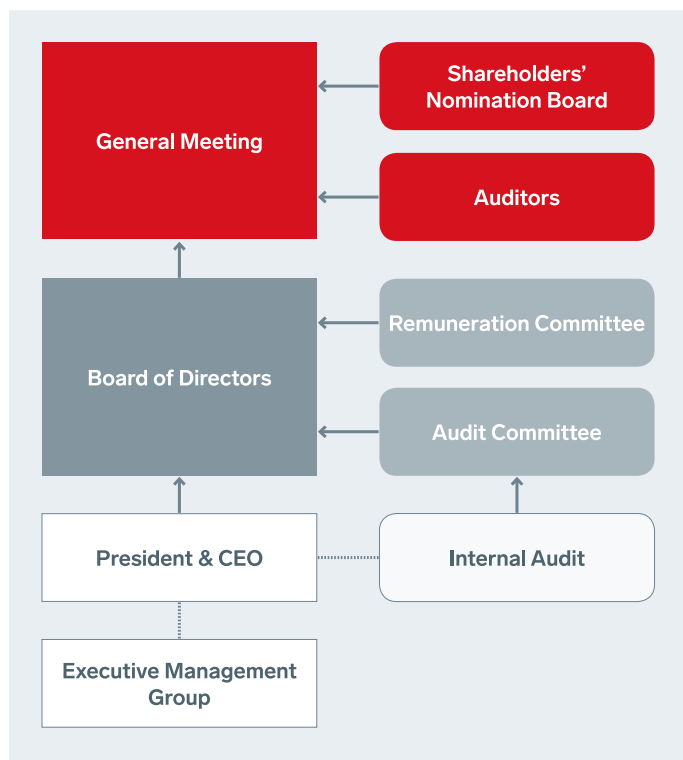
The company’s activities are primarily regulated by the Electricity Market Act. The Electricity Market Act stipulates that Fingrid’s governance and its grid operations must be independent of the production and sale of electricity and natural gas. Fingrid’s owners must ensure that they keep separate decision-making which concerns Fingrid and decision-making concerning companies which practice the production or sale of electricity or natural gas. The confirmed regulatory methods allow the Energy Authority to monitor the reasonableness of the prices of Fingrid’s electricity transmission operations, as well as its capabilities to make sufficient investments in its grid and cover its costs. The Energy Authority confirms the allowed earnings for each regulatory period. The current regulatory methods for the regulatory periods 2016–2019 and 2020–2023 entered into force on 1 January 2016.

Fingrid’s corporate governance statement was drawn up as a separate report from the annual report and has been processed by Fingrid’s Board and the Board’s audit committee. Fingrid’s auditing organisation PricewaterhouseCoopers Oy has verified that this statement has been provided and that the description of the internal control and risk management systems pertaining to the financial reporting process is consistent with the financial statements of the company.

The Corporate Governance Code and the Corporate Governance Code 2020 are available in full at [www.cgfinland.fi](http://www.cgfinland.fi).

## 2. Description of Fingrid's administrative bodies

Fingrid's administrative system is described below, and the tasks of the administrative bodies are described later in sections 3–7.





## 3. General meeting

The general meeting is the company's supreme decision-making body. Each shareholder has the right to participate in the general meeting and to exercise their right to vote. The shares of the company are divided into Series A shares and Series B shares. Series A shares confer three (3) votes each at the general meeting and Series B shares one (1) vote each. When electing members of the Board of Directors, Series A shares confer ten (10) votes each and Series B shares confer one (1) vote each.

Decisions at the general meeting are primarily made with a simple majority vote. Certain changes to the articles of association nevertheless require support from a qualified majority. In addition, Series B shareholders have the right to elect one (1) member of the Board. Up-to-date information on the total number of shares and voting rights in each share class is published on Fingrid's website.

The general meeting adopts the financial statements, decides on the distribution of profits and elects an auditor and the company Board, elects a Chair and Deputy Chair of the Board and decides on discharging members of the Board and the President & CEO from liability. In addition, the general meeting decides on the remuneration paid to the Board of Directors and its committees. The annual general meeting is held once a year, no later than in June. An extraordinary general meeting shall be held if the Board so decides or if the Limited Liability Companies Act (Osakeyhtiölaki, 324/2006) so requires.

The general meeting is convened by the company Board. In accordance with the articles of association, invitations to general meetings and other notifications shall be sent at the earliest four (4) weeks and at the latest two (2) weeks before the meeting as a registered letter to each shareholder to the address entered in the share register of the company.

The notice of the general meeting and the following information is published on the company website at least 21 days before the general meeting:

- The documents to be submitted to the general meeting
- Board proposals for decisions
- Proposals concerning the composition and remuneration of the Board
- The methods complied with while preparing the proposal for the election of the Board
- Procedure according to which the Board members are to be appointed in compliance with the articles of association
- Information on the proposed Board members and an assessment of their independence
- Proposal for the election of financial auditors
- Other proposals made by the shareholders and to be addressed by the general meeting

Each shareholder has the right to have an item falling within the competence of the general meeting by virtue of the Limited Liability Companies Act addressed by the general meeting. The shareholder must submit his or her request to have the item discussed by the annual general meeting such that the company has sufficient time to process the matter before delivering the notice of the annual general meeting. The company publishes on its website a date by which shareholders must submit their requests to have a specific matter addressed by the annual general meeting and an email address to which the requests should be sent.

The company publishes the minutes of the general meetings on its website no later than two (2) weeks after the meeting.

As a rule, the Chair of the Board and other Board members, Fingrid's President & CEO, together with the auditor, are

present at the general meeting. Also, a person proposed for the first time as a Board member shall participate in the general meeting that decides on his or her election unless there are well-founded reasons for the absence.

Fingrid's annual general meeting was held on 21 March 2019. The minutes of the annual general meeting have been published on the company's website.

### **3.1 Shareholders' Nomination Board**

Fingrid's annual general meeting held on 28 March 2018 decided to establish a Shareholders' Nomination Board. The Nomination Board's tasks are defined in the Nomination Board's rules of procedure approved by the general meeting and they are in line with the Corporate Governance Code's recommendation 18b. The Nomination Board's task is to prepare proposals concerning the appointment and remuneration of the members of the Board of Directors for the annual general meeting and to evaluate the activities of the Board of Directors. The Nomination Board was established to operate until further notice.

The Nomination Board shall include three (3) representatives of the Company's shareholders and the Chairman of the Board of Directors, who shall serve as an expert member in the Nomination Board. The three (3) shareholders with the largest share of the votes have the right to appoint one (1) member each to the Nomination Board. If a shareholder does not wish to use their right to appoint a member, the right shall be transferred to the next largest shareholder who would otherwise not be entitled to appoint a member.

The Nomination Board must give its proposal to the company's Board of Directors annually, and no later than the 31st of January preceding the next annual general meeting.

The members of the Shareholders' Nomination Board as of 21 March 2019 were Juha Majanen, Director of Administrative Governance and Development, Ministry of Finance, nominated by the State of Finland; Jukka Reijonen, Head of Private Equity, Debt and Infrastructure, Ilmarinen, nominated by Mutual Pension Insurance Company Ilmarinen; and Erkkö Rynänen, Director, OP, nominated by Aino Holdingyhtiö Ky. The term of office of the Nomination Board's members ends at the termination of the annual general meeting following the appointment of the member.

In 2019, the Nomination Board convened four (4) times and the meeting attendance percentage was 100. The Nomination Board prepared a proposal on the number of members and the composition of the Board of Directors to be submitted to the Board of Directors and evaluated the activities of the Board of Directors.

## 4. Board of Directors

Fingrid's annual general meeting elects a Board of Directors once per year. In accordance with the articles of association, the Board of Directors consists of five (5) members. Shareholders who hold Series B shares in the company are entitled to elect one (1) member of the Board through a simple majority decision in accordance with the quantity of Series B shares held. Individuals who are Board members in a company which practices the sale or production of electricity or natural gas, or in a body which represents such a company, may not be elected as a member of the Board. The general meeting elects one (1) Board member to serve as the Chair of the Board and one (1) member to serve as the Deputy Chair of the Board. The Board is convened by the Chair or Deputy Chair of the Board.

The Board constitutes a quorum when more than half of its members are present, and one (1) of these is the Chair or the Deputy Chair. The decisions of the Board of Directors are made through a simple majority on the basis of the Board members present in the meeting. New Board members are familiarised with the company's operations. A Board member's period of office expires at the closing of the next annual general meeting following his or her election.

### 4.1 Duties of the Board of Directors

The tasks and responsibilities of Fingrid's Board are set out by the Limited Liability Companies Act and other applicable legislation, as well as the articles of association. The Board of Directors is responsible for the administration and appropriate organisation of the operations of the company. The Board of Directors makes sure that the company adheres to the relevant rules and regulations, articles of association of the company, and guidelines provided by the annual general meeting. The primary duties and principles of the Board of Directors are also specified in the Board's working order, according to which the Board:

- Decides the company strategy.
- Approves the annual action plan and budget on the basis of the strategy and supervises its implementation.
- Approves Fingrid's management system and other business principles to be determined on the Board level.
- Confirms the values to be followed in Fingrid's operations.
- Approves the total amount of purchases and capital investments and its distribution on the various sectors, and decides separately on budgeted purchases, capital investments and sales in excess of 10 million euros, and on purchases, capital investments and sales outside the budget in excess of 2 million euros.
- Reviews and approves the audit plan, financial statements, the half-year report and the related stock exchange releases, as well as the annual review.
- Addresses and decides on the proposals to be presented to the annual general meeting in accordance with the regulations of the Limited Liability Companies Act and the recommendations in the Corporate Governance Code.
- Annually reviews the risks relating to the company's operations and the management of such risks.
- Decides on the operating model and annual plan of the internal audit and reviews the internal audit reports.
- Addresses the company's corporate social responsibility report at least once a year.
- Appoints and dismisses the President & CEO of the company and his/her deputy.
- Approves the basic organisation and composition of the executive management group of the company.
- Decides on appointments to the boards of the company's subsidiaries and associated companies and addresses the nominations for the CEOs of subsidiaries and associated companies.
- Decides on the principles of the remuneration system and on the remuneration of the President & CEO and the executive management group.
- Holds part of the meeting at least once a year without the presence of executive management.
- Holds part of the meeting at least once a year with the auditor without the presence of executive management.
- Assesses its activities, work methods and efficiency once a year.

- Appoints from amongst its own members the audit committee and remuneration committee.
- Appoints an advisory committee whose task is to act as a link between the Board and the company management and customers. The advisory committee has 10–14 members who represent electricity producers, transmitters, sellers, users and other electricity market actors. The term of office is three (3) calendar years. The Board confirms the advisory committee's regulations.
- Addresses other business which the Chair of the Board, a Board member or the President & CEO has proposed for inclusion in the agenda.

## 4.2 Board of Directors in 2019

The Board of Directors in 2019 was represented by Juhani Järvi (Chair), Päivi Nerg (Deputy Chair), Anu Hämäläinen, Sanna Syri and Esko Torsti.

Of the Board's members, Juhani Järvi, Anu Hämäläinen and Sanna Syri are independent from the company and its significant shareholders. Päivi Nerg and Esko Torsti are independent from the company, but not from its significant shareholders, because they both are in a service relationship with a significant shareholder. The company's President & CEO, CFO and general counsel, who is the Board's secretary, participate in Board meetings. Board members do not own shares in the company.

The Board convened 11 times over the course of the year and approved the financial statements and annual review for 2018, and decided on Fingrid's strategy, the budget and annual action plan for 2020, the grid service pricing for 2020, new investments in the main grid and ICT, the new Nordic balancing agreement, the sale of the majority of the shares in Nord Pool Holding AS to Euronext Nordics Holding AS, the principles of internal control and risk management as well as system security management and the promotion of the electricity markets, the remuneration of executives and all significant principles affecting the company. In addition, the Board of Directors addressed in its meeting significant investments, such as the third AC connection between Finland and Sweden and the 'Forest Line', the progress made in the Datahub project and the impact of the transformation of the power system on the company's operations.

### Fingrid's Board of Directors 2019

Name	Year of birth	Education	Main position and independence	Attendance at Board meetings	Attendance at committee meetings
Chair Juhani Järvi	1952	M.Sc. (Finance)	Board work, independent from the company and significant shareholders	11/11	Audit committee 4/4 Remuneration committee 3/3
Deputy Chair Päivi Nerg	1958	M.Sc. (Agr. & For.)	Permanent Under-Secretary, The Ministry of Finance independent of the company, non-independent of significant shareholders	10/11	Remuneration committee 3/3
Anu Hämäläinen	1965	M.Sc. (Finance)	Wärtsilä Corporation, Vice President, Group Treasury and Financial Services & Support, independent from the company and significant shareholders	10/11	Audit committee 4/4

Sanna Syri	1970	D.Sc. (Technology)	Aalto University, Professor, independent from the company, independent from significant shareholders	11/11	Audit committee 3/4 (as of 21 March 2019) Remuneration committee 1/3 (until 21 March 2019)
Esko Torsti	1964	Lic. Pol.	Ilmarinen Mutual Pension Insurance Company, Vice President, independent from the company and non-independent from significant shareholders	11/11	Audit committee 1/4 (until 21 March 2019) Remuneration committee 2/3 (as of 21 March 2019)

### 4.3 Diversity of the Board of Directors

The Board of Directors' diverse composition supports the accomplishment and development of the goals and targets set by the company for its operations. An aim of the company is for all Board members to have adequate and mutually complementary experience and expertise in the areas essential for both the operations and societal role of the company. Fingrid additionally strives to assess the composition of the Board in terms of age and gender, taking into account the gender equality targets set by the state ownership policy and the other owners. The proposal for the composition of the Board of Directors is prepared by the Nomination Board, which includes three (3) representatives of the Company's shareholders and the Chairman of the Board of Directors, who shall serve as an expert member in the Nomination Board.

Fingrid Board members possess wide-ranging business and management expertise, also outside of Finland. The sectors and areas of expertise represented in the Board include industry, energy sector, financing and accounting as well as state administration. Sixty per cent of the Board members are female and 40 per cent male. The ages of the Board members range between 49 and 67 years.

## 5. Board committees

The Board has two (2) committees: the audit committee and the remuneration committee. The Board approves the committees' working orders, which are regularly updated. The Board appoints members of the committees from amongst its own members. Each committee has at least three (3) members. The requirements of the Corporate Governance Code are complied with when appointing members of the committees.

The committees appointed by the Board assess their operations once a year.

### 5.1 Audit committee

The audit committee is appointed by the Board of Directors and it assists the Board. The Board has specified the duties of the audit committee in its working order in accordance with recommendation 16 of the Corporate Governance Code, in addition to which the audit committee should also assess the audit plans of the auditor and internal auditor, review the auditor's and the internal audit reports, supervise compliance with legislation (incl. requirements set in the EU's Audit Regulation) and with the governance principles set by the Board as well as the financial reporting process and prepare the process for the selection of the auditor.

The Audit Committee consisted of Anu Hämäläinen (Chair as of 21 March 2019), Juhani Järvi, Sanna Syri (as of 21 March 2019) and Esko Torsti (Chair) (until 21 March 2019). The committee convened four (4) times in 2019. The President & CEO, the CFO and general counsel participated in the committee's meetings. In its meetings, the Audit Committee addressed issues such as the half-year report, the auditor's reports, the internal audit's reports on the company's corporate safety & security, crisis communications, the administration of the Datahub project and the introduction of the company's new procurement system, the principles of internal control and risk management, and the corporate governance statement. The committee additionally prepared matters up for decision by the Board concerning the company's financial reporting and bond programmes.

### 5.2 Remuneration committee

The remuneration committee is appointed by the Board of Directors and it assists the Board. The Board has specified the duties of the remuneration committee in its working order in accordance with recommendation 17 of the Corporate Governance Code. Accordingly, the duties of the remuneration committee include, among other things, preparing the company's remuneration principles and remuneration statement. The committee also prepares for the Board, on the basis of accepted principles, a proposal concerning the remuneration to be paid to the President & CEO and other members of the executive management group. The committee furthermore prepares matters concerning the election of the President & CEO and members of the executive management group and successor planning.

The Remuneration Committee consisted of Juhani Järvi (Chair), Päivi Nerg, Sanna Syri (until 21 March 2019) and Esko Torsti (as of 21 March 2019). In 2019, the remuneration committee convened three (3) times. The President & CEO and the Senior Vice President, HR and Communications, participated in the committee's meetings. Topics discussed in the meetings included the remuneration systems for the executive management group and the President & CEO as well as management successor planning and deputising arrangements.

## 6. President & CEO

The President & CEO is a corporate body, as defined in the Limited Liability Companies Act. The President & CEO attends to the administrative routines of the company in accordance with guidelines provided by the Board of Directors. In accordance with the Limited Liability Companies Act, the President & CEO is responsible for ensuring that the company's bookkeeping complies with legislation and that financial management is reliably organised. Assisted by the executive management group, the President & CEO is responsible for the operations of the company and the implementation of the Board of Directors' decisions and serves as the Chair of the Board of the subsidiaries. The President & CEO is not a member of the company's Board of Directors.

Jukka Ruusunen (D.Sc. Tech., born 1958) has acted as Fingrid's President & CEO since 2007. He does not own Fingrid shares nor does he have share-based rights in Fingrid or in a company that belongs to the same group as Fingrid.

## 7. Company management

Fingrid holds key responsibility for the transmission of electricity in Finland's main grid and thereby for society's ability to function. In its operations, Fingrid complies with the applicable legislation and international conventions as well as the principles approved by the Board of Directors and the policies approved by the President & CEO and discussed by the executive management group. Fingrid's Code of Conduct is published on the company's website.

The primary duty of Fingrid's executives is to ensure that the company's basic tasks are managed efficiently. The operations are based on meeting the needs of customers and society, taking into account the obligations laid down in the articles of association, shareholder agreements, electricity system license and Electricity Market Act.

Fingrid's operations are managed in a matrix of four perspectives. These are: customers and society, finance, internal processes (adequacy of the transmission system, system operation and promoting the electricity market), and personnel and expertise.

The operational organisation has been organised into functions. The heads of the functions make up the executive management group of the company. The Board of Directors approves the basic organisation of the company on the level of functions.

Significant special tasks are separated and organised as necessary in a separate company. Such tasks include e.g. special electricity market services, such as the management of peak load capacity and taking care of the guarantees of origin for electricity, which are carried out by Finextra Oy, a wholly owned subsidiary of the parent company Fingrid. Another subsidiary wholly owned by the parent company Fingrid, Fingrid Datahub Oy, is in charge of providing the electricity markets' centralised data exchange service and related services to electricity market parties and is responsible for the management of the registered information required by the electricity market and the development of these functions.

### 7.1 Executive management group

The executive management group supports the President & CEO. Its tasks are:

- to define, communicate, implement and follow up the strategy,
- to draw up an action plan and budget,
- to implement financial control and risk management,
- to implement resource planning, procurement and control,
- to implement external communications and stakeholder dialogue,
- to prepare matters for the Board of Directors and
- to develop the work of the executive management group.

Each member of the executive management group is responsible for the day-to-day business operations of the organisation in his or her area of responsibility and for implementing operative decisions.

In addition to Jukka Ruusunen, President & CEO, the executive management group in 2019 consisted of:

- Kari Kuusela, M.Sc. (Tech.), born in 1955, Executive Vice President, Asset Management (until 31 July 2019)
- Jussi Jyrinsalo, Licentiate in Technology, born in 1964, Senior Vice President, Transmission System Services and Grid Planning,



- Timo Kiiveri (M.Sc., MBA), born in 1967, Senior Vice President, Asset Management (as of 31 July 2019)
- Marina Louhija, LL.M., born in 1968, General Counsel, Legal and Administrative Affairs
- Tiina Miettinen, M.Sc. (Politics), M.Sc. (Knowledge Management), born in 1963, Senior Vice President, HR and Communications
- Jan Montell, M.Sc. (Finance), born in 1968, Chief Financial Officer (CFO)
- Reima Päivinen, M.Sc. (Tech.), born in 1958, Senior Vice President, Power System Operations
- Asta Sihvonen-Punkka, Licentiate in Economics, M.For., born in 1962, Executive Vice President (since 31 July 2019), Senior Vice President (until 31.7.2019), Markets
- Kari Suominen, M.Sc. (Tech.), MBA, born in 1964, Chief Information Officer (CIO).

The members of the executive management group do not own Fingrid shares nor do they have share-based rights in Fingrid or in a company that belongs to the same group as Fingrid.

The executive management group convened 15 times in 2019.

## 8. Advisory committee

Fingrid's Board of Directors appoints an advisory committee with 10 to 14 members to serve as a link between the company and its customers. The advisory committee is an advisory body which provides perspectives on the company's business operations and customer services from a customer point of view. The advisory committee widely represents electricity producers, transmitters, sellers, users and other electricity market actors.

The advisory committee is set out in Fingrid's articles of association. The Board annually confirms the regulations concerning the work of the advisory committee. The term of office of the members of the advisory committee is three years. The President & CEO and Vice President responsible for the company's customer relationships participate in the advisory committee's meetings.

The composition of the advisory committee is set out on the company's website.

The advisory committee convened four times during the year. In its meetings, the advisory committee dealt with, among other things, the renewal of Fingrid's services, the investment needs and changes to Fingrid's grid operations arising from the increasing use of renewable energy, the company's readiness rehearsals and the energy companies' experiences concerning data management.

# 9. Internal control and risk management

## 9.1 Internal control and risk management principles

Fingrid's internal control is a permanent component of the company's operations and addresses all those operating methods and procedures whose objective it is to ensure

- effective and profitable operations that are in line with the company's strategy,
- the reliability and integrity of the company's financial and management information,
- that the company's assets are protected,
- that applicable legislation, guidelines, regulations, agreements and the company's own governance and operating guidelines are complied with, and
- a high standard of risk management.

Risk management is planned as a whole, with the objective of comprehensively identifying, assessing, monitoring and safeguarding the company's operations, the environment, personnel and assets from various threats and risks.

Continuity management is a part of risk management. Its objective is to improve the organisation's capacity to prepare and to react in the best possible way should risks occur, and to ensure the continuity of operations in such situations.

Further information on internal control, risk management and the foremost risks and factors of uncertainty is available on the company's website and in the Board of Directors' annual review.

## 9.2 Arrangement of internal control and risk management and distribution of responsibility

### 9.2.1 Board of Directors

The company's Board of Directors is responsible for organising internal control and risk management, and it approves the principles of internal control and risk management every two years or more often, if required. The Board defines the company's strategic risks and related management procedures as part of the company's strategy and action plan, and monitors their implementation. The Board decides on the operating model for the company's internal audit. The Board regularly receives internal audit and financial audit reports as well as a status update at least once a year on the strategic risks and continuity threats relating to the company's operations and their management and realisation.

### 9.2.2 Line management and other organisation

Assisted by the Executive Management Group, the President & CEO is responsible for executing and steering the company's governance, decision-making procedures, control and risk management, and for the assessment of strategic risks and continuity threats at the company level, and their related risk management.

The heads of functions are responsible for the practical implementation of the governance, decision-making procedures, controls and risk management for their areas of responsibility, as well as for the reporting of deviations and

the sufficiency of detailed guidelines. Directors appointed in charge of the threats to continuity management are responsible for drawing up and maintaining continuity management plans and guidelines, and for arranging sufficient training and practice.

The CFO is responsible for arranging procedures, controls and monitoring at the company level as required by the harmonised operating methods of internal control and risk management. The company's general counsel is responsible at the company level for assuring the legality and regulation compliance of essential contracts and internal guidelines, taking into account the company's interests, as well as for the procedures these require. Each Fingrid employee is obligated to identify and report any risks or control deficiencies she or he observes and to carry out the agreed risk management procedures.

## **9.3 Arrangement of internal control and risk management related to the financial reporting process**

The internal control systems relating to the financial reporting process are part of a more extensive overall system of Fingrid's internal control.

### **9.3.1 Control environment of financial reporting process**

The Group comprises the parent company Fingrid Oyj and its wholly owned subsidiaries Finextra Oy and Fingrid Datahub Oy. The associated companies are eSett Oy (holding 33.3%) and Nord Pool AS (holding 18.8%). The Group has no joint ventures.

The financial administration of the company is responsible for the Group's centralised financial reporting and for the internal control and risk management of financial reporting. The executive management group and those with budget responsibility as well as the heads of units and functions receive a monthly report of the financial situation. These reports include information on the proceeds, costs and capital investments in the relevant area of responsibility. In addition to financial accounting reports, the reporting covers comprehensive reports which contain business information. These are produced by means of cost accounting and the financial control system.

The interpretation and application of the standards governing financial statements are centralised at the Group's financial administration, which monitors the accounting standards (IFRS, FAS), maintains an account scheme, draws up internal guidelines for the financial statements, and is responsible for the financial reporting process. The process is documented and it specifies how, when and on what schedule the month-end accounts are drawn up.

Fingrid draws up the consolidated financial statements and the half-year report in accordance with IFRS reporting standards accepted by the European Union and in accordance with the Finnish Securities Market Act. The annual review and the financial statements of the Finnish companies included in the Group are prepared in accordance with the Finnish Accounting Act as well as the guidelines and statements of the Finnish Accounting Standards Board.

The internal control and risk management systems and procedures related to the financial reporting processes, described in more detail below, have been devised so as to make sure that financial reporting by the company is reliable, coherent and timely and that the financial reports published provide an essentially true and fair view of Fingrid's finances.

### **9.3.2 Roles and responsibilities of the financial reporting process**

Fingrid's Board of Directors is primarily responsible for defining the principles of internal control and risk management related to financial reporting, and the Board makes sure that these principles are followed in the company. The Board

reviews and approves the half-year report, the annual review and the financial statements. The audit committee assists the Board in this by monitoring the efficiency of the company's internal control, internal audit and risk management systems.

The finance department of the Group is responsible for developing the financial reporting process through means such as monitoring the development needs of controls related to financial reporting, by supervising the sufficiency and efficiency of these controls, and by making sure that external reporting is correct and up to date and that the regulations pertaining to reporting are followed.

The company's financial auditor and internal auditor carry out inspections relating to financial reporting in accordance with the plan approved by the Board.

### **9.3.3 Risk management, control procedures and monitoring of the financial reporting process**

Controls pertaining to risk management are set throughout the Group, at all levels and units of the Group. Examples of the controls include internal guidelines, acceptance procedures and authorisations, cross-checking with cost accounting, matching, verifications, assessment of operative efficiency, securing of assets, and differentiation of tasks. The financial administration of the Group is responsible for the control structures relating to the financial reporting process.

The control of the budgeting process is based on the budgeting guidelines, with the financial administration of the Group being responsible for their specification, centralised maintenance, and for monitoring compliance with them. The principles are applied uniformly throughout the Group, and there is a common reporting system in use.

The monthly financial reporting to the executive management group together with the related analyses constitute the primary control and monitoring process in securing the efficiency and purposefulness of the functions and the accuracy of financial reporting. The analyses compare the realised proceed and cost components with the budget and to the previous year, and the budget is compared to the quarterly forecast. The monitoring of cash flow and capital investments is part of this process.

Verification of the accuracy of monthly reporting employs the company's financial control system, which the controllers and heads of units of the company can use to find essential errors and deviations. The accuracy of financial reporting is also ensured through good data security and data protection. Risky work combinations are avoided wherever possible. User rights are checked regularly, and user rights are determined by the position of a person in the organisation. The databases used in the financial control system and accounting system are backed up regularly. The company has a data security manager who is responsible for the management and development of data networks and data security, as well as for providing personnel with guidance concerning data security matters.

Controls for the financial reporting processes are developed as part of internal control. Personnel is given training in how to monitor the correctness of the information produced by the financial reporting process of the company, concerning cost allocation, posting, acceptance procedures for invoices and receipts, as well as for budgeting and actual result follow-up.

The company's auditor and internal audit carry out regular inspections on the functionality of controls concerning the financial reporting process and on the accuracy of information.

# 10. Financial audit and internal audit

## 10.1 Financial audit

An authorised public accounting company selected by the Annual General Meeting acts as auditor for the company. The company's financial auditor inspects the accounting, financial statements and financial administration for each financial period and provides the AGM with reports required by accounting legislation or otherwise stipulated in legislation. The financial auditor reports on his or her work, observations and recommendations for the Board of Directors and may also carry out other verification-related tasks commissioned by the Board or management.

The annual general meeting of 2019 elected authorised public accountants PricewaterhouseCoopers Oy as the auditor of the company. Authorised public accountant Heikki Lassila serves as the company's responsible auditor. The general meeting decided that the auditor's fee and expenses are paid on the basis of a reasonable invoice accepted by the company.

<b>Auditor's fees, EUR 1,000</b>	<b>2019</b>	<b>2018</b>
Auditing fees	114	89
Other fees	39	94
<b>TOTAL</b>	<b>153</b>	<b>183</b>

## 10.2 Internal audit

The Board of Directors decides on the operating model for the company's internal audit. The internal audit acts on the basis of plans processed by the audit committee and approved by the Board. Audit results are reported to the object of inspection, the President & CEO, the audit committee and the Board. Upon decision of the Board, an internal audit outsourced to an authorised public accounting company acts within the company. From an administrative perspective, the internal audit is subordinate to the President & CEO. The internal audit provides a systematic approach to the assessment and development of the efficacy of the company's risk management, monitoring, management and administrative processes and ensures their sufficiency and functionality as an independent party. The internal audit has the authority to carry out reviews and to access all information that is essential to the audit. Fingrid's internal audit carries out risk-based auditing on the company's various processes.

In 2019, Deloitte & Touche Oy served as Fingrid's internal auditor and carried out a total of four (4) audits. The audits concerned the company's corporate safety & security, crisis communications, the administration of the Datahub project and the introduction of the company's new procurement system. The total fees paid to Deloitte & Touche Oy for auditing tasks amounted to EUR 94 500.

# 11. Related party transactions

The Group's related parties include, in addition to the parent company Fingrid Oyj, subsidiaries Finextra Oy and Fingrid Datahub Oy, and the associated companies Nord Pool AS and eSett Oy, the shareholder entities listed in section 6.5 of the company's financial statements, and senior management and their related parties. The senior management is composed of the Board of Directors, the President & CEO, and the executive management group. Other related party transactions include transactions concluded with entities in which the State of Finland has a holding in excess of 50 per cent. Fingrid's related party transactions are accounted for in section 7.1 of the financial statements.

In the decision making concerning related party transactions, Fingrid sees to it that any conflicts of interest are taken into account, and no one included in the related parties or a representative of a related party participates in deciding on a related party transaction. Business with related parties is conducted at market prices. Fingrid maintains a list of its related parties.

In December 2019, the company's Board of Directors approved new related party principles, which the company will follow as of 1 January 2020.

## 12. Main procedures relating to insider administration

Fingrid complies with the Market Abuse Regulation (MAR), Nasdaq Helsinki Oy's insider guidelines, the Central Bank of Ireland's (CBI), the UK's Financial Conduct Authority's (FCA) and the Financial Supervisory Authority's (FIN-FSA) up-to-date guidelines on the governance and management of insider information. Fingrid additionally has insider guidelines approved by the Board of Directors, which describe the key principles for insider issues to be applied within the company. The company's general counsel, Marina Louhija, is in charge of insider administration.

Fingrid's permanent insiders consist of the Board of Directors, President & CEO, members of the executive management group as well as any person considered to regularly have access, due to their duties, to insider information concerning Fingrid. Project-specific lists of insiders are drawn up as necessary; such lists include any persons in charge of preparations for the project who have access to insider information related to the project. Fingrid additionally applies a so-called extended closed window to the persons who participate in the preparation of the half-year report, management reviews and/or financial statements, including any external consultants and experts.

The lists related to Fingrid's insider administration are not public; only the person in charge of insider administration and his/her assistants have access to them.

According to Fingrid's insider guidelines, permanent or project-specific insiders and the persons under the extended closed window rules may not, on their own account or on the account of a third party, trade in Fingrid's financial instruments within thirty (30) days prior to the publication of Fingrid's financial statements release and the regularly published half-year report release and management reviews.



# Remuneration principles and remuneration statement

## 13 Remuneration principles

Remuneration at Fingrid is guided by the creation of shareholder value, good performance in carrying out basic tasks and the sustainability targets set for the company. The owners', especially the state ownership policy's and Ilmarinen's, principles have been taken into account in remuneration. Remuneration must be reasonable, fair and competitive.

Remuneration is a key incentive for Fingrid to guide, motivate and engage the members of its Board of Directors and management. Competitive remuneration is an essential tool for hiring competent executives to the company.

### Principles guiding remuneration at Fingrid

<b>Fingrid's basic tasks</b> - system security and continuity management - promoting the electricity market - developing the transmission grid		
competitive overall remuneration	incentive systems in line with the basic tasks	rewards for good performance
Value creation: increasing the value created by the company for shareholders, customers and society		
Owners' remuneration principles		

Fingrid's remuneration principles determine the principles of remuneration for the company's Board of Directors and executive management.

The remuneration principles, as they pertain to the members of the company's Board of Directors, comply with the principles set forth by the state's and other owners' policies, which requires remuneration to be open, reasonable and market-based. As regards the remuneration of the President & CEO, the company abides by the same principles as those pertaining to the members of the Board of Directors and by the remuneration principles outlined in the company in general. The President & CEO's remuneration metrics are partly the same as those for the other members of the executive management group and the company's personnel. In addition, the same principles are applied to the President & CEO's remuneration and benefits as those applied to the entire personnel, for example when determining the company car benefit and supplementary pension plans. The company's remuneration committee prepares for the Board of Directors the principles of the remuneration system for executive management and other personnel as well as the remuneration for the President & CEO and the members of the executive management group. This strengthens the consistency of the company's remuneration principles.

## 14 Description of the decision-making process

A decision-making process has been defined for remuneration, which shall be followed when approving, assessing and implementing the remuneration principles. The decision-making process takes into account and sets forth the measures

to prevent and manage potential conflicts of interest.

The decision-making processes pertaining to the remuneration of Fingrid's governing bodies are as follows:

- The general meeting decides on the remuneration of the members of the **Board of Directors**. The Shareholders' Nomination Board prepares the proposals concerning the remuneration of the members of the Board of Directors for the general meeting, and the general meeting makes the final decision on the remuneration.
- The company's Board of Directors decides on the principles of the remuneration system, benefits and key conditions of the service relationship of the **President & CEO**. The remuneration committee appointed by the Board of Directors prepares for the Board of Directors a proposal on the President & CEO's remuneration based on the remuneration principles and other approved principles. Remuneration is determined taking into account the results of the senior management remuneration statement drawn up by an external consultant, comparing the salaries of executives in unlisted commercial, mainly state-owned companies that are of a similar size in terms of turnover, balance sheet and personnel numbers. The Board of Directors annually decides on the President & CEO's remuneration and implementation thereof based on a proposal made by the remuneration committee.

There is no share or share-related remuneration scheme or supplementary pension scheme in place at Fingrid.

## 15 Description of the Board's remuneration

The general meeting decides on the Board's remuneration based on a proposal made by the Shareholders' Nomination Board. The remuneration of the members of the Board of Directors consists of fixed monthly fees and meeting fees. An increased fixed fee is paid to the Board Chair and Deputy Chair. Meeting fees are paid to Board members also for attending the various committees' and the Nomination Board's meetings. The members of the Board have no share or share-related remuneration schemes or supplementary pension schemes. Fingrid also does not pay pension fees for the Board's remuneration. The decisions of the general meeting concerning the Board members' remuneration are published in the same stock exchange release as the other decisions made by the general meeting.

## 16 Description of the remuneration of the President & CEO

The company's Board of Directors decides on the remuneration of Fingrid's President & CEO within the framework of the remuneration principles and based on the proposal of the remuneration committee. The principles of remuneration for Fingrid's President & CEO are described in the following sections.

### 16.1 Components of remuneration used and their relative shares

The total remuneration of the President & CEO consists of a fixed total salary and variable pay components, which are a one-year bonus scheme (max. 40 per cent of the fixed annual salary for the earnings year, including fringe benefits and holiday pay) and overlapping three-calendar-year long-term incentive schemes (max. 40 per cent of the fixed gross annual salary, including fringe benefits and holiday pay). There is no share or share-based remuneration scheme or supplementary pension scheme in place for the President & CEO on behalf of the company. The President & CEO has the possibility to convert part of his monetary remuneration into a company car benefit in accordance with the car policy determined by the company.

### 16.2 Basis for determining the variable pay components

The bonus schemes are based on a policy stance according to which the annual maximum limit for the total variable remuneration is 40 per cent of the remuneration recipient's fixed annual salary, however such that if the company's and

remuneration recipient's performance is exceptionally good, the total annual amount of remuneration can be a maximum of 80 per cent of the fixed salary. This is also in line with the state ownership policy's stance on variable pay in unlisted commercial companies.

The Board of Directors annually decides on the criteria for Fingrid's President & CEO's one-year bonus scheme and their lower and upper limits. As a general rule, the criteria for the one-year bonus are determined based on two company-level KPIs (usually financial result and customers' trust), one management-related KPI and one KPI related to a strategic project or personal performance. The metrics are based on, for example, the results of customer and employee surveys and on the quantitative and qualitative criteria set for the strategic projects. The Board of Directors decides on the final realisation of the metric's value based on the proposal of the remuneration committee.

The Board of Directors annually decides on the earnings criteria for the President & CEO's long-term bonus schemes and their lower and upper limits, separately for each earnings period. The metrics of the ongoing schemes for the President & CEO in 2019 were related to system security (calculated cost of disturbances for society and customers), electricity market functionality (negative impacts of the electricity transmission restrictions between Finland and Sweden on the electricity market) and increasing shareholder value.

The metrics are based on criteria defined by the Board of Directors, and the decision on the final realisation of the metric's value is made by the Board of Directors based on the proposal of the remuneration committee.

Corporate social responsibility is taken into account in both the one-year and long-term incentive schemes, since part of the metrics used in the remuneration schemes are also the company's key sustainability KPIs.

As a general rule, the variable remuneration components are paid in the beginning of the year following the earnings period in accordance with the payment date confirmed by the Board of Directors. In specified situations, the Board of Directors is entitled to cancel the bonus, cut the bonus or defer the bonus payment date. The payment of the variable remuneration components additionally requires that the President & CEO's service relationship with the company is in force on the bonus payment date, excluding specified exceptional situations.

### **16.3 Other key conditions applicable to the service relationship**

Fingrid's President & CEO's mutual period of notice is six months. If the company dismisses the President & CEO, an amount of money corresponding to nine months' fixed salary is paid to the President & CEO in addition to the salary for the period of notice. There is no share or share-based remuneration scheme or supplementary pension scheme in place for the President & CEO on behalf of the company.

No separate compensation is paid to the President & CEO for tasks related to Fingrid's majority-owned subsidiaries or associated companies.

The Board of Directors can also, for a particular compelling reason, decide on another reward to be paid to the President & CEO.

### **16.4 Conditions for deferral and possible clawback of remuneration**

Fingrid's Board of Directors determines the date on which the variable remuneration is paid and its possible deferral. If the President & CEO's service contract ends due to financial irregularities or other possible suspicions of misconduct, the Board of Directors can demand that the bonus paid out from the scheme be returned to the company.

## 17 Remuneration report

The remuneration report describes the realisation of the company's remuneration principles. The report describes the remuneration of the company's Board of Directors, President & CEO and other executives during the previous financial year.

In 2019, the remuneration of Fingrid's Board of Directors, President & CEO and other executives complied with the remuneration principles defined by the company. This has had a positive effect on the company's performance in the tasks set for it, its long-term financial success and its responsible operations.

The development of the Board of Directors' and President & CEO's remuneration in relation to the company's employees' average annual earnings has been fair. In addition, the company's financial performance is in line with the bonuses that have been paid. The development of the Board of Directors' and President & CEO's remuneration in relation to the average remuneration of the company's employees and the company's financial performance over the five previous financial years is described in the table below.

Year	Fees paid to the Board of Directors in total (€)	Salaries and benefits of the President & CEO (€)	Personnel costs/ person (€)*	Turnover (M€)
2019	121,200 (0.015%)	522,000 (0.066%)**	68,773 (0.009%)**	789
2018	126,300 (0.015%)**	452,000 (0.053%)**	85,611 (0.010%)**	853
2017	121,800 (0.018%)**	416,000 (0.062%)**	83,480 (0.012%)**	672
2016	122,340 (0.021%)**	352,000 (0.060%)**	85,113 (0.015%)**	586
2015	114,000 (0.019%)**	324,000 (0.054%)**	80,890 (0.013%)**	600

\* Personnel costs/average number of employees. Personnel costs decreased in 2019 mainly as a result of the capitalisation of personnel costs related to investment projects.

\*\*% of turnover

The Remuneration Report is published simultaneously with the financial statements and the annual review and it is part of the Corporate Governance Statement. The report is presented to the annual general meeting and it is available on the company's website.

### 17.1 Fees paid to the Board of Directors for the previous financial year

The general meeting confirmed the following monthly fees for the members of Fingrid's Board of Directors:

- Chair of the Board EUR 2,400
- Deputy Chair of the Board EUR 1,300
- Board members EUR 1,000.

In addition, Board members were paid a meeting fee of EUR 600 for each Board meeting and committee and

Nomination Board meeting attended by the member.

Total fees paid to Board members in 2019:

	On the Board in 2019	Fees total 2019	On the Board in 2018	Fees total 2018
Juhani Järvinen, Chair	1.1.–31.12.	42,000	1.1.–31.12.	40,800
Juha Majanen, Deputy Chair	–	–	1.1.–28.3.	5,100
Päivi Nerg, Deputy Chair	1.1.–31.12.	19,800	28.3.–31.12.	15,600
Anu Hämäläinen, Board member	1.1.–31.12.	20,400	1.1.–31.12.	21,600
Sanna Syri, Board member	1.1.–31.12.	21,000	1.1.–31.12.	21,000
Esko Torsti, Board member	1.1.–31.12.	20,400	1.1.–31.12.	22,200

There are no share or share-based remuneration schemes, supplementary pension schemes or other financial benefits, such as incentive systems, in place for the members of the Board of Directors on behalf of the company.

None of the Board members are in an employment or service relationship with the company.

## 17.2 Remuneration of the President & CEO and executive management group for the previous financial year

The information concerning the remuneration of Fingrid's President & CEO and executive management group for 2019 is as follows:

	Salaries and benefits 2019	Variable merit pay*	Total remuneration in 2019	Merit pay maturing in 2020**
President & CEO	309,000	213,000	522,000	195,000
Executive management group	1,206,000	495,000	1,701,000	382,000
TOTAL	1,515,000	708,000	2,223,000	577,000

\* Merit pay earned in 2018 and paid in 2019.

\*\* Merit pay earned in 2019 and payable in 2020.

The service terms of the President & CEO have been specified in a separate President & CEO service contract which is approved by the Board of Directors. The retirement age and pension accrual of the President & CEO are determined in accordance with general pension legislation.

The total remuneration of the President & CEO consisted in 2019 of a fixed total salary, a one-year bonus scheme (max. 40 per cent of the annual pay for the earnings year), and a three-year long-term incentive scheme (max. 35 per cent of the annual pay for the earnings year in the 2016–2018 scheme and max. 40 per cent in the 2017–2019 scheme maturing in 2020).

The criteria for the President & CEO's one-year bonus scheme in both 2018 and 2019 were the company's results, customers' trust, success in developing the electricity market, functionality of the workplace community, and leadership. As strategic projects, success in developing the electricity market was measured in 2018 and success in key investment projects (construction of the 'Forest Line' transmission connection and the establishment of Datahub Oy) was measured in 2019.

The metrics for the long-term incentive schemes were system security, electricity market functionality and shareholder value, in both the long-terms schemes 2016–2018 and the 2017–2019 scheme maturing in 2020. Corporate social responsibility has been taken into account in both the one-year incentive scheme and the long-term incentive scheme when determining their metrics, which are partly the same as the responsibility KPIs defined by the company.

In 2018, Fingrid showed exceptional performance across all areas of its business, which led to higher-than-usual remuneration for both the President & CEO and the personnel. The rewards earned in 2018 were paid in spring 2019.

There is no share or share-based remuneration scheme or supplementary pension scheme in place for the President & CEO on behalf of the company.

The mutual President & CEO period of notice is six months. If the company dismisses the President & CEO, an amount of money corresponding to nine months' fixed salary is paid to the President & CEO in addition to the salary for the period of notice.

### **Remuneration of the executive management group**

The total remuneration of the members of the executive management group consisted of a fixed total salary, a one-year bonus scheme, and a three-year long-term incentive scheme. The maximum amount of the one-year bonus scheme was 25 per cent of the annual pay for the earnings year. The annual maximum amount of the long-term incentive scheme was also 25 per cent of the annual pay for the earnings year.

The metrics for the executive management's one-year bonus scheme in 2019 were the company's results, customers' confidence, functionality of the workplace community, and leadership. The metrics additionally comprised the attainment of the key objectives of each member of the executive management group. The metrics for the long-term incentive scheme are system security, electricity market functionality and shareholder value.

Corporate social responsibility has been taken into account in both the one-year incentive scheme and the long-term incentive scheme when determining their metrics, which are partly the same as the responsibility KPIs defined by the company.

There is no share or share-based remuneration scheme or supplementary pension scheme in place for Fingrid's executive management group on behalf of the company.

**Remuneration of the personnel**

Personnel salaries comprised the basic salary determined according to the content of the task, competence, experience and results, an annual quality bonus that encourages the effective implementation of the strategy, and an incentive bonus to support personal performance. Remuneration was supplemented by other benefits and worktime flexibility organised by the company. Results which form the basis of quality bonuses are measured using company-level strategic criteria defined annually and criteria based on personal performance. Incentive bonuses are paid for good performance as part of the daily management of personal performance.

The CEO-to-employee annual median income ratio in 2019 was 7:1, and the female-to-male annual median income ratio was 0.9:1.

# Stock exchange releases 2019

5 December 2019

Fingrid to sell most of its shares in Nord Pool

23 October 2019

Fingrid Group – Management's Review 1 January–30 September 2019: Profit down as expected due to lower transmission grid fees

2 October 2019

Fingrid to maintain the current transmission prices in 2020

17 September 2019

Fingrid Oyj's financial reports in 2020

23 July 2019

Fingrid Group's Half-Year Report 1 January–30 June 2019

24 April 2019

Fingrid Group – Management's Review 1 January–31 March 2019

21 March 2019

Resolutions of the Annual General Meeting of Fingrid Oyj

12 March 2019

Fingrid Oyj's half-year report's timetable 2019

26 February 2019

Notice in accordance with the Finnish Securities Markets Act, chapter 7, section 3

26 February 2019

Asta Sihvonen-Punkka appointed Fingrid's Executive Vice President as of 1 July 2019

26 February 2019

Fingrid Group's Financial Statements Bulletin January - December 2018: Excellent results in all areas

31 January 2019

Timo Kiiveri appointed to Fingrid's executive management group

28 January 2019

Fitch Ratings has downgraded Fingrid Oyj's rating to 'A'; outlook stable

16 January 2019

Proposals of Fingrid's Shareholders' Nomination Board to the Annual General Meeting

10 January 2019

Dual listing of debt issues and debt issuance programme to the Irish Stock Exchange

**Fingrid's stock exchange releases are published on the company's website**





# Annual review and financial statements

# 1 Report of the board of directors

## 1.1 Financial result

Fingrid's consolidated financial statements have been drawn up in accordance with the International Financial Reporting Standards (IFRS). Unless otherwise indicated, the figures in parentheses refer to the same period of the previous year.

Fingrid's consolidated financial statements have been drawn up in accordance with the same accounting principles as in 2018, taking into account the changes brought about by IFRS 16 and the more detailed application of IAS16.

The Group's turnover was EUR 789.4 (852.8) million. Grid service income declined to EUR 385.0 (423.2) million, due to the reduced grid service prices. Electricity consumption in Finland totalled 86.1 (87.5) terawatt hours during the year. Imbalance power sales amounted to EUR 346.7 (348.8) million, on a par with the previous year. Cross-border transmission income from the connection between Finland and Russia decreased to EUR 11.6 (35.5) million, as a result of the lower cross-border transmission tariff. The transmission tariff used in imports from Russia is based on the difference between Finland's and north-western Russia's area prices. Other operating income declined to EUR 4.2 (10.8) million. The decline resulted from a decrease in capital gains from the sale of fixed assets.

The Group's total costs amounted to EUR 651.6 (659.0) million. Imbalance power costs remained on the previous year's level and totalled EUR 323.5 (320.0) million. Loss power costs grew to EUR 53.9 (47.7) million. The volume of loss power grew slightly, and the price of loss power procurement increased somewhat. The realised average price of loss power procurement was EUR 39.57 (37.88) per megawatt hour. The cost of reserves to safeguard the main grid's system security remained on the previous year's level and amounted to EUR 55.9 (56.7) million. Depreciation totalled EUR 97.8 (99.7) million. Grid maintenance costs amounted to EUR 21.6 (21.2) million.

Personnel costs declined to EUR 26.4 (32.2) million, mainly as a result of the capitalisation of personnel costs related to investment projects EUR 4,7 million. A total of EUR 3.4 (3.6) million was used for R&D projects.

### Turnover and other operating income, € million

	Jan-Dec/19	Jan-Dec/18	July-Dec/19	July-Dec/18
Grid service revenue	385.0	423.2	175.7	193.8
Sales of imbalance power	346.7	348.8	171.6	184.1
	11.6			
Cross-border transmission income		35.5	6.2	15.3
Peak load capacity income*	14.1	14.0	4.8	4.7
ITC income	14.4	13.1	7.6	7.8
Other turnover	17.4	18.2	8.3	10.4
Other operating income	4.2	10.8	3.6	9.8

<b>Turnover and other income total</b>	<b>793.6</b>	<b>863.6</b>	<b>377.7</b>	<b>425.7</b>
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Costs, € million				
	Jan-Dec/19	Jan-Dec/18	July-Dec/19	July-Dec/18
Purchase of imbalance power	323.5	320.0	160.9	170.6
Cost of loss energy	53.9	47.7	28.2	22.3
Depreciation	97.8	99.7	49.1	50.4
Cost of reserves	55.9	56.7	29.3	27.1
Personnel costs	26.4	32.2	10.4	15.6
Maintenance management costs	21.6	21.2	13.8	13.2
Cost of peak load capacity*	13.7	13.7	4.4	4.6
ITC charges	15.0	13.8	7.3	7.2
Other costs	43.8	54.0	21.4	30.9
Costs total	651.6	659.0	324.7	342.0
<b>Operating profit excluding the change in the fair value of commodity derivatives</b>	<b>142.1</b>	<b>204.6</b>	<b>53.1</b>	<b>83.7</b>
<b>Operating profit of Group, IFRS</b>	<b>115.5</b>	<b>241.6</b>	<b>48.7</b>	<b>91.2</b>

\* Peak load capacity income and costs are related to the securing of sufficient electricity supply during peak consumption hours in compliance with the Finnish Peak Load Capacity Act.

The Group's operating profit was EUR 115.5 (241.6) million. To recognise changes in the fair value of electricity derivatives and the currency derivatives related to capital expenditure and other operating expenses, EUR -26.6 (37.1) million was recorded in operating profit. The Group's profit before taxes was EUR 105.8 (229.0) million. The biggest differences year-on-year are explained by changes in the market value of electricity derivatives (EUR -63.5 million) and lower grid service income and cross-border transmission income (change totalling EUR -62.0 million). Profit for the financial year was EUR 84.6 (183.2) million. The equity ratio was 32.0 (36.6) per cent at the end of the year.

The parent company's turnover was EUR 786.2 (844.6) million, profit for the financial year EUR 148.1 (194.6) million and distributable funds were EUR 199.0 million.

Based on the company's own calculations, the result according to the regulatory model that governs grid operations amounts to a deficit of around EUR 15 million for 2019 and to a deficit of some EUR 30 million for the entire regulatory period 2016–2019.

## 1.2 Financing

The company's credit rating remained high, reflecting its strong overall financial situation and debt service capacity. The Group's net financial costs were EUR 10.1 (15.2) million, including EUR 0.7 million in interest expenses on the lease liabilities entered into the balance sheet following the introduction of the IFRS 16 standard in 2019. The Group's net interest expenses on loans during the year totalled EUR 14.7 (16.3) million. The change in the fair value of financial derivatives was EUR 8.1 million positive (EUR 6.7 million positive).

Interest-bearing borrowings totalled EUR 1,120.0 (1,059.6) million, of which non-current borrowings accounted for EUR 884.7 (771.5) million and current borrowings for EUR 235.3 (288.1) million. At the end of the year, the company's interest-bearing borrowings included a total of EUR 32.9 million in lease liabilities, consisting of EUR 2.4 million in short-term liabilities, to be paid within a year.

The company's liquidity remained good. Cash and financial assets totalled EUR 82.8 (85.3) million on 31 December 2019. The company additionally has an undrawn committed revolving credit facility of EUR 300 million to secure liquidity (until 11 December 2022) and EUR 50 million in uncommitted overdraft facilities.

The counterparty risk arising from derivative contracts relating to financing was EUR 22.4 (14.3) million. Fingrid's foreign exchange and commodity price risks were hedged.

Fingrid has credit rating service agreements with S&P Global Ratings (S&P) and Fitch Ratings (Fitch). The credit ratings valid on 31 December 2019 remained high and were as follows:

- S&P's rating for Fingrid's unsecured senior debt and long-term company rating at 'AA-' and the short-term company rating at 'A-1+', with a stable outlook.
- Fitch's rating for Fingrid's unsecured senior debt at 'A+', the long-term company rating at 'A', and 'F1' for the short-term company rating, with a stable outlook.

## 1.3 Share capital

The company's share capital is EUR 55,922,485.55. Fingrid shares are divided into Series A shares and Series B shares. The number of Series A shares is 2,078 and the number of Series B shares is 1,247. The voting and dividend rights related to the shares are described in more detail in the notes to the financial statements and in the articles of association available on the company's website.

## 1.4 Customers

Fingrid provides transmission grid and electricity market services to its customers: power companies, electricity-consuming industry and electricity market participants. The company's operations are largely based on fulfilling statutory duties, and they are conducted with the customers in mind, fairly and on equal terms.

According to the customer survey conducted in autumn 2019, customers' satisfaction with Fingrid has remained at the previous year's good level. More than half of the customers felt that the company's operations had improved during the past year. According to the survey, customers perceive Fingrid as an open and co-operative player who works for the benefit of the whole of society and treats its customers equally. The company received a Net Promoter Score (NPS) of 36, which is a good result for a natural monopoly.

According to a study carried out by the European Network of Transmission System Operators for Electricity (ENTSO-E) in 2019, the transmission tariffs for electricity in the Finnish transmission system are the third lowest in Europe, compared with transmission grids of a similar size. The comparison included 36 countries. In 2020, the grid service fees will be maintained at the previous year's level.

During the year under review, Fingrid's services were redefined and regrouped into larger packages. The service offering now consists of main services, which are grid services and electricity market services.

As a result of its customer service development work, Fingrid launched the online service platform My Fingrid in May 2019 for its customers. In My Fingrid, customers can view, for example, electricity transmission metering, invoicing and reactive power information as well as disturbance and transmission outage information. Different customer data can be updated and reported through the service.

## 1.5 Capital expenditure

The company's total capital expenditure in 2019 amounted to EUR 135.6 (92.7) million. This included a total of EUR 103.4 (85.1) million invested in the transmission grid and EUR 5.5 (2.9) million for reserve power. ICT investments amounted to EUR 25.6 (4.0) million. A total of EUR 3.4 (3.6) million was used for R&D projects during the year under review. The most significant construction projects during the year were the Iron Lady II (Hikiä-Orimattila), the grid reinforcing measures in North Karelia and the construction work at the Olkiluoto, Nurmijärvi, Jyväskylä, Inkoo and Korja substations. The costliest of all ICT investments was the centralised information exchange system for electricity retail markets, Datahub, which the company is currently building.

Finland's main grid turned 90 in 2019. The electricity transmission grid is constructed and maintained with the needs of a clean power system in mind. Investments and maintenance are carried out safely, efficiently and in a timely manner. The proportion of wind power will be substantially increased in Finland going forward. It is Fingrid's duty to ensure that the planned production capacity can be connected to the power system and the electricity market. Investments and maintenance are carried out safely, efficiently and in a timely manner.

The main grid is being reinforced both between Finland and Sweden and in Finland along the north-south axis. The Coastal Line from North Ostrobothnia to Pori has been completed, the Forest Line from Oulu to Petäjävesi is under construction and the reinforcement of the Lake Power Line from North Ostrobothnia to Kuopio is at the planning stage. All of the constructed transmission connections are major investments, necessary for the transmission grid that serves as a platform for the clean energy of the future.

By international standards, grid asset management at Fingrid is world-class. In spring 2019, the company once again placed at the top in the International Transmission Asset Management Study (ITAMS).

Fingrid's asset management has been certified according to ISO 55001:2014. The certification was granted to Fingrid for the first time in 2016, and again by Lloyd's Register Verification Limited in autumn 2019.

In accordance with the company's land use and environmental policy, the objective of main grid investments and maintenance is to reduce life-cycle environmental impacts. In 2019, the statutory environmental impact assessment (EIA) was initiated for the projects related to the transmission line between Huittinen and Forssa and Sweden's third AC connection between Muhos and Ylitornio. In addition, three environmental assessments were completed. An expropriation permit ruling entitling to the construction and maintenance of the transmission line was received for four projects, the most significant of which was the Forest Line, running for more than 300 kilometres from Central Finland to Oulu.

Grid planning requires international and national co-operation between the various parties. Fingrid was also involved in devising the plan. In autumn 2019, the Nordic transmission system operators published a Nordic grid plan, under which the Nordic TSOs will have on-going investment projects worth around EUR 15 billion in total by 2028.

The planning of the Finnish main grid is dominated by a transition from fossil fuels towards electricity production with zero carbon dioxide emissions, in other words the connection of wind and nuclear power. Fingrid also published a main grid development plan 2019–2030 in autumn 2019. The development plan sets forth Fingrid's main grid planning principles, grid development needs and planned investments for the next 10-year period.

In 2019, power lines and substations were built extensively throughout Finland. A total of approximately 150 kilometres of new transmission lines were built, and 12 new or expanded substations were completed. The most significant on-going construction projects are related to the Forest Line, the third AC connection between Finland and Sweden and the construction work around the Oulujoki river:

- The Olkiluoto substation's ageing 400 kilovolt switching station at Eurajoki was replaced by two separate switching stations. The changes improved the Olkiluoto nuclear power plant units' grid connection reliability, ensuring that the units can supply electricity to the system with no disturbances. The work was completed in November 2019.
- The renewal of the transmission line dubbed the Iron Lady continued. The construction of the 400 + 110 kilovolt transmission line between Hikiä and Orimattila focussed on the Hikiä (Hausjärvi)–Metsämarttila (Kärkölä) section. Iron Lady II was completed in December 2019.
- Fingrid's most significant and largest project is called the Forest Line, which runs from Oulu to Petäjavesi. The connection will increase the transmission capacity along the north-south axis, and it will be completed in 2019–2022. The construction project has been divided into six separate subprojects, for which procurement agreements were made during the year under review.
- A third AC connection (RAC3) between Finland and Sweden which is important for the Nordic electricity market has proceeded as planned, in co-operation with Sweden's TSO. An EIA is being carried out for the transmission line from northern Finland to northern Sweden. In 2019, the project received more than EUR 4 million in financial support from the EU for the technical assessment phase. The cross-border transmission connection is due for completion in 2025.
- A digital substation project will be implemented in Pernoonkoski, Kotka, in an effort to gain experience in the utilisation of a digital fieldbus in the substation environment. The aim is to create a digitalised substation that is safe, environmentally sustainable, remote controlled and provides excellent cost effectiveness in terms of both capex and operational costs. The Pernoonkoski substation is due for completion in 2020.
- The construction of Fingrid's new Imatra substation related to Iron Lady II is underway near the Imatra hydropower plant. The new substation will be commissioned in autumn 2020.
- Tampereen Sähköverkko, Elenia and Fingrid are together upgrading the Tampere area's electricity network. An electricity network development plan was drawn up for the area, as a result of which Tampere will receive a 110 kilovolt transmission line to meet the area's electricity needs. The transmission line will be built in 2019–2020. The solution jointly developed by the three companies is cost-effective and has minimal environmental impacts.
- In the Oulujoki river area, two substations will be renewed and one will be expanded, and a new transmission line will be built. The transmission line is an important part of reinforcing the planned Lake Line towards eastern Finland.
- In order to secure the Helsinki region's electricity supply, a new type of operating model is being developed, in which the City of Helsinki, the region's distribution network company Helen Sähköverkko and Fingrid collaborate to carry out an infrastructure project that will serve the Helsinki region's electricity supply and facilitate land use. Fingrid is preparing to build a new 400-kilovolt cable link from Länsisalmi in Vantaa to Viikinmäki, with plans to have it up and running in the latter half of the 2020s. During the year under review, Fingrid, the City of Helsinki and Helen Sähköverkko together drew up a review of the specified transmission solution, based on which detailed planning can be started. Based on a decision issued by the Uusimaa Centre for Economic Development, Transport and the Environment, an EIA is not required in a 400-kilovolt cable development project.

Of the future transmission line projects, five are in the general planning phase. They will proceed to the construction phase within the next few years in accordance with the main grid development plan.

During the year under review, Fingrid launched an aerial photography project on the main grid, in which all of the company's transmission lines will be photographed and laser-scanned. The data obtained will be utilised extensively, from grid documentation to the analysis of the trees on the edges of power line right-of-ways. The collected data will help plan and implement necessary measures efficiently and safely.



Fingrid owns ten reserve power plants with a constant start-up readiness of 15 minutes. In 2019, an upgrade project was completed at the Naantali reserve power plant, with the main objective of improving environmental and fire safety. During the year under review, the planning of an upgrade project concerning the Vanaja reserve power plant was started.

One of Fingrid's long-term goals is to improve the occupational safety culture and in this way achieve its zero accident objective. In 2019, Fingrid's own personnel had no lost-time workplace accidents (0). A total of 7 (4) lost-time workplace accidents were recorded among Fingrid's service providers. Among the lost-time accidents, one led to an absence of more than 30 days from work and was classified as serious. In addition, one workplace accident was classified as serious, because it caused a permanent impairment to the service provider's employee. The suppliers' and Fingrid's combined accident frequency rate increased from the previous year to 5.5 (3.2)/million worked hours.

## 1.6 Power system

Electricity consumption in Finland totalled 86.1 (87.5) terawatt hours in 2019. Fingrid transmitted a total of 68.7 (68.6) terawatt hours of electricity in its grid, representing 76.0 (75.4) per cent of the total transmission volume in Finland (consumption and inter-TSO).

The electricity import and production capacity was sufficient to cover the peak consumption during the year. The peak in electricity consumption, 14,542 (14,062) MWh/h was reached on Monday 28 January 2019 between 8 and 9 a.m., with Finland's electricity production contributing 10,978 MWh/h and the remaining 3,564 MWh/h being imported. The area price of electricity on the day-ahead market in Finland was €70.05/MWh during the peak consumption hour.

On the Nordic level, water resources were at a normal level, leading to lower wholesale prices for electricity in the Nordic countries compared to the previous year. This was reflected in the high volumes of electricity imported from the Nordic countries. Electricity transmissions between Finland and Sweden consisted mostly of large imports to Finland. In 2019, 16.3 (14.5) terawatt hours of electricity was imported from Sweden to Finland, and 0.5 (1.0) terawatt hours was exported from Finland to Sweden. In the electricity transmission between Finland and Estonia, exports to Estonia amounted to 3.8 (2.4) terawatt hours. Imports from Estonia amounted to 0.3 (0.9) terawatt hours. Electricity transmission from Russia to Finland amounted to 7.5 (7.9) terawatt hours. In 2019, 0.2 (0.2) terawatt hours of electricity was imported from Norway to Finland, and 0.1 (0.1) terawatt hours was exported from Finland to Norway.

Nearly the full transmission capacity was available in all cross-border connections during the review period. The electricity transmission was steered by the markets and the hourly transmission direction varied according to the current market situation. The price differences between the Nordic countries in 2019, which were large at times, resulted mainly from a different electricity production structure. Area prices between Finland and Sweden diverged in situations where the transmission capacity between the countries was insufficient to meet the demand for electricity.

In 2019, there was no need to raise Fingrid's preparedness for disturbance clearing. The transmission reliability rate remained at an excellent level and transmission reliability rate was 99.9998 (99.9999) per cent. An outage in a connection point in the grid caused by a disturbance in Fingrid's electricity network lasted an average of 4.3 (12.0) minutes, which is equal to the ten-year average. The calculated cost of the disturbances (regulatory outage costs) to consumer customers was only EUR 2.7 (1.5) million. If quick reconnections are included, the cost of disturbances amounts to EUR 5.2 million.

The reliability and usability of DC connections were at a good level in 2019. There was one long-lasting disturbance on the EstLink 2 connection, which began in late December and ended in early January 2020. The number of disturbances and the total duration of disturbances were on the same level as in 2018 for DC connections.

The volume of transmission losses in the grid increased somewhat from the level of the previous year, amounting to 1.3 (1.2) terawatt hours. This was 1.5 (1.3) per cent of the total volume of transmitted electricity. The annual variation of losses is affected by the Nordic electricity production situation, such as the volume of hydropower. Losses have been minimised by keeping the voltage of the transmission grid as high as possible and by making grid investments and equipment procurements that promote energy efficiency.

<b>Counter trade</b>	<b>Jan- Dec/19</b>	<b>Jan- Dec/18</b>	<b>July-Dec/ 19</b>	<b>July-Dec/ 18</b>
Counter-trade between Finland and Sweden, €M	0.1	1.9	0.0	1.8

Counter-trade between Finland and Estonia, €M	0.5	0.1	0.1	0.0
Counter-trade between Finland's internal connections, €M	0.3	2.2	0.2	2.1
<b>Total counter-trade, €M</b>	<b>0.9</b>	<b>4.1</b>	<b>0.4</b>	<b>3.9</b>

Reserves required to maintain the power balance of the power system were procured from Finland, other Nordic countries, Estonia and Russia. The availability of reserves was good, with the exception of the spring floods, which limited the availability of hydropower plants to reserve maintenance. Consumption is increasingly active in participating in the frequency containment reserve for disturbances. Countertrade costs arise from, among other things, transmission grid disturbances and problems. Countertrade refers to special adjustments made in the management of electricity transmission which are used to eliminate short-term bottlenecks (congestion in electricity transmission caused by the transmission grid). In addition to this, Fingrid guarantees the cross-border transmission capacities between countries it has confirmed by carrying out countertrades, i.e. purchasing and selling electricity, up until the end of the 24-hour usage period. The need for countertrade can arise from, for example, power plant failures or power outages or disruptions in the transmission grid. Countertrade costs amounted to only EUR 0.9 (4.1) million.

<b>Power system operation</b>	<b>Jan-Dec/19</b>	<b>Jan-Dec/18</b>	<b>July-Dec/ 19</b>	<b>July-Dec/18</b>
Electricity consumption in Finland TWh	86.1	87.5	41.5	42.2
Inter TSO transmission in Finland, TWh	4.4	3.5	2.3	2.0
Transmission within Finland, TWh	90.5	90.9	43.7	44.2
Fingrid's transmission volume TWh	68.7	68.6	34.0	33.9
Fingrid's electricity transmission to customers, TWh	64.2	64.9	31.7	31.8
Fingrid's loss energy volume TWh	1.3	1.2	0.7	0.6
<b>Electricity transmission Finland - Sweden</b>				
Exports to Sweden TWh	0.5	1.0	0.1	0.5
Imports from Sweden TWh	16.3	14.5	9.2	7.0
<b>Electricity transmission Finland - Estonia</b>				
Exports to Estonia TWh	3.8	2.4	2.1	1.4
Imports from Estonia TWh	0.3	0.9	0.1	0.3
<b>Exports to Norway TWh</b>				
Exports to Norway TWh	0.1	0.1	0.0	0.0
Imports from Norway TWh	0.2	0.2	0.2	0.1
<b>Electricity transmission Finland - Russia</b>				
Imports from Russia TWh	7.5	7.9	3.3	4.4

## 1.7 Electricity market

The average market price of spot electricity on the electricity exchange (Nordic system price) was EUR 38.94 (43.99) per megawatt hour. The wholesale prices of electricity were slightly lower than in the previous year in both Finland and the other Nordic countries. The decline in the prices was impacted by the improved precipitation in the Nordics compared to 2018. At times, the availability of wind power had a clear impact on the area price of electricity in Finland. The prices of emissions rights remained at the level they had reached in 2018.

Fingrid's congestion income from cross-border transmission lines totalled EUR 73.0 (29.6) million, of which the cross-border transmission lines between Finland and Sweden accounted for EUR 65.5 (28.2) million. EUR 15.0 (18.9) million of this was accrued during the first half of the year and EUR 50.5 (9.3) million during the second half of the year. The links between Finland and Estonia generated EUR 7.5 (1.4) million in congestion income. Fingrid's congestion income has been used, in accordance with regulations, for the Forest Line connection's network investment and for the Alapitkä capacitor investment. EUR 72.4 million in accrued congestion income was left unused and will be used for future investments to improve the functioning of the electricity market.

<b>Electricity market</b>	<b>Jan-Dec/ 19</b>	<b>Jan-Dec/ 18</b>	<b>July-Dec/19</b>	<b>July-Dec/18</b>
Nordic system price, average €/MWh	38.94	43.99	36.70	49.07
Area price Finland, average €/MWh	44.04	46.80	45.63	51.55
Congestion income between Finland and Sweden, € million*	131.0	56.5	101.0	18.6
Congestion hours between Finland and Sweden %**	40.1	20.6	54.4	19.0
Congestion income between Finland and Estonia, € million*	15.0	2.8	4.0	2.0
Congestion hours between Finland and Estonia %	11.8	5.4	10.4	7.9

\* The congestion income between Finland and Sweden and between Finland and Estonia is divided equally between the relevant TSOs. The income and costs of the transmission connections are presented in the tables under 'Financial result'. Congestion income is used for investments aimed at eliminating the cause of congestion.

\*\* The calculation of a congestion hour between Finland and Sweden refers to an hour during which Finland's day-ahead area price differs from Sweden's SE1 or SE3 area price.

Through Fingrid's transmission grid and the cross-border transmission lines, market participants gain access to and can reap the benefits of an open European electricity market. The market is provided with the highest possible transmission capacity, which enables effective trading for the market participants. In 2019, the reliability of Estonia's DC connections was weaker than in previous peak years, but despite the challenging situations, the connections were efficiently restored for use by the markets. The usability and reliability of Sweden's DC connections have been at an excellent level.

In summer 2019, competition was enabled between power exchanges in Central Europe. Since then, electricity sellers and buyers have been able to choose their preferred power exchange. In December 2019, Fingrid, together with the other Nordic and Baltic TSOs that hold shares in Nord Pool Holding AS, entered into a binding agreement to sell the majority of the company's shares to Euronext Nordics Holding AS, a Norwegian company fully owned by Euronext N.V. The transaction was completed in January 2020.

In June 2019, Fingrid announced that it would enable intraday trading within Finland until the start of the delivery hour. Finnish market participants have expressed a preference for having a possibility to trade closer to real time. The exact schedule depends on the decisions made by the power exchanges active in Finland to offer their customers a possibility to trade until the start of the delivery hour (Nord Pool implemented 0 minutes intraday gate closure time in Finland on 14 January 2020.)

During 2019, Fingrid actively developed the electricity markets as part of the Nordic imbalance settlement project and participated in European joint development work in ENTSO-E, the European Network of Transmission System Operators of Electricity. In addition, Fingrid has implemented measures to promote the electricity market in Finland.

The Nordic imbalance settlement project automates the power system's imbalance settlement, in other words the real-time balancing of electricity production and consumption. The project also develops new Nordic marketplaces for automatic and manual frequency restoration reserves.

Following the imbalance settlement project, the Nordic countries will implement a shorter imbalance settlement period enabling 15-minute trading and a new imbalance power model. The Nordic project's updated roadmap was published in November 2019.

Finland is the only Nordic country to publish real-time balancing power pricing data. In 2019, Fingrid started to publish the price of the last activated balancing power bid whenever Finland is decoupled into a separate regulation area.

On 14 May 2019, the Danish TSO Energinet and the imbalance settlement company eSett's current owners Fingrid, Svenska kraftnät and Statnett signed an agreement according to which Energinet joined the Nordic Balance Settlement by becoming a co-owner of eSett Oy. Each party owns 25 per cent of the company. The Danish market participants will join the Nordic Balance Settlement in the fourth quarter of 2020 once the regulating authorities approve the new market processes.

In autumn 2019, Fingrid launched a pilot where the minimum bid size in the balancing energy market was lowered from five to one MW. The goal of the pilot is to ease entry to the balancing energy market and the transition towards the European balancing markets.

The EU-financed flexible market platform project INTERRFACE continued during the year under review. The project is part of the broad-ranging Horizon 2020 programme, and it involves testing a flexible market platform in Finland, Estonia and Latvia.

The European Commission granted Project of Common Interest status to the preparations for the CrossFlex flexible resource project in October 2019. CrossFlex is a project proposal by Fingrid and the TSOs of Estonia and Åland with the aim of promoting the large-scale utilisation of the flexibility provided by distributed decentralised resources locally, nationally and between Finland and Åland as well as between Finland and Estonia.

Fingrid has been testing aggregation models in the balancing energy market and launched an independent aggregator pilot in the balancing energy market in 2019. The aim is to allow reserve providers to collect or aggregate decentralised flexible resources out of the balances of other electricity market participants. This enables new kinds of business models and makes it easier for new participants or resources to enter the reserve market.

Fingrid is building a centralised information exchange system for electricity retail markets, Datahub, which will contain data from about 3.7 million electricity metering points. In 2019, it became apparent that some distribution system operators and retailers will not be able to implement the necessary changes in their own customer and metering data management systems to reach Datahub readiness in time. The new go-live date was confirmed in a Government Decree that entered into force in early December. According to the decree, the Datahub will go live on 21 February 2022.

## 1.8 Personnel

Fingrid employed 380 (380) persons, including temporary employees, at the end of the year. The number of permanent personnel was 338 (327). At the end of the year, 24 (23) per cent of the personnel were women and 76 (77) per cent were men. The average age of the personnel was 44 (44).

During 2019, the personnel received a total of 14,112 (14,979) hours of training, with an average of 37 (39) hours per person. Employee absences due to illness accounted for 1 (1) per cent of the total working hours. In addition to a compensation system that is based on the requirements of each position, Fingrid has in place a merit pay and incentive bonus scheme.

Fingrid's operations are based on an open, collaborative, renewing and high-performing work community. The personnel are strongly committed to the company's vision and mission. The meaning of the work – responsibility for the functioning of the electricity system – is an integral part of daily work. Fingrid employees work to achieve the clean power system of the future.

Fingrid is a specialist organisation whose operations are strongly based on knowledge and expertise and people's ability to apply that knowledge in their daily work. The work requires solid factual expertise, but also the ability to interact and share information with other specialists.

Fingrid is committed to promoting diversity in everything it does. The company guarantees equal opportunities, rights and treatment to all employees and makes use of its personnel's diverse expertise. In accordance with its employer promise, the company has committed to a collaborative atmosphere where the organisational culture and management practices are respectful, fair and tolerant to all. Fingrid abides by the principles of non-discrimination, equality and diversity in its HR policy.

Employees have extensive decision-making powers and each one of them works independently in a specialist role, drawing on the expertise and insights of colleagues and networks. Work is guided by a shared strategy and good governance practices.

As technology and the entire operational environment evolve, working life changes continuously. Fingrid responds to these changes by offering its employees opportunities to develop and grow their competence. The approach of securing expertise as a strategic choice improves the quality of personnel planning and helps the company to better prepare for future needs. Fingrid takes a broad view of learning and development: employees are offered opportunities for on-the-job learning through demanding tasks, complex projects and job rotation. Fingrid Academy offers all specialists training and coaching programmes related to supporting the company's strategy. The company has focussed especially on developing the communication, interaction and engagement skills of specialists.

In 2019, Fingrid Academy offered coaching for supervisors, project management coaching, training in O365 tools, language and multicultural coaching and unit-specific coaching mainly related to change, work community and emotional skills. The training programme called Loikka (i.e. 'Leap') was targeted at specialists and aimed at increasing their communication and engagement skills. During the year under review, supervisors were offered a coaching programme called Johtamisen polku ('Management path'), which put the emphasis on bold supervisory work and performance management. In addition to shared training provided by the company, personnel can take the initiative by proposing specific training to boost their know-how. In 2019, each Fingrid employee received an average of 5 (5) days of training.

The work atmosphere and success of leadership are monitored through annual personnel surveys. A Great Place to Work employee survey was carried out in 2019. Based on the results, employees consider Fingrid to be a good place to work overall. The overall result, i.e. the Trust Index, improved somewhat from the previous survey and was 88 (87), which

is a top result on the Finnish scale.

In February 2019, Fingrid was awarded as one of Finland's most inspiring workplaces for the third year in a row. The company placed third in the Responsible Summer Job campaign in the medium-sized company category.

During the year under review, Fingrid introduced a new alternative for paying quality bonuses, with the personnel deciding to establish a voluntary personnel fund. The objective of the fund is to contribute to the company's long-term commitment to its employees and to the employees' commitment to the company.

## 1.9 Board of Directors and corporate management

Fingrid Oyj's Annual General Meeting was held in Helsinki on 21 March 2019. The members of the Board of Directors in 2019 were Juhani Järvi (Chair), Päivi Nerg (Deputy Chair), Anu Hämäläinen, Sanna Syri and Esko Torsti.

PricewaterhouseCoopers Oy was elected as the auditor of the company, with Heikki Lassila, APA, serving as the responsible auditor.

The Board of Directors has two committees: the Audit Committee and the Remuneration Committee.

The Audit Committee consisted of Anu Hämäläinen (Chair as of 21 March 2019), Juhani Järvi, Sanna Syri (as of 21 March 2019) and Esko Torsti (Chair) (until 21 March 2019).

The Remuneration Committee consisted of Juhani Järvi (Chair), Päivi Nerg, Sanna Syri (until 21 March 2019) and Esko Torsti (as of 21 March 2019).

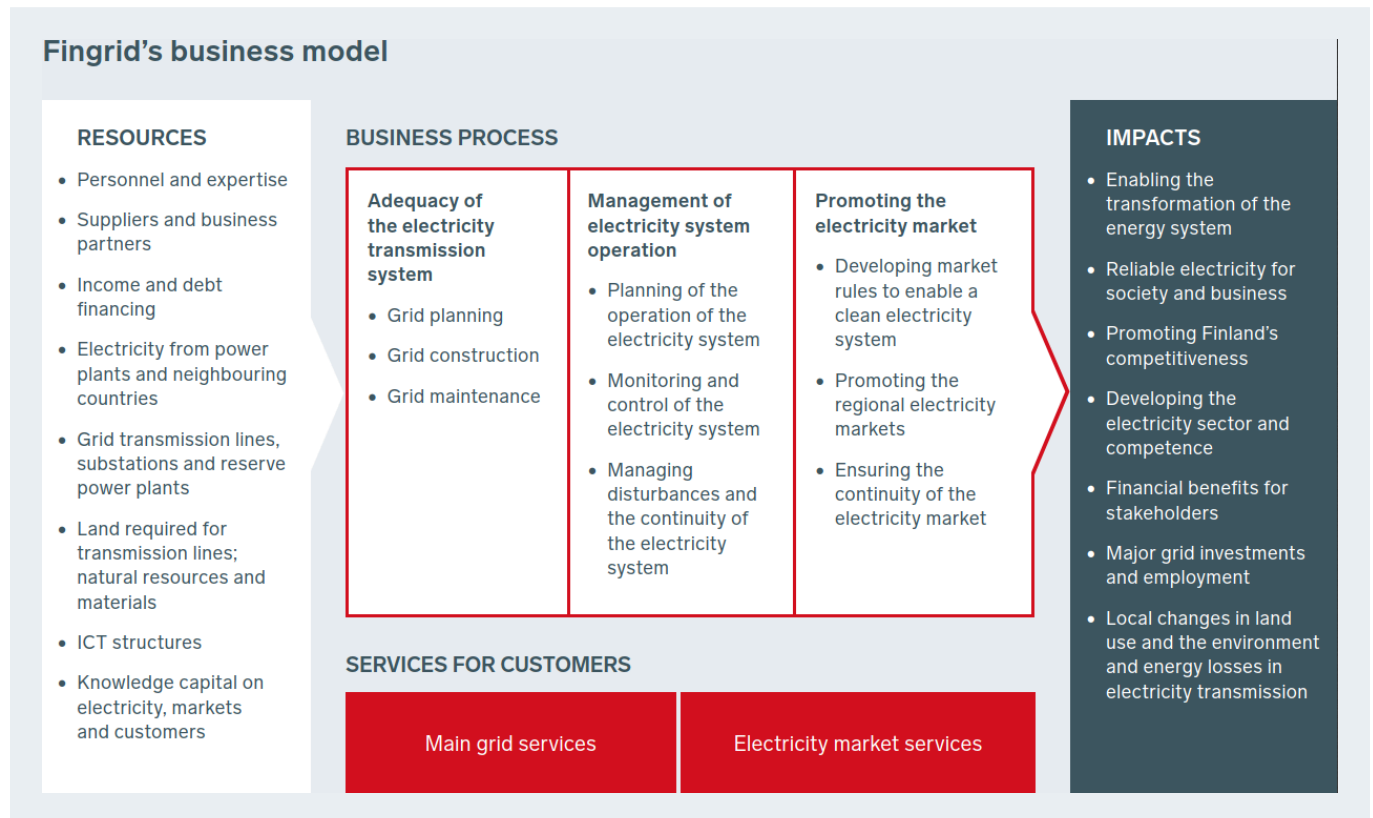
Jukka Ruusunen serves as President & CEO of the company. Fingrid has an Executive Management Group which supports the President & CEO in the company's management and decision-making.

A corporate governance statement, required by the Finnish Corporate Governance Code, has been provided separately. The statement and other information required by the Code are also available on the company's website at [www.fingrid.fi](http://www.fingrid.fi).



# 1.10 Fingrid's business model

The purpose of the business model is to describe the most important material and immaterial resources at Fingrid's disposal that are necessary for the business processes. The impact of Fingrid's operations and the significant added value they generate show in various ways throughout Finnish society.



# 1.11 Internal control and risk management

Fingrid's internal control is a permanent component of the company's operations and addresses all those operating methods and procedures whose objective it is to ensure

- effective and profitable operations that are in line with the company's strategy,
- the reliability and integrity of the company's financial and management information,
- that the company's assets are protected,
- that applicable legislation, guidelines, regulations, agreements and the company's own governance and operating guidelines are complied with, and
- a high standard of risk management.

Risk management is planned as a whole, with the objective of comprehensively identifying, assessing, monitoring and safeguarding the company's operations, the environment, personnel and assets from various threats and risks.

Continuity management is a part of risk management. Its objective is to improve the organisation's capacity to prepare and to react in the best possible way should risks occur, and to ensure the continuity of operations in such situations.

Further information on internal control, risk management and the foremost risks and factors of uncertainty is available on the company's website.

## Board of Directors

The company's Board of Directors is responsible for organising internal control and risk management, and it approves the principles of internal control and risk management every two years or more often, if required. The Board defines the company's strategic risks and related management procedures as part of the company's strategy and action plan, and monitors their implementation. The Board decides on the operating model for the company's internal audit. The Board regularly receives internal audit and financial audit reports as well as a status update at least once a year on the strategic risks and continuity threats relating to the company's operations and their management and realisation.

## Line management and other organisation

Assisted by the Executive Management Group, the President & CEO is responsible for executing and steering the company's governance, decision-making procedures, control and risk management, and for the assessment of strategic risks and continuity threats at the company level, and their related risk management.

The heads of functions are responsible for the practical implementation of the governance, decision-making procedures, controls and risk management for their areas of responsibility, as well as for the reporting of deviations and the sufficiency of detailed guidelines. Directors appointed to be in charge of threats to continuity management are responsible for drawing up and maintaining continuity management plans and guidelines, and for arranging sufficient training and practice.

The CFO is responsible for arranging procedures, controls and monitoring at the company level as required by the harmonised operating methods of internal control and risk management. The company's general counsel is responsible at the company level for assuring the legality and regulation compliance of essential contracts and internal guidelines, taking into account the company's interests, as well as for the procedures these require. Each Fingrid employee is obligated to identify and report any risks or control deficiencies she or he observes and to carry out the agreed risk management procedures.

### **Financial audit**

An authorised public accounting company selected by the general meeting acts as auditor for the company. The company's financial auditor inspects the accounting, financial statements and financial administration for each financial period and provides the AGM with reports required by accounting legislation or otherwise stipulated in legislation. The financial auditor reports on his or her work, observations and recommendations for the Board of Directors and may also carry out other verification-related tasks commissioned by the Board or management.

### **Internal audit**

The Board of Directors decides on the operating model for the company's internal audit. The internal audit acts on the basis of plans processed by the audit committee and approved by the Board. Audit results are reported to the object of inspection, the President & CEO, the audit committee and the Board. Upon decision of the Board, an internal audit outsourced to an authorised public accounting company acts within the company. From an administrative perspective, the internal audit is subordinate to the President & CEO. The internal audit provides a systematic approach to the assessment and development of the efficacy of the company's risk management, monitoring, management and administrative processes and ensures their sufficiency and functionality as an independent party. The internal audit has the authority to carry out reviews and to access all information that is essential to the audit. Fingrid's internal audit carries out risk-based auditing on the company's various processes.

## 1.12 Foremost risks

Since Fingrid plays a significant role in Finnish society, the impact of risks is assessed from both the company's and society's perspective. Strategic risks are considered to be events that may lead to a material deterioration in the company's ability to operate or in its corporate image or, in the worst-case scenario, events that may lead to the company's operations being called into question by society.

The most significant of the company's three identified strategic risks is a severe disturbance related to the functioning of the power system, leading to a regional or Finland-wide loss of electricity supply. Extensive disturbances to the power system can be caused by a technical malfunction, an extreme weather event, human error, an accident or vandalism. The consequences of a major disturbance are the paralysis of society's functions and major damage to Finnish business and industry.

Financial regulation directly impacts shareholder value, financing and credit ratings. A significant negative change in regulation constitutes a material strategic risk for the company's business operations.

The third strategic risk for the company's operations is the possibility of a distortion in the corporate culture under the monopoly's protection, which can surface in the form of disregard for sustainability requirements or other unprofessional behaviour.

In addition to strategic risks, business risks identified as substantial, such as accident, asset, information security, procurement, regulatory interest rate and counterparty and refinancing risks, are reported to the company's Board of Directors.

Fingrid's risk management and foremost risks are explored in greater detail in the company's annual report and on its website. Fingrid's financing risks are described in more detail in sections 6.2 and 6.3 of the consolidated financial statements. No substantial risks were realised in 2019.

## 1.13 Corporate responsibility

Fingrid promotes through its operations particularly the UN's global Sustainable Development Goals (SDGs) related to climate actions, energy and infrastructure. In addition to successfully fulfilling the company's societally important core mission, the following aspects are important for business and corporate responsibility: safety and security, procurement practices, stakeholder trust, financial result, Code of Conduct and taking care of the work community. Fingrid's compliance with corporate responsibility is steered by the set strategic targets. The targets have been set by identifying topics that are of material importance to Fingrid. The need for updates to the materiality analysis is assessed annually as part of the strategy process, based on an operating environment and stakeholder analysis and on the strategy update. Achieving the targets is the starting point for executive management's and personnel's remuneration.

Corporate responsibility and compliance management is integrated with Fingrid's management system and risk management practices. The starting point is Fingrid's strategy where responsibility is a corporate-level strategic choice and one of the company's values. According to Fingrid's vision, the company and its employees are known for their responsible business practices. Fingrid's Board of Directors approves the company's Code of Conduct, monitors the sustainability of operations and ensures that corporate responsibility management is integrated into business operations. Corporate responsibility is reported on to the Board of Directors over the course of the year as required and separately in an aggregate form once a year. Corporate responsibility aspects are also included in the Board of Directors' decision-making process when making decisions about, for example, investments. The President & CEO and the heads of functions are each responsible for compliance management and corporate responsibility issues within their areas of responsibility. The executive management group regularly reviews corporate responsibility issues, and alongside profitability, social issues and environmental impacts are taken into account in a balanced manner in decision-making.

Fingrid has declared its human rights commitment as part of the company's Code of Conduct. To ensure its understanding of human rights impacts, Fingrid has carried out an assessment in compliance with the due diligence process recommended in the UN's Guiding Principles on Business and Human Rights and updates its action plan annually.

Fingrid is a responsible tax payer and for its part combats the grey economy, and does not engage in money laundering or corruption, such as blackmail and bribery. Fingrid reports on its tax footprint and does not carry out special arrangements to minimise taxes. In 2019, no breaches of anti-competition laws, complaints related to the privacy of private individuals, corruption incidents, human rights violations or discrimination incidents occurred in Fingrid's operations.

Managerial work and the entire work community ensure that behaviour is in line with the company's Code of Conduct. New employees must complete online induction training on the Code of Conduct. During the year under review, Fingrid also drew up ethical principles for the use of artificial intelligence and participated in a corporate AI ethics challenge. Online training on corporate security and safety was organised for the entire personnel. A confidential and independent whistleblowing channel was in place for reporting suspected breaches against the Code of Conduct. Its accessibility for external stakeholders was further improved by increasing the reporting channel's visibility on the website and by promoting awareness of security and safety and the importance of reporting suspected misconduct among service providers. Fingrid again received an excellent score (90%) in a survey carried out in 2019, where employees assessed the sustainability of the company's ways of operating. According to a customer survey, the trust KPI measuring the implementation of the customer strategy and customers' trust was 4.0 on a scale of 1–5.

Fingrid has joined the United Nations' Global Compact initiative, and its Code of Conduct is in line with the initiative's principles on human rights, labour, the environment and anti-corruption. In procurements, Fingrid requires its contractual partners to commit to Fingrid's Supplier Code of Conduct and monitors compliance using a risk-based approach. Compliance with the Supplier Code of Conduct is a condition for being included in supplier registers used in recurring substation and power line procurements. In addition, contractual partners are subject to separate contract terms related

to the use of subcontractors and workforce, and to occupational safety and environmental matters. Nine Fingrid work sites were audited in 2019 to verify compliance with contractor obligations, occupational safety and environmental management. In addition, key foreign subcontractors from the Baltics and Poland, as well as the cleaning service company used by the company, were audited by a third party, focussing especially on employment matters and wages. In international goods sourcing, third-party supplier audits were carried out at 20 production plants in a total of 11 countries, and three follow-up audits were carried out in order to rectify any observed non-compliances. Procurements from one supplier were interrupted and measures were required for the co-operation to continue.

Corporate responsibility reporting as a whole is integrated into Fingrid's annual report. To ensure transparency and comparability, Fingrid reports on its corporate responsibility in accordance with the international Global Reporting Initiative (GRI) framework. The corporate responsibility reporting for 2019 was verified by a third party. The Report of the Board of Directors also includes non-financial information.

In addition, Fingrid disclosed in 2019 the business risks and opportunities related to climate change in accordance with the Task Force on Climate-related Financial Disclosures framework in an aggregate form on the TCFD data page.

## 1.14 Environmental matters

Fingrid's operations have a significant positive impact on the environment and climate. By reinforcing the electricity transmission grid for the needs of clean electricity production, Fingrid helps Finland reach its climate goals. Other environmental impacts of significance caused by the company's operations are related to the consumption of natural resources and climate impact during grid construction and maintenance, the climate impact of energy losses occurring during electricity transmission, the impacts of transmission lines on nature, landscape and land use and possible fuel and oil leaks from substations and reserve power plants.

When building and maintaining the main grid, landowners and other stakeholders are taken into account, and environmental impacts are reduced at all stages of the main grid's life cycle in accordance with Fingrid's land-use and environmental policy. Key aspects include a thorough environmental impact assessment (EIA) and preparedness for environmental risks. Fingrid's reserve power plants have an ISO 14001 environmental certification.

The contractors and service providers responsible for taking care of the main grid were committed to environmentally responsible operating practices in line with Fingrid's land-use and environmental policy through contractual terms, training and audits. All personnel working at Fingrid's work sites completed online training on environmental matters. Service providers received environmental training when investment projects were started and environmental aspects were monitored at the work site as part of work site monitoring. Compliance with environmental requirements, occupational safety and contractor obligations were verified in a total of nine audits. Two audits on overall safety and several audits related to the ISO 14001 environmental management system were carried out at reserve power plants.

Fingrid's reserve power plants are subject to an environmental permit and covered by the EU's emissions trading scheme. The accuracy of the measuring and reporting systems for fuel consumption is verified by an accredited emissions trading verifier. A total of 5,142 (8,223) units (tCO<sub>2</sub>) of emission allowances were returned, 100 per cent of which consisted of purchased emission right units. Fingrid has not been granted free-of-charge emission rights for the emissions trade period 2013–2020. Purchased emission rights units amounted to 7,000 in 2019. Emissions trading had minor financial significance for Fingrid.

Our goal is to complete grid investment projects and maintenance without any significant environmental deviations. No significant environmental damage occurred during the year under review, but one incident classified as significant that had occurred in the previous year surfaced during the year. Materials from work sites were recycled as efficiently as possible when building new grid sections and substations or dismantling old structures. The total volume of waste during the year was approximately 13,920 tonnes, of which 98 per cent was utilised in some way and 89 per cent was recycled.

Fingrid actively participates in land-use planning to ensure safety and land-use reservations for the grid. In 2019, the company issued around 240 statements on land-use plans and EIAs. In addition, Fingrid directed the construction and operations taking place near grid installations by issuing statements containing safety guidelines and land-use restrictions. The number of such statements issued was 440.

An EIA was conducted to assess the human and environmental impacts of the transmission line project from Huittinen to Forssa and the transmission lines for Sweden's third AC connection from Muhos via Keminmaa to Ylitornio. Local residents were informed beyond statutory practices through land-owner letters and local newspaper ads, and the projects were presented in three public events that were open to all.

Fingrid received an expropriation permit ruling necessary to build, operate and maintain the Forest Line, Pyhänselkä–Nuojunkangas, Kontiolahti–Uimaharju and Imatra–Huutokoski transmission lines. An expropriation permit application was submitted for the transmission line projects Pyhänselkä–Nuojunkangas, Imatra–Huutokoski and Kontiolahti–Palojärvi. The expropriation compensation process was completed for the transmission line projects

Lieto–Forssa and Elovaara-Pinsiö. Nine hearings in accordance with the Finnish Expropriation Act were held with landowners.

The service providers who carry out maintenance work and trim vegetation along power line right-of-ways were instructed to take landowners and natural sites into account and to take care of waste and chemicals. In a bid to increase the utilisation of right-of-ways, land owners were offered information both in connection with the projects and through other communications initiatives and they were granted initial funding for managing the right-of-ways as heritage habitats.

In 2019, altogether 132 megawatts of wind power was connected to Fingrid's main grid, which will indirectly avoid emissions worth around 72,000 carbon dioxide equivalent tonnes in the coming years. In addition, Fingrid concluded during the year agreements on connecting a total of approximately 2,000 megawatts of wind power production to the electricity grid. Once realised, this will lead to a substantial positive climate impact, indirectly avoiding emissions worth around 1.1 million carbon dioxide equivalent tonnes. Fingrid's carbon dioxide emissions in 2019 totalled approximately 200,000 carbon dioxide equivalent tonnes.



## 1.15 Legal proceedings and proceedings by authorities

An accident took place on a work site in Laukaa, Finland, on 25 August 2017, where an employee of Revilla y Garcia S.L. died after having fallen from a power line tower. A civil court case has been raised in Spain for damages against Fingrid (the client linked with the accident), the main contractor, Technolines S.R.L. filial i Finland, and its sub-contractor, Revilla y Garcia S.L. Fingrid does not believe the claim against it is likely to succeed and, in Fingrid's view, the legal proceedings or their outcome are not likely to have a substantial impact on the company's earnings or financial position. The action raised in the case concerning social security based compensation has lapsed.

## 1.16 Events after the review period and estimate of future outlook

On 5 December 2019, Fingrid Oyj announced that it had, together with the other owners of Nord Pool Holding AS, entered into a binding agreement to sell 66% of the company's shares to Euronext. On 15 January 2020, Fingrid Oyj announced that the transaction has received the necessary authority approvals and that the other preconditions for its completion have been fulfilled. The sale will have a small positive impact on Fingrid's result and cash flow in the first quarter. Fingrid's indirect ownership in Nord Pool is 6.4%, which is managed through a holding company jointly owned by the Nordic Transmission System Operators.

Fingrid Group's profit for the 2020 financial period, excluding changes in the fair value of derivatives and before taxes, is expected to slightly decline compared to the previous year. Fingrid announced on 2 October 2019 that it will maintain the electricity transmission prices in the main grid at their 2019 level in 2020.

Results forecasts for the financial year are complicated especially by the uncertainty related to grid income, ITC income and cross-border transmission income, and to reserve and loss power costs. These are dependent on the variations in outside temperature and precipitation and changes in the hydrological situation in the Nordic countries, which affect electricity consumption and electricity prices in Finland and neighbouring areas and thus also grid transmission volumes. The company's debt service capacity is expected to remain stable.

## 1.17 Board of Directors' proposal for the distribution of profit

The guiding principle for Fingrid's dividend policy is to distribute substantially all of the parent company profit as dividends. When making the decision, however, the economic conditions, the company's near-term investment and development needs as well as any prevailing financial targets of the company are always taken into account.

Fingrid Oyj's parent company's profit for the financial year was EUR 148,060,722.84 and distributable funds in the financial statements total EUR 198,985,738.74. Since the close of the financial year, there have been no material changes in the company's financial position and, in the Board of Directors' view, the proposed dividend distribution does not compromise the company's solvency.

The company's Board of Directors will propose to the Annual General Meeting of Shareholders that, on the basis of the balance sheet adopted for the financial period that ended on 31 December 2019, a dividend of EUR 58,500.00 at maximum per share will be paid for Series A shares and EUR 21,400.00 at maximum for Series B shares, for a total of EUR 148,248,800.00 at maximum. The first dividend instalment of EUR 39,500.00 for each Series A share and EUR 14,450.00 for each Series B share, totalling EUR 100,100,150.00, shall be paid on 25 March 2020. The second dividend instalment, a maximum of EUR 19,100.00 for each Series A share and a maximum of EUR 6,950.00 for each Series B share, totalling EUR 48,148,650.00, shall be paid based on the authorisation hereby given to the Board. The Board of Directors has the right to decide on the payment of the second dividend instalment after the half-year report has been confirmed and after having assessed the company's solvency, financial position and financial development. The second dividend instalment decided on with the authorisation given to the Board shall be paid on the third banking day after the decision. It will be proposed that the authorisation remain valid until the next Annual General Meeting.

# 1.18 Annual General Meeting 2020

Fingrid Oyj's Annual General Meeting is scheduled to be held on 20 March 2020 in Helsinki.

In Helsinki, on 27th February 2020  
Fingrid Oyj  
Board of Directors

## 2 Consolidated Key Figures

CONSOLIDATED KEY FIGURES						
		2019	2018	2017	2016	2015
		IFRS	IFRS	IFRS	IFRS	IFRS
<b>Extent of operations</b>						
Turnover	MEUR	789.4	852.8	672.0	586.1	600.2
Capital expenditure, gross	MEUR	135.6	92.7	111.1	146.7	147.5
– % of turnover	%	17.2	10.9	16.5	25.0	24.6
Research and development expenses	MEUR	3.4	3.6	2.6	2.4	1.8
– % of turnover	%	0.4	0.4	0.4	0.4	0.3
Personnel, average		384	376	352	336	319
Personnel at the end of period		380	380	355	334	315
Salaries and remunerations total	MEUR	22.3	26.5	24.2	22.7	21.3
<b>Profitability</b>						
Operating profit	MEUR	115.5	241.6	184.8	192.0	162.6
– % of turnover	%	14.6	28.3	27.5	32.8	27.1
Profit before taxes	MEUR	105.8	229.0	163.7	173.9	129.3
– % of turnover	%	13.4	26.9	24.4	29.7	21.5
Return on investments (ROI)	%	6.4	13.2	10.0	10.4	8.7
Return on equity (ROE)	%	11.6	23.3	16.7	18.8	15.0
<b>Financing and financial position</b>						
Equity ratio	%	32.0	36.6	37.8	36.4	33.5
Interest-bearing net borrowings	MEUR	1,037.2	974.3	998.9	1,028.0	1,026.9
Net gearing		1.5	1.3	1.3	1.3	1.4

<b>Share-specific key figures</b>						
Profit/share	€	25,452.5	55,106.3	39,350.8	41,706.1	31,150.8
Dividend/A shares	€	58,500,00*	67,650.00*	68,470.00	37,536.09	33,686.24
Dividend/B shares	€	21,400,00*	24,750.00*	25,050.00	16,038.49	16,038.49
Dividend payout ratio A shares	%	229.8	122.8	174.0	90.0	108.1
Dividend payout ratio series B shares	%	84.1	44.9	63.7	38.5	51.5
Equity/share	€	206,213	232,310	240,017	230,301	213,822
Number of shares at 31 Dec						
– Series A shares	shares	2,078	2,078	2,078	2,078	2,078
– Series B shares	shares	1,247	1,247	1,247	1,247	1,247
Total	shares	3,325	3,325	3,325	3,325	3,325

\* The Board of Directors' proposal to the Annual General Meeting on the maximum dividend to be distributed

## **CALCULATION OF KEY FIGURES**

Return of investment, % =  $\frac{\text{Profit before taxes + interest and other finance costs}}{\text{Balance sheet total - non-interest-bearing liabilities (average for the year)}} \times 100$

Return on equity, % =  $\frac{\text{Profit for the financial year}}{\text{Equity (average for the year)}} \times 100$

Equity ratio, % =  $\frac{\text{Equity}}{\text{Balance sheet total - advances received}} \times 100$

Earnings per share, € =  $\frac{\text{Profit for the financial year}}{\text{Average number of shares}}$

Dividends per share, € =  $\frac{\text{Dividends for the financial year}}{\text{Average number of shares}}$

Dividend payout ratio, % =  $\frac{\text{Dividend per share}}{\text{Earnings per share}} \times 100$

Equity per share, € =  $\frac{\text{Equity}}{\text{Number of shares at closing date}}$

Interest-bearing net borrowings, € = Interest-bearing borrowings - cash and cash equivalents and financial assets

$$\text{Net gearing} = \frac{\text{Interest-bearing borrowings - cash and cash equivalents and financial assets}}{\text{Equity}}$$

# 3 Consolidated Financial Statements (IFRS)

## Introduction

### How to read Fingrid's financial statements and get the most out of it?

- Notes are compiled under specific themes to provide the best representation of Fingrid
- Chapters 4-7 consist of notes to the consolidated financial statements.
- Accounting principles are linked with the note of most relevant for each specific principle.
- Accounting principles are shown at the end of each note, in a separate box and recognizable by the use of symbol



- Interesting facts about Fingrid's operating environment are highlighted in infoboxes throughout the notes to the financial statements. The infoboxes can be recognized by the use of symbol



### Fingrid's business model and the regulation of transmissions system operations

Fingrid constitutes a natural monopoly as referred to in the Finnish Electricity Market Act (588/2013), with duties defined in legislation. The company's operations, reasonableness in pricing and financial result are regulated and overseen by the Energy Market Authority. Transmission network operations constitute most of the company's turnover, result and balance sheet.

The allowed financial result from transmission network operations is calculated by multiplying the total adjusted capital invested in the transmission network operations (transmission network assets valued at the regulatory present value) with the reasonable rate of return defined by the Energy Market Authority.

The reasonable financial result allowed by the regulation forms the basis of Fingrid's financial planning and pricing. One can calculate the required amount of turnover by adding operating expenses in the result. Fingrid's turnover mainly constitutes from the pricing of the transmitted electricity, in other words the consumption of Fingrid's customers. Fingrid additionally charges fees for output from and input into the grid, and power generation capacity fees. The company determines in advance for the next year the unit prices for the transmission of electricity to recover required turnover. The company's total costs consist of the operating expenses and financial costs and taxes, which are excluded from regulatory calculations.

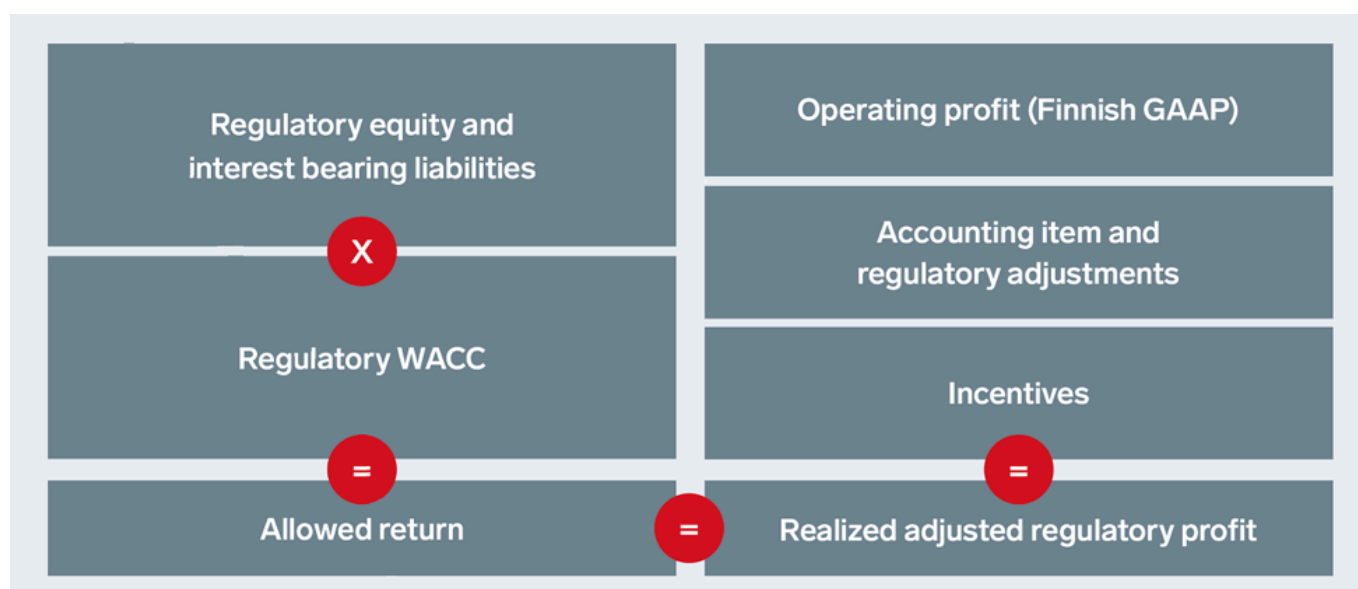
The so-called adjusted profit, realised in compliance with the regulation, is calculated by adjusting the parent company's operating profit according to the Energy Market Authority's regulation methods and by adding the impact of the incentives.



The regulation incentives are as follows: *Investment incentive* – intended to promote reasonable and cost-effective investments as well as a justified overhaul of components. The incentive impact is created by the fact that the methods allow the TSO straight-line depreciations based on the replacement value of the transmission network assets. *Quality incentive* – intended to encourage the TSO to improve the quality of electricity transmission. In practical terms this means minimising the calculated negative impact caused by non-transmitted energy. *Efficiency improvement incentive* – intended to encourage the TSO to operate cost-effectively. The efficiency improvement incentive is based on Fingrid's controllable operating costs.

*Innovation incentive* – intended to encourage the TSO to develop and use innovative technical and operational solutions in its network operations. In practice, this means adequate R&D resources.

Any realised regulatory profit over a regulatory period that exceeds the allowed return is a surplus that must be returned to the customers in the form of lower future prices. If the realised regulatory profit over a regulatory period is below the allowed return, the result is a deficit which the company may recover from the customers in the form of higher future prices. No regulatory surplus or deficit income is recorded in the financial statements. The aim of Fingrid's business operations is to achieve, as a rule, the allowed financial result each year.



The Energy Market Authority determines Fingrid's highest allowed financial result over four-year regulatory periods (2016–2019 and 2020–2023). The table below presents Fingrid's own rough approximations for 2019, as well as the cumulative figures for the current regulatory period. Since the company had a surplus in the previous regulatory period, the intention is to have a deficit in the current regulatory period.

<b>WACC (pre-tax) 2019</b>	<b>Adjusted capital 2019</b>	<b>Allowed financial result 2019</b>	<b>Deficit(-)/Surplus(+) 2019</b>	<b>Cumulative Deficit (-)/Surplus(+) 2016-2019</b>
5.36%	Approx. EUR 2,900 million	Approx. EUR 155 million	Approx. EUR -15 million	Approx. EUR -30 million

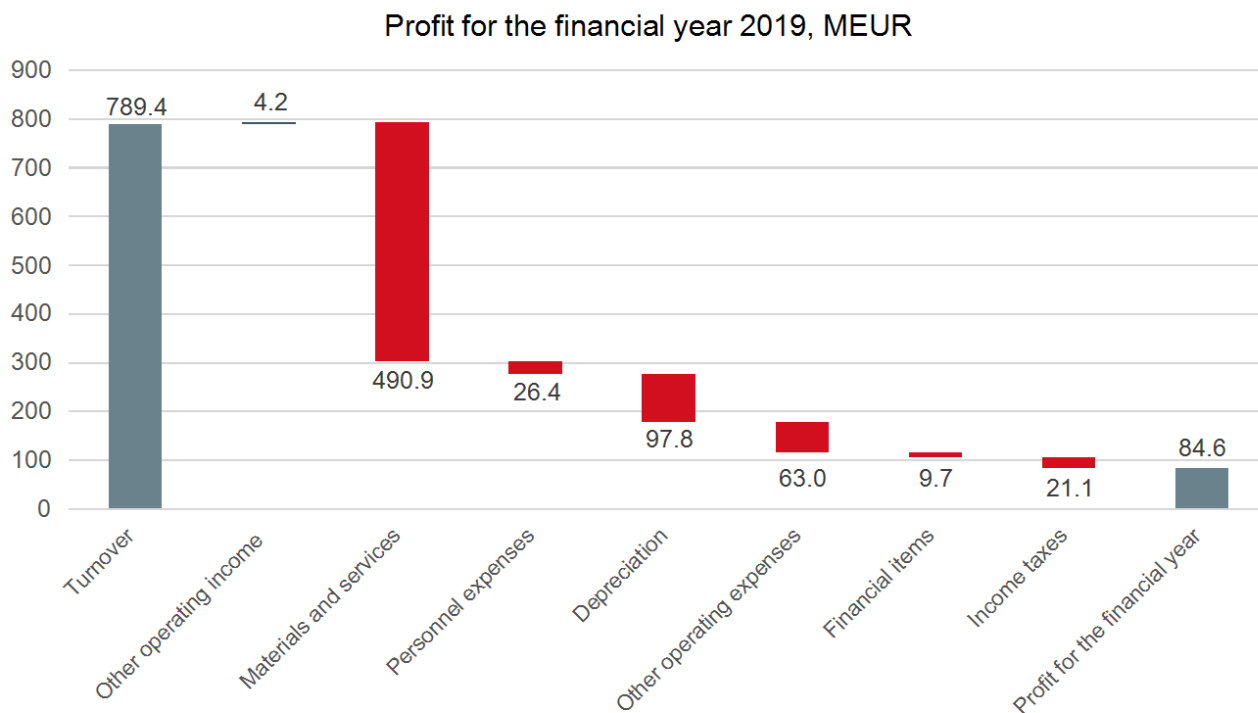
The company also engages in other regulated business operations, but the impact of these on the company's financial income and balance sheet is negligible.

# 3.1 Income statement

**CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME**

		1 Jan - 31 Dec, 2019	1 Jan - 31 Dec, 2018
	Notes	€ 1,000	€ 1,000
<b>TURNOVER</b>	1	<b>789,356</b>	<b>852,784</b>
Other operating income	2	4,221	10,800
Materials and services	5	-490,861	-482,873
Personnel expenses	9	-26,409	-32,190
Depreciation	11,12	-97,826	-99,661
Other operating expenses	6,13	-63,007	-7,211
<b>OPERATING PROFIT</b>		<b>115,475</b>	<b>241,648</b>
Finance income	17	468	170
Finance costs	17	-10,562	-15,384
Finance income and costs		-10,093	-15,213
Share of profit of associated companies		384	2,607
<b>PROFIT BEFORE TAXES</b>		<b>105,766</b>	<b>229,041</b>
Income taxes		-21,136	-45,813
<b>PROFIT FOR THE FINANCIAL YEAR</b>		<b>84,630</b>	<b>183,228</b>
<b>OTHER COMPREHENSIVE INCOME</b>			
Items that may subsequently be transferred to profit or loss			
Translation reserve		40	-193
<b>TOTAL COMPREHENSIVE INCOME FOR THE FINANCIAL PERIOD</b>		<b>84,670</b>	<b>183,036</b>
<b>Profit attributable to:</b>			
Equity holders of parent company		84,630	183,228
<b>Total comprehensive income attributable to:</b>			
Equity holders of parent company		84,670	183,036
<b>Earnings per share for profit attributable to the equity holders of the parent company:</b>			
Undiluted and diluted earnings per share, €		25,453	55,106
Weighted average number of shares, quantity		3,325	3,325

Notes are an integral part of the financial statements.



## 3.2 Consolidated balance sheet

ASSETS			
		31 Dec 2019	31 Dec 2018
	Notes	€ 1,000	€ 1,000
<b>NON-CURRENT ASSETS</b>			
Intangible assets:	12		
Goodwill		87,920	87,920
Land use rights		100,301	97,509
Other intangible assets		23,469	10,343
		211,690	195,772
Property, plant and equipment:	11		
Land and water areas		19,640	16,749
Buildings and structures		243,068	226,329
Machinery and equipment		560,973	553,310
Transmission lines		757,210	758,485
Other property, plant and equipment		118	2,484
Prepayments and purchases in progress		62,592	71,391
		1,643,599	1,628,749
Right-of-use-assets	13	32,574	
Investments in associated companies	24	12,137	13,822
Derivative instruments	23	28,625	32,486
Deferred tax assets	10	22,915	23,296
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,951,541</b>	<b>1,894,125</b>
<b>CURRENT ASSETS</b>			
Inventories	8	12,067	12,391
Derivative instruments	23	3,835	18,575
Trade receivables and other receivables	3,24	94,858	99,484
Other financial assets	20	67,188	71,380

Cash in hand and cash equivalents	19	15,626	13,922
<b>TOTAL CURRENT ASSETS</b>		<b>193,575</b>	<b>215,750</b>
<b>TOTAL ASSETS</b>		<b>2,145,116</b>	<b>2,109,876</b>

Notes are an integral part of the financial statements.

#### EQUITY AND LIABILITIES

	Notes	31 Dec 2019 € 1,000	31 Dec 2018 € 1,000
<b>EQUITY ATTRIBUTABLE TO EQUITY HOLDERS OF THE PARENT COMPANY</b>			
Share capital	21	55,922	55,922
Share premium account	21	55,922	55,922
Translation reserve	21	-1,040	-1,080
Retained earnings	21	574,854	661,665
<b>TOTAL EQUITY</b>		<b>685,659</b>	<b>772,429</b>
<b>NON-CURRENT LIABILITIES</b>			
Deferred tax liabilities	10	108,784	122,986
Borrowings	14	854,138	771,508
Provisions	25	1,393	1,424
Derivative instruments	23	6,514	7,393
Lease liabilities	13,14	30,515	
		<b>1,001,343</b>	<b>903,311</b>
<b>CURRENT LIABILITIES</b>			
Borrowings	14	232,978	288,091
Derivative instruments	23	372	4,014
Lease liabilities	13,14	2,371	
Trade payables and other liabilities	7	222,393	142,030
		<b>458,114</b>	<b>434,135</b>
<b>TOTAL LIABILITIES</b>		<b>1,459,457</b>	<b>1,337,446</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>2,145,116</b>	<b>2,109,876</b>

Notes are an integral part of the financial statements.

## 3.3 Consolidated statement of changes in equity

Attributable to equity holders of the parent company, € 1,000

	Share capital	Share premium account	Translation reserve	Retained earnings	Total equity
<b>Balance on 31 December 2017</b>	<b>55,922</b>	<b>55,922</b>	<b>-888</b>	<b>687,100</b>	<b>798,057</b>
Impact from change in accounting principle (IFRS 15)				-35,146	-35,146
<b>Balance on 1 Jan 2018</b>	<b>55,922</b>	<b>55,922</b>	<b>-888</b>	<b>651,954</b>	<b>762,912</b>
<b>Comprehensive income</b>					
Profit or loss				183,228	183,228
<b>Other comprehensive income</b>					
Translation reserve			-193		-193
<b>Total other comprehensive income adjusted by tax effects</b>			<b>-193</b>		<b>-193</b>
<b>Total comprehensive income</b>			<b>-193</b>	<b>183,228</b>	<b>183,036</b>
<b>Transactions with owners</b>					
Dividend relating to 2017				-173,518	-173,518
<b>Balance on 31 December 2018</b>	<b>55,922</b>	<b>55,922</b>	<b>-1,080</b>	<b>661,665</b>	<b>772,429</b>
<b>Balance on 1 Jan 2019</b>	<b>55,922</b>	<b>55,922</b>	<b>-1,080</b>	<b>661,665</b>	<b>772,429</b>
<b>Comprehensive income</b>					
Profit or loss				84,630	84,630
<b>Other comprehensive income</b>					
Translation reserve			40		40
<b>Total other comprehensive income adjusted by tax effects</b>			<b>40</b>		<b>40</b>
<b>Total comprehensive income</b>			<b>40</b>	<b>84,630</b>	<b>84,670</b>
<b>Transactions with owners</b>					
Dividend relating to 2018				-171,440	-171,440
<b>Balance on 31 Dec 2019</b>	<b>55,922</b>	<b>55,922</b>	<b>-1,040</b>	<b>574,854</b>	<b>685,659</b>

Notes are an integral part of the financial statements.

## 3.4 Consolidated cash flow statement

### CONSOLIDATED CASH FLOW STATEMENT

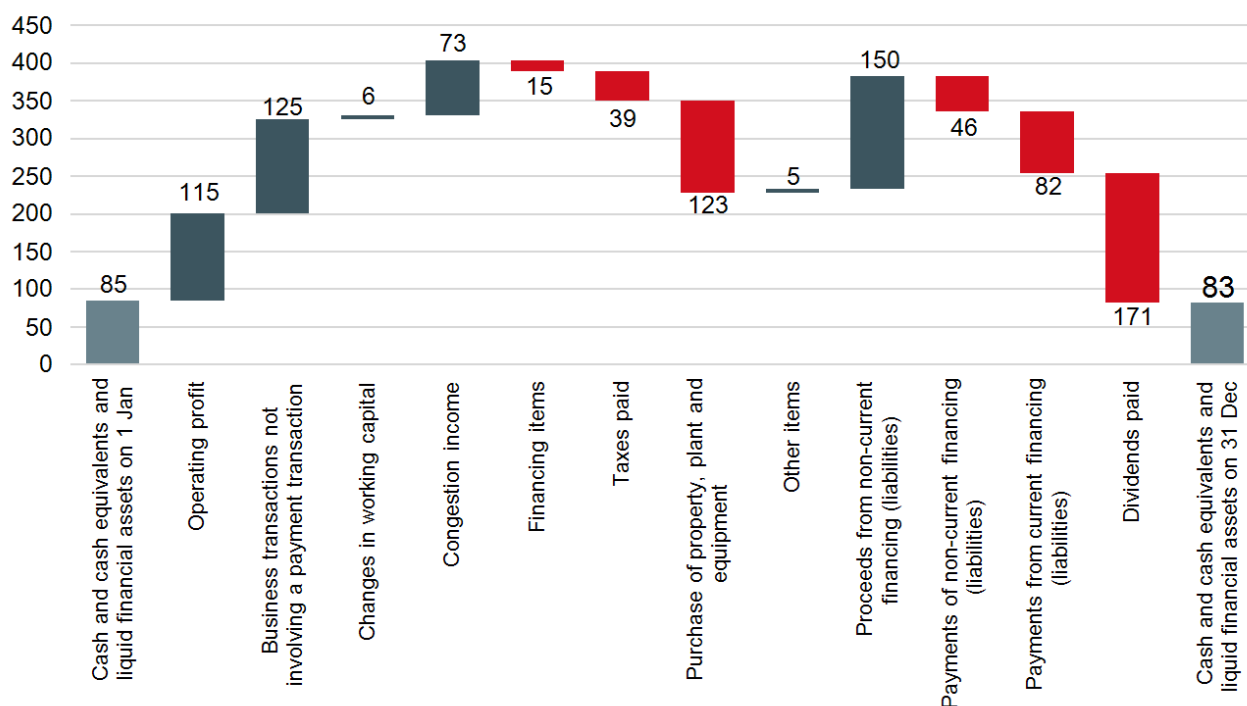
		1 Jan - 31 Dec, 2019	1 Jan - 31 Dec, 2018
	Notes	€ 1,000	€ 1,000
<b>Cash flow from operating activities:</b>			
Profit before taxes		105,766	229,041
Adjustments:			
Business transactions not involving a payment transaction:			
Depreciation		97,826	99,661
Capital gains/losses (-/+) on tangible and intangible assets		-2,713	-8,276
Other adjustments		-2,217	
Share of profit of associated companies		-384	-2,607
Gains/losses from the assets and liabilities recognised in the income statement at fair value		21,831	-29,606
Other business transactions not involving a payment transaction		9,826	
Finance income and costs		10,093	15,213
Impact from changes in the fair value of the investment		299	-97
Changes in working capital:			
Change in trade receivables and other receivables		3,934	-5,490
Change in inventories		324	1,138
Change in trade payables and other liabilities		1,246	10,147
Congestion income		73,001	29,632
Change in provisions	25	-31	-50
Interests paid		-21,005	-16,188
Interests received		6,397	306
Taxes paid		-39,188	-37,335
Net cash flow from operating activities		265,005	285,489
<b>Cash flow from investing activities:</b>			
Purchase of property, plant and equipment	11	-104,762	-90,019
Purchase of intangible assets	12	-17,739	-6,699
Proceeds from sale of other assets		684	



Proceeds from sale of property, plant and equipment		3,057	13,745
Repayment of loan receivables		938	1,750
Dividends received		881	645
Contributions received		610	
Capitalised interest paid	17	-1,016	-1,042
Net cash flow from investing activities		-117,347	-81,621
<b>Cash flow from financing activities:</b>			
Proceeds from non-current financing (liabilities)		150,000	
Payments of non-current financing (liabilities)		-46,325	-129,086
Proceeds from current financing (liabilities)			100,270
Payments from current financing (liabilities)		-80,071	
Dividends paid	21	-171,440	-173,518
Principal elements of lease payments		-2,309	
Net cash flow from financing activities		-150,145	-202,334
<b>Change in cash as per the cash flow statement</b>		<b>-2,487</b>	<b>1,533</b>
<b>Opening cash as per the cash flow statement</b>		<b>85,301</b>	<b>83,768</b>
<b>Closing cash as per the cash flow statement</b>	19,20	<b>82,815</b>	<b>85,301</b>

Notes are an integral part of the financial statements.

Cash flow for the period 2019, MEUR



## 4 Benchmark for TSO Operations (IFRS)

- This chapter contains first general information about the Group and the general accounting principles applied to the consolidated financial statements.
- The chapter focuses on describing how Fingrid's turnover and result are formed and how they relate to the regulatory revenue level. The impact of the regulation is reflected in Fingrid's day-to-day operations and revenue collection.
- The chapter also describes Fingrid's operating receivables and liabilities, as well as the risk management they entail.
- People are Fingrid's most important resource, which is why information related to personnel has been included here, in the first note.
- Fingrid is a substantial tax payer, and Fingrid does not use tax planning. The note on taxes is at the end of this chapter, in chapter 4.9.

# 4.1 General information about the Group and general accounting principles

Fingrid Oyj is a Finnish public limited liability company responsible for electricity transmission in the high-voltage transmission system in Finland (the main grid). Fingrid's nationwide grid is an integral part of the power system in Finland. The transmission grid is the high-voltage trunk network which covers all of Finland. Major power plants, industrial plants and electricity distribution networks are connected to the grid.

Finland's main grid is part of the Nordic power system, which is connected to the system in Central Europe via high-voltage direct current transmission links. Finland also has DC links with Russia and Estonia.

The main grid encompasses more than 14,000 kilometres of 400, 220 and 110 kilovolt transmission lines, plus more than 100 substations.

Fingrid is in charge of planning and monitoring the operation of the main grid and for maintaining and developing the system. An additional task is to participate in work carried out by ENTSO-E, the European Network of Transmission System Operators for Electricity, and in preparing European market and operational codes as well as network planning.

Fingrid offers grid, cross-border transmission and balance services to its contract customers: electricity producers, network operators and the industry. Fingrid serves the electricity market by maintaining adequate electricity transmission capacity, by removing bottlenecks from cross-border transmission links and by providing market data.

The consolidated financial statements include the parent company Fingrid Oyj and its wholly owned subsidiaries Finextra Oy and Datahub Oy. The consolidated associated companies are Nord Pool Holding AS (ownership 18.8%) and eSett Oy (ownership 25.0%). The Group has no joint ventures.

Fingrid issues bonds under the Euro Medium Term Note (EMTN) programme. Fingrid Oyj's issuances under the EMTN programme are generally listed on the London and Irish stock exchanges. Fingrid shares are not listed.

## Critical accounting estimates and judgements

When the consolidated financial statements are drawn up in accordance with the IFRS, the company management needs to make estimates and assumptions which have an impact on the amounts of assets, liabilities, income and expenses recorded and conditional items presented. These estimates and assumptions are based on historical experience and other justified assumptions which are believed to be reasonable under the conditions which constitute the foundation for the estimates of the items recognised in the financial statements. The actual amounts may differ from these estimates. In the financial statements, estimates have been used for example, when specifying the economic lives of tangible and intangible asset items, and in conjunction with deferred taxes and provisions. Critical estimates and judgements by management are described by topic in the notes, and the judgement or estimates related to which are in accordance with the following table.

<b>Estimate of the purchase and sale of imbalance power</b>	Chapter 4.3
<b>Inter-Transmission System Operator Compensation (ITC)</b>	Chapter 4.3
<b>Deferred tax assets and liabilities</b>	Chapter 4.9

Determination of the fair value measurement of grid assets	Chapter 5.1
Determination of the depreciation periods of property, plant and equipment, and intangible assets	Chapter 5.2



## Accounting principles

Fingrid adopted the IFRS 16 Leases standard effective on 1 Jan 2019. The changes to the accounting principles due to the adoption of the standard are presented in chapter 5.3. The new standard did not have a material impact on the consolidated financial statements. In addition, the application of the IAS16 standard has been specified. In other respects, the preparation of the consolidated financial statements generally followed the same standards as in 2018.

## Segment reporting

The entire business of the Fingrid Group is deemed to comprise grid operations in Finland with system responsibility, only constituting a single segment. There are no essential differences in the risks and profitability of individual products and services. For that reason, segment reporting in accordance with the IFRS 8 standard is not presented. The operating segment is reported in a manner consistent with the internal reporting to the chief operating decision-maker. The chief operating decision-maker is the company's Board of Directors. Fingrid operates only in Finland, which is also why geographical data is not presented.

## Foreign currency transactions

The consolidated financial statements are presented in euros, which is the functional currency of the parent company. Transactions and financial items denominated in foreign currencies are recognised at the foreign exchange mid-rate quoted by the European Central Bank (ECB) at the transaction date. Receivables and liabilities denominated in foreign currencies are valued in the financial statements at the mid-rate quoted by the ECB at the closing date. Foreign exchange gains and losses from business are included in the corresponding items above operating profit. Foreign exchange gains and losses from financial instruments are recognised at net amounts in finance income and costs.

## Earnings per share

The Group has calculated undiluted earnings per share in accordance with standard IAS 33. Undiluted earnings per share are calculated using the weighted average number of shares outstanding during the financial year. Since Fingrid has no share option schemes or benefits bound to shareholders' equity or other equity financial instruments, there is no dilutive effect.

## 4.2 The company's general risk management processes and policies

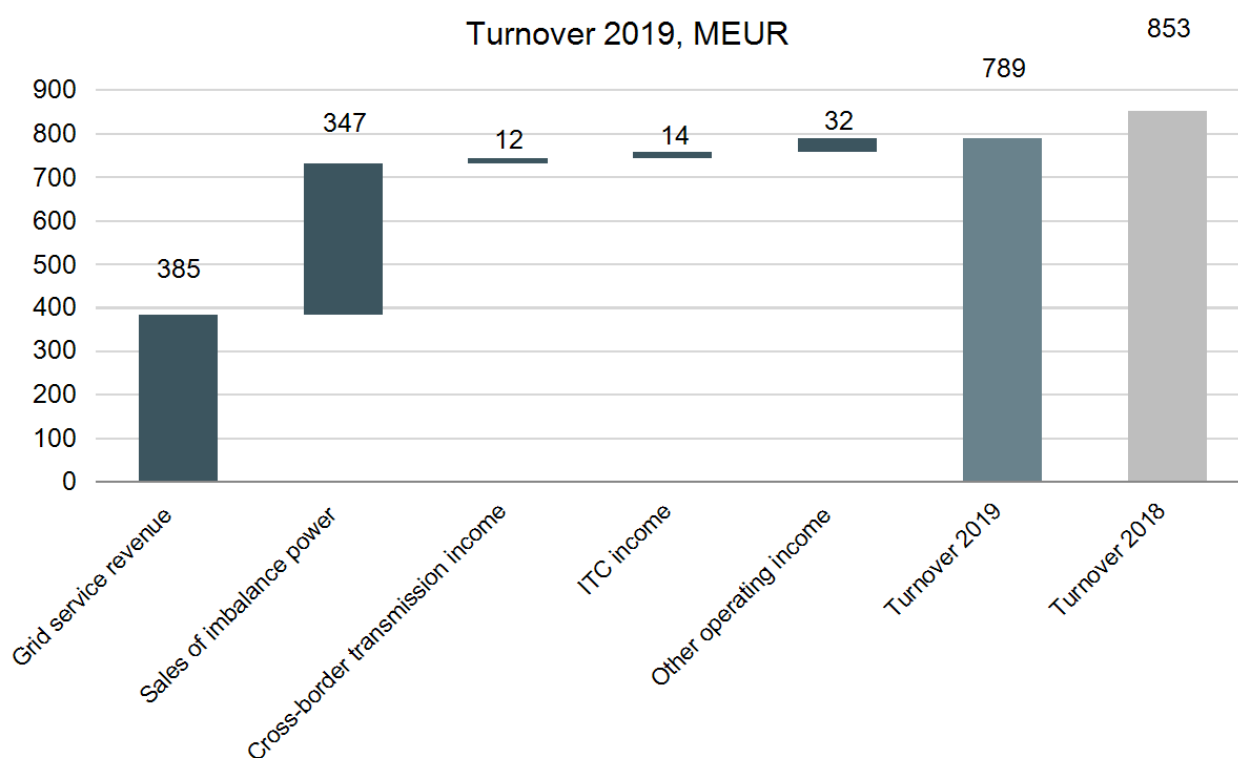
The objective of Fingrid's risk management is to make preparations for cost-effective measures providing protection against damage and loss relating to risks and to ensure the commitment of the entire personnel to considering the risks pertaining to the company, its various organisational units and each employee. In order to fulfil these objectives, risk management is continuous and systematic. The significance of individual risks or risk entities is assessed against the present level of protection, taking into account the probability of a harmful event, its financial impact and impact on corporate image or on the attainment of the business goals.

Risk management is planned holistically with the objective of comprehensively identifying, assessing, monitoring and safeguarding the company's operations, the environment, personnel and assets from various threats and risks. Due to the nature of the company's basic mission, risks are also assessed from a societal perspective.

The Board approves the key principles of internal control and risk management and any amendments to them. The Board of Directors approves the primary actions for risk management as part of the corporate strategy, indicators, action plan, and budget. The Board of Directors (Audit Committee) receives a situation report on the major risks relating to the operations of the company and on the management of such risks.

## 4.3 Formation of turnover and financial result

Turnover consists of the following:



1. TURNOVER, €1,000	2019	2018
Grid service revenue	385,031	423,151
Sales of imbalance power	346,749	383,837
Cross-border transmission income	11,608	35,516
ITC income	14,429	13,089
Peak load capacity	14,111	14,032
Other operating income	17,427	18,160
<b>Total</b>	<b>789,356</b>	<b>852,784</b>

Grid service income mainly consists of the unit price for electricity transmission multiplied by the volume. The Energy Market Authority approves the pricing structure for grid services, on the basis of which Fingrid sets the unit prices for electricity transmission during the winter period and for consumption during other times. The winter period begins on 1

December and ends on the last day of February. Fingrid additionally charges fees for output from and input into the grid, and power generation capacity fees. Fingrid seeks to set the unit prices for electricity transmission each autumn for the next year, for one year at a time. Within the framework of grid services, a customer obtains the right to transmit electricity to and from the main grid through its connection point. Grid service is agreed by means of a grid service contract signed between a customer connected to the main grid and Fingrid.

Each electricity market party must ensure its electricity balance by making an agreement with either Fingrid or some other party. Fingrid buys and sells imbalance power in order to stabilise the hourly power balance of an electricity market party (balance responsible party). Imbalance power trade and pricing are based on a balance service agreement with equal and public terms and conditions.

Fingrid is responsible for the continuous power balance in Finland at all times by buying and selling balancing power in Finland. The balance responsible parties can participate in the Nordic balancing power market by submitting bids on their available capacity. The terms and conditions of participation in the balancing power market and the pricing of balancing power are based on the balance service agreement.

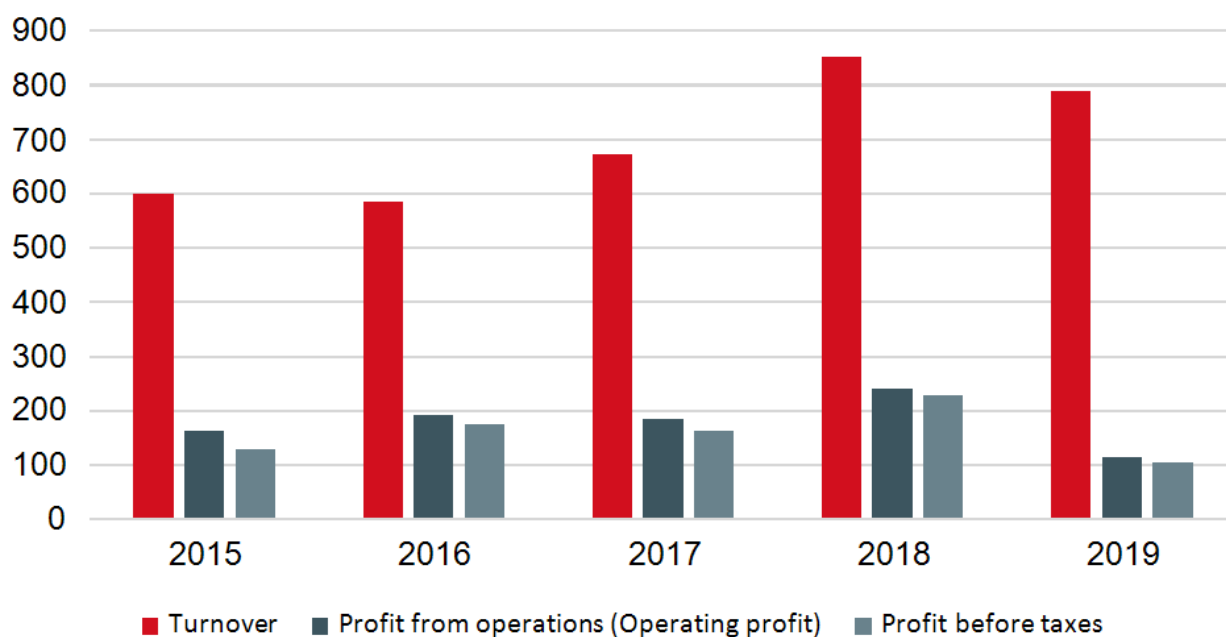
Transmission services on the cross-border connections to the other Nordic countries enable participation in the European day-ahead and intraday markets. Fingrid offers electricity transmission service from Russia through its 400 kV cross-border connections. The transmission service is intended for fixed electricity imports and it is based on Fingrid's agreements with the Russian TSO and system operator. The technical terms of the cross-border power lines are defined in the Intersystem Agreement, the operational terms in the Operation Agreement, measurement terms in the Agreement of Electricity Metering and Accounting and the commercial terms are specified in the Agreement of Capacity Allocation. The Customer and Fingrid agree on the terms of the electricity transmission in a transmission service agreement, which is based on the agreements mentioned above. The contractual terms are equal and public. ITC compensation is, for Fingrid, income and/or costs which the transmission system operator receives for the use of its grid by other European transmission system operators and/or pays to other transmission system operators when using their grid to serve its own customers.

The peak load capacity secures the supply security of electricity in situations of the Finnish power system where the planned electricity procurement is not sufficient to cover the anticipated electricity consumption. The peak load capacity system is a special task assigned to Fingrid by the Finnish Energy Authority, based on the Peak Load Capacity Act (117/2011, Act on peak load capacity which secures a balance between electricity production and consumption). The Energy Authority submits the peak load capacity plants for competitive tendering, and Fingrid manages the peak load capacity service as required by the Act. The peak load capacity can consist of both power plants and facilities capable of adjusting their electricity consumption.

2. OTHER OPERATING INCOME, €1,000	2019	2018
Rental income	650	831
Capital gains on fixed assets	2,713	8,276
Contributions received	290	186
Other income	568	1,506
<b>Total</b>	<b>4,221</b>	<b>10,800</b>



## Turnover and profit from operations 2015-2019, MEUR



### Accounting principles

#### Revenue recognition

Sales recognition takes place on the basis of the delivery of the service. Electricity transmission is recognised once the transmission has taken place, and balance power services are recognised on the basis of the delivery of the service. Indirect taxes and discounts, etc., are deducted from the sales income when calculating turnover.

#### IFRS 15 Revenue from Contracts with Customers

The fundamental principle of the IFRS 15 standard is that sales revenue should be recognised when control over the goods or the service is transferred to the customer.

A five-step process should be applied when recognising sales revenue:

- Identify the customer contract(s)
- Identify the individual performance obligations
- Determine the transaction price according to the contract
- Allocate the transaction price to individual performance obligations, and
- Recognise revenue when each performance obligation is met.

Sales recognition takes place on the basis of the supply of the service. Electricity transmission is recognised once the transmission has taken place. Balance power services are recognised on the basis of the delivery of the service. Fingrid has defined the performance obligations related to each agreement, and revenue recognition has been examined separately for each performance obligation. When determining the extent to which a performance obligation is met, a

single method should be applied for all performance obligations to be met over time. Connection agreements are long term and can be terminated, at the earliest, 15 years from the date when they entered into force. If a customer does not receive an individual item of goods or a service against the connection fee, this must be recognised as revenue in the same way as the other revenue according to the contract, generally over the contract term.



## Judgements and estimates

### Estimate of the purchase and sale of imbalance power

The income and expenses of imbalance power are ascertained through a nationwide imbalance settlement procedure, which is based on the Ministry of Employment and Economy's 9 December 2008 decree on the disclosure obligation related to the settlement of electricity delivery. The final imbalance settlement is completed no later than 13 days from the delivery month, which is why the income and expenses of imbalance power in the financial statements are partly based on preliminary imbalance settlement. The estimate is based on the preliminary imbalance settlement information provided by the imbalance settlement. For foreign balances, the calculations have been verified with the foreign counterparties.

### Inter-Transmission System Operator Compensation (ITC)

Compensation for the transit transmissions of electricity has been agreed upon through an ITC (Inter-Transmission System Operator Compensation) agreement. The centralised calculations are carried out by ENTSO-E (the European Network of Transmission System Operators of Electricity). ITC compensation is determined on the basis of the compensation paid for use of the grid and transmission losses. The ITC calculations take into account the electricity transmissions between the various ITC agreement countries. ITC compensation can represent both an income and a cost for a transmission system operator. Fingrid's share of the ITC compensation is determined on the basis of the cross-border electricity transmissions and imputed grid losses. ITC compensation is invoiced retroactively after all parties to the ITC agreement have approved the invoiced sums. Control is carried out monthly. This is why the uninvoiced ITC compensations for 2019 have been estimated in the financial statements. The estimate has been made using actual energy border transmissions in Finland and unit compensations, which have been estimated by analysing the actual figures from previous months and data on grid transmissions during these months.

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## 4.4 Revenue-related receivables and credit risk management

3. TRADE RECEIVABLES AND OTHER RECEIVABLES, €1,000	2019	2018
Trade receivables	74,355	88,730
Trade receivables from associated companies		782
Loan receivables from associated companies	188	500
Prepayments and accrued income from associated companies	3,693	9
Prepayments and accrued income	6,887	7,199
Other receivables	9,736	2,263
<b>Total</b>	<b>94,858</b>	<b>99,484</b>
<b>Essential items included in prepayments and accrued income</b>	<b>2019</b>	<b>2018</b>
Accruals of sales	3,145	2,662
Accruals of purchases/prepayments	1,115	1,533
Interest receivables	2,609	2,723
Tax assets	17	280
<b>Total</b>	<b>6,887</b>	<b>7,199</b>

### Credit risk management – customers

According to The Electricity Market Act, the company is obliged to accept distribution network operators joining the grid as well as electricity producers and consumers as its customers. Accordingly, the company cannot choose its customers based on a credit risk analysis or collect different fees from them. In general, collateral are not required from the company's customers to secure sales payments, but in the event of an overdue payment, this is possible. The unit in charge of the customer relationships is responsible for verifying their creditworthiness. The procedure following a customer payment default is defined in the terms and conditions of the Main Grid Contract. Fingrid requires a collateral (either bank guarantees or an upfront payment) in order to cover the electricity taxes payable by customers connected to the grid and subject to the tax, as ruled in the Main Grid Contract's Service Terms and Conditions. At the turn of the year, the company had minor outstanding receivables, of which the credit risk was considered to be low, and the company estimates it will receive these payments. The company has no impairments related to receivables.

### Netting of trade receivables and trade payables

The trade receivables and trade payables are netted in the balance sheet as presented in the table below. The netted items are associated with purchases and sales of imbalance power. The company has a legally enforceable right of set-off to these items in any circumstance and will use this right.

**4. NETTING OF TRADE RECEIVABLES AND TRADE PAYABLES € 1,000**

	2019			2018		
	Gross amount of trade receivables/ trade payable	Amount of netted items	Net amount of trade receivables and trade payables presented in the balance sheet	Gross amount of trade receivables/ trade payables	Amount of netted items	Net amount of trade receivables and trade payables presented in the balance sheet
Trade receivables	90,365	-16,010	74,355	110,676	-21,164	89,513
Trade payables	40,518	-16,010	24,508	48,859	-21,164	27,696

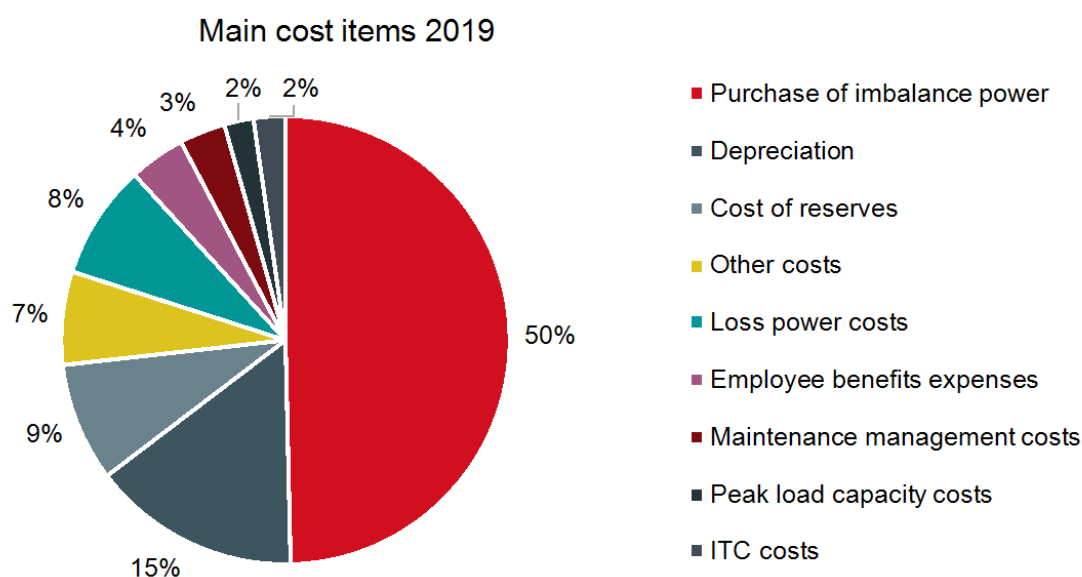

**Accounting principles**
**Trade and other receivables**

Loans and other receivables are recognised initially at fair value; subsequently they are measured at amortised cost using the effective interest rate method. The expected credit losses are assessed based on historical amounts of credit losses, taking into account forward-looking information on economical developments and receivable-specific assessments. Impairment losses are recognised directly, under other operating expenses, to reduce the carrying amount of the receivables. Fingrid did not have any impairment losses during the periods presented here.

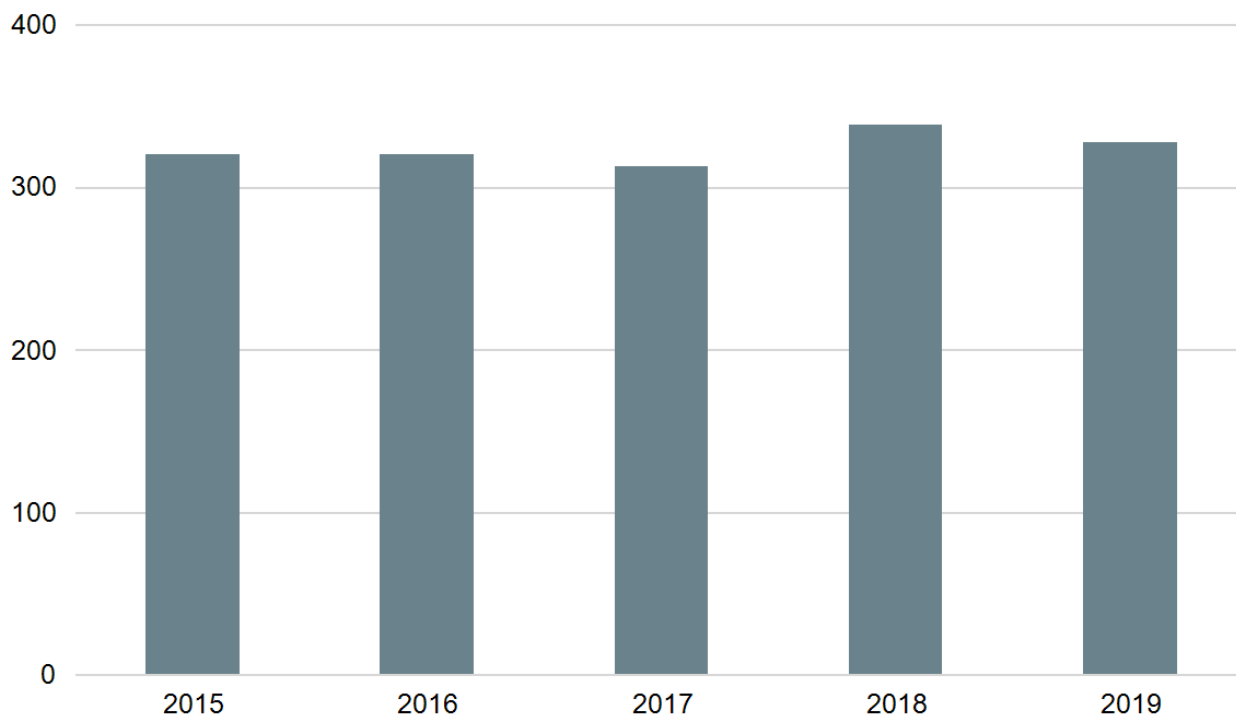
In addition to trade receivables and other receivables, the company has a small amount of loan receivables from associated companies. These are long- and short-term and described in Chapter 7.1. The receivables from associated companies are recognised according to these same accounting principles.

## 4.5 Operating expenses, liabilities and credit risk management for purchases

Fingrid's operating expenses consist of and have developed as follows:



Cost increases due in particular to new tasks and unexpected external changes affecting operations has been a special characteristic of grid operations in recent years. The new tasks include, among other things, the changes required by the European network codes and the costs for developing these tasks, and developing the Nordic imbalance settlement and the related markets. Some of the new tasks and responsibilities are assigned to Fingrid by law, which means the company must increasingly develop and back up its operations. The cost factors also include society's increasing dependency on the power system, as well as needs related to data security. Fingrid nevertheless continues to be one of the most cost-effective TSOs in the world in international benchmark studies. The Group's R&D costs in 2019 amounted to EUR 3.4 (3.6) million.

**Total costs (without imbalance power) 2015-2019, MEUR**


5. MATERIALS AND SERVICES, €1,000	2019	2018
Loss power costs	53,856	47,673
Purchase of imbalance power	322,226	316,608
Cost of reserves	55,716	56,286
Peak load capacity costs	13,719	13,717
ITC costs	14,982	13,803
Maintenance management costs	19,871	19,582
Other materials and services	10,491	15,204
<b>Total</b>	<b>490,861</b>	<b>482,873</b>

6. OTHER OPERATING EXPENSES, €1,000	2019	2018
Contracts, assignments etc. undertaken external	26,385	30,665
Gains/losses from measuring electricity derivatives at fair value	26,585	-36,958
Other rental expenses	1,023	4,083
Other expense	9,013	9,422

<b>Total</b>	<b>63,007</b>	<b>7,211</b>
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Auditors' fees	2019	2018
PricewaterhouseCoopers Oy		
Auditing fee	114	89
Assignments referred to in the Auditing Act, Chapter 1, Section 1, Subsection 2		2
Other fees	39	92
<b>Total</b>	<b>153</b>	<b>183</b>

Auditors' fees are included in other operating expenses

The company's operating model is largely based on outsourcing, including areas such as grid investments, maintenance management and ICT purchases. The company will apply competitive tendering as described in the procurement policy. All purchasing activities are based on impartiality, equality and transparency. Procurement decisions will be made according to previously published financial and qualitative criteria that are verifiable also after the fact. Fingrid aims to ensure that all suppliers and their subcontractors operate in a sustainable manner. A commitment to Fingrid's Supplier Code of Conduct is required from all suppliers.

7. TRADE PAYABLES AND OTHER LIABILITIES, €1,000	2019	2018
Trade payables	24,508	25,470
Trade payables to associated companies	3,920	2,226
Interest payable	11,056	11,794
Value added tax	17,896	13,803
Collaterals received	923	923
Electricity tax	4,107	4,443
Accruals	159,240	82,759
Other debt	741	613
<b>Total</b>	<b>222,393</b>	<b>142,030</b>

Essential items included in accruals	2019	2018
Personnel expenses	6,978	8,011
Accruals of sales and purchases	68,203	57,526
Tax liabilities	11,681	15,930
Congestion income	72,378	1,292

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<b>Total</b>	<b>159,240</b>	<b>82,759</b>
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### Credit risk in purchasing

The heads of functions are in charge of credit risks related to suppliers. The procurement policy and guidelines, and separate instructions set out the financial criteria required for Fingrid's suppliers and their monitoring.

### General procurement principles

The Group follows three alternative procurement methods when purchasing goods or services. When the value of the purchase is less than 30,000 euros and the benefits of a competitive tender are smaller than the costs of the purchase, the purchase can be executed without a competitive tender or it can be executed through an oral request. A written order or purchasing agreement is always drawn up. When the estimated value of the procurement exceeds 30,000 euros but is below the threshold values applied to public procurements, the procurement is subject to competitive bidding by requesting written bids from the supplier candidates. When the public procurement threshold values that apply to Fingrid (in 2019: EUR 443,000 for goods and services, EUR 5,548,000 for construction projects, EUR 418,000 for design competitions and EUR 5,548,000 for right-of-use agreements) are exceeded, the company follows the public procurement legislation applied to special sectors.



## 4.6 Inventories

### 4.6 Inventories

Fingrid prepares for outages by maintaining reserve power plants. The inventories contain fuel for reserve power plants, spare parts for submarine cables, back-up equipment and parts for substations, and repair equipment for transmission lines. The aim of stockpiling is to achieve sufficient preparedness at the substations and on the transmission lines owned by Fingrid in case of faults and events possibly occurring during times of crisis.

8. INVENTORIES, €1,000	2019	2018
Materials and consumables		
Material stocks	7,063	7,030
Fuel stocks	5,004	5,361
<b>Total</b>	<b>12,067</b>	<b>12,391</b>

The use of inventories was entered as an expense of EUR 1.6 (1.5) million.



#### Accounting principles

##### Inventories

Inventories are measured at the lower of acquisition cost or net realisable value. The acquisition cost is determined using the FIFO principle. The net realisable value is the estimated market price in normal business reduced by the estimated future costs of completing and estimated costs required by sale. Inventories consist of material and fuel inventories.

## 4.7 Management of commodity risks

The electricity price and volume risks are not significant to the company's turnover and financial result over time. If the volume of transmitted electricity deviates from the forecasted volume, the result may be a deviation in the company's turnover and financial result. This can lead to a surplus or deficit compared with the allowed reasonable return for the year in question, which the company will aim to offset during the subsequent financial year.

The company is exposed to electricity price and volume risk through transmission losses so that the company must acquire so-called loss power in an amount corresponding to the electricity transmission losses. Loss power purchases and the price hedging thereof are based on the Corporate Finance Principles approved by the Board of Directors. Moreover, the company has a loss power policy, approved by the Executive Management Group, for loss power hedging and purchases, as well as operative instructions, instructions for price hedging and control room instructions. The allowed hedging instruments are defined in the loss power policy. The purpose of price hedging is to reduce the impact of market price volatility and enable sufficient predictability in order to keep the annual pressures on grid pricing of loss energy at a moderate level. Price hedging is implemented over a four year horizon such that by the end of September in the year preceding the delivery, the price risk for the next year is fully hedged. For the price hedging, the company mainly uses NASDAQ OMX Commodities quoted forwards and futures. The company can also use OTC futures comparable with NASDAQ OMX Commodities forwards and futures. The nominal values, fair values and exposures of electricity derivatives are disclosed in table 23.

Commodity risks other than those related to loss energy purchases arise if the company enters into purchasing agreements in which the price of the underlying commodity influences the final price of the investment commodity (commodity price risk). As a rule, commodity price risks and exchange rate risks are fully hedged. A risk that amounts to less than EUR 5 million when realised can be left unhedged for reasons of cost-effectiveness.

## 4.8 Personnel - the cornerstone of our operations

Fingrid Oyj employed 380 (380) persons, including temporary employees, at the end of the year. The number of permanent personnel was 338 (327). Of the personnel employed by the company, 24 (23) per cent were women and 76 (77) per cent were men. The average age of the personnel was 44 (44).

9. PERSONNEL EXPENSES, €1,000	2019	2018
Salaries and bonuses	22,308	26,511
Pension expenses - contribution-based schemes	3,454	4,662
Other additional personnel expenses	648	1,017
<b>Total</b>	<b>26,409</b>	<b>32,190</b>
<b>Salaries and bonuses of top management</b>	<b>2,244</b>	<b>1,925</b>

Personnel costs amounted to EUR 31.1 (32.2) million, of which EUR 4.7 was capitalised to investment projects.

In 2019, the Group applied a remuneration system for senior management; the general principles of the system were accepted by the Board of Directors of Fingrid Oyj on 20 December 2018. The total remuneration of the members of the executive management group consists of a fixed total salary, a one-year bonus scheme, and a three-year long-term incentive scheme. The maximum amount of the one-year bonus scheme payable to the CEO was 40 per cent of the annual salary and to the other members of the executive management group 25 per cent of the annual salary. The maximum amount of the annual long-term incentive scheme payable to the CEO was 40 per cent and to the other members of the executive management group 25 per cent.

The Group currently has contribution-based pension schemes only. The pension security of the Group's personnel is arranged by an external pension insurance company. Pension premiums paid for contribution-based schemes are recognised as an expense in the income statement in the year to which they relate. In contribution-based schemes, the Group has no legal or factual obligation to pay additional premiums if the party receiving the premiums is unable to pay the pension benefits.

NUMBER OF SALARIED EMPLOYEES IN THE COMPANY DURING THE FINANCIAL YEAR:	2019	2018
Personnel, average	384	376
Personnel, 31 Dec	380	380

**Accounting principles****Employee benefits****Pension obligations**

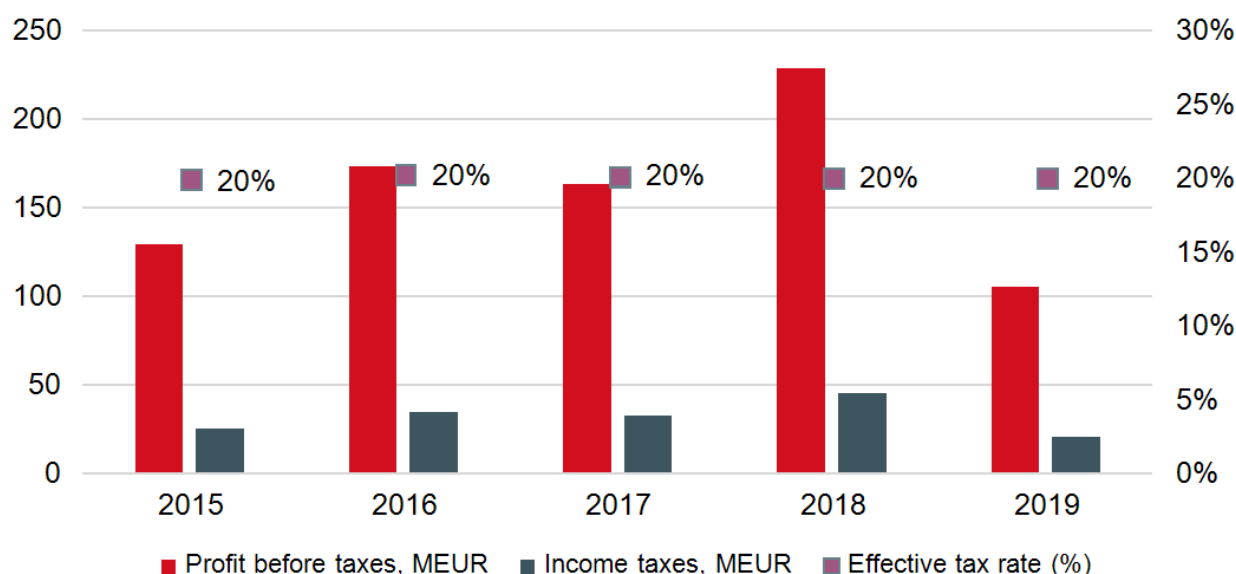
The company has only defined contribution-based pension schemes. A defined contribution-based pension arrangement refers to a pension scheme according to which fixed contributions are paid into a separate entity, and the Group bears no legal or actual obligation to make additional contributions if the fund does not contain sufficient funds to pay out benefits based on work performed during current and previous financial periods to all employees. Under defined contribution-based pension schemes, the Group pays mandatory, contractual or voluntary contributions into publicly or privately managed pension insurance policies. The Group has no other contribution obligations in addition to those payments. The payments are entered as personnel costs when they fall due. Advance payments are entered in the balance sheet as assets insofar as they are recoverable as refunds or deductions from future payments.

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## 4.9 Taxes

The company will pay its income taxes in accordance with the underlying tax rate, without special tax arrangements. Income taxes consist of direct taxes and the change in deferred tax: EUR -34.5 (-48.5) million and EUR 13.8 (2.7) million respectively. Fingrid's effective tax rate is essentially comparable to Finland's corporate tax rate 20%. The only difference between the Finnish corporate tax rate and Fingrid's effective tax rate is due to a minor amount of non-deductible items, amounting in 2019 to EUR -0.1 (0.0) million. The table below illustrates the development of Fingrid's effective tax rate.

### Taxes 2015-2019



### 10. DEFERRED TAX ASSETS AND LIABILITIES, € 1,000

#### Changes in deferred taxes in 2019:

	31 Dec 2018	Recorded in income statement at profit or loss	31 Dec 2019
<b>Deferred tax assets</b>			
Provisions	285	-6	279
Trade payables and other liabilities	1,913	146	2,059
Derivative instruments	2,281	-762	1,519
Congestion income	10,788	-1,786	9,003
Connection fees (IFRS 15)	8,028	1,965	9,993
Lease liabilities (IFRS 16)		62	62

<b>Total</b>	<b>23,296</b>	<b>-381</b>	<b>22,915</b>
<b>Deferred tax liability</b>			
Accumulated depreciations difference	-79,779	10,000	-69,779
Property, plant and equipment, tangible and intangible asset	-29,407	-799	-30,206
Other receivables	-556	-530	-1,086
Other financial assets	-71	-140	-210
Borrowings	-1,501	-243	-1,744
Derivative instruments	-11,673	5,914	-5,758
<b>Total</b>	<b>-122,986</b>	<b>14,202</b>	<b>-108,784</b>

**Changes in deferred taxes in 2018:**

<b>Deferred tax assets</b>	31 Dec 2017	Recorded in income statement at profit or loss	31 Dec 2018
Provisions	295	-10	285
Current financial receivables	3	-3	
Trade payables and other liabilities	1,566	347	1,913
Derivative instruments	3,207	-926	2,281
Congestion income	8,846	1,942	10,788
Connection fees (IFRS 15)		8,028	8,028
<b>Total</b>	<b>13,918</b>	<b>9,378</b>	<b>23,296</b>

<b>Deferred tax liabilities</b>	31 Dec 2017	Recorded in income statement at profit or loss	31 Dec 2018
Accumulated depreciations difference	-89,779	10,000	-79,779
Property, plant and equipment, tangible and intangible assets	-28,665	-742	-29,407
Other receivables	-560	4	-556
Other financial assets	-99	29	-71
Borrowings	-2,619	1,118	-1,501
Derivative instruments	-5,281	-6,392	-11,673
<b>Total</b>	<b>-127,003</b>	<b>4,017</b>	<b>-122,986</b>



## Accounting principles

### Income taxes

Taxes presented in the consolidated income statement include the Group companies' accrual taxes for the profit of the financial year, tax adjustments from previous financial years and changes in deferred taxes. Deferred taxes are recorded in accordance with Finland's statutory corporate tax rate of 20%. Taxes are recognised in the income statement unless they are linked with other comprehensive income, in which case the tax is also recognised in other comprehensive income. Such items in the Group consist solely of available-for-sale investments, since hedge accounting for electricity derivatives was discontinued in 2014.

Deferred tax assets and liabilities are recognised on all temporary differences between the tax values of asset and liability items and their carrying amounts using the liability method. Deferred tax is recognised using tax rates valid up until the closing date. The deferred tax liabilities arising from the original recognition of goodwill will not be recognised, however. Deferred tax liabilities will also not be recognised if they are caused by the original recognition of the asset or liability and the item is not related to a merger and the transaction will not affect the accounting totals or the taxable revenue during its implementation. The deferred tax assets are shown as non-current receivables and deferred tax liabilities correspondingly as non-current liabilities.

The largest temporary differences result from the depreciation of property, plant and equipment, from financial instruments, and from the use of congestion income for capital expenditures. No deferred tax is recognised on the undistributed profits of the foreign associated company, because receiving the dividend does not cause a tax impact by virtue of a Nordic tax agreement. The deferred tax asset from temporary differences is recognised up to an amount which can likely be utilised against future taxable income.

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## 5 Long-term Investor (IFRS)

- This chapter focusses on Fingrid's assets, and above the most important ones: Grid assets and the indicators related to them.
- The chapter also takes a look at the company's goodwill and provides a description of other property, plant and equipment, and intangible assets

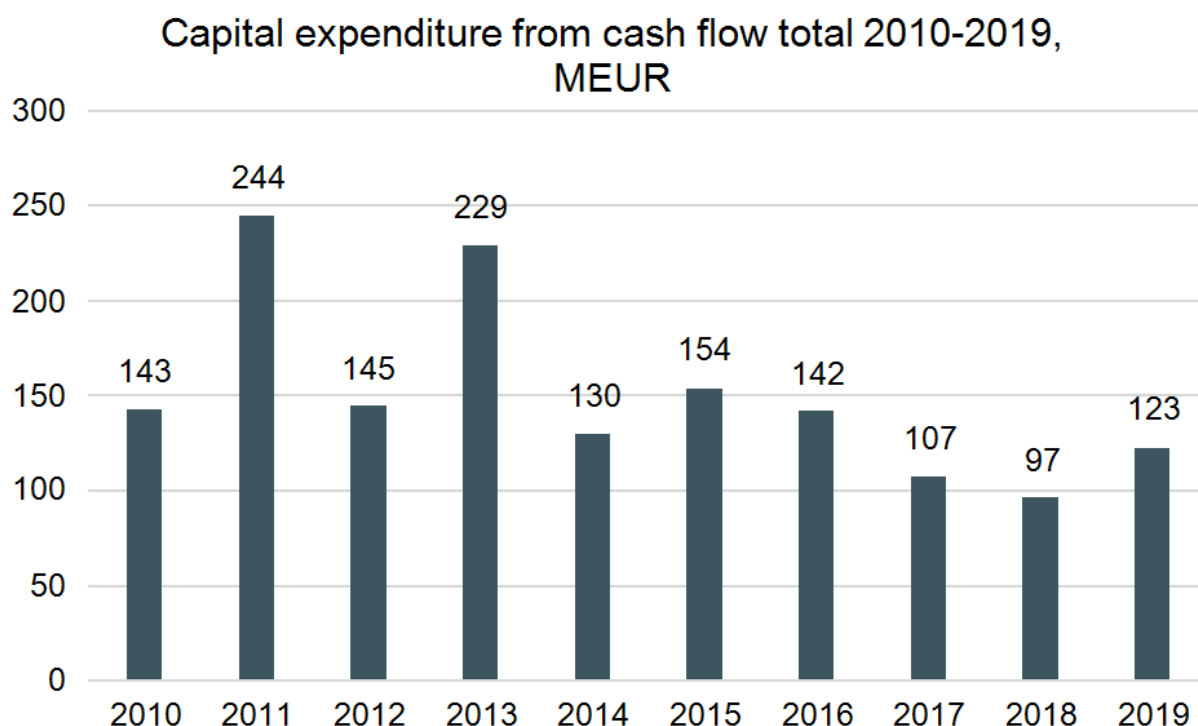


## 5.1 Grid assets

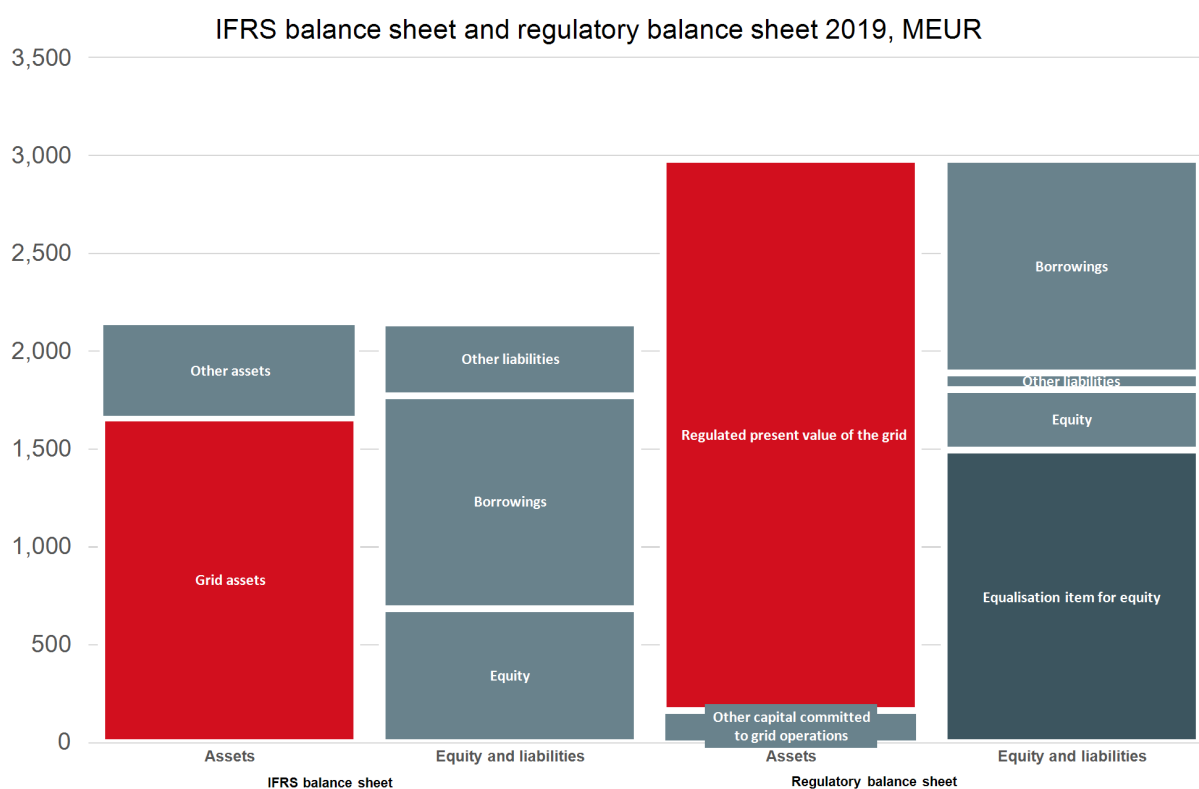
Fingrid's grid investment programme promotes the national climate and energy strategy, improves system security, increases transmission capacity and promotes the electricity markets. The annual capital expenditure in the grid has remained extensive.



The company's total capital expenditure in 2019 amounted to EUR 135.6 (92.7) million. This included a total of EUR 103.4 (85.1) million invested in the transmission grid and EUR 5.5 (2.9) million for reserve power. ICT investments amounted to EUR 25.6 (4.0) million. A total of EUR 3.4 (3.6) million was used for R&D projects during the year under review. In 2019, power lines and substations were built extensively throughout Finland. A total of approximately 150 kilometres of new transmission lines were built, and 12 new or expanded substations were completed. The most significant on-going construction projects are related to the Forest Line, the third AC connection between Finland and Sweden and the construction work around the Oulujoki river.



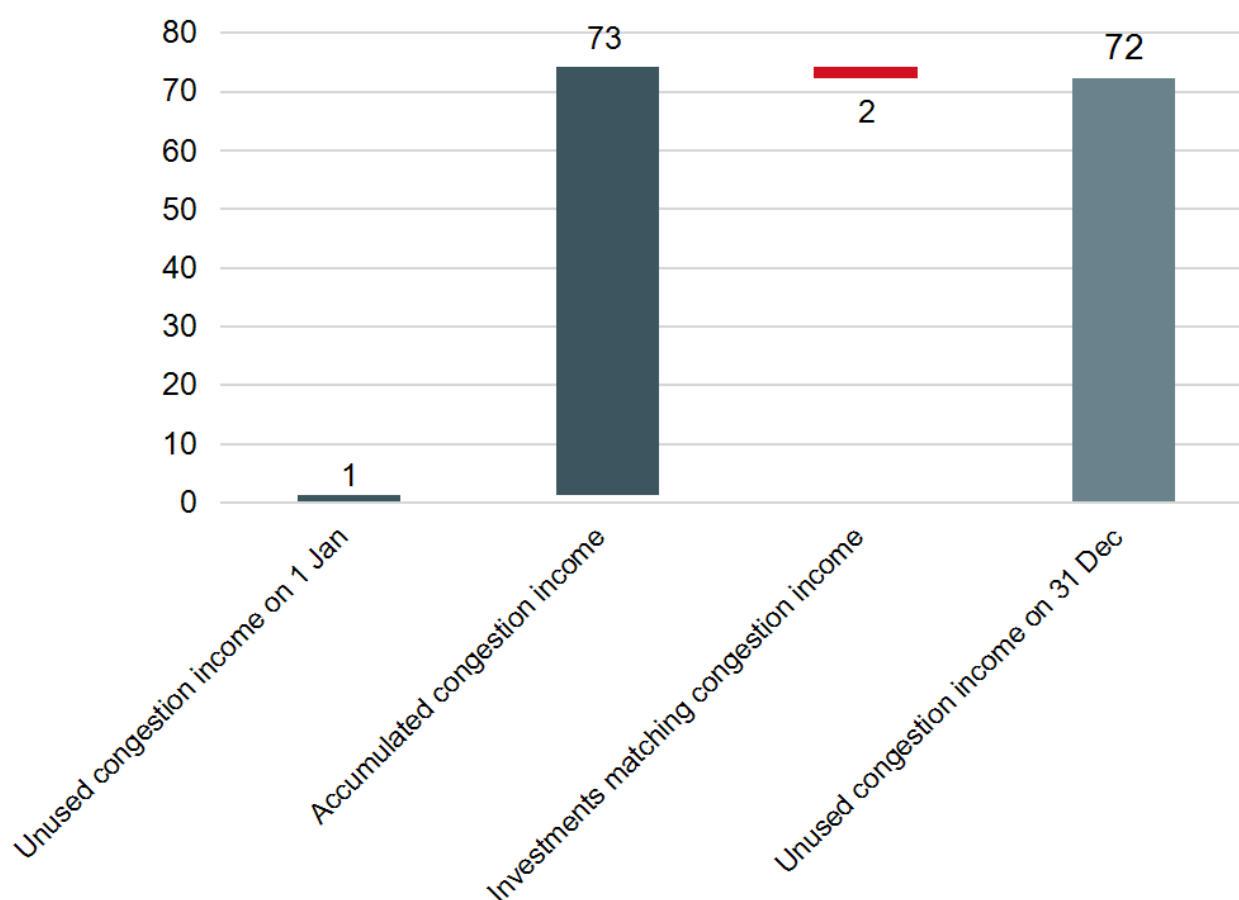
Grid assets are recognised at fair value for the purposes of the company's regulatory balance sheet, as described earlier. The fair value of the transmission network assets (adjusted replacement cost) is calculated by adding up the adjusted replacement costs for each grid component; these are calculated by multiplying the unit price specified by the Energy Authority with the number of grid components. The adjusted present value in use for a grid component is calculated based on the adjusted replacement cost, using the useful life and mean lifetime data of the grid component.



**Congestion income**

Congestion income is generated because of an insufficient transmission capacity between the bidding zones of an electricity exchange. In such cases, the bidding zones become separate price areas, and the transmission link joining them generates congestion income in the electricity exchange as follows: congestion income [€/h] = transmission volume in the day-ahead markets [MW] \* area price difference [€/MWh]. The basis for this is that a seller operating in a lower priced area receives less for their power than what a buyer pays for it in a higher priced area. The additional income caused by this price difference, i.e. congestion income, remains in the electricity exchange, which then pays the income to the TSOs as per the contractual terms. The congestion income received by a grid owner must be used for the purposes stated in EU Regulation 2019/943, Article 19: guaranteeing the actual availability of the allocated capacity, and maintaining or increasing interconnection capacities through network investments. As a consequence of the change in the regulation governing Fingrid's grid pricing, the company will include the congestion income received after 1 January 2016 in the balance sheet.

### Congestion income 2019, MEUR



Fingrid’s congestion income from cross-border transmission lines totalled EUR 73.0,0 (29.6) million. Congestion income accrued in 2019 was allocated to the Alapitkä capacitor investment, which maintains cross-border transmission capacity. EUR 72.4 million in congestion income was left unused and will be used for future investments to improve the functioning of the electricity market.



#### Accounting principles

##### Congestion income

As a consequence of the change in the regulation governing Fingrid’s grid pricing, the company will include the congestion income received after 1 January 2016 as accruals in the item other liabilities in the balance sheet. Of the accruals, congestion income will be recognised in the income statement as other operating income when their corresponding costs, as defined in the regulation, accrue as annual expenses in the income statement. Alternatively, they are entered in the balance sheet against investments, as defined by regulation, to lower the acquisition cost of

property, plant and equipment, which lowers the depreciation of the property, plant and equipment in question. The congestion income received before 1 January 2016 was recognised in turnover.

**Public contributions**

Public contributions received from the EU or other parties related to property, plant and equipment are deducted from the acquisition cost of the item, and the contributions consequently reduce the depreciation made on the item. Other contributions are distributed as income over those periods when costs linked with the contributions arise. Other contributions received are presented in other operating income.

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## 5.2 Tangible and intangible assets

11. PROPERTY, PLANT AND EQUIPMENT, € 1,000	2019	2018
<b>Land and water areas</b>		
Cost at 1 Jan	19,116	18,070
Increases 1 Jan - 31 Dec	524	1,138
Decreases 1 Jan - 31 Dec		-92
<b>Cost at 31 Dec</b>	<b>19,640</b>	<b>19,116</b>
<b>Carrying amount 31 Dec</b>	<b>19,640</b>	<b>19,116</b>
<b>Buildings and structure</b>		
Cost at 1 Jan	305,190	279,432
Increases 1 Jan - 31 Dec	26,825	26,780
Decreases 1 Jan - 31 Dec		-1,022
<b>Cost at 31 Dec</b>	<b>332,015</b>	<b>305,190</b>
Accumulated depreciation 1 Jan	-78,861	-69,640
Decreases, depreciation 1 Jan - 31 Dec		536
Depreciation 1 Jan - 31 Dec	-10,086	-9,756
<b>Carrying amount 31 Dec</b>	<b>243,068</b>	<b>226,329</b>
<b>Machinery and equipment</b>		
Cost at 1 Jan	1,183,907	1,146,492
Increases 1 Jan - 31 Dec	50,791	43,870
Decreases 1 Jan - 31 Dec		-6,455
<b>Cost at 31 Dec</b>	<b>1,234,697</b>	<b>1,183,907</b>
Accumulated depreciation 1 Jan	-630,596	-584,443
Decreases, depreciation 1 Jan - 31 Dec		2,464
Depreciation 1 Jan - 31 Dec	-43,128	-48,617
<b>Carrying amount 31 Dec</b>	<b>560,973</b>	<b>553,310</b>
<b>Transmission lines</b>		
Cost at 1 Jan	1,313,640	1,305,020
Increases 1 Jan - 31 Dec	36,650	10,541
Decreases 1 Jan - 31 Dec	-4,810	-1,921

<b>Cost at 31 Dec</b>	<b>1,345,479</b>	<b>1,313,640</b>
Accumulated depreciation 1 Jan	-555,155	-518,783
Decreases, depreciation 1 Jan - 31 Dec	4,404	1,081
Depreciation 1 Jan - 31 Dec	-37,518	-37,453
<b>Carrying amount 31 Dec</b>	<b>757,210</b>	<b>758,485</b>
<b>Other property, plant and equipment</b>		
Cost at 1 Jan	118	181
Decreases 1 Jan - 31 Dec		
<b>Cost at 31 Dec</b>	<b>118</b>	<b>118</b>
Decreases, depreciation 1 Jan - 31 Dec		
Depreciation 1 Jan - 31 Dec		
<b>Carrying amount 31 Dec</b>	<b>118</b>	<b>118</b>
<b>Prepayments and purchases in progress</b>		
Cost at 1 Jan	59,596	83,656
Increases 1 Jan - 31 Dec	106,599	75,934
Transfers to other tangible and intangible assets 1 Jan - 31 Dec	-115,901	-99,995
<b>Cost at 31 Dec</b>	<b>50,294</b>	<b>59,596</b>
<b>Carrying amount 31 Dec</b>	<b>50,294</b>	<b>59,596</b>
<b>Capitalised interest</b>		
Cost at 1 Jan	13,705	12,664
Increases 1 Jan - 31 Dec	1,016	1,042
Decreases 1 Jan - 31 Dec		-1
<b>Cost at 31 Dec</b>	<b>14,721</b>	<b>13,705</b>
Accumulated depreciation 1 Jan	-1,910	-1,433
Depreciation on capitalised interest 1 Jan - 31 Dec	-513	-478
<b>Carrying amount 31 Dec</b>	<b>12,297</b>	<b>11,795</b>
<b>Carrying amount 31 Dec</b>	<b>62,592</b>	<b>71,391</b>
<b>Property, plant and equipment</b>	<b>1,643,599</b>	<b>1,628,749</b>

**12. INTANGIBLE ASSETS, €1,000**
**2019**
**2018**
**Land use rights**

Cost at 1 Jan	97,509	95,087
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Increases 1 Jan - 31 Dec	2,811	2,625
Decreases 1 Jan - 31 Dec	-19	-203
<b>Cost at 31 Dec</b>	<b>100,301</b>	<b>97,509</b>
<b>Carrying amount 31 Dec</b>	<b>100,301</b>	<b>97,509</b>
<b>Other intangible assets</b>		
Cost at 1 Jan	52,930	48,783
Increases 1 Jan - 31 Dec	17,086	4,148
<b>Cost at 31 Dec</b>	<b>70,016</b>	<b>52,930</b>
Accumulated depreciation 1 Jan	-42,588	-39,229
Depreciation 1 Jan - 31 Dec	-3,960	-3,358
<b>Carrying amount 31 Dec</b>	<b>23,469</b>	<b>10,343</b>
<b>Carrying amount 31 Dec</b>	<b>123,770</b>	<b>107,852</b>

Land use rights are not depreciated but tested annually for impairment in connection with the testing of goodwill.

The entire business of the Fingrid Group is grid operations in Finland with system responsibility, which the full goodwill of the Group in the balance sheet is fully allocated to. The goodwill included in the balance sheet amounts to EUR 87.9 million and has not changed during the periods under review. Since, per the regulation, the fair value of the net assets included in the company's grid assets is approximately EUR 2,800.0 million compared to the carrying amount of EUR 1,855.3 million in net assets, which includes land use rights and goodwill, the book value of the asset items has not decreased.



## Accounting principles

### Property, plant and equipment

Grid assets form most of the property, plant and equipment. Grid assets include, among other things, 400 kV, 220 kV, 110 kV transmission lines, direct current lines, transmission line right-of-ways, substations and the areas they encompass (buildings, structures, machinery and equipment, substation access roads), gas turbine power plants, fuel tanks, generators and turbines.

Property, plant and equipment are valued in the balance sheet at the original acquisition cost less accumulated depreciation and potential impairment. If an asset is made up of several parts with useful lives of different lengths, the parts are treated as separate items and are depreciated over their separate useful lives.

When a part of property, plant and equipment that is treated as a separate item is replaced, the costs relating to the new part are capitalised. Other subsequent costs are capitalised only if it is likely that the future economic benefit relating to the asset benefits the Group and the acquisition cost of the asset can be determined reliably. Repair and maintenance



costs are recognised in the income statement when they are incurred.

Borrowing costs, such as interest costs and arrangement fees, directly linked with the acquisition, construction or manufacture of a qualifying asset form part of the acquisition cost of the asset item in question. A qualifying asset is one that necessarily requires a considerably long time to be made ready for its intended purpose. Other borrowing costs are recognised as an expense. Borrowing costs included in the acquisition cost are calculated on the basis of the average borrowing cost of the Group.

Property, plant and equipment is depreciated over the useful life of the item using the straight-line method. Depreciation on property, plant and equipment taken into use during the financial year is calculated on an item-by-item basis from the month of introduction. Land and water areas are not depreciated. The expected economic lives are verified at each closing date, and if they differ significantly from the earlier estimates, the depreciation periods are amended accordingly.

The depreciation periods of property, plant and equipment are as follows:

#### Buildings and structure

Substation buildings and separate buildings	40 years
Substation structures	30 years
Buildings and structures at gas turbine power plants	20-40 years
Separate structures	15 years

#### Transmission lines

Transmission lines 400 kV	40 years
Direct current lines	40 years
Transmission lines 110-220 kV	30 years
Creosote-impregnated towers and related disposal costs	30 years
Aluminium towers of transmission lines (400 kV)	10 years
Optical ground wires	10-20 years

#### Machinery and equipment

Substation machinery	10-30 years
Gas turbine power plants	20 years
Other machinery and equipment	3-5 years

Gains or losses from the sale or disposition of property, plant and equipment are recognised in the income statement under either other operating income or expenses. Property, plant and equipment are derecognised in the balance sheet when their economic useful life has expired, the asset has been sold, scrapped or otherwise disposed of to an outsider.

**Goodwill and other intangible assets**

Goodwill created as a result of the acquisition of enterprises and businesses is composed of the difference between the acquisition cost and the net identifiable assets of the acquired business valued at fair value. Goodwill is allocated to cash-generating units and is tested annually for impairment. With associated companies, goodwill is included in the value of the investment in the associated company.

Other intangible assets consist of computer software and land use and emission rights. Computer software is valued at its original acquisition cost and depreciated on a straight line basis during its estimated useful life. Land use rights, which have an indefinite useful life, are not depreciated but are tested annually for impairment.

More on emission rights in chapter 7.2.

Subsequent expenses relating to intangible assets are only capitalised if their economic benefits to the company increase beyond the former performance level. In other cases, expenses are recognised in the income statement when they are incurred.

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## 5.3 Lease agreements

The Group's leases mainly relate to office premises. The durations of the leases vary, and they may include options for extension and termination. The Group adopted the IFRS 16 standard on 1 January 2019.

A right-of-use asset and a corresponding liability are recognised for leases at the date at which the leased asset is available for use by the Group. Each lease payment is allocated between the liability and finance cost.

13. LEASES, 1,000 €	2019	2018
<b>Right-of-use-assets:</b>		
Right-of-use-assets, buildings and structures		
Cost at 1 Jan	34,974	
Increases 1 Jan - 31 Dec	220	
Deprecation 1 Jan - 31 Dec	-2,620	
Cost at 31 Dec	<b>32,574</b>	
Carrying amount 31 Dec	<b>32,574</b>	
Lease liabilities:		
Non-current	30,515	
Current	2,371	
<b>Total</b>	<b>32,886</b>	
<b>Amounts recognised in the income statement:</b>		
Depreciation of right-of-use assets – buildings	2,620	
Interest costs	683	
Costs related to low value asset leases	964	

The outgoing cash flow from leases in 2019 totalled EUR 3.0 million.

The Group has mainly leased office premises, land areas under substations and transmission lines and some 110 kilovolt transmission lines and circuit breaker bays. The durations of the lease agreements range from less than one year to fifteen years, and the contracts can usually be extended after the original date of expiration. The index, renewal and other terms of the different agreements vary.

As of 1 January 2019, the Group has recognised right-of-use assets for leases in the balance sheet, with the exception of short-term leases or leases concerning underlying assets with a low value; more information in accounting principle Leases and in the above calculation. Until 31 December 2018, lease liabilities were disclosed as an off-balance sheet item:

RENTAL LIABILITIES, € 1,000	2019	2018
<b>Rental obligations from lease agreements:</b>		
In one year		4,223
In more than one year and not more than five years		14,716
In more than five years		11,273
<b>Total</b>		<b>30,212</b>



## Accounting principles

### Lease agreements

Lease obligations where the risks and rewards incident to ownership remain with the lessor are treated as other lease agreements. Lease obligations paid on the basis of other lease agreements are treated within other operating expenses and are recognised in the income statement as equally large items during the lease period. Other lease agreements primarily concern office facilities, land areas and network leases.

#### IFRS 16 Leases

A right-of-use asset and a corresponding liability are recognised for leases at the date at which the leased asset is available for use by the Group. Each lease payment is allocated between the liability and finance cost. The finance cost is recognised in the income statement over the lease term so that the interest rate on the remaining liability is equal in each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and lease term on a straight-line basis.

The assets and liabilities arising from leases are initially measured on a present-value basis. Lease liabilities include the net fair value of the following lease payments:

- fixed payments less any incentives to be received
- variable lease payments that depend on an index or a rate
- amounts that the lessee is expected to pay based on residual value guarantees
- the exercise price of a purchase option, if the lessee is reasonably certain to exercise that option
- payments of penalties for terminating the lease if the lease term reflects the lessee exercising an option to terminate the lease

The lease payments are discounted using the Group's incremental borrowing rate.

Right-of-use assets are measured at cost, which comprises:

- the amount equal to the lease liability at its initial recognition
- lease payments made before the commencement of the lease, less any incentives received
- any initial direct costs and
- cost of restoring the site to the original condition

Payments related to short-term leases and low value asset leases are expensed in equal instalments. Leases with a lease term of 12 months or less are considered short term. Where the value of an underlying asset is not material for Fingrid, the management has evaluated the asset as a low value asset.

Payments related to repayments of lease liabilities are stated as cash flows from financing activities, the interest expenses are recognised in consolidated interest expenses. Lease payments based on short-term leases and low value asset leases and variable lease payments not included in lease liabilities are stated as cash flows from operating activities.

### **Adoption of the IFRS 16 standard**

Fingrid Oyj adopted the IFRS 16 standard on 1 January 2019, applying the modified retrospective transition approach. The cumulative impact of the adoption is presented in the opening balance on January 2019, and the comparison figures of the preceding year have not been adjusted. IFRS 16 replaced the previous IAS 17 Leases standard.

The standard requires the lessee to record all leases on its balance sheet. The lessee records on the balance sheet a right-of-use asset representing its right to use the asset and a lease liability representing its obligation to make lease payments. These right-of-use assets are depreciated over the shorter of lease term and useful life of the underlying asset. The interest cost of lease liabilities is recorded in finance costs. IFRS 16 provides for optional exemptions for short-term leases and low-value assets, which Fingrid Oyj makes use of. The payments related to these are expensed in the income statement. From the lessor's perspective, reporting remains similar to that under IAS 17, with the leases being divided into finance leases and other leases. Fingrid does not have significant leases as a lessor.

Following the adoption of IFRS 16, Fingrid has recorded on its balance sheet new assets and liabilities, mainly for leases of office premises. On 1 January 2019, Fingrid recorded EUR 35 million in new right-of-use assets. On 31 December 2018, rental liabilities other than finance lease liabilities amounted to EUR 30.2 million. The difference on the date of adoption is primarily attributable to the fact that Fingrid has a few long-term leases related to office premises, and that the options for extension referred to in the standard were taken into account when measuring the leases on the date of adoption of IFRS 16. Management's discretion has been used when assessing to what extent it can be expected that the options to extend the lease terms will be exercised. When adopting IFRS 16, the right-of-use assets were recorded based on an amount equal to the right-of-use asset's discounted lease liability. The average weighted discount rate for the right-of-use liability on 1 January 2019 was 2.02%.

The IFRS 16 standard has an impact on how the cash flow calculation is presented. The new presentation improves the cash flow from operating activities before financing items and taxes. Under IFRS 16, lease liability payments are stated in the cash flow of financing activities and the related interest in interest expenses.

The standard provides for two optional recognition exemptions for the lessee. If the exemption is adopted, the accounting treatment is similar to the previous treatment of operating leases, i.e. the lessee recognises the lease payments in profit or loss. The exemptions concern short-term leases and leases of low-value assets. Fingrid applies the IFRS 16 standard's exemption not to recognise on the balance sheet short-time leases with a lease term of 12 months or less and which do not include an option to purchase the underlying asset. Also where the value of an underlying asset is not material for Fingrid, the management has decided to make full use of the option.

The lease term corresponds to the non-cancellable period of the lease and leases where, according to management's assessment, the options to extend the lease will be exercised with a high probability. The real-estate leases do not clearly define the interest rate implicit in the lease, which is why Fingrid uses as the interest rate an estimate of the company's incremental borrowing rate for real estate leases. The incremental borrowing rate is determined for the entire real-estate lease portfolio, whereby all real-estate leases are discounted using the same interest rate. The discount rates applied in discounting leases under IFRS 16 are based on the market yield on the company's publicly quoted bonds.

Short-term leases or leases of low-value assets, which are expensed in equal instalments, consist of vehicle lease

payments, lease payments for land and water areas and lease payments for small machinery and equipment.

### Impacts of the transition to IFRS 16

Reconciliation of lease liabilities and commitments related to leases on the transition date is presented below:

<b>Rental liabilities 31 Dec 2018</b>	<b>30.2</b>
Impacts of determining the lease term	15.1
Impacts of discounting	-5.8
Short-term leases that are not recognised as dept	-0.1
Low-value asset leases	-4.3
<b>Rental liabilities 1 Jan 2019</b>	<b>35.0</b>
<b>Of which:</b>	
Current lease liabilities	2.3
Non-current lease liabilities	32.7
	<b>35.0</b>

## 6 Strong Financial Position (IFRS)

- This chapter focuses on describing how Fingrid's financing is formed and how the related risks are managed, and at the same time, how short-term financial assets that secure liquidity are formed.
- The chapter describes the company's principles of capital management, ownership structure and dividend distribution policy.
- The end of the chapter contains a summary of all the financial assets and financing liabilities, as well as derivatives, that the company uses solely for risk management purposes. The risks relate to various market risks: the electricity price risk and the interest rate and exchange rate risk. Management of the price and volume risk of electricity is described in chapter 4.7.

## 6.1 Capital management

Equity and liabilities as shown in the balance sheet are managed by the company as capital. The balance sheet according to the company's accounting is smaller than the balance sheet under the Finnish Energy Authority's regulations, in which grid assets have been measured at the regulatory present value in use. The company's borrowings are presented at their carrying amount also on the regulatory balance sheet. Equity on the accounting balance sheet is smaller than equity on the regulatory balance sheet, which balances out the difference in the grid asset carrying amount and the regulatory value in use. The principal aim of Fingrid's capital management and grid asset management is to secure the company's ability to conduct uninterrupted operations, value retention and rapid recovery from any exceptional circumstances. A key goal is to maintain an ideal capital structure such that the company's credit rating remains solid, cost of capital remains reasonable, and the company can pay dividends to its shareholders.

The company aims to maintain a credit rating of at least 'A-'. The company has not set specific key figure targets for accounting balance sheet or regulatory balance sheet capital management, but instead monitors and controls the overall situation, for which credit ratings and their underlying risk analyses and other parameters create a foundation.

The company's credit rating remained high in 2019. This reflects the company's strong overall financial situation and debt service capacity. Fingrid has credit rating service agreements with S&P Global Ratings (S&P) and Fitch Ratings (Fitch). The credit ratings valid on 31 December 2019 remained high and were as follows:

- S&P's rating for Fingrid's unsecured senior debt and long-term company rating at 'AA-' and the short-term company rating at 'A-1+', with a stable outlook.
- Fitch's rating for Fingrid's unsecured senior debt at 'A+', the long-term company rating at 'A', and 'F1' for the short-term company rating, with a stable outlook. Fitch Ratings downgraded Fingrid Oyj's Long-Term Issuer Default Rating (IDR) to 'A' from 'A+' and senior unsecured rating to 'A+' from 'AA-' on 28 January 2019. Fitch also affirmed a Short-Term IDR of 'F1'. The outlook for the ratings is stable. The rating remains the highest assigned by Fitch to any regulated TSO in Europe.



## 6.2 The aims and organisation of financing activities and the principles for financial risk management

The company has a holistic approach to the management of financing activities, encompassing external financing, as well as managing liquidity, counterparty and financial risks, and supporting business operations in matters related to financing in general.

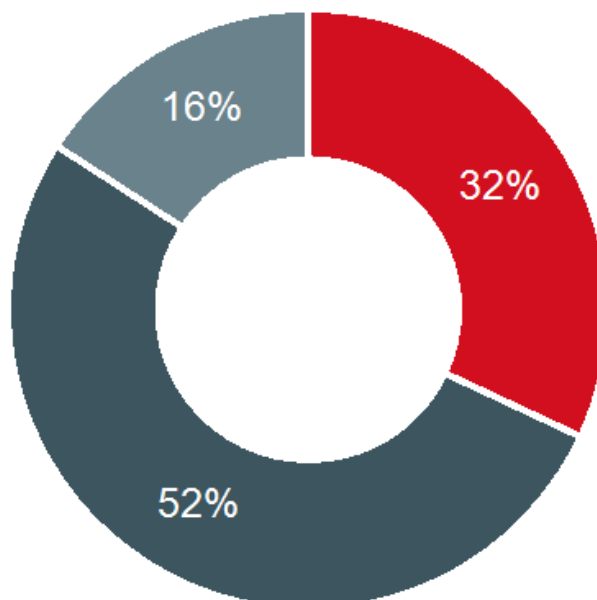
Core aims for financing activities:

- Protecting shareholder value by securing the financing required for the company's business operations, by hedging against the main financial risks and by minimising financial costs within the risk limits;
- Maintaining adequate liquidity even in unexpected situations;
- Long-term financing from diverse sources, taking into account the company's investment plan and cash flow from operating activities as well as credit rating and its criteria;
- Overall optimisation of the interest rate risk, including the interest rate risk of business operations via the Energy Authority's regulatory model (risk-free interest in the so called WACC model) and the company's interest rate risk of net debt;
- Forward-looking financial planning to ensure that the overall impact from the cash flow from operating activities, future investments, maturing loans and future dividends is taken into account when raising funds and optimising the loan portfolio structure.

The Treasury maintains active and consistent dialogue with the credit rating agencies and monitors the key ratios used by the agencies, as well as other generally accepted financial ratios.

Fingrid's financial capital consists of equity and debt financing. The share of equity from the balance sheet total was 32.0% and that of liabilities 68.0% in 2019. The IFRS 16 standard reduced the share of equity by 0.5% points. Regulatory equity was 60.5% and liabilities were 39.5% of the regulatory balance sheet in 2019.

## Capital structure 2019



■ Shareholders' equity ■ Interest-bearing borrowings ■ Other liabilities

Fingrid Oyj is exposed to market, liquidity, counterparty and credit risks, among others, when the company's financial position is managed. The objective of financial risk management is to foster shareholder value by securing the financing required for the company's business operations, by hedging against the main financial risks and by minimising financing costs within the risk limits.

### Corporate finance principles

The Board of Directors of Fingrid Oyj approves the Corporate Finance Principles which define how Fingrid Oyj manages financing as a whole. The external financing of Fingrid Group is carried out by Fingrid Oyj.

### Risk management execution and reporting

Fingrid's Chief Financial Officer is responsible for the practical measures related to securing financing and managing financial risks, in line with the company's Corporate Finance Principles and Treasury Policy. The CFO oversees the day-to-day organising, reporting and adequate controls of financing activities, and reports regularly to the CEO and the Board (Audit Committee).

### Risk management processes

The Treasury unit is in charge of risk monitoring, systems and the models and methods used to calculate and assess risks. The Treasury unit is furthermore responsible for identifying, measuring and reporting the financial risks that the company may be exposed to. The internal audit additionally ensures compliance with the Corporate Finance Principles and the company's internal guidelines.

**Fair value hierarchy**

In the presentation of fair value, assets and liabilities measured at fair value are categorised into a three-level hierarchy. The appropriate hierarchy is based on the input data of the instrument. The level is determined on the basis of the lowest level of input for the instrument that is significant to the overall fair value measurement.

Level 1: inputs are publicly quoted in active markets.

Level 2: inputs are not publicly quoted and are based on observable market parameters either directly or indirectly.

Level 3: inputs are not publicly quoted and are unobservable market parameters.

## 6.3 Financial liabilities, financial costs and managing the financial risks of liabilities

The company takes advantage of the opportunities offered by credit ratings at any given time on the international and domestic money markets. Market-based and diversified financing is sought from several sources. The goal is a balanced maturity profile. Fingrid's existing loan agreements, debt or commercial paper programmes are unsecured and do not include any financial covenants based on financial ratios.

The company operates in the debt capital, commercial paper and loan markets:

- For long-term financing, the company has an international Medium Term Note Programme ("EMTN Programme"), totalling EUR 1.5 billion.
- Fingrid has an international Euro Commercial Paper Programme ("ECP Programme") totalling EUR 600 million.
- Fingrid has a domestic commercial paper programme totalling EUR 150 million.
- Furthermore, Fingrid has bilateral long-term loan agreements with both the European Investment Bank (EIB) and the Nordic Investment Bank (NIB).

### Green financing

Green financing is an important part of Fingrid's financing strategy and responsible operating model. Fingrid was the first Finnish company to issue a Green Bond in 2017. Green Bonds are used to finance projects that are expected to have long-term net positive environmental impacts. Green Bond projects connect renewable energy production to Fingrid's transmission network, reduce electricity transmission losses and create smart solutions that save energy and the environment. Fingrid annually reports on the impacts of its Green Bond projects by publishing a separate impact report on its website under Investors. As of 2019, the company also discloses the estimated amount of carbon dioxide emissions that have been avoided through these projects in carbon dioxide equivalent tonnes. The company's objective is to increase the share of green financing in its total financing.

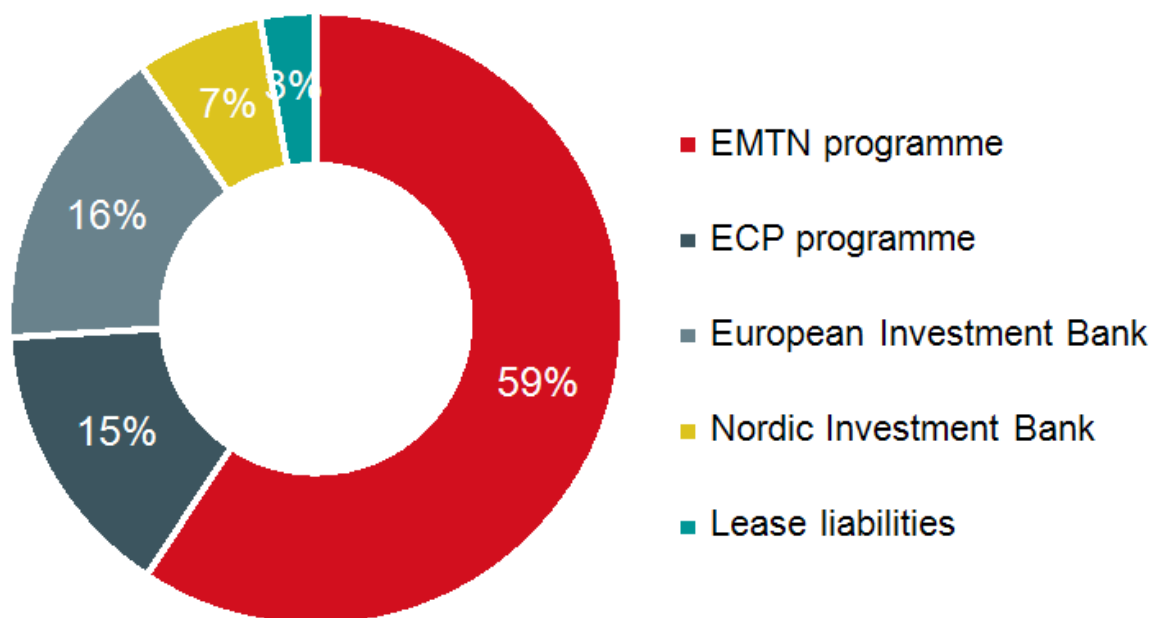
Fingrid's EMTN programme and bonds are listed on the London Stock Exchange. On 9 January 2019, Fingrid listed the EMTN Programme and bonds on the Irish Stock Exchange (Euronext Dublin) in addition to the London Stock exchange. Dual listing enables the trading of debt issues and new debt issue listings on these two stock exchanges.

Fingrid and the European Investment Bank (EIB) signed a EUR 100 million long term loan agreement for reinforcing and developing Finland's electricity transmission grid on 7 February 2019. The EIB's funding supports Fingrid's investment programme, which aims to reinforce and develop the nation-wide electricity transmission grid.

Fingrid and the Nordic Investment Bank (NIB) signed a twenty-year EUR 100 million loan agreement concerning the expansion and reinforcement of the transmission grid. The loan will be used to finance Fingrid's investments that will enable the power system transformation to accommodate the growing production of renewable energy and the reinforcement of the grid to keep Finland as a single price area.

The graph below illustrates Fingrid's various sources of debt financing. Fingrid sources debt financing mainly from the international debt capital markets.

## Total debt by source 2019



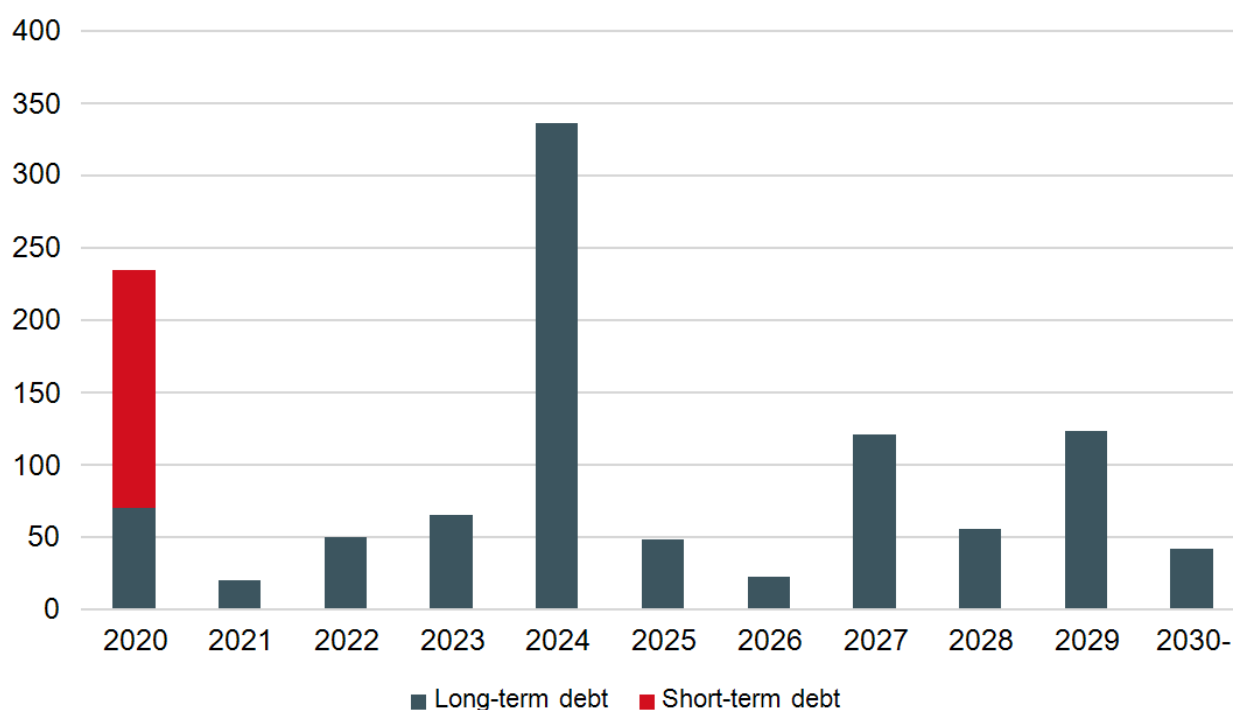
Borrowings are as follows:

14. BORROWINGS, €1,000	2019			2018			Hierarchy level
	Fair value	Balance sheet value	%	Fair value	Balance sheet value	%	
<b>Non-current</b>							
Bonds	701,100	613,921		743,043	663,629		Level 2
Loans from financial institutions	249,487	240,216		115,404	107,879		Level 2
	<b>950,588</b>	<b>854,138</b>		<b>858,446</b>	<b>771,508</b>		
Lease liabilities		30,515					
		<b>884,652</b>	79%		<b>771,508</b>	73%	
<b>Current</b>							

Bonds	50,136	50,000		20,848	20,104	Level 2
Loans from financial institutions	18,900	17,662		23,855	22,600	Level 2
Other loans/Commercial papers (international and domestic)	165,106	165,315		245,183	245,387	Level 2
	<b>234,142</b>	<b>232,978</b>		<b>289,886</b>	<b>288,091</b>	
Lease liabilities		2,371				
		<b>235,349</b>	21%		<b>288,091</b>	27%
<b>Total</b>	<b>1,184,730</b>	<b>1,120,001</b>	100%	<b>1,148,332</b>	<b>1,059,598</b>	100%

The fair values of borrowings are based on the present values of cash flows. Loans raised in various currencies are measured at the present value on the basis of the yield curve of each currency. The discount rate includes the company-specific and loan-specific risk premium. Borrowings denominated in foreign currencies are translated into euros at the fixing rate quoted by the ECB at the closing date.

### Debt maturity profile, MEUR



Non-current financial liabilities in the graph above include a total of EUR 32.9 million in lease liabilities in accordance with IFRS 16.

15. BONDS INCLUDED IN BORROWINGS, €1,000					2019	2018
Currency	Nominal value	Maturity	Interest	Balance sheet value		
EUR	50,000	20 Sep 2020	floating rate	50,000	50,000	
EUR	30,000	19 Sep 2022	floating rate	30,000	30,000	
EUR	30,000	11 Sep 2023	2.71%	30,000	30,000	
EUR	300,000	3 Apr 2024	3.50%	299,359	299,222	
EUR	100,000	23 Nov 2027	1.125%	99,424	99,355	
EUR	25,000	27 Mar 2028	2.71%	25,000	25,000	
EUR	10,000	12 Sep 2028	3.27%	10,000	10,000	
EUR	80,000	24 Apr 2029	2.95%	80,000	80,000	
EUR	30,000	30 May 2029	2.89%	30,000	30,000	
				653,783	653,577	
NOK	200,000	12 Nov 2019	5.37%		20,104	
NOK	100,000	16 Sep 2025	4.31%	10,138	10,052	
				10,138	30,156	
Bonds, long-term total				613,921	663,629	
Bonds, short-term total				50,000	20,104	
<b>Total</b>				<b>663,921</b>	<b>683,733</b>	

The company defines net debt as the difference between cash in hand, and the financial assets recognized in the income statement at fair value and borrowings as shown in the balance sheet. The development of net debt is actively monitored.

16. RECONCILIATION OF DEBT, €1,000			
	Borrowings due within 1 year	Borrowings due after 1 year	Total
<b>Debt on 1 Jan 2018</b>	<b>269,304</b>	<b>813,404</b>	<b>1,082,707</b>
Cash flow from financing activities	-28,816		-28,816
Exchange rate adjustments	2,108	3,399	5,506
Other changes not involving a payment transaction		201	201
Transfer to short-term loans	45,496	-45,496	
<b>Debt on 31 Dec 2018</b>	<b>288,091</b>	<b>771,508</b>	<b>1,059,598</b>

Cash flow from financing activities	-126,396	150,000	23,604
Exchange rate adjustments	3,621	292	3,913
Other changes not involving a payment transaction	2,371	30,515	32,886
Transfer to short-term loans	67,662	-67,662	
<b>Debt on 31 Dec 2019</b>	<b>235,349</b>	<b>884,652</b>	<b>1,120,001</b>

Other changes are mainly made up of IFRS 16 impacts.

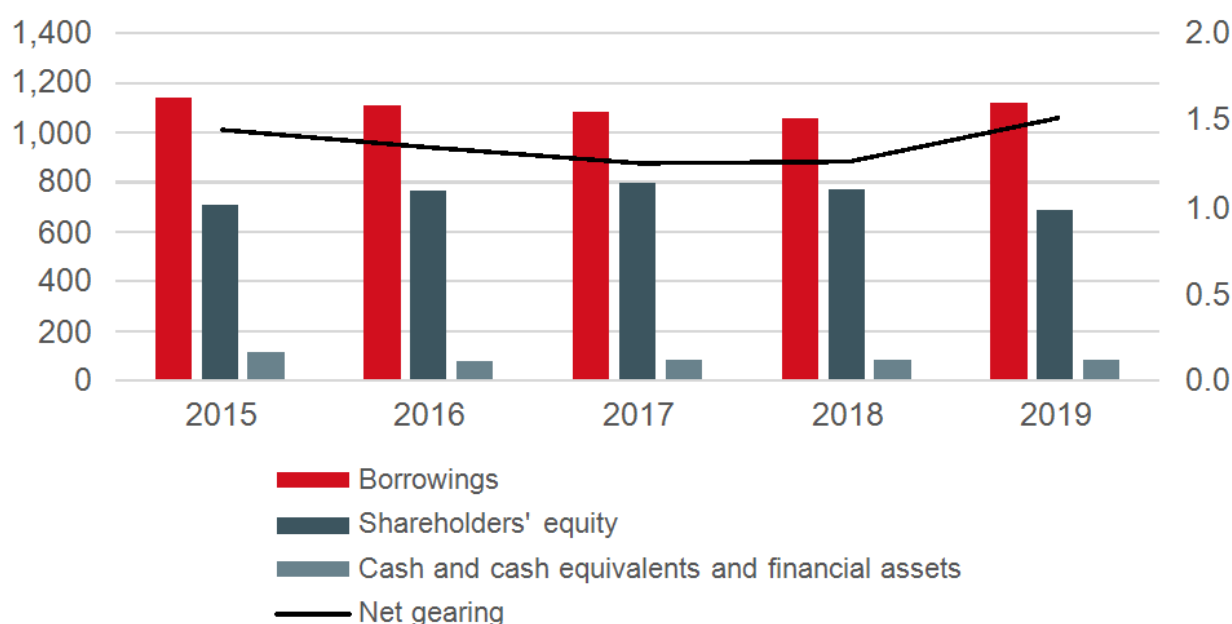
<b>Reconciliation of net debt, € 1,000</b>	<b>2019</b>	<b>2018</b>
Cash in hand and cash equivalents	15,626	13,922
Financial assets recognised in the income statement at fair value	67,188	71,380
Borrowings - repayable within one year	235,349	288,091
Borrowings - repayable after one year	884,652	771,508
<b>Net debt</b>	<b>1,037,186</b>	<b>974,297</b>

Net debt is the difference between the company's debt and its cash in hand and cash equivalents

Financial assets recognised at fair value through profit and loss are liquid investments traded on active markets. At the end of the year, the company's borrowings included a total of EUR 32.9 million in lease liabilities in accordance with IFRS 16, consisting of EUR 2.4 million in short-term liabilities, to be paid within a year, and EUR 30.5 million in long-term liabilities, with a maturity date after more than a year.



### Capital MEUR and net gearing 2015-2019



Interest income and costs on loans and other receivables are as follows:

17. INTEREST INCOME AND EXPENSES FROM LOANS AND OTHER RECEIVABLES, €1,000		
	2019	2018
Interest income on financial assets in income statement at fair value	466	46
Interest income on cash, cash equivalents and bank deposits	2	124
	468	170
Interest expenses on borrowings	-19,985	-20,898
Net interest expenses on interest rate and foreign exchange derivatives	5,926	4,553
Gains from measuring derivative contracts at fair value	5,405	2,790
Losses from measuring derivative contracts at fair value	-1,007	-1,917
Net foreign exchange gains and losses from borrowings, derivatives and FX-accounts	-351	-59
Interest expenses on lease liabilities (IFRS 16)	-683	
Other finance costs	-882	-895
	-11,577	-16,426
Capitalised finance costs, borrowing costs;		

at a capitalisation rate of 1.3 % (note 11)	1,016	1,042
<b>Total</b>	<b>-10,093</b>	<b>-15,213</b>

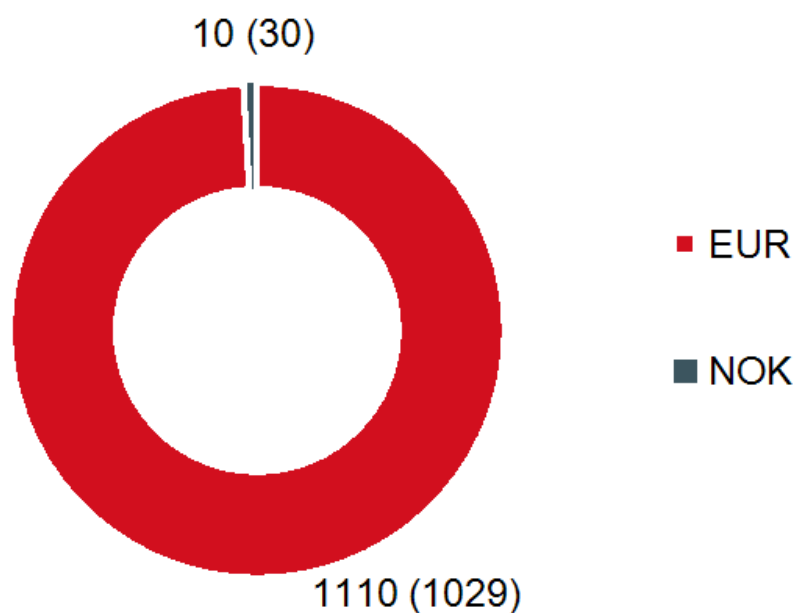
**Managing the market risks of debt**

Fingrid’s debts are issued in both fixed and floating interest rates and in several currencies. They thus expose Fingrid’s cash flow to interest rate and exchange rate risks. Fingrid uses derivative contracts to hedge against these risks. Fingrid generally holds issued bonds to maturity and thus does not value its bonds in the balance sheet at fair value or hedge against the fair value interest rate risk. The permitted hedging instruments are defined in the Treasury policy and are chosen in order to achieve the most effective hedging possible for the risks in question.

The functional currency of the company is euro. Generally, currency risks and the foreign exchange interest rate risk are fully hedged. A risk that amounts to less than EUR 5 million when realised can be left unhedged for reasons of cost-effectiveness.

**Transaction risk**

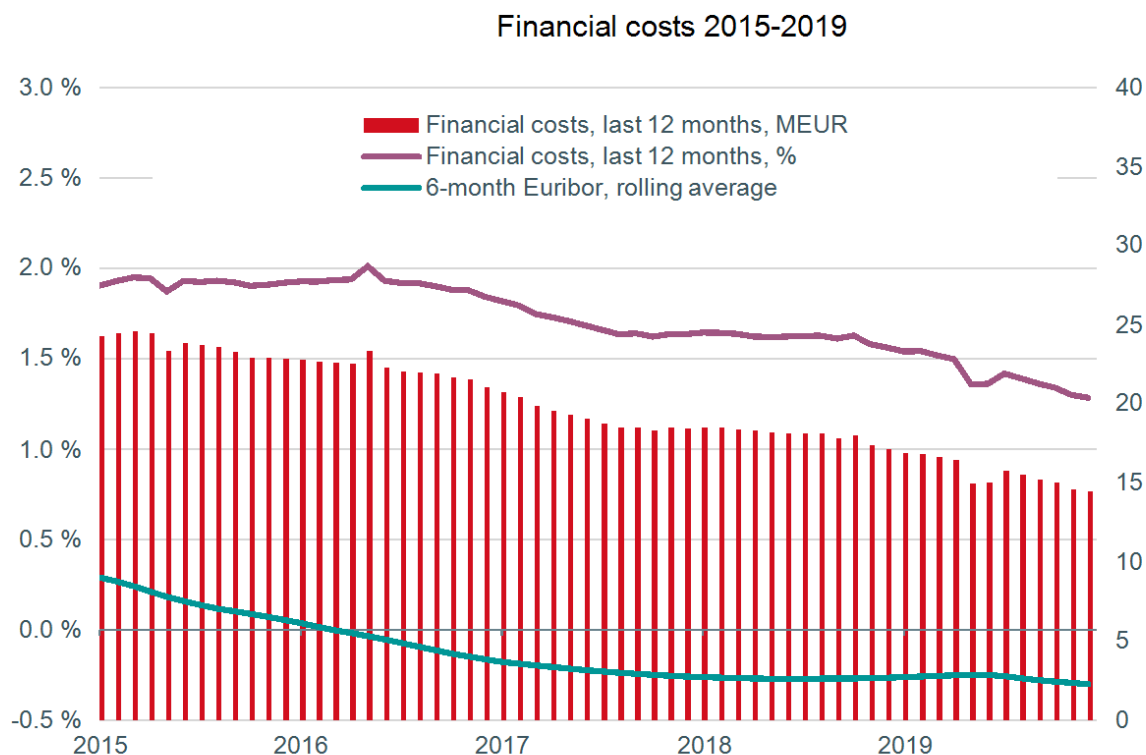
**Total debt in original currency 2019, MEUR**



The company issues bonds in the international and domestic money and debt capital markets. The company’s debt portfolio is spread across euro-denominated and non-euro-denominated currencies. The total foreign-currency-denominated debt portfolio and the related interest rate flows are hedged against the currency risk. The currency risk

for each bond is always fully hedged in conjunction with its issuance. The company uses interest rate and cross currency swaps to hedge the exchange rate and interest risk of bonds.

Business-related currency risks are small and they are mainly hedged. During the financial year, the company used foreign exchange forwards to hedge business transaction risks. A summary of the derivatives is presented in Note 23.



The graph 'Financial costs 2015–2019' does not include IFRS 16 interest expenses.

**Interest rate risk**

The company is only exposed to euro denominated interest rate risk from its business operations, assets and borrowings. The company's borrowings are, both in terms of principal and interest payments, fully hedged against exchange rate risks. Cash and cash equivalents and financial assets recognised in the income statement at fair value are denominated in euros.

Interest rate risk management includes optimisation of future interest rate risk of business operations (risk-free interest in the WACC model described in the next infobox) emerging from the regulatory model specified by the Energy Authority, together with company's net debt interest rate risk.

The interest rate risk from business operations can in part or in its entirety be hedged in terms of the adjusted capital committed to grid operations. The Board of Directors makes a separate decision on the hedging of operational interest rate risks. The interest rate risk included in business operations was not hedged in 2019. The interest rate risk inherent in Fingrid's business operations is caused by changes in the risk-free interest in the WACC model. If the risk-free interest

rate rises/falls by one percentage unit, the post-tax WACC rises/falls by 0.9%.

The objective of managing the interest rate risk on the loan portfolio is to minimise interest costs in the long term. The aim is to keep the average interest rate period of the gross interest exposure for the loan portfolio (derivatives and liabilities) at around twelve (12) months. The loan portfolio's interest rate risk arises from market interest rate volatility, which decreases or increases the annual interest expenses on the company's floating-rate loans. When market interest rates increase/decrease, the interest expenses of the floating-rate loans also increase/decrease. The company hedges this so-called cash flow risk with derivatives. The sensitivity of the loan portfolio to interest rate risk is measured by using a Cash Flow at Risk (CFaR) type of model, more specifically the Autoregressive Integrated Moving Average (ARIMA) model. The key parameters of the model are the 3-month and 6-month Euribor rates, of which the historical time series serve as a basis for a forward-looking simulation of the probable future interest expenses for Fingrid's loan portfolio. The exposure on which the sensitivity analysis is calculated includes all of the Group's interest-bearing borrowings, the loan portfolio's derivatives and interest-rate options purchased to hedge against unexpected changes in interest rates. According to the model, there is a 95% (99%) probability that Fingrid's interest expenses will amount to no more than EUR 17.1 (18.0) million during the next 12 months.



### Determination of the reasonable rate of return in regulation and operational interest rate risk

The reasonable rate of return on adjusted capital committed to grid operations is determined by using the weighted average cost of capital model (WACC). The WACC model determined by the Finnish Energy Authority illustrates the average cost of the capital used by the company, where the weights are the relative values of equity and debt. The weighted average of the costs of equity and interest-bearing debt are used to calculate the total cost of capital, i.e. the reasonable rate of return per the regulation. The reasonable return is calculated by multiplying the adjusted capital invested in network operations by the WACC.

$$WACC_{post-tax} = C_E \times \frac{E}{E+D} + C_D \times (1 - yvk) \times \frac{D}{E+D}$$

$WACC_{post-tax}$  = reasonable rate of return after corporate tax

$C_E$  = reasonable cost of equity

$C_D$  = reasonable cost of interest-bearing debt

$E$  = adjusted equity invested in network operations

$D$  = adjusted interest-bearing debt invested in network operations

ctr = current rate of corporate tax

$$C_D = R_r + DP$$

$R_r$  = risk-free interest rate

$DP$  = risk premium of debt

$$C_E = R_r + \beta_{\text{velallinen}} \times (R_m - R_r) + LP$$

$R_r$  = risk-free interest rate  
 $\beta_{\text{levered}}$  = levered beta  
 $R_m$  = average market return  
 $R_m - R_r$  = market risk premium  
 $LP$  = liquidity premium

The above-mentioned reasonable rate of return after taxes is then adjusted with the current rate of corporate tax. This calculation gives the reasonable pre-tax rate of return.

$$WACC_{\text{pre-tax}} = \frac{WACC_{\text{post-tax}}}{(1 - yvk)}$$

WACC pre-tax = reasonable rate of return before corporate tax

A fixed capital structure is applied to the TSO, whereby the weight of debt capital is 50% and the weight of equity capital is 50%. The pre-tax reasonable rate of return is calculated as follows:

$$WACC_{\text{pre-tax}} = \frac{C_E \times 0,5}{(1 - yvk)} + C_D \times 0,5$$

$$R_{k,\text{pre-tax}} = WACC_{\text{pre-tax}} \times (E + D)$$

$R_{k,\text{pre-tax}}$  = pre-tax reasonable return, EUR  
 $WACC_{\text{pre-tax}}$  = reasonable rate of return, %  
 $E$  = adjusted equity invested in network operations, EUR  
 $D$  = adjusted interest-bearing debt invested in network operations, EUR  
 $E + D$  = adjusted capital invested in network operations, EUR

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Cost of equity
$C_E = R_f + \beta_{Unlevered} \times (1 + (1 - t) \times D/E) \times (R_m - R_f) + LP$ $C_E = \text{Finnish 10y bond} + 0.4 \times (1 + (1 - 20\%) \times 50/50) \times 5\% + 0.6\%$ $C_E = \text{Finnish 10y bond} + 4.2\%$
Cost of debt
$C_D = R_f + DP$ $C_D = \text{Suomen valtion 10v obligaatio} + 1.26\%$
WACC (pre tax)
$WACC_{post-tax} = C_E \times 50/100 + C_D \times (1 - t) \times 50/100$ $WACC_{post-tax} = \text{Finnish 10y bond} \times 0.9 + 2.60\%$ $WACC_{pre-tax} = \text{Finnish 10y bond} \times 1.125 + 3.26\%$

Parameter	Value to be applied
Risk-free rate ( $R_f$ )	Greater of: a) 10-year average of 10-year Finnish government bond rate b) Average of previous year April-September government bond rate
Asset beta ( $\beta_{Unlevered}$ )	0.4
Market risk premium ( $R_m - R_f$ )	5.0%
Liquidity premium (LP)	0.6%
Capital structure (D/E)	50/50
Risk premium of debt (DP)	1.26%
Tax rate (t)	20%

## Liquidity risk

Fingrid is exposed to liquidity and refinancing risks arising from the redemption of loans, payments and fluctuations in cash flow from operating activities. The liquidity of the company must be arranged so that liquid assets (cash and cash equivalents, and financial assets recognised in the income statement at fair value) and available long-term committed credit lines can cover 110% of the refinancing needs for the next 12 months.

The company has a revolving credit facility agreement of EUR 300 million signed on 11 December 2015. The maturity of the facility is five years. In addition to this, the company has two one-year extension options, of which both have been used. These extended the maturity of the revolving credit facility until 11 December 2022. The facility is committed and has not been drawn. The company additionally has uncommitted overdraft facilities totaling EUR 50 million.

The refinancing risk is managed by building an even maturity profile such that the share of long-term loans in a single year constitutes less than 30 per cent of the total debt and the average maturity of the company's loan portfolio is at least three years. To secure refinancing, the company makes wide use of diverse sources of financing. The high credit rating and good bank and investor relations enable ready access to the debt capital market and thus minimises the company's debt refinancing risks and financing costs. The counterparty risks of financing activities are caused by counterparties related to investing (e.g. money market funds), derivatives counterparties and bank counterparties. The company minimises any counterparty risks. As a rule, credit rating categories are the decisive factor in specifying the counterparty limit.

Contractual repayments and interest costs on borrowings are presented in the next table. The interest rates on floating-rate loans are defined using the zero coupon curve. The repayments and interest amounts are undiscounted values. Finance costs arising from interest rate swaps are often paid in net amounts depending on the nature of the swap. In the following table, they are presented in gross amounts.

### 18. PAYMENTS UNDER FINANCING AGREEMENTS IN CASH, €1000

31.12.2019		2020	2021	2022	2023	2024	2025-	Total
Bonds	-repayments	50,000		30,000	30,000	299,359	254,562	<b>663,921</b>

	-interests	17,124	17,106	17,125	17,106	16,293	23,962	<b>108,716</b>
Loans from financial institutions	-repayments	17,662	17,662	17,662	33,047	34,660	137,185	<b>257,879</b>
	-interests	2,095	1,690	1,393	1,237	1,041	4,900	<b>12,356</b>
Commercial papers	-repayments	165,000						<b>165,000</b>
Lease liabilities	-repayments	2,371	2,311	2,192	2,199	2,228	21,584	<b>32,886</b>
	-interests	642	600	557	513	469	2,159	<b>4,938</b>
Currency swaps	-payments	25	32	48	67	79	12,603	<b>12,855</b>
Interest rate swaps	-payments	72	95	144	203	71	427	<b>1,012</b>
Forward contracts	-payments	12,597	300	1,000	1,500	900		<b>16,297</b>
<b>Total</b>		<b>267,589</b>	<b>39,797</b>	<b>70,121</b>	<b>85,872</b>	<b>355,100</b>	<b>457,382</b>	<b>1,275,860</b>
Currency swaps	-receivables	437	437	437	437	437	10,575	<b>12,760</b>
Interest rate swaps	-receivables	5,281	5,205	4,915	4,094	3,025	2,580	<b>25,101</b>
Forward contracts	-receivables	12,173	296	992	1,505	909		<b>15,874</b>
<b>Total</b>		<b>17,891</b>	<b>5,937</b>	<b>6,344</b>	<b>6,036</b>	<b>4,371</b>	<b>13,155</b>	<b>53,735</b>
<b>Total</b>		<b>249,698</b>	<b>33,860</b>	<b>63,777</b>	<b>79,836</b>	<b>350,728</b>	<b>444,227</b>	<b>1,222,126</b>
<b>31 Dec 2018</b>		<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024-</b>	<b>Total</b>
Bonds	-repayments	20,104	50,000		30,000	30,000	553,629	<b>683,733</b>
	-interests	18,377	17,222	17,234	17,293	17,102	40,247	<b>127,475</b>
Loans from financial institutions	-repayments	21,662	17,662	17,662	17,662	17,662	37,229	<b>129,541</b>
	-interests	2,486	2,088	1,820	1,562	1,216	1,311	<b>10,483</b>
Commercial papers	-repayments	245,000						<b>245,000</b>
Overdraft	-payments	938						<b>938</b>
Currency swaps	-payments	23,891	49	77	115	152	12,922	<b>37,205</b>

Interest rate swaps	-payments	924	328	658	1,102	1,555	7,771	<b>12,338</b>
Forward contracts	-payments	198	350	300	1,000	1,500	900	<b>4,248</b>
<b>Total</b>		<b>333,579</b>	<b>87,699</b>	<b>37,751</b>	<b>68,734</b>	<b>69,188</b>	<b>654,009</b>	<b>1,250,961</b>
Currency swaps	-receivables	21,617	433	433	433	433	10,918	<b>34,268</b>
Interest rate swaps	-receivables	5,152	5,082	4,810	4,448	3,601	7,689	<b>30,784</b>
Forward contracts	-receivables	196	351	301	1,011	1,533	926	<b>4,318</b>
<b>Total</b>		<b>26,965</b>	<b>5,867</b>	<b>5,544</b>	<b>5,893</b>	<b>5,568</b>	<b>19,534</b>	<b>69,370</b>
<b>Total</b>		<b>306,614</b>	<b>81,833</b>	<b>32,206</b>	<b>62,841</b>	<b>63,621</b>	<b>634,475</b>	<b>1,181,591</b>



## Accounting principles

### Borrowings

Borrowings are initially recognised at fair value net of the transaction costs incurred. Transaction costs consist of bond prices above or below par value, arrangement fees, commissions and administrative fees that are directly related to the loan. Borrowings are subsequently measured at amortised cost; any difference between the loan amount and the amount to be repaid is recognised in the income statement over the loan period using the effective interest rate method. Borrowings are derecognised when they mature and are repaid.

Commitment fees to be paid on credit facilities are entered as transaction costs related to the loan insofar as partial or full utilisation of the facility is likely. In such cases, the fee is capitalized in the balance sheet until the facility is utilised. If there is no proof that loans included in a facility are likely to be drawn in part or in full, the fee will be recognised as an upfront payment for liquidity services and amortized over the maturity of the facility in question.



## 6.4 Cash and cash equivalents and other financial assets

19. CASH AND CASH EQUIVALENTS, €1,000	2019	2018
Cash assets and bank account balances	15,626	13,922
<b>Total</b>	<b>15,626</b>	<b>13,922</b>

20. OTHER FINANCIAL ASSETS, €1,000	2019	2018	Hierarchy level
Short-term fixed income funds	67,188	56,881	Level 1
Commercial papers	0	4,498	Level 2
Bank deposits, over 3 months	0	10,000	Level 2
<b>Total</b>	<b>67,188</b>	<b>71,380</b>	



### Accounting principles

#### Cash and cash equivalents

Cash and cash equivalents in the balance sheet include cash in hand and bank deposits with an initial maturity of no more than three months. Cash and cash equivalents in the cash flow statement also include financial assets recognised in the income statement at fair value. Cash and cash equivalents are derecognised when they mature, are sold or otherwise disposed of.

#### Other financial assets

The financial assets classified in this category include short-term money market securities (certificates of deposit, commercial papers and municipality bills), current investments in short-term fixed income funds, and bank deposits kept for more than three months. Financial assets recognised at fair value in the income statement are entered in the balance sheet at fair value at the settlement date. Subsequently, the financial assets are measured on each reporting day at fair value, and the change in their fair value is recognised in the income statement under finance income and costs. Derivatives are also included in this group, but are presented in the balance sheet on their own lines. Accounting principles for derivatives are disclosed in Chapter 6.6.

### **Available-for-sale investments**

Fingrid does not have financing assets classified as available-for-sale investments.

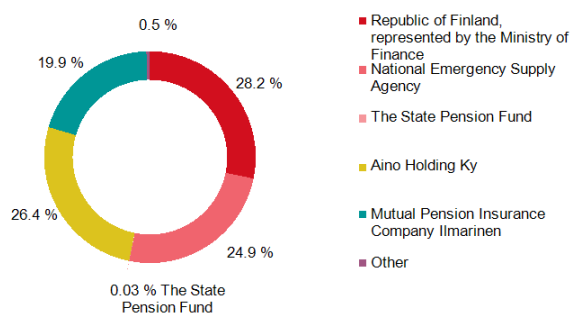
Financial assets are derecognised when they mature, are sold or otherwise disposed of such that their risks and revenues have been transferred.

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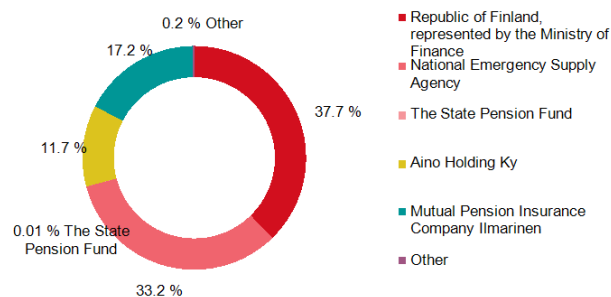
## 6.5 Equity and dividend distribution

The shareholders' equity is composed of two share classes. The shareholder breakdown and voting rights are illustrated in the following graphs.

Shareholders 31 Dec 2019



Voting rights 31 Dec 2019



### SHAREHOLDERS BY CATEGORY 31 DEC 2019

	Number of shares	Of all shares %	Of votes %
Public organisations	1,768	53.17	70.87
Financial and insurance institutions	1,557	46.83	29.12
<b>Total</b>	<b>3,325</b>	<b>100.00</b>	<b>100.00</b>

Shareholders, 31 Dec 2019	Number of shares	Of all shares %	Of votes %
Republic of Finland, represented by the Ministry of Finance	939	28.24	37.66
Aino Holding Ky	878	26.41	11.74
National Emergency Supply Agency	828	24.90	33.20
Mutual Pension Insurance Company Ilmarinen	661	19.88	17.15
Imatran Seudun Sähkö Oy	10	0.30	0.13
Fennia Life	6	0.18	0.08
Elo Mutual Pension Insurance	1	0.03	0.01
OP Insurance Ltd	1	0.03	0.01
The State Pension Fund	1	0.03	0.01
<b>Total</b>	<b>3,325</b>	<b>100.00</b>	<b>100.00</b>

The company's share capital is EUR 55,922,485.55. Fingrid shares are divided into Series A shares and Series B shares. The number of Series A shares is 2,078 and the number of Series B shares is 1,247.

The maximum number of shares is 13,300, as in 2018. The shares have no par value.

Series A shares confer three votes each at the Annual General Meeting and Series B shares one vote each. When electing members of the Board of Directors, Series A shares confer 10 votes each at the Annual General Meeting and Series B shares one vote each.

Series B shares have the right before Series A shares to obtain the annual minimum dividend specified below from the funds available for profit distribution. If the annual minimum dividend cannot be distributed in some year, the shares confer a right to receive the undistributed amount from the funds available for profit distribution in the subsequent years; however, such that Series B shares have the right over Series A shares to receive the annual minimum dividend and the undistributed amount.

### **Fingrid Oyj's Annual General Meeting decides on the annual dividend.**

Eighty-two per cent of the dividends to be distributed for each financial year is distributed for all Series A shares and eighteen per cent for all Series B shares, however such that EUR twenty million of the dividends to be distributed for each financial year is first distributed for all Series B shares. If the above-mentioned EUR twenty million minimum amount for the financial period is not distributed (all or in part) for Series B shares in a financial period, Series B shares confer the right to receive the undistributed minimum amount in question (or the accumulated undistributed minimum amount accrued during such financial periods) in the next profit distribution, in any disbursements paid out, or in any other distribution of assets prior to any other dividends, disbursements or asset distribution until the undistributed minimum amount has been distributed in full for Series B shares. There are no non-controlling interests.

Equity is composed of the share capital, share premium account, revaluation reserve (incl. fair value reserve), translation reserve, and retained earnings. The translation reserve includes translation differences in the net capital investments of associated companies in accordance with the equity method of accounting. The profit for the financial year is booked in retained earnings.

### **Share premium account**

The share premium account includes the difference between the counter value of the shares and the value obtained. The share premium account consists of restricted equity as referred to in the Finnish Limited Liability Companies Act. The share capital can be increased by transferring funds from the share premium account. The share premium account can be decreased in order to cover losses or, under certain conditions, it can be returned to the owners.

### **Revaluation reserve**

In 2017, the company divested its available-for-sale investments.

Changes to equity funds during the financial year are presented in the statement of changes in equity.

## **21. SHAREHOLDERS BY CATEGORY**

The share capital is broken down as follows	Number of shares	Of all shares %	Of votes %
Series A shares	2,078	62.50	83.33

Series B shares	1,247	37.50	16.67
<b>Total</b>	<b>3,325</b>	<b>100.00</b>	<b>100.00</b>

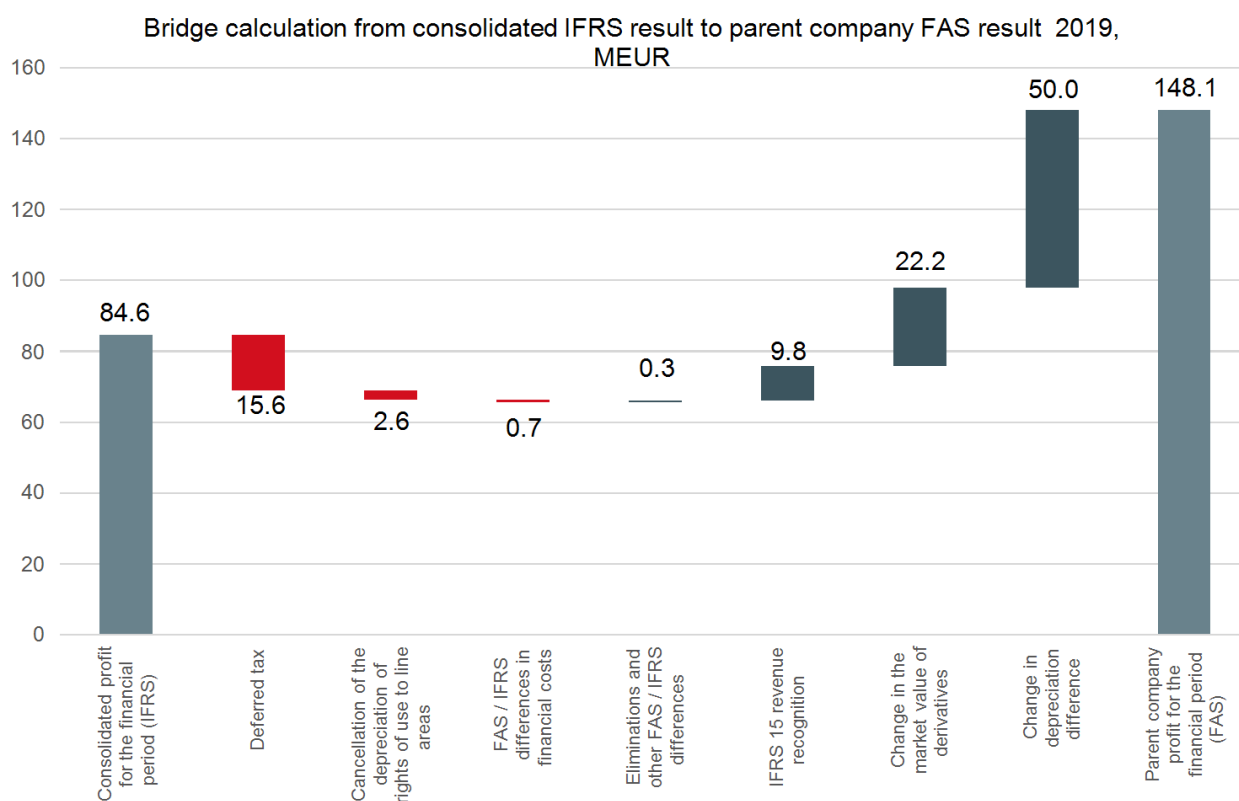
Fingrid's dividends are distributed such that the shareholders receive a reasonable return on their invested capital, but also such that the company's financial position is maintained.

Fingrid Oyj's distributable funds in the financial statements total EUR 198,985,738.74. Based on the 2018 financial statements, EUR 171.4 million was paid in dividends (EUR 173.5). Since the closing date, the Board of Directors has proposed that a dividend of EUR 58,500.00 at maximum per share will be paid for Series A shares, and EUR 21,400.00 at maximum for Series B shares for a total of EUR 148,248,800.00 at maximum. The first dividend instalment of EUR 39,500.00 for each Series A share and EUR 14,450.00 for each Series B share, totalling EUR 100,100,150.00, shall be paid on 25 March 2020. The second dividend instalment, a maximum of EUR 19,000.00 for each Series A share and a maximum of EUR 6,950.00 for each Series B share, totalling a maximum of EUR 48,148,650.00, shall be paid based on the authorisation to be given to the Board. The Board of Directors has the right to decide on the payment of the second dividend instalment after the half-year report has been confirmed and after having assessed the company's solvency, financial position and financial development. The second dividend instalment decided on with the authorisation given to the Board shall be paid on the third banking day after the decision. It will be proposed that the authorisation remains valid until the next Annual General Meeting.

The distributable funds are calculated on the basis of the parent company's equity. Dividends are paid based on the distributable funds of the parent company.

The guiding principle for Fingrid's dividend policy is to distribute substantially all of the parent company profit as dividend. When making the decision, however, the economic conditions, the company's near term investment and development needs as well as any prevailing financial targets of the company are always taken into account.

The graph below indicates the differences between the consolidated IFRS income statement and the parent company's FAS income statement.



## Accounting principles

### Dividend distribution

The Board of Directors' proposal concerning dividend distribution is not recorded in the financial statements. The liability and equity is recognised only after a decision is made by the Annual General Meeting of Shareholders.

## 6.6 Summary of financial assets, financial liabilities and derivatives

The carrying amounts of Fingrid's financial assets and liabilities by measurement category are as follows:

### 22. CARRYING AMOUNTS OF FINANCIAL ASSETS AND LIABILITIES BY MEASUREMENT CATEGORY, €1,000

	Assets/ liabilities recognised in income statement at fair value	Available-for- sale financial assets	Financial assets/ liabilities measured at amortised cost	Total	Note
<b>Balance sheet item 31 Dec 2019</b>					
<b>Non-current financial assets</b>					
Interest rate and currency derivatives	26,720			26,720	23
Electricity derivatives	1,905			1,905	23
Loan receivables			1,125	1,125	
<b>Current financial assets</b>					
Interest rate and currency derivatives	0			0	23
Electricity derivatives	3,835			3,835	23
Trade receivables and other receivables			83,990	83,990	3
Other financial assets	67,188			67,188	20
Cash in hand and cash equivalents			15,626	15,626	19
<b>Financial assets total:</b>	<b>99,648</b>		<b>100,741</b>	<b>200,389</b>	
<b>Non-current financial liabilities:</b>					
Borrowings			884,652	884,652	14
Interest rate and currency derivatives	6,514			6,514	23
<b>Current financial liabilities:</b>					
Borrowings			235,349	235,349	14
Interest rate and currency derivatives	372			372	23
Trade payables and other liabilities			107,687	107,687	7
<b>Financial liabilities total</b>	<b>6,886</b>		<b>1,227,689</b>	<b>1,234,574</b>	
<b>Balance sheet item 31 Dec 2018</b>					
	Assets/ liabilities recognised in income	Available-for- sale financial assets	Financial assets/ liabilities measured at	Total	Note

	statement at fair value	amortised cost	
<b>Non-current financial assets</b>			
Interest rate and currency derivatives	22,837	22,837	23
Electricity derivatives	9,643	9,643	23
Loan receivables		1,750	1,750
<b>Current financial assets</b>			
Interest rate and currency derivatives	718	718	23
Electricity derivatives	17,856	17,856	23
Trade receivables and other receivables		95,271	95,271 3
Other financial assets	56,881	14,498	71,380 20
Cash in hand and cash equivalents		13,922	13,922 19
<b>Financial assets total:</b>	<b>107,936</b>	<b>125,441</b>	<b>233,378</b>
<b>Non-current financial liabilities:</b>			
Borrowings		771,508	771,508 14
Interest rate and currency derivatives	7,390	7,390	23
<b>Current financial liabilities:</b>			
Borrowings		288,091	288,091 14
Interest rate and currency derivatives	4,011	4,011	23
Electricity derivatives	3	3	23
Trade payables and other liabilities		97,939	97,939 7
<b>Financial liabilities total</b>	<b>11,404</b>	<b>1,157,537</b>	<b>1,168,941</b>

At the end of the year, the company's borrowings included a total of EUR 32.9 million in lease liabilities in accordance with IFRS 16, consisting of EUR 2.4 million in short-term liabilities, to be paid within a year, and EUR 30.5 million in long-term liabilities, with a maturity date after more than a year.

Fingrid uses derivatives for hedging purposes only, even though the company does not apply hedge accounting. Bilateral derivative transactions require a valid International Swap Dealers Association's (ISDA) Master Agreement with the counterparty. The derivatives falling under the scope of an ISDA agreement can be netted in conditional circumstances such as default or bankruptcy. The company had derivatives that can be netted as per ISDA at a total fair value of EUR 22.4 million in 2019 (14.3). Fingrid provides collateral to cover the market value of electricity forwards. The management of electricity price risk is described in chapter 4.7. The hedging of interest rate and foreign exchange risks is described in chapter 6.3.

The company's derivative transactions consist of interest rate and cross currency swaps for hedging the loan portfolio, as well as purchased cap options used to hedge the loan portfolio from a sudden change in short-term interest rates. Forward contracts are used to fix the exchange rate for non-euro-denominated contracts related to business operations. The company uses electricity futures and forwards to hedge the price risk of future loss power purchases.



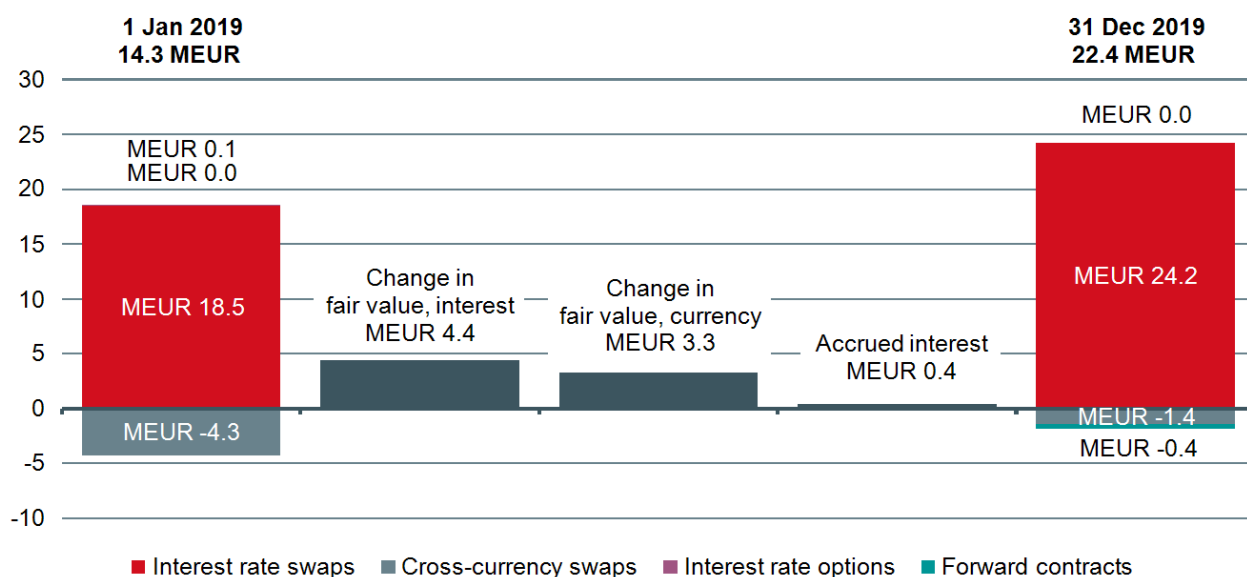
The table below includes all of the Group's derivatives.

23. DERIVATIVE INSTRUMENTS, € 1,000									
	2019				2018				Hierarchy level
	Fair value pos.	Fair value neg.	Net fair value	Nominal value	Fair value pos.	Fair value neg.	Net fair value	Nominal value	
<b>Interest rate and currency derivatives</b>	31.12.19	31.12.19	31.12.19	31.12.19	31.12.18	31.12.18	31.12.18	31.12.18	
Cross-currency swaps	1,509	-2,901	-1,393	12,512	2,571	-6,888	-4,316	36,237	Level 2
Forward contracts		-440	-440	15,878	7	-5	1	5,150	Level 2
Interest rate swaps	27,771	-3,564	24,207	265,000	23,575	-5,087	18,488	325,000	Level 2
Bought interest rate options	49		49	610,000	126		126	620,000	Level 2
<b>Total</b>	<b>29,329</b>	<b>-6,905</b>	<b>22,423</b>	<b>903,389</b>	<b>26,279</b>	<b>-11,980</b>	<b>14,300</b>	<b>986,387</b>	
	Fair value pos.	Fair value neg.	Net fair value	Volume TWh	Fair value pos.	Fair value neg.	Net fair value	Volume TWh	
<b>Electricity derivatives</b>	31.12.19	31.12.19	31.12.19	31.12.19	31.12.18	31.12.18	31.12.18	31.12.18	
Electricity future contracts. NASDAQ OMX Commodities	8,015	-771	7,244	0.71	12,383	-385	11,997	1.87	Level 1
Electricity forward contracts. NASDAQ OMX Commodities	5,740		5,740	3.56	27,500	-3	27,496	2.58	Level 1
<b>Total</b>	<b>13,755</b>	<b>-771</b>	<b>12,984</b>	<b>4.27</b>	<b>39,883</b>	<b>-389</b>	<b>39,494</b>	<b>4.45</b>	

The net fair value of derivatives indicates the realised profit/loss if they had been closed on the last trading day of 2019. The net fair value cannot be used for deriving the net derivative liabilities or receivables in the balance sheet, as accrued interest is taken into account here.

The graph below indicates the change of value of all of the company's currency and interest rate derivatives in 2019.

**Change in the net fair value of financial derivatives 2019**

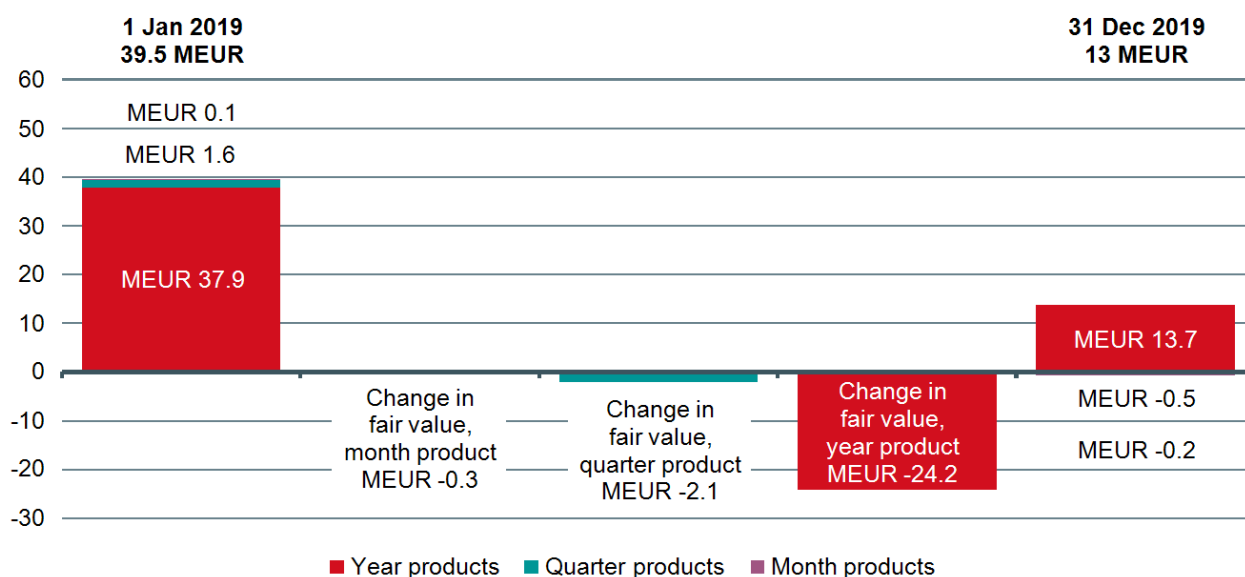


The purpose of Fingrid’s loss power price hedging is to reduce the effect of volatility in market prices on the loss power procurement costs and to give adequate predictability in order to keep the pressures to change transmission fees moderate. The change in the fair value of the electricity derivatives used for hedging the price of Fingrid’s loss power purchases recognised in the operating profit was EUR 26.6 negative (EUR 37.0 million positive). The volatility in the fair value of electricity derivatives can be significant. The negative impact on profit resulted from the realisation of electricity derivatives with a positive market value and from the effect of lower market quotations for electricity derivatives on the fair value of the electricity derivatives. Fingrid holds its bought derivatives to maturity.

The sensitivity of the fair value of electricity derivatives in relation to changes in the price of electricity is measured as the difference a 10 per cent fluctuation in market price would have on outstanding electricity derivatives on the reporting date. An increase/decrease of 10 per cent in the market price of electricity would have an impact of EUR 9.2 million/EUR –9.2 million on the Group’s profit before taxes.

The graph below illustrates the net value of the company’s electricity derivatives and the change in it in 2019.

**Change in the net fair value of electricity derivatives 2019**



**Accounting principles**

**FINANCIAL INSTRUMENTS**

**Classification of financial assets and liabilities**

The Group classifies the financial assets and liabilities in accordance with its business model and in compliance with IFRS 9.

The classification is accomplished on the basis of the objective of the business model and the contract-based cash flows from the investments or by applying the fair value option at initial recognition.

Other financial assets can include investments in short-term money-market securities (certificates of deposit, commercial papers and municipality bills), bank deposits of more than three months and investments in short-term fixed income funds.

Investments in short-term fixed income funds have been classified and entered at fair value in the income statement.

Investments in short-term money-market securities are classified and entered at amortised cost according to the accounting model applied by the company. The goal is to keep the investments to maturity and collect the contractual cash flows, consisting of the payments of principal and interest. Money-market securities have previously been entered at fair value in the income statement, but the change did not have a material impact on the company's financial result.

Bank deposits of more than three months are entered at amortised cost.

The Group actively tests each instrument for impairment and if the impairment criteria are met, the impairment is

entered in the income statement. The accounting procedure for financial assets has not changed, and they continue to be entered at amortised cost. The rules concerning balance sheet derecognition have not changed from the IAS 39 standard 'Financial Instruments: Recognition and Measurement'.

The Group does not apply hedge accounting, and the rules applied to hedge accounting according to IFRS 9 do not affect the company's accounting procedures.

### **Cash and cash equivalents**

Cash and cash equivalents consist of cash in hand and bank deposits with an initial maturity of no more than three months.

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## **Accounting principles**

### **Derivative instruments**

Derivatives are initially recognised at fair value according to the date the derivative contract is entered into, and are subsequently re-measured at fair value. Changes in the fair value of derivatives are recognised in profit and loss. The company uses derivative contracts only for hedging purposes according to the Corporate Finance principles, the Treasury policy and the loss energy policy.

### **Electricity derivatives**

The company enters into electricity derivative contracts in order to hedge the price risk of electricity purchases in accordance with the loss power forecast. Fingrid discontinued hedge accounting for electricity derivatives at the beginning of 2014. As a result, the entire change in the fair value of electricity derivatives is recorded in the income statement.

### **Interest and currency derivatives**

The company enters into derivative contracts in order to hedge financial risks (interest rate and foreign exchange exposure) in compliance with the Corporate Finance Principles approved by the Board of Directors. Fingrid does not apply hedge accounting to these derivatives. A derivative asset or liability is recognised at its original fair value. Derivatives are measured at fair value at the closing date, and the change in fair value is recognised in the income statement under finance income and costs.

The fair values of derivatives at the closing date are based on different calculation methods. Foreign exchange forwards have been measured at the forward prices. Interest rate and currency swaps have been measured at the present value on the basis of the yield curve of each currency. Interest rate options have been valued using generally accepted option pricing models in the market.

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## 7 Other Information (IFRS)

- This chapter contains the rest of the notes.
- First comes a joint presentation of the Group companies and related parties' data.
- After that, other notes follow in the same sequence they appear in the income statement and balance sheet.

## 7.1 Group companies and related parties

The Group has two Fingrid's wholly-owned subsidiaries, Finextra Oy and Fingrid Datahub Oy.

Finextra Oy is a subsidiary wholly-owned by Fingrid Oyj established to handle the statutory public service obligations not included in actual grid operations or transmission system responsibility. These tasks include peak load capacity services and guarantee-of-origin services for electricity. Through Finextra, the cost of public service tasks is separated from the cost of grid operations, which makes it possible to ensure the unequivocal transparency of the different operations. The Energy Authority oversees Finextra's operations and reasonable returns from its services. The aim of Finextra is to carry out the assigned duties cost effectively, making use of joint resources. The allowable annual return on peak load capacity services is EUR 75,000. The allowed return on guarantee-of-origin services for the regulatory period starting on 1 January 2017 was approximately EUR 180,000.

Fingrid Datahub Oy is a subsidiary wholly-owned by Fingrid Oyj established in 2016 to handle the operations linked to the datahub. Key duties of the subsidiary is to offer and develop centralised electricity market information exchange services and other related services to the market parties and to govern the register information required by the electricity markets. The datahub is a centralised information exchange system for retail markets that stores data from all of Finland's 3.5 million electricity metering points. The information stored in the datahub will be utilised by around 100 electricity sales companies and more than 80 distribution network operators to provide services to the consumers of electricity. Fingrid started the datahub project during the spring of 2015.

The consolidated associated companies are Nord Pool Holding AS (ownership 18.8%) and eSett Oy (ownership 25.0%).

The investments in associated companies included in the balance sheet are composed of the following:

24. INVESTMENTS IN ASSOCIATED COMPANIES, € 1,000	2019	2018
<b>Non-current</b>		
Interests in associated companies	11,012	12,072
Loan receivables from associated companies	1,125	1,750
<b>Current</b>		
Loan receivables from associated companies	188	500
<b>Total</b>	<b>12,325</b>	<b>14,322</b>

Receivable from an associated company consists of a loan receivable from eSett Oy. The main terms and conditions are as follows:

### Associated company loan:

The loan capital is EUR 1.1 (2.3) million and the annual interest rate is 1.5 per cent, on top of the 12-month Euribor. The loan repayment is ten equal instalments every six months. The amount of the loan capital is one quarter of the total loan that eSett's owners have granted the company proportionate to their holdings. The terms of the loan are the same as

the loan terms for eSett's other owners.

Financial summary of associated companies, €1,000									
	Non-current		Current assets		Turnover	Profit/ loss	Dividends received during the financial period	Ownership (%)	
	2019	Assets	Liabilities	Assets					
Nord Pool Holding AS	6,049	341	178,808	152,658	38,964	4,801	881	18.8	
eSett Oy	5,750	3,750	43,836	38,982	6,321	-71		25.0	

	Non-current		Current assets		Turnover	Profit/ loss	Dividends received during the financial period	Ownership (%)	
	2018	Assets	Liabilities	Assets					
Nord Pool Holding AS	5,613	353	268,109	239,125	40,951	9,403	645	18.8	
eSett Oy	6,795	5,250	47,001	41,353	10,080	4,218		33.3	

The Group's associated companies indicated in the tables are treated in the consolidated financial statements using the equity method of accounting.

The Nordic Balance Settlement (NBS) was introduced in Finland on 1 May 2017. When the NBS began its operations, imbalance settlement transferred from Fingrid's Balance Service Unit to eSett Oy.

The company has an equity investment in Norwegian kroner in an associated company, which results in exposure to translation risk. The translation risk is not significant and the company does not hedge against this risk.

Equity investments in associated companies, € 1,000	2019	2018
Cost at 1 Jan	12,072	10,303
Decreases	-603	
Share of profit	384	2,607
Translation reserve	40	-193
Dividends	-881	-645
<b>Carrying amount 31 Dec</b>	<b>11,012</b>	<b>12,072</b>
Carrying amount of associated companies includes goodwill 31 Dec.	<b>3,245</b>	<b>3,245</b>

There are no material temporary differences related to associated companies on which deferred tax assets or liabilities have

been recognised.

The subsidiaries, associated companies and parent company (Fingrid Oyj) described above are related parties of the Group. In addition, the shareholder entities mentioned in chapter 6.5 and the top management and its related parties are also considered related parties. The top management is composed of the Board of Directors, the President & CEO, and the executive management group. All transactions between Fingrid and related parties take place on market terms. The company has not lent money to the top management, and the company has no transactions with the top management. At the close of the reporting period, the Republic of Finland owned 53.1 per cent of the company's shares. The Finnish Parliament has authorised the Ministry of Finance to reduce the state's ownership in Fingrid Oyj to no more than 50.1 per cent of the company's shares and votes.

Transactions with associated companies, € 1,000	2019	2018
Sales	121	155
Expense adjustments	22	65
Purchases	3,230	3,889
Receivables	3,693	791
Liabilities	2,830	2,226
Loan receivables	1,313	2,250



## Accounting principles

### Subsidiaries

The subsidiaries encompass all companies over which the Group has control (including structured entities). The Group is considered to have control over a company if the Group's holding results in exposure to variable returns or if the Group is entitled to variable returns and it can influence these returns by exercising its control over the company. The subsidiaries are consolidated into the consolidated financial statements starting from the day on which the Group gained control over the company. Consolidation is discontinued once the control ceases to exist.

Consolidation of operations is carried out using acquisition cost method.

Transactions, receivables and liabilities between Group companies and any unrealised profits from internal transactions are eliminated. Unrealised losses are also eliminated unless the transaction indicates an impairment of the disposed asset. If necessary, the financial statements of the subsidiaries have been adjusted to correspond to the accounting principles applied by the Group.

### Associated companies

The associated companies include all companies over which the Group has significant influence but no control or joint control. This is generally based on a shareholding amounting to 20–50% of the votes. Fingrid has an 18.8% ownership



in Nord Pool Holding AS. In Fingrid's view, however, the significant influence over the company is retained because Fingrid is represented in Nord Pool's board of directors, as a shareholder with an ownership of more 10% is entitled to appoint a board member according the shareholder agreement. Fingrid has influence over Nord Pool's operating principles and over the decisions on dividends and asset distribution. According to the shareholder agreement, the board approves the annual operational plan and budget and makes a proposal to the annual general meeting on dividends. Fingrid also shares, via Nord Pool, in the costs of European market development.

Investments in associated companies are initially recognised at the acquisition cost and subsequently handled using the equity method. According to the equity method, investments are initially recorded at the acquisition cost and this is subsequently adjusted by recognising the Group's share of the profit or loss after the time of acquisition in the income statement and the Group's share of any changes in the investment object's other comprehensive income in other comprehensive income. Any dividends received or to be received from the associated companies and joint ventures are deducted from the investment's carrying amount.

If the Group's share of the losses of an investment recognised according to the equity method equals or exceeds the Group's holding in the company in question, including any other non-current receivables without collaterals, the Group will not recognise any additional losses unless it has obligations or it has made payments on behalf of the company.

A share corresponding to the Group's ownership interest is eliminated from the unrealised profits between the Group and its associated companies and joint ventures. Any unrealised losses are also eliminated unless the transaction indicates an impairment of the disposed asset. If necessary, the accounting principles applied by the investments to be recognised according to the equity method have been adjusted to correspond to the principles applied by the Group.

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## 7.2 Other notes

### Emission rights

Fingrid's reserve power plants are subject to an environmental permit and covered by the EU's emissions trading scheme. Fingrid has not been granted free-of-charge emission rights for the emissions trade period 2013–2020. Emission rights purchased in 2019 amounted to 7,000 units (tCO<sub>2</sub>). Emissions trading had minor financial significance for Fingrid. CO<sub>2</sub> emissions included in emissions trading totalled 5,142 tonnes in 2019 (8,223).



### Accounting principles

#### Emission rights

##### Emission rights

Emission rights acquired free of charge are recognised in intangible assets at their nominal value, and purchased emission rights at their acquisition cost. A liability is recognised for emission rights to be returned. If the Group has sufficient emission rights to cover the return obligations, the liability is recognised at the carrying amount corresponding to the emission rights in question. If there are not sufficient emission rights to cover the return obligations, the liability is recognised at the market value of the emission rights in question. No depreciation is recognised on emission rights. They are derecognised in the balance sheet at the time of transfer when the actual emissions have been ascertained. The expense resulting from the liability is recognised in the income statement under the expense item 'Materials and services'. Capital gains from emissions rights are recognised under other operating income.

25. PROVISIONS, € 1,000	2019	2018
Provisions for creosote-impregnated towers 1 Jan	1,424	1,474
Provisions used	-31	-50
<b>Provisions 31 Dec</b>	<b>1,393</b>	<b>1,424</b>



### Accounting principles

#### Provisions

A provision is recorded when the Group has a legal or factual obligation based on an earlier event and it is likely that

fulfilling the obligation will require a payment, and the amount of the obligation can be estimated reliably. The provisions are valued at the present value of the costs required to cover the obligation. The discounting factor used in calculating the present value is chosen so that it reflects the market view of the time value of money at the assessment date and the risks pertaining to the obligation.

26. COMMITMENTS AND CONTINGENT LIABILITIES, €1,000	2019	2018
<b>Pledges</b>	<b>490</b>	<b>480</b>
<b>Other financial commitments</b>		
Rent security deposit, guarantee	38	38
Credit facility commitment fee and commitment fee:		
Commitment fee for the next year	414	345
Commitment fee for subsequent years	568	862
	<b>1,020</b>	<b>1,245</b>
<b>Unrecognised investment commitments</b>	<b>181,973</b>	<b>103,946</b>

The investment commitments consist of agreements signed by the company to carry out grid construction projects and to procure the datahub system.

#### Payment obligations from right-of-use agreements for reserve power plants:

In one year	8,663	8,663
In more than one year and less than five years	29,638	34,064
In more than five years	15,596	19,610
<b>Total</b>	<b>53,896</b>	<b>62,337</b>

Under its system responsibility, Fingrid is also obligated to maintain a rapid response disturbance reserve to prepare for disruptions to the power system. In order to ensure the availability of this disturbance reserve, Fingrid has, in addition to its reserve power plant capacity, acquired power plant capacity suited to this purpose by long-term Right-of-use agreements.

#### LEGAL PROCEEDINGS AND PROCEEDINGS BY AUTHORITIES

An accident took place on a work site in Laukaa, Finland, on 25 August 2017, where an employee of Revilla y Garcia S.L. died after having fallen from a power line tower. A civil court case has been raised in Spain for damages against Fingrid (the client linked with the accident), the main contractor, Technolines S.R.L. filial i Finland, and its sub-contractor, Revilla y Garcia S.L. Fingrid does not believe the claim against it is likely to succeed and, in Fingrid's view, the legal proceedings or their outcome are not likely to have a substantial impact on the company's earnings or financial position. The action raised in the case concerning social security based compensation has lapsed.

## EVENTS AFTER THE CLOSING DATE

On 5 December 2019, Fingrid Oyj announced that it had, together with the other owners of Nord Pool Holding AS, entered into a binding agreement to sell 66% of the company's shares to Euronext. On 15 January 2020, Fingrid Oyj announced that the transaction has received the necessary authority approvals and that the other preconditions for its completion have been fulfilled. The sale will have a small positive impact on Fingrid's result and cash flow in the first quarter. Fingrid's indirect ownership in Nord Pool is 6.4%, which is managed through a holding company jointly owned by the Nordic Transmission System Operators.

Fingrid Group's profit for the 2020 financial period, excluding changes in the fair value of derivatives and before taxes, is expected to slightly decline compared to the previous year. Fingrid announced on 2 October 2019 that it will maintain the electricity transmission prices in the main grid at their 2019 level in 2020.

Results forecasts for the financial year are complicated especially by the uncertainty related to grid income, ITC income and cross-border transmission income, and to reserve and loss power costs. These are dependent on the variations in outside temperature and precipitation and changes in the hydrological situation in the Nordic countries, which affect electricity consumption and electricity prices in Finland and neighbouring areas and thus also grid transmission volumes. The company's debt service capacity is expected to remain stable.

## GROUP'S CONTACT INFORMATION AND APPROVAL OF THE FINANCIAL STATEMENTS

Fingrid Oyj is a Finnish public limited liability company incorporated under the Finnish Companies Act. Fingrid's consolidated financial statements have been drawn up in accordance with the International Financial Reporting Standards (IFRS) as adopted by the EU. Fingrid's registered office is in Helsinki at the address P.O. Box 530 (Läkkisepäntie 21, 00620, Helsinki), 00101 Helsinki.

A copy of the consolidated financial statements is available on the website [fingrid.fi](http://fingrid.fi) or at Fingrid Oyj's head office.

The amounts in the financial statements are expressed in thousands of euros and are based on the original acquisition costs, unless otherwise stated in the accounting principles or notes.

Fingrid Oyj's Board of Directors has accepted the publication of these financial statements in its meeting on 27 February 2020. In accordance with the Finnish Companies Act, the shareholders have the opportunity to adopt or reject the financial statements in the shareholders' meeting held after their publication. The shareholders' meeting can also amend the financial statements.

# 8 Parent company financial statements (FAS)

## 8.1 Parent company income statement

### 8.1 Parent company income statement

		Jan-Dec/2019	Jan-Dec/2018
	Notes	€	€
<b>TURNOVER</b>	2	<b>786,172,778.25</b>	<b>844,636,947.00</b>
Other operating income	3	4,318,646.92	10,800,562.63
Materials and services	4	-477,603,454.67	-469,156,712.93
Personnel costs	5	-26,552,187.13	-30,987,690.53
Depreciation and amortisation expense	6	-98,240,304.08	-102,385,166.51
Other operating expenses	7,8	-39,681,552.93	-43,367,646.31
<b>OPERATING PROFIT</b>		<b>148,413,926.36</b>	<b>209,540,293.35</b>
Finance income and costs	9	-13,610,843.06	-16,519,817.38
<b>PROFIT BEFORE APPROPRIATIONS AND TAXES</b>		<b>134,803,083.30</b>	<b>193,020,475.97</b>
<b>Appropriations</b>			
Change in depreciation difference		50,000,000.00	50,000,000.00
Income taxes	10	-36,742,360.46	-48,450,162.82
<b>PROFIT FOR THE FINANCIAL YEA</b>		<b>148,060,722.8</b>	<b>194,570,313.15</b>

Notes are an integral part of the financial statements.

## 8.2 Parent company balance sheet

ASSETS		31 Dec 2019	31 Dec 2018
	Notes	€	€
<b>Intangible assets:</b>			
Other intangible assets	12	74,207,990.70	77,600,740.48
		<b>74,207,990.70</b>	<b>77,600,740.48</b>
<b>Tangible assets</b>			
	13		
Land and water areas		19,640,631.77	19,116,986.53
Buildings and structures		243,001,815.61	226,260,218.96
Machinery and equipment		559,391,487.70	551,598,765.91
Transmission lines		742,446,973.27	743,255,086.72
Other property, plant and equipment		117,516.35	117,516.35
Prepayments and purchases in progress		50,294,189.42	59,596,188.98
		<b>1,614,892,614.12</b>	<b>1,599,944,763.45</b>
<b>Investments:</b>			
	14		
Interests in Group companies		843,310.86	843,310.86
Interests in associated companies		8,087,353.95	8,587,578.95
		<b>8,930,664.81</b>	<b>9,430,889.81</b>
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,698,031,269.63</b>	<b>1,686,976,393.74</b>
<b>CURRENT ASSETS</b>			
<b>Inventories</b>	15	<b>12,066,857.86</b>	<b>12,390,535.52</b>
<b>Receivables</b>			
<b>Non-current</b>			
Loan receivables from Group companies	16	21,394,055.61	9,142,044.28
Loan receivables from associated companies	16	1,125,000.00	1,750,000.00
Deferred tax assets	10	9,002,757.57	10,788,284.51
		<b>31,521,813.18</b>	<b>21,680,328.79</b>
<b>Current</b>			
Trade receivables		68,438,571.79	82,960,650.88
Receivables from Group companies	17	2,542,055.18	377,781.29
Receivables from associated companies	18	3,880,910.79	1,290,832.94

Other receivables		11,055,048.42	1,463,140.20
Prepayments and accrued income	19,20	7,059,591.00	9,489,162.82
		<b>92,976,177.18</b>	<b>95,581,568.13</b>
<b>Financial securities</b>	21	<b>66,489,293.26</b>	<b>70,980,070.94</b>
<b>Cash in hand and bank receivables</b>	21	<b>15,626,317.65</b>	<b>13,921,698.15</b>
<b>TOTAL CURRENT ASSETS</b>		<b>218,680,459.13</b>	<b>214,554,201.53</b>
<b>TOTAL ASSETS</b>		<b>1,916,711,728.76</b>	<b>1,901,530,595.27</b>

Notes are an integral part of the financial statement.

SHAREHOLDERS' EQUITY AND LIABILITY		31 Dec 2019	31 Dec 2018
	Notes	€	€
<b>EQUITY</b>	22		
Share capital		55,922,485.55	55,922,485.55
Share premium account		55,922,485.55	55,922,485.55
Profit from previous financial years		50,925,015.90	27,794,652.75
Profit for the financial year		148,060,722.84	194,570,313.15
<b>TOTAL SHAREHOLDERS' EQUITY</b>		<b>310,830,709.84</b>	<b>334,209,937.00</b>
<b>ACCUMULATED APPROPRIATIONS</b>	23	<b>348,896,757.27</b>	<b>398,896,757.27</b>
<b>PROVISIONS FOR LIABILITIES AND CHARGES</b>	30	<b>1,393,146.78</b>	<b>1,424,146.78</b>
<b>LIABILITIES</b>			
<b>Non-current liabilities</b>			
Bonds	24,25	617,511,729.99	667,511,729.99
Loans from financial institutions		240,216,450.17	107,878,787.88
		<b>857,728,180.16</b>	<b>775,390,517.87</b>
<b>Current liabilities</b>			
Bonds	24	50,000,000.00	23,724,792.54
Loans from financial institutions		17,662,337.71	22,600,144.82
Trade payables		17,541,604.90	20,725,047.34
Liabilities to Group companies	26	1,598,574.20	2,880,243.07
Liabilities to associated companies	27	3,919,746.15	2,226,105.94
Other liabilities	28	188,907,858.16	265,127,089.56
Accruals	29	118,232,813.59	54,325,813.08

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	<b>397,862,934.71</b>	<b>391,609,236.35</b>
<b>TOTAL LIABILITIES</b>	<b>1,255,591,114.87</b>	<b>1,166,999,754.22</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>1,916,711,728.76</b>	<b>1,901,530,595.27</b>

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Notes are an integral part of the financial statements.



## 8.3 Parent company cash flow statement

		1 Jan - 31 Dec, 2019	1 Jan - 31 Dec, 2018
	Notes	€	€
<b>Cash flow from operating activities:</b>			
Profit before taxes		134,803,083.30	193,020,475.97
Adjustments:			
Depreciation		98,240,304.08	102,385,166.51
Capital gains/losses (+/-) on tangible and intangible assets		-2,815,810.14	-8,131,010.26
Interest and other finance costs		13,610,843.06	16,519,817.38
Other adjustments		-2,217,154.00	
Changes in working capital:			
Change in trade receivables and other receivables		3,951,573.69	-5,029,980.04
Change in inventories		323,677.66	1,138,374.77
Change in trade payables and other liabilities		-1,892,072.25	10,796,432.05
Congestion income		73,001,449.41	29,632,292.62
Change in provisions		-31,000.00	-50,000.00
Interest paid		-21,335,127.58	-21,416,295.12
Interest received		6,396,426.04	4,431,631.10
Taxes paid	10	-39,205,820.03	-37,281,373.19
Net cash flow from operating activities		262,830,373.24	286,015,531.79
<b>Cash flow from investing activities:</b>			
Purchase of property, plant and equipment	13	-104,761,656.82	-89,930,983.87
Purchase of intangible assets	12	-3,483,636.41	-5,491,663.99
Purchase of other assets	14		-606,903.32
Proceeds from sale of other assets	14	684,495.00	
Proceeds from sale of property, plant and equipment	13	3,057,000.00	13,745,399.31
Loans granted		-12,000,000.00	-4,000,000.00
Repayment of loan receivables		937,500.00	1,750,000.00
Dividends received	9	880,590.07	644,876.60
Contributions received		609,998.00	

Net cash flow from investing activities		-114,075,710.16	-83,889,275.27
<b>Cash flow from financing activities:</b>			
Proceeds from current financing (liabilities)		435,667,584.00	542,636,150.22
Payments of current financing (liabilities)		-515,738,978.54	-440,527,216.90
Proceeds from non-current financing (liabilities)		150,000,000.00	
Payments of non-current financing (liabilities)		-46,324,937.36	-129,086,415.69
Change in group account receivables and liabilities		-3,704,539.36	
Dividends paid	22	-171,439,950.00	-173,518,010.00
Net cash flow from financing activities		-151,540,821.26	-200,495,492.37
<b>Change in cash and cash equivalents and financial assets</b>		<b>-2,786,158.18</b>	<b>1,630,764.15</b>
<b>Cash and cash equivalents and financial assets 1 Jan</b>		<b>84,901,769.09</b>	<b>83,271,004.94</b>
<b>Cash and cash equivalents and financial assets 31 Dec</b>	21	<b>82,115,610.91</b>	<b>84,901,769.09</b>

Notes are an integral part of the financial statements.

# 8.4 Notes to the financial statements of parent company

## 1. ACCOUNTING PRINCIPLES

Fingrid Oyj's financial statements have been drawn up in accordance with the Finnish Accounting Standards (FAS). The items in the financial statements are valued at original acquisition cost.

### Foreign currency transactions

Commercial transactions and financial items denominated in foreign currencies are recognised at the foreign exchange mid-rate quoted by the European Central Bank (ECB) at the transaction date. Interest-bearing liabilities and receivables and the derivatives hedging these items are valued at the mid-rate quoted by the ECB at the closing date. Foreign exchange gains and losses on interest-bearing liabilities and receivables, and on the instruments hedging these items, are recognised at maturity under finance income and costs. Foreign exchange rate differences arising from the derivatives used to hedge commercial currency flows are recognised to adjust the corresponding item in the income statement.

### Interest and currency derivatives

Interest rate and currency swaps, foreign exchange forwards and interest rate options are used, in accordance with the Treasury Policy, to hedge the interest rate and foreign exchange risk, as well as the commercial items, in Fingrid's balance sheet items. The accounting principles for derivative contracts are the same as for the underlying items. The interest rate items of interest rate and cross-currency swaps and interest rate options are accrued and recognised in the income statement under interest income and costs. The interest portion of forward foreign exchange contracts hedging the interest-bearing liabilities and receivables is accrued over the maturity of the contracts and recognised under finance income and costs. Premiums paid or received on interest rate options are accrued over the hedging period.

### Electricity derivatives

Fingrid hedges its loss power purchases against price risk by employing futures and forwards traded on the NASDAQ OMX Oslo ASA. There can also be trading in the OTC market in instruments corresponding to Nasdaq OMX Oslo ASA's financial instruments. The profits and losses arising from these contracts are used to adjust the loss energy purchases in the income statement in the period in which the hedging impacts profit or loss.

### Research and development expenses

Research and development expenses are treated as annual expenses.

### Valuation of fixed assets

Fixed assets are capitalised under immediate acquisition cost. Planned straight-line depreciation on the acquisition price is calculated on the basis of the useful life of the fixed asset. Depreciation on fixed assets taken into use during the financial year is calculated on an item-by-item basis from the month of introduction.

The depreciation periods are as follows:

Goodwill = 20 years

Other non-current expenses:

- Rights of use to line areas = 30–40 years
- Other rights of use according to useful life, maximum = 10 years
- Computer software = 3 years

Buildings and structures

- Substation buildings and separate buildings = 40 years
- Substation structures = 30 years
- Buildings and structures at gas turbine power plants = 20–40 years
- Separate structures = 15 years

Transmission lines

- Transmission lines 400 kV = 40 years
- Direct current lines = 40 years
- Transmission lines 110–220 kV = 30 years
- Creosote-impregnated towers and related disposal costs\* = 30 years
- Aluminium towers of transmission lines (400 kV) = 10 years
- Optical ground wires = 10–20 years

Machinery and equipment

- Substation machinery = 10–30 years
- Gas turbine power plants = 20 years
- Other machinery and equipment = 3–5 years

\*Disposal costs are discounted at present value and added to the value of the fixed asset and recognised under provisions for liabilities and charges.

Goodwill is depreciated over a 20-year period, since grid operations are a long-term business in which income is accrued over several decades.

### **Emission rights**

Emission rights are treated in accordance with the net procedure in conformance with statement 1767/2005 of the Finnish Accounting Board.

### **Valuation of inventories**

Inventories are recognised according to the FIFO principle at acquisition cost, or at the lower of replacement cost or probable market price.

### **Cash in hand, bank receivables and financial securities**

Cash in hand and bank receivables include cash assets and bank balances. Financial securities include certificates of deposit, commercial papers and investments in short-term fixed income funds. Quoted securities and comparable

assets are valued at the lower of original acquisition cost or probable market price.

### Interest-bearing liabilities

Fingrid's non-current interest-bearing liabilities consist of loans from financial institutions and bonds issued under the Euro Medium Term Note (EMTN) programme. The current interest-bearing liabilities consist of commercial papers issued under the domestic and international programmes and of the current portion of noncurrent borrowings and bonds maturing within a year. The outstanding notes under the programmes are denominated in euros and foreign currencies. Fingrid has both fixed and floating rate debt. The interest is accrued over the maturity of the debt. The differential of a bond issued over or under par value is accrued over the life of the bond. The arrangement fees of the revolving credit facilities are, as a rule, immediately recognised as an expense, and the commitment fees are recognised as an expense over the maturity of the facility.

### Financial risk management

The principles applied to the management of financial risks are presented in chapters 6.2 and 6.3 of the Notes to the Consolidated Financial Statements.

### Income taxes

Taxes include the accrued tax corresponding to the profit for the financial year as well as tax adjustments for previous financial years.

### Deferred taxes

The company enters deferred tax assets for the congestion income it uses for investments, and they become taxable income and tax in the year in which they were used. The tax assets entered for congestion income are recognised in accordance with the depreciation used in taxation for investments covered by congestion income. Congestion income allocated to investments is entered as a reduction in acquisition cost. For the rest, deferred tax assets and liabilities are not recorded in the income statement or balance sheet, but are instead presented in the notes.

## 2. TURNOVER BY BUSINESS AREA

The business of Fingrid Oyj comprises entirely transmission grid business with system responsibility. For that reason, there is no distribution of turnover by business area.

TURNOVER, €1,000	2019	2018
Grid service income	394,857	428,437
Imbalance power sales	346,749	348,837
Cross-border transmission	11,608	35,516
ITC income	14,429	13,089
Income from peak load capacity services	74	234
Income from guarantee-of-origin services	58	239
Other operating income	18,397	18,285
<b>Total</b>	<b>786,173</b>	<b>844,637</b>

3. OTHER OPERATING INCOME, €1,000	2019	2018
Rental income	644	831
Capital gains of fixed assets	2,816	8,277
Contributions received	290	186
Other income	568	1,506
<b>Total</b>	<b>4,319</b>	<b>10,801</b>

4. MATERIALS AND SERVICES, €1,000	2019	2018
Purchases during the financial year	377,427	378,727
Loss energy purchases	53,856	48,796
Change in inventories, increase (-) or decrease (+)	970	1,138
Materials and consumables	432,253	428,662
Services	45,350	40,495
<b>Total</b>	<b>477,603</b>	<b>469,157</b>

5. PERSONNEL EXPENSES, €1,000	2019	2018
Salaries and bonuses	22,396	25,564
Pension expenses	3,518	4,437
Other personnel expenses	638	987
<b>Total</b>	<b>26,552</b>	<b>30,988</b>

Salaries and bonuses of the members of the Board of Directors and President and CEO, €1,000	2019	2018
Juhani Järvi, Chairman (since 6 June 2014)	42	41
Päivi Nerg, Vice Chairman (since 28 March 2018)	20	16
Juha Majanen, Vice Chairman (until 28 March 2018)		5
Sanna Syri, Member of the Board (since 14 April 2015)	21	21
Esko Torsti, Member of the Board (since 22 March 2012)	20	22
Anu Hämäläinen, Member of the Board (since 6 April 2016)	20	22
Jukka Ruusunen, President and CEO	523	452

**Number of salaried employees in the company during the financial year:**

Personnel, average	368	362
Personnel, 31 Dec	368	365

DEPRECIATION ACCORDING TO PLAN, €1,000	2019	2018
Other non-current expenses	8,107	7,164
Buildings and structures	10,083	9,752
Machinery and equipment	42,998	48,482
Transmission lines	37,052	36,986
<b>Total*</b>	<b>98,240</b>	<b>102,385</b>
* depreciation on the electricity grid (notes 12 and 13)	91,998	93,720

7. OTHER OPERATING EXPENSES, €1,000	2019	2018
Contracts, assignments etc. undertaken externally	25,142	29,821
Grid rents	234	241
Other rental expenses	3,609	3,714
Other costs	10,696	9,592
<b>Total</b>	<b>39,682</b>	<b>43,368</b>

8. AUDITORS' FEES, €1,000	2019	2018
PricewaterhouseCoopers Oy:		
Auditing fee	104	79
Other fees	39	92
<b>Total</b>	<b>143</b>	<b>171</b>

9. FINANCE INCOME AND COSTS, €1,000	2019	2018
Dividend income from Group companies	171	
Dividend income from others	881	645
Interest income from Group companies	421	
Interest income from associated companies	22	
Interest and other finance income from others	6,743	4,547

	8,239	5,192
Interest and other finance costs to others	-21,849	-21,712
	-21,849	-21,712
<b>Total</b>	<b>-13,611</b>	<b>-16,520</b>

10. INCOME TAXES, €1,000	2019	2018
Income taxes for the financial year	34,546	50,392
Income taxes for the previous financial years	411	
Changes in deferred taxes	1,786	-1,942
<b>Total</b>	<b>36,742</b>	<b>48,450</b>

The company will pay its income taxes in accordance with the underlying tax rate, with no tax planning

Deferred tax assets in balance sheet, €1,000		
On temporary differences from congestion income	9,003	10,788
<b>Total</b>	<b>9,003</b>	<b>10,788</b>

Deferred tax assets and liabilities of balance sheet, €1,000		
<b>Deferred tax assets</b>		
On temporary differences	279	285
	279	285
<b>Deferred tax liabilities</b>		
On temporary differences	200	214
On appropriations	69,779	79,779
	69,980	79,993
<b>Total</b>	<b>69,701</b>	<b>79,709</b>

11. GOODWILL, €1,000	2019	2018
Cost at 1 Jan	128,664	128,664
<b>Cost at 31 Dec</b>	<b>128,664</b>	<b>128,664</b>
Accumulated depreciation according to plan 1 Jan	-128,664	-128,664
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>0</b>	<b>0</b>



12. INTANGIBLE ASSETS, €1,000	2019	2018
Cost at 1 Jan	172,237	167,176
Increases 1 Jan–31 Dec	4,733	5,803
Decreases 1 Jan–31 Dec	-1,190	-742
<b>Cost at 31 Dec</b>	<b>175,780</b>	<b>172,237</b>
Accumulated depreciation according to plan 1 Jan	-94,636	-87,902
Decreases, depreciation according to plan 1 Jan–31 Dec	1,171	431
Depreciation according to plan 1 Jan–31 Dec	-8,107	-7,164
<b>Carrying amount 31 Dec</b>	<b>74,208</b>	<b>77,601</b>
Accumulated depreciation difference 1 Jan	-50,083	-52,047
Changes in depreciation difference reserve 1 Jan–31 Dec	2,831	1,964
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>-47,252</b>	<b>-50,083</b>
<b>*Net capital expenditure in electricity grid, €1,000</b>	<b>2019</b>	<b>2018</b>
Carrying amount 31 Dec	68,679	70,075
Carrying amount 1 Jan	-70,075	-71,258
Depreciation according to plan 1 Jan–31 Dec	4,441	4,091
Decreases 1 Jan–31 Dec	19	312
<b>Total</b>	<b>3,064</b>	<b>3,219</b>

13. TANGIBLE ASSETS, €1,000	2019	2018
<b>Land and water areas</b>		
Cost at 1 Jan	19,117	18,071
Increases 1 Jan–31 Dec	524	1,049
Decreases 1 Jan–31 Dec		-3
<b>Cost at 31 Dec</b>	<b>19,641</b>	<b>19,117</b>
<b>Buildings and structures</b>		
Cost at 1 Jan	305,089	279,331
Increases 1 Jan–31 Dec	26,825	26,780
Decreases 1 Jan–31 Dec		-1,022
<b>Cost at 31 Dec</b>	<b>331,914</b>	<b>305,089</b>
Accumulated depreciation according to plan 1 Jan	-78,829	-69,612
Decreases, depreciation according to plan 1 Jan–31 Dec		536
Depreciation according to plan 1 Jan–31 Dec	-10,083	-9,752

<b>Carrying amount 31 Dec</b>	<b>243,002</b>	<b>226,260</b>
Accumulated depreciation difference 1 Jan	-13,343	-13,542
Changes in depreciation difference reserve 1 Jan–31 Dec	-57	199
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>-13,400</b>	<b>-13,343</b>
<b>Machinery and equipment</b>		
Cost at 1 Jan	1,179,798	1,142,267
Increases 1 Jan–31 Dec	50,791	43,870
Decreases 1 Jan–31 Dec		-6,339
<b>Cost at 31 Dec</b>	<b>1,230,589</b>	<b>1,179,798</b>
Accumulated depreciation according to plan 1 Jan	-628,200	-582,116
Decreases, depreciation according to plan 1 Jan–31 Dec		2,399
Depreciation according to plan 1 Jan–31 Dec	-42,998	-48,482
<b>Carrying amount 31 Dec</b>	<b>559,391</b>	<b>551,599</b>
Accumulated depreciation difference 1 Jan	-56,386	-86,466
Changes in depreciation difference reserve 1 Jan–31 Dec	27,174	30,079
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>-29,213</b>	<b>-56,386</b>
<b>Transmission lines</b>		
Cost at 1 Jan	1,295,079	1,286,459
Increases 1 Jan–31 Dec	36,650	10,541
Decreases 1 Jan–31 Dec	-4,810	-1,921
<b>Cost at 31 Dec</b>	<b>1,326,918</b>	<b>1,295,079</b>
Accumulated depreciation according to plan 1 Jan	-551,824	-515,918
Decreases, depreciation according to plan 1 Jan–31 Dec	4,404	1,081
Depreciation according to plan 1 Jan–31 Dec	-37,052	-36,986
<b>Carrying amount 31 Dec</b>	<b>742,447</b>	<b>743,255</b>
Accumulated depreciation difference 1 Jan	-279,085	-296,842
Changes in depreciation difference reserve 1 Jan–31 Dec	20,052	17,758
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>-259,033</b>	<b>-279,085</b>
<b>Other property, plant and equipment</b>		
Cost at 1 Jan	118	118
<b>Cost at 31 Dec</b>	<b>118</b>	<b>118</b>

**Prepayments and purchases in progress**

Cost at 1 Jan	59,596	83,656
Increases 1 Jan–31 Dec	106,599	75,934
Transfers to other tangible and intangible assets 1 Jan - 31 Dec	-115,901	-99,995
<b>Cost at 31 Dec</b>	<b>50,294</b>	<b>59,596</b>
<b>Tangible assets total*</b>	<b>1,614,893</b>	<b>1,599,945</b>

*Net capital expenditure in electricity grid, €1,000	2019	2018
Carrying amount 31 Dec	1,589,030	1,569,901
Carrying amount 1 Jan	-1,569,901	-1,609,354
Depreciation according to plan 1 Jan–31 Dec	87,557	89,630
Decreases 1 Jan–31 Dec	407	5,209
<b>Total</b>	<b>107,093</b>	<b>55,386</b>

Fingrid's reserve power plants are included in the property, plant and equipment of the transmission system.

14. INVESTMENTS, €1,000	2019	2018
<b>Interests in Group companies</b>		
Cost at 1 Jan	843	507
Increases 1 Jan–31 Dec		336
<b>Cost at 31 Dec</b>	<b>843</b>	<b>843</b>
<b>Interests in associated companies</b>		
Cost at 1 Jan	8,588	8,588
Decreases 1 Jan–31 Dec	-500	
<b>Cost at 31 Dec</b>	<b>8,087</b>	<b>8,588</b>
<b>Investments total</b>	<b>8,931</b>	<b>9,431</b>

15. INVENTORIES, €1,000	2019	2018
<b>Materials and consumables at 31 Dec</b>	<b>12,067</b>	<b>12,391</b>
<b>Total</b>	<b>12,067</b>	<b>12,391</b>

16. OTHER NON-CURRENT RECEIVABLES, €1,000	2019	2018
Loan receivables from Group companies	21,394	9,142
Loan receivables from associated companies	1,125	1,750
Deferred tax assets	9,003	10,788
<b>Total</b>	<b>31,522</b>	<b>21,680</b>

17. RECEIVABLES FROM GROUP COMPANIES, €1,000	2019	2018
<b>Current:</b>		
Trade receivables	186	262
Interest receivables	284	116
Other receivables	2,072	
<b>Total</b>	<b>2,542</b>	<b>378</b>

18. RECEIVABLES FROM ASSOCIATED COMPANIES, €1,000	2019	2018
Trade receivables	3,689	782
Interest receivables	4	9
Loan receivables	188	500
<b>Total</b>	<b>3,881</b>	<b>1,291</b>

19. PREPAYMENTS AND ACCRUED INCOME, €1,000	2019	2018
Interest and other financial items	3,826	5,810
Accruals of sales and purchases	3,234	2,880
Other prepayments and accrued income		800
<b>Total</b>	<b>7,060</b>	<b>9,489</b>

20. UNRECORDED EXPENSES AND PAR VALUE DIFFERENTIALS ON THE ISSUE OF LOANS INCLUDED IN PREPAYMENTS AND ACCRUED INCOME, €1,000	2019	2018
Par value differentials	1,217	1,423

21. CASH AND CASH EQUIVALENTS, €1,000	2019	2018
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Commercial papers		4,498
Short-term fixed income funds	66,489	56,482
Bank deposits		10,000
Cash in hand and bank receivables	15,626	13,922
<b>Total</b>	<b>82,116</b>	<b>84,902</b>

22. SHAREHOLDERS' EQUITY, €1,000	2019	2018
Share capital 1 Jan	55,922	55,922
<b>Share capital 31 Dec</b>	<b>55,922</b>	<b>55,922</b>
Share premium account 1 Jan	55,922	55,922
<b>Share premium account 31 Dec</b>	<b>55,922</b>	<b>55,922</b>
Profit from previous financial years 1 Jan	<b>222,365</b>	<b>201,313</b>
Dividend distribution	-171,440	-173,518
<b>Profit from previous financial years 31 Dec</b>	<b>50,925</b>	<b>27,795</b>
<b>Profit for the financial year</b>	<b>148,061</b>	<b>194,570</b>
<b>Shareholders' equity 31 Dec</b>	<b>310,831</b>	<b>334,210</b>
<b>Distributable shareholders' equity</b>	<b>198,986</b>	<b>222,365</b>

Number of shares	Series A	Series B	Total
	shares	shares	
1 Jan 2019	2,078	1,247	3,325
31 Dec 2019	<b>2,078</b>	<b>1,247</b>	<b>3,325</b>

Series A shares confer three votes each at the Annual General Meeting and Series B shares one vote each. When electing members of the Board of Directors, Series A shares confer 10 votes each at the Annual General Meeting and Series B shares one vote each.

Series B shares have the right before Series A shares to obtain the annual dividend specified below from the funds available for profit distribution. If the annual dividend cannot be distributed in some year, the shares confer a right to receive the undistributed amount from the funds available for profit distribution in the subsequent years; however, such that Series B shares have the right over Series A shares to receive the annual dividend and the undistributed amount.

Fingrid Oyj's Annual General Meeting decides on the annual dividend.

Eighty-two (82) per cent of the dividends to be distributed for each financial year is distributed for all Series A shares and eighteen (18) per cent for all Series B shares, however such that EUR twenty (20) million of the dividends to be distributed for each financial year is first distributed for all Series B shares. If the above-mentioned EUR twenty (20) million minimum amount for the financial period is not distributed (all or in part) for Series B shares in a financial period, Series B shares confer the right to receive the undistributed minimum amount in question (or the accumulated undistributed minimum amount accrued during such financial periods) in the next profit distribution, in any disbursements paid out, or in any other distribution of assets prior to any other dividends, disbursements or asset distribution until the undistributed minimum amount has been distributed in full for Series B shares.

There are no non-controlling interests.

23. ACCUMULATED APPROPRIATIONS, €1,000	2019	2018
Accumulated depreciation from the difference between depreciation according to plan and depreciation carried out in taxation	348,897	398,897
<b>Total</b>	<b>348,897</b>	<b>398,897</b>

24. BONDS, €1,000				2019	2018
Currency	Nominal value	Maturity	Interest	Balance sheet value	
EUR	50,000	20 Sep 2020	floating rate	50,000	50,000
EUR	30,000	19 Sep 2022	floating rate	30,000	30,000
EUR	30,000	11 Sep 2023	2.71%	30,000	30,000
EUR	300,000	3 Apr 2024	3.50%	300,000	300,000
EUR	100,000	23 Nov 2027	1.125%	100,000	100,000
EUR	25,000	27 Mar 2028	2.71%	25,000	25,000
EUR	10,000	12 Sep 2028	3.27%	10,000	10,000
EUR	80,000	24 Apr 2029	2.95%	80,000	80,000
EUR	30,000	30 May 2029	2.89%	30,000	30,000
				655,000	655,000
NOK	200,000	12.11.2019	5.37%		23,725
NOK	100,000	16.9.2025	4.31%	12,512	12,512
				12,512	36,237
Bonds, long-term total				617,512	667,512
Bonds, short-term				50,000	23,725

total

<b>Total</b>	<b>667,512</b>	<b>691,237</b>
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25. LOANS FALLING DUE IN FIVE YEARS OR MORE, €1,000	2019	2018
Bonds	257,512	587,512
Loans from financial institutions	137,185	54,892
<b>Total</b>	<b>394,697</b>	<b>642,404</b>

26. LIABILITIES TO GROUP COMPANIES, €1,000	2019	2018
<b>Current:</b>		
Other liabilities	1,599	2,880
<b>Total</b>	<b>1,599</b>	<b>2,880</b>

27. LIABILITIES TO ASSOCIATED COMPANIES, €1,000	2019	2018
<b>Current:</b>		
Trade payables	3,920	2,226
<b>Total</b>	<b>3,920</b>	<b>2,226</b>

28. OTHER LIABILITIES, €1,000	2019	2018
<b>Current:</b>		
Other loans/Commercial papers (international and domestic)	165,315	245,387
Value added tax	17,849	13,783
Electricity tax	4,107	4,443
Advances received	923	923
Other liabilities	713	591
<b>Total</b>	<b>188,908</b>	<b>265,127</b>

29. ACCRUALS, €1,000	2019	2018
<b>Current:</b>		

Interest and other financial items	11,056	11,306
Salaries and additional personnel expenses	6,716	7,685
Accruals of sales and purchases	16,401	18,113
Tax debts	11,681	15,930
Congestion income	72,378	1,292
<b>Total</b>	<b>118,233</b>	<b>54,326</b>

30. PROVISIONS FOR LIABILITIES AND CHARGES, €1,000	2019	2018
Creosote-impregnated and CCA-impregnated wooden towers, disposal costs	1,393	1,424
<b>Total</b>	<b>1,393</b>	<b>1,424</b>



31. DERIVATIVE AGREEMENTS, €1,000									
	2019				2018				Hierarchy level
	Fair value pos. 31.12.19	Fair value neg. 31.12.19	Net fair value 31.12.19	Nominal value 31.12.19	Fair value pos. 31.12.18	Fair value neg. 31.12.18	Net fair value 31.12.18	Nominal value 31.12.18	
<b>Interest rate and currency derivatives</b>									
Cross-currency swaps	1,509	-2,901	-1,393	12,512	2,571	-6,888	-4,316	36,237	Level 2
Forward contracts		-440	-440	15,878	7	-5	1	5,150	Level 2
Interest rate swaps	27,771	-3,564	24,207	265,000	23,575	-5,087	18,488	325,000	Level 2
Bought interest rate options	49		49	610,000	126		126	620,000	Level 2
<b>Total</b>	<b>29,329</b>	<b>-6,905</b>	<b>22,423</b>	<b>903,389</b>	<b>26,279</b>	<b>-11,980</b>	<b>14,300</b>	<b>986,387</b>	
<b>Electricity derivatives</b>	Fair value pos. 31.12.19	Fair value neg. 31.12.19	Net fair value 31.12.19	Volume TWh 31.12.19	Fair value pos. 31.12.18	Fair value neg. 31.12.18	Net fair value 31.12.18	Volume TWh 31.12.19	
Electricity future contracts. NASDAQ OMX Commodities	8,015	-771	7,244	0.71	12,383	-385	11,997	1.87	Level 1
Electricity forward contracts. NASDAQ OMX Commodities	5,740		5,740	3.56	27,500	-3	27,496	2.58	Level 1
<b>Total</b>	<b>13,755</b>	<b>-771</b>	<b>12,984</b>	<b>4.27</b>	<b>39,883</b>	<b>-389</b>	<b>39,494</b>	<b>4.45</b>	

32. COMMITMENTS AND CONTINGENT LIABILITIES, €1,000			2019	2018
<b>Rental liabilities</b>				
Liabilities for the next year			3,504	4,054
Liabilities for subsequent years			35,597	25,927

	<b>39,101</b>	<b>29,981</b>
<b>Right-of-use agreements</b>		
Liabilities for the next year	8,663	8,663
Liabilities for subsequent years	45,233	53,674
	<b>53,896</b>	<b>62,337</b>
<b>Pledges given as collateral for regulatory charges</b>	<b>490</b>	<b>480</b>
<b>Other financial commitments</b>		
Rent security deposit, guarantee	38	38
Credit facility commitment fee and commitment fee:		
Commitment fee for the next year	414	345
Liabilities for subsequent years	568	862
	<b>1,020</b>	<b>1,245</b>
<b>Unrecognised investment commitments</b>	<b>169,419</b>	<b>80,954</b>

The investment commitments consist of agreements signed by the company to carry out grid construction projects.

### 33. LEGAL PROCEEDINGS AND PROCEEDINGS BY AUTHORITIES

An accident took place on a work site in Laukaa, Finland, on 25 August 2017, where an employee of Revilla y Garcia S.L. died after having fallen from a power line tower. A civil court case has been raised in Spain for damages against Fingrid (the client linked with the accident), the main contractor, Technolines S.R.L. filial i Finland, and its sub-contractor, Revilla y Garcia S.L. Fingrid does not believe the claim against it is likely to succeed and, in Fingrid's view, the legal proceedings or their outcome are not likely to have a substantial impact on the company's earnings or financial position. The action raised in the case concerning social security based compensation has lapsed.

### 34. SEPARATION OF BUSINESSES IN ACCORDANCE WITH THE ELECTRICITY MARKET ACT

#### Imbalance power and regulating power

Each electricity market party must ensure its electricity balance by making an agreement with either Fingrid or some other party. Fingrid buys and sells imbalance power in order to stabilise the hourly power balance of an electricity market party (balance responsible party). Imbalance power trade and pricing are based on a balance service agreement with equal and public terms and conditions.

Fingrid is responsible for the continuous power balance in Finland by buying and selling balancing power in Finland. The balance responsible parties can participate in the Nordic balancing power market by submitting bids on their available capacity. The terms and conditions of participation in the regulating power market and the pricing of balancing power are based on the balance service agreement.

Fingrid is responsible for organising national imbalance settlement. As of the beginning of May 2017, Fingrid has transferred the imbalance settlement to eSett Oy, a company jointly owned by the Finnish, Swedish, Norwegian and Danish transmission system operators.

The balance settlement takes place after the utilisation hours by determining the actual electricity generation, consumption and electricity trade. The outcome of the balance settlement is power balances for each party to the electricity trade.

### Management of balance operation

In accordance with a decision by the Energy Market Authority, Fingrid Oyj shall separate the duties pertaining to national power balance operation by virtue of Chapter 12 of the Electricity Market Act. The management of balance operation is a part of grid operations.

The income statement of the balance service unit is separated by means of cost accounting as follows:

Income	direct
Separate costs	direct
Production costs	matching principle
Administrative costs	matching principle
Depreciation	matching principle in accordance with Fingrid Oyj's depreciation principle
Finance income and costs	on the basis of imputed debt
Income taxes	based on result

The average number of personnel during 2019 was 8 (10). The operating profit was -1.8 (-0.8) per cent of turnover.

	1 Jan - 31 Dec, 2019	1 Jan - 31 Dec, 2018
<b>MANAGEMENT OF BALANCE OPERATION, SEPARATED INCOME STATEMENT</b>	€1,000	€1,000
<b>TURNOVER</b>	<b>356,290</b>	<b>355,698</b>
Other operating income	184	1
Materials and services	-358,590	-352,266
Personnel costs	-887	-1,062
Depreciation and amortisation expens	-561	-609
Other operating expenses	-2,816	-4,530
<b>OPERATING PROFIT</b>	<b>-6,379</b>	<b>-2,768</b>

Finance income and costs	22	64
<b>PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES</b>	<b>-6,357</b>	<b>-2,703</b>
Appropriations	208	222
Income taxes		
<b>PROFIT/LOSS FOR THE FINANCIAL YEAR</b>	<b>-6,149</b>	<b>-2,482</b>

**MANAGEMENT OF BALANCE OPERATION, SEPARATED BALANCE SHEET**

<b>ASSETS</b>	<b>31 Dec 2019</b>	<b>31 Dec 2018</b>
	<b>€1,000</b>	<b>€1,000</b>
<b>NON-CURRENT ASSETS</b>		
<b>Intangible assets</b>		
Other non-current expenses	351	811
<b>Tangible assets</b>		
Machinery and equipment	250	351
<b>Investments</b>		
Interests in associated companies	1,501	2,001
<b>TOTAL NON-CURRENT ASSETS</b>	<b>2,102</b>	<b>3,163</b>
<b>CURRENT ASSETS</b>		
<b>Non-current</b>		
Loan receivables from associated companies	1,125	2,250
<b>Current receivables</b>		
Trade receivables	3,311	5,740
Receivables from Group companies	6,235	10,319
Receivables from associated companies	16,027	21,184
Other receivables	1,497	2,516
	27,070	39,759
Cash in hand and bank receivables	1	1
<b>TOTAL CURRENT ASSETS</b>	<b>28,196</b>	<b>42,010</b>
<b>TOTAL ASSETS</b>	<b>30,298</b>	<b>45,173</b>

	<b>31 Dec 2019</b>	<b>31 Dec 2018</b>
	<b>€1,000</b>	<b>€1,000</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>		

<b>EQUITY</b>		
Share capital	32	32
Share premium account	286	286
Profit from previous financial years	20,214	22,696
Profit for the financial year	-6,149	-2,482
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>14,382</b>	<b>20,532</b>
<b>ACCUMULATED APPROPRIATIONS</b>	<b>-818</b>	<b>-611</b>
<b>LIABILITIES</b>		
<b>Current liabilities</b>		
Trade payables	3,311	2,199
Liabilities to associated companies	13,423	23,053
	16,734	25,252
<b>TOTAL LIABILITIES</b>	<b>16,734</b>	<b>25,252</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>30,298</b>	<b>45,173</b>

### Development of information exchange

It is Fingrid's task to develop the exchange of information required for electricity trade and imbalance settlement as set out in the Electricity Market Act. Fingrid's information exchange services are part of the electricity markets' information exchange environment. In order to develop the effective and accurate exchange of information, Fingrid works in close co-operation with e.g. electricity market parties, interest groups, service providers, supervisory authorities, legislators, organisations that develop national and international communications and other transmission system operators. In accordance with a decision by the Energy Market Authority, Fingrid Oyj must separate the duties pertaining to the development of information exchange by virtue of Chapter 12 of the Electricity Market Act. The development of information exchange is a part of grid operations.

The separation of the income statement for the development of information exchange is realised by means of cost accounting as follows:

Income	direct
Separate costs	direct
Administrative costs	matching principle
Income taxes	based on result

1 Jan - 31 Dec,

1 Jan - 31 Dec,

	2019	2018
		€1,000
<b>TURNOVER</b>	<b>604</b>	<b>605</b>
Other operating expenses	-639	-368
<b>OPERATING PROFIT</b>	<b>-35</b>	<b>237</b>
<b>PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES</b>	<b>-35</b>	<b>237</b>
Income taxes	7	-47
<b>PROFIT/LOSS FOR THE FINANCIAL YEAR</b>	<b>-28</b>	<b>190</b>

DEVELOPMENT OF INFORMATION EXCHANGE, SEPARATED BALANCE SHEET		
ASSETS	31 Dec 2019	31 Dec 2018
	€1,000	€1,000
<b>CURRENT ASSETS</b>		
Trade receivables	11	350
Receivables from Group companies	470	
Other receivables	225	83
<b>TOTAL CURRENT ASSETS</b>	<b>706</b>	<b>433</b>
<b>TOTAL ASSETS</b>	<b>706</b>	<b>433</b>

SHAREHOLDERS' EQUITY AND LIABILITIES	31 Dec 2019	31 Dec 2018
	€1,000	€1,000
<b>EQUITY</b>		
Share capital	3	3
Profits/losses from previous financial years	-331	-520
Profit for the financial year	-28	190

<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>-356</b>	<b>-328</b>
<b>LIABILITIES</b>		
<b>Current liabilities</b>		
Trade payables	1,062	353
Liabilities to Group companies		343
Other liabilities		65
	1,062	761
<b>TOTAL LIABILITIES</b>	<b>1,062</b>	<b>761</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>706</b>	<b>433</b>

### Grid operations

Grid operations refers to licensed electricity system operation that takes place on the electricity grid. Electricity system operations are defined in Chapter 1 of the Electricity Market Act (588/2013) and grid operations are defined in Chapter 5. Of Fingrid Oyj's operations, activities related to the management of the power reserve system and guarantees of origin for electricity, as well as the datahub project that was started in 2015 are not included in grid operations. Operations that are not part of grid operations constitute 'other operations' as referred to in Chapter 12 of the Electricity Market Act and must be separated from grid operations in accordance with that Chapter.

The income statement and balance sheet of grid operations and other operations have, in compliance with Chapter 12 of the Electricity Market Act, been separated by means of cost accounting as follows:

Income	direct
Separate costs	direct
Production costs	matching principle
Administrative costs	matching principle
Depreciation	matching principle in accordance with Fingrid Oyj's depreciation principle
Finance income and costs	on the basis of imputed debt
Income taxes	based on result
Balance sheet items	matching principle

	TRANSMISSION SYSTEM OPERATION	OTHER OPERATION
	1 Jan - 31 Dec, 2019	1 Jan - 31 Dec, 2019
<b>SEPARATED INCOME STATEMEN</b>	<b>€1,000</b>	<b>€1,000</b>
<b>TURNOVER</b>	<b>784,742</b>	<b>1,431</b>
Other operating income	4,319	
Materials and services	-477,603	
Personnel costs	-26,122	-431
Depreciation and amortisation expense	-98,240	
Other operating expenses	-38,681	-1,001
<b>OPERATING PROFIT</b>	<b>148,414</b>	<b>0</b>
Finance income and costs	-14,204	593
<b>PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES</b>	<b>134,210</b>	<b>593</b>
Appropriations	50,000	
Income taxes	-36,624	-119
<b>PROFIT/LOSS FOR THE FINANCIAL YEAR</b>	<b>147,587</b>	<b>474</b>

SEPARATED BALANCE SHEET	TRANSMISSION SYSTEM OPERATION	OTHER OPERATION
	31 Dec 2019	31 Dec 2019
<b>ASSETS</b>	<b>€1,000</b>	<b>€1,000</b>
<b>Intangible assets:</b>		
Goodwill		
Other intangible assets	74,208	
	<b>74,208</b>	
<b>Tangible assets</b>		
Land and water areas	19,641	



Buildings and structures	243,002	
Machinery and equipment	559,391	
Transmission lines	742,447	
Other property, plant and equipment	118	
Prepayments and purchases in progress	50,294	
	<b>1,614,893</b>	
<b>Investments:</b>		
Interests in Group companies		843
Interests in associated companies	8,087	
Other shares and interests		
	<b>8,087</b>	<b>843</b>
<b>TOTAL NON-CURRENT ASSETS</b>	<b>1,697,188</b>	<b>843</b>
<b>CURRENT ASSETS</b>		
Inventories	12,067	
<b>Receivables</b>		
<b>Non-current</b>		
Loan receivables from Group companies		21,394
Loan receivables	1,125	

from associated companies		
Deferred tax assets	9,003	
	<b>10,128</b>	<b>21,394</b>
<b>Current</b>		
Trade receivables	68,439	
Receivables from Group companies	21,972	2,542
Receivables from associated companies	3,881	
Other receivables	9,462	
Prepayments and accrued income	8,653	
	<b>112,406</b>	<b>2,542</b>
Financial securities	66,489	
Cash in hand and bank receivables	15,626	
<b>TOTAL CURRENT ASSETS</b>	<b>216,716</b>	<b>23,936</b>
<b>TOTAL ASSETS</b>	<b>1,913,904</b>	<b>24,779</b>

<b>SEPARATED BALANCE SHEET</b>	<b>TRANSMISSION SYSTEM OPERATION</b>	<b>OTHER OPERATION</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>31 Dec 2019</b>	<b>31 Dec 2019</b>
	<b>€1,000</b>	<b>€1,000</b>
<b>EQUITY</b>		
Share capital	55,920	3
Share premium account	55,922	

Profit from previous financial years	50,313	612
Profit for the financial year	147,587	474
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>309,742</b>	<b>1,089</b>
<b>ACCUMULATED APPROPRIATIONS</b>	<b>348,897</b>	
<b>PROVISIONS FOR LIABILITIES AND CHARGES</b>	<b>1,393</b>	
<b>LIABILITIES</b>		
<b>Non-current liabilities</b>		
Bonds	617,512	
Loans from financial institutions	240,216	
	<b>857,728</b>	
<b>Current liabilities</b>		
Bonds	50,000	
Loans from financial institutions	17,662	
Trade payables	17,542	
Liabilities to Group companies		23,570
Liabilities to associated companies	3,920	
Other liabilities	188,896	11
Accruals	118,124	109
	<b>396,144</b>	<b>23,691</b>
<b>TOTAL LIABILITIES</b>	<b>1,253,872</b>	<b>23,691</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>1,913,904</b>	<b>24,779</b>

## Other non-current assets included in the separated balance sheet for grid operations

SEPARATED BALANCE SHEET	TRANSMISSION SYSTEM OPERATION
ASSETS	31 Dec 2019
	€1,000
<b>Intangible assets:</b>	
Other intangible assets	5,529
	<b>5,529</b>

<b>Tangible assets</b>	
Land and water areas	16,962
Buildings and structures	4,554
Machinery and equipment	3,228
Transmission lines	1,001
Other property, plant and equipment	118
Prepayments and purchases in progress	50,294
	<b>76,157</b>
<b>TOTAL NON-CURRENT ASSETS</b>	<b>81,686</b>

### Congestion income in grid operations

The congestion income received by a grid owner must be used for the purposes stated in EC Regulation 714/2009, Article 16, Paragraph 6: guaranteeing the actual availability of the allocated capacity, and maintaining or increasing interconnection capacities through network investments. As a consequence of the change in the regulation governing Fingrid's grid pricing, the company will include the congestion income received after 1 January 2016 as accruals in the item other liabilities in the balance sheet. Of the accruals, congestion income will be recognised in the income statement as other operating income when their corresponding costs, as defined in the regulation, accrue as annual expenses in the income statement. Alternatively, they are entered in the balance sheet against investments, as defined by regulation, to lower the acquisition cost of property, plant and equipment, which lowers the depreciation of the property, plant and equipment in question. The congestion income received before 1 January 2016 was recognised in turnover. Congestion income accrued in 2019 has been used in accordance with regulations for the Alapitkä substation capacitor investment, which maintains cross-border transmission capacity. MEUR 72.4 in congestion income was left unused and will be used for future investments to improve the functioning of the electricity market.

Congestion income, €1,000	2019	2018
Congestion income on 1 Jan	1,292	
Accumulated congestion income	73,001	29,632
Expenses matching congestion income		
Investments matching congestion income	-1,915	-28,341
<b>Congestion income on 31 Dec</b>	<b>72,378</b>	<b>1,292</b>

### Countertrade

In terms of the costs arising from countertrade used to safeguard system security in grid operations, congestion income may be used to offset countertrade costs arising from cross-border transmission connections.

Counter trade, €1,000	2019	2018

Counter-trade between Finland and Sweden	137	1,916
Counter-trade between Finland and Estonia	485	58
Counter-trade between Finland's internal connection	279	2,161
<b>Total counter-trade</b>	<b>902</b>	<b>4,135</b>

### 35. EMISSION RIGHTS

Fingrid has not been granted free-of-charge emission rights for the emissions trade period 2013–2020.

The use of emission rights had no impact on the financial result in 2019.

	2019	2018
Total CO <sub>2</sub> emissions tCO <sub>2</sub>	5,142	8,223

### 36. PERMANENT LOCATION IN DENMARK IN INCOME TAXATION

#### Joint Nordic operational planning organisation

Fingrid has established, jointly with Svenska Kraftnät, Statnett and Energinet.dk, the Nordic Regional Security Coordinator (Nordic RSC) in Copenhagen for inter-TSO operational planning between the countries. The unit includes Fingrid employees who provide the service for Fingrid's parent company, and this operation constitutes a permanent location in terms of income taxation and is income taxable to Denmark. The unit became operational in summer 2018.

	1 Jan - 31 Dec, 2019	1 Jan - 31 Dec, 2018
	€1,000	€1,000
<b>INCOME STATEMENT</b>		
<b>TURNOVER</b>	<b>897</b>	<b>423</b>
Personnel costs	-201	-129
Other operating expenses	-653	-274
<b>OPERATING PROFIT</b>	<b>43</b>	<b>20</b>
<b>PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES</b>	<b>43</b>	<b>20</b>
Income taxes	-9	-4
<b>PROFIT/LOSS FOR THE FINANCIAL YEAR</b>	<b>33</b>	<b>16</b>

# 9 Signatures for the Annual Review and for the Financial Statements

Helsinki, 27th February 2020

Juhani Järvi  
Chair

Päivi Nerg  
Deputy Chairman

Sanna Syri

Esko Torsti

Anu Hämäläinen

Jukka Ruusunen  
President & CEO

## **Auditor's notation**

A report on the audit carried out has been submitted today.

Helsinki, 27th February 2020

PricewaterhouseCoopers Oy  
Authorised Public Accountants

Heikki Lassila, APA