



**Annual report 2017**

**FINGRID**

# Table of Contents

## In brief

5	Contents of the annual report and reporting principles
6	Review by the President & CEO
8	Fingrid in brief
10	Power transmission grid

## Strategy and Management System

12	Operating environment
	Climate change and transformation of the energy system
	Security of energy supply and electricity dependency
	Globalisation and responsibility
	Digitalisation
17	Stakeholder engagement
19	Mission and business model
20	Strategy
	Fingrid's strategic targets and indicators
	Management system
30	Personnel
36	Corporate responsibility

## Business operations

41	Customers
	Customer committees and Advisory Committee
51	Finance and treasury
56	Power system
63	Electricity market
68	Grid development and maintenance

76	Environment
80	Research and development

## GRI index

## Governance

113	Board of Directors
117	Executive management group
123	Foremost uncertainty factors and risks
126	Corporate Governance Statement
	1. General
	2. Description of Fingrid's administrative bodies
	3. General meeting
	4. Board of Directors
	5. Board committees
	6. President & CEO
	7. Company management
	8. Advisory committee
	9. Internal control and risk management
	10. Financial audit and internal audit
	11. Related party transactions
	12. Main procedures relating to insider administration
	Remuneration statement
147	Stock exchange releases 2017

## Annual review and financial statements

149	1 Report of the board of directors
	1.1 Financial result

	1.2 Financing		4.5 Operating expenses, liabilities and credit risk management for purchases
	1.3 Capital expenditure		4.6 Inventories
	1.4 Power system		4.7 Management of electricity price and volume risk and commodity risks
	1.5 Electricity market		4.8 Personnel - the cornerstone of our operations
	1.6 Share capital		4.9 Taxes
	1.7 Personnel and remuneration systems		
	1.8 Board of Directors and corporate management	210	5 Long-term Investor
	1.9 Fingrid's business model		5.1 Grid assets
	1.10 Internal control and risk management		5.2 Tangible and intangible assets
	1.11 Foremost risks and uncertainty factors for society and Fingrid		5.3 Lease agreements
	1.12 Corporate responsibility	222	6 Strong Financial Position
	1.13 Environmental matters		6.1 Capital management
	1.14 Legal proceedings and proceedings by authorities		6.2 The aims and organisation of financing activities and the principles for financial risk management
	1.15 Events after the review period and estimate of future outlook		6.3 Financial liabilities, financial costs and managing the financial risks of liabilities
	1.16 Board of Directors' proposal for the distribution of profit		6.4 Cash and cash equivalents and other financial assets
	1.17 Annual General Meeting 2017		6.5 Equity and dividend distribution
173	2 Consolidated Key Figures		6.6 Summary of financial assets, financial liabilities and derivatives
176	3 Consolidated Financial Statements (IFRS)		
	3.1 Income statement	252	7 Other Information
	3.2 Consolidated balance sheet		7.1 Group companies and related parties
	3.3 Consolidated statement of changes in equity		7.2 Other notes
	3.4 Consolidated cash flow statement	260	8 Parent company financial statements (FAS)
187	4 Benchmark for TSO Operations		8.1 Parent company income statement
	4.1 General information about the Group and general accounting principles		8.2 Parent company balance sheet
	4.2 The company's general risk management processes and policies		8.3 Parent company cash flow statement
	4.3 Formation of turnover and financial result	293	8.4 Notes to the financial statements of parent company
	4.4 Revenue-related receivables and credit risk management	294	9 Signatures for the Annual Review and for the Financial Statements
			Auditor's Report



## In brief

# Contents of the annual report and reporting principles

Fingrid's annual report for 2017 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 interim reports 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 AS (ownership 18.8%) and eSett Oy (ownership 33.3%). 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 our 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, and, e.g. information on personnel's well-being, occupational safety, environmental impacts and the tax footprint is always reported in connection with the responsibility area in question. The reporting is also in compliance with the Global Reporting Initiative (GRI) guidelines (Core requirements). The boundaries of the social and environmental data do not include the associated companies. Requirements for corporate responsibility reporting by state-owned companies and 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.

# Review by the President & CEO

## Fingrid is Finland's transmission system operator

2017 was a busy year for Fingrid. We did well in achieving the operational and financial targets set for 2017. We developed the grid for the power system of the future. The grid's transmission capacity was in efficient use, and transmission reliability remained at an excellent level. We raised the reliability of direct current (DC) connections that are important for the electricity market to an all-time high. Financially, Fingrid is in good shape, despite significant capital expenditure and operational development in recent years. The result development has been strong. The consolidated turnover amounted to EUR 672.0 (586.1) million and profit for the financial period was EUR 130.8 (138.7) million. Our estimates indicate that the result according to the regulatory model that governs grid operations will show a slight deficit for 2017. Towards the end of the year, we decided to keep the transmission grid tariffs unchanged for 2018.

## Preparing for the future now

At Fingrid, we continuously think about the future and the impacts it will have on the operations of a transmission system operator. For us, the main drivers of the future will be the energy system's transition to new production methods and technologies, and the changes taking place in society. The electrification of society is an efficient way to put an end to the considerable carbon dioxide emissions caused by the energy system. A reliable supply of electricity is a necessity for a society that can no longer function without it. As a transmission system operator, Fingrid has a central role in powering Finland. Preparing for changes in the industry and for future investments demands diligent work. Decisions made today will continue to have an impact decades from now. Society's efforts to achieve ever-greater equality and openness is also nicely aligned with our operations, which have for a long time now been based on these factors. Corporate Spirit's People Power and Great Place to Work workplace atmosphere surveys carried out in 2017 prove that Fingrid is one of the best places to work in Finland.

## A different kind of TSO

Fingrid stands apart from other transmission system operators in its customer focus. We work for the benefit of customers and society. Every Fingrid employee must be committed to hearing the customer's voice. Based on feedback received in 2017, our customers trust us. World-class efficiency, based on an ability to combine our core competence with the best experts in every industry, is another characteristic of our work. Fingrid's customer focus, efficiency and innovative approach have also garnered attention around the world. The company was ranked among the top three transmission grid brands at the CHARGE energy conference in Iceland in October 2017. This achievement would not have been possible without our smooth co-operation with customers and service providers.

In an increasingly globalised operating environment, the sustainability of a TSO's business operations is assuming an increasingly significant role. Our commitment to the UN's Global Compact initiative is a testimony to how important sustainability and transparency are to Fingrid. We implement our strategy in strict compliance with the principles of corporate sustainability.

We do important development work on behalf of the power system's transmission reliability and the electricity markets. The modernisation and digitalisation of the power system continuously leads to new innovations. Without significant technological breakthroughs, the transition to a new, clean power system is not possible. It is important that the new technologies are effectively integrated into the power system. The market's "invisible hand" is the best partner for new technologies: competition and the markets effectively steer new investments, while price guides the use of new technology so that it optimally supports balance in the power system. Well-functioning markets fairly reward market players and encourage them to find new solutions. It has been a joy to

see that demand-side management in electricity consumption is gradually finding its place in the electricity markets. We saw some good examples of this in 2017. Similar development would also be welcome in battery technology. The hope is that the market attracts new investments, also in electricity production.

In terms of promoting the electricity markets, we are pro-integration. In that respect, we do have concerns about the future of Nordic co-operation. Recently, there have been clear signs of politics instead of traditional, trust-based co-operation.

We are seeking new solutions on a broad front by collaborating with innovative companies. We are focused on our core mission and are not contemplating finding new business. Fingrid's mission is to support and promote Finnish companies by carrying out joint development work with them and by serving as a platform for growth for new businesses. This enables us to support Finland's success in the best possible way and to realise our mission as a transmission system operator for all Finns.

Jukka Ruusunen  
CEO



# Fingrid in brief

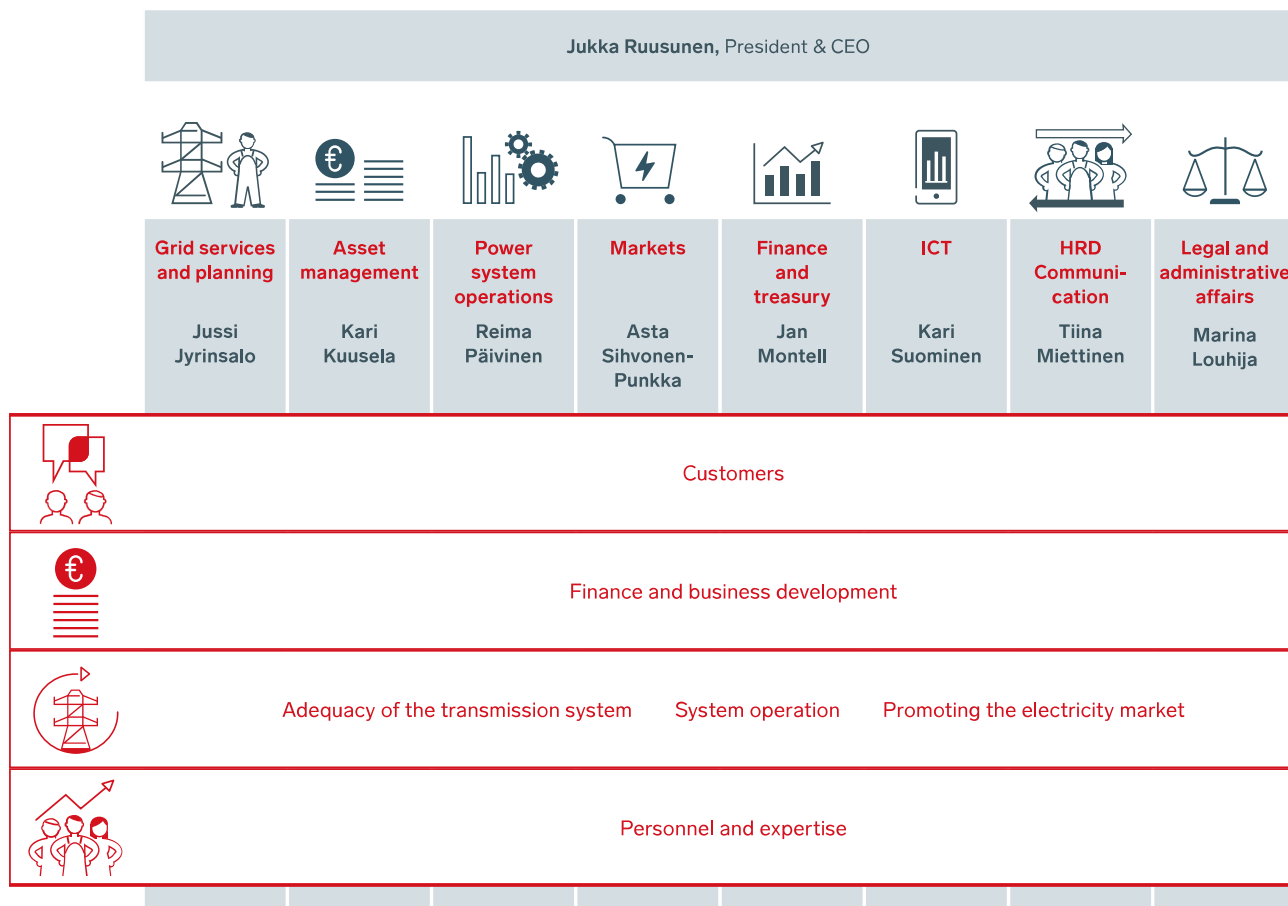
- Fingrid Oyj is a Finnish public limited company responsible for electricity transmission in the high-voltage transmission system in Finland. The company was established on 29th November 1996.
- Operations started on 1st September 1997.
- Turnover amounts to EUR 672 (586) million.
- The balance sheet total is EUR 2.1 (2.1) billion.
- Fingrid's nationwide grid is an integral part of the power system in Finland. The main grid is the high-voltage trunk network that covers all of Finland. Major power plants, industrial plants and electricity distribution networks are connected to the grid.
- Fingrid guarantees a disturbance-free electricity supply in Finland. Fingrid ensures that the generation and consumption of electricity are always in balance. Between 2017 and 2026, some 1,500 kilometres of new transmission lines and eight substations will be built.
- Fingrid's customers include grid companies, electricity producers, major electricity consumers and electricity market parties. The services the company offers its customers are electricity transmission, balance services, guarantee-of-origin certificates, electricity market information and retail market information exchange.
- The Finnish power system is part of the common Nordic power system. The Nordic system is connected to the system in Central Europe via high-voltage direct current (HVDC) transmission links. Finland also has HVDC links with Russia and Estonia.
- The transmission system owned by Fingrid encompasses approx. 14,400 kilometres of 400-, 220- and 110-kilovolt transmission lines, plus 115 substations, four HVDC connections and 10 of the company's own reserve power plants.
- Fingrid is responsible for planning and monitoring the operation of the Finnish electricity transmission system and for maintaining and developing the system. The company also participates in the work of ENTSO-E, the European Network of Transmission System Operators for Electricity, and in preparing European network codes and network planning. Alongside European co-operation, Nordic TSOs co-operate in the areas of grid operations and the development of grid and electricity market rules.
- Fingrid develops new services to improve market efficiency. In spring 2015, Fingrid launched a project that will centralise information exchange between electricity retail sellers and TSOs into one service, called the datahub. The project also aims to clarify and enhance the business processes of electricity retail markets.
- The company is owned by the State of Finland (direct holding 28.2%), the National Emergency Supply Agency (24.9%), Aino Holding Ky (26.4%), Ilmarinen Mutual Pension Insurance Company (19.9%) and other institutional investors (0.6%). Aino Holding Ky is owned by OP Insurance and pension entities (Pohjola Insurance Ltd, OP Life Assurance Ltd., OP Pension Fund and OP Pension Foundation), the State Pension Fund and Elo Mutual Pension Insurance Company.
- The bonds issued by Fingrid in the capital markets are listed on the London Stock Exchange.
- Fingrid owns 18.8 per cent of electricity exchange Nord Pool AS.
- Fingrid owns the balance services company eSett Oy together with Statnett and Svenska Kraftnät. In line with its motto, "We settle together", the company offers imbalance settlement services to parties on the Finnish, Norwegian and Swedish electricity markets. The company's operations commenced in May 2017, when eSett Oy took over imbalance settlement. At the same time, the markets transitioned to using a harmonised Nordic imbalance settlement model. The goal is to offer market parties operating conditions that are as equal as possible in the entire operating area, thus lowering both their market-entry threshold and costs. eSett serves more than 1,000 electricity market parties.
- The joint Nordic operational planning office, Nordic RSC, launched its first operations at the end of 2017 in



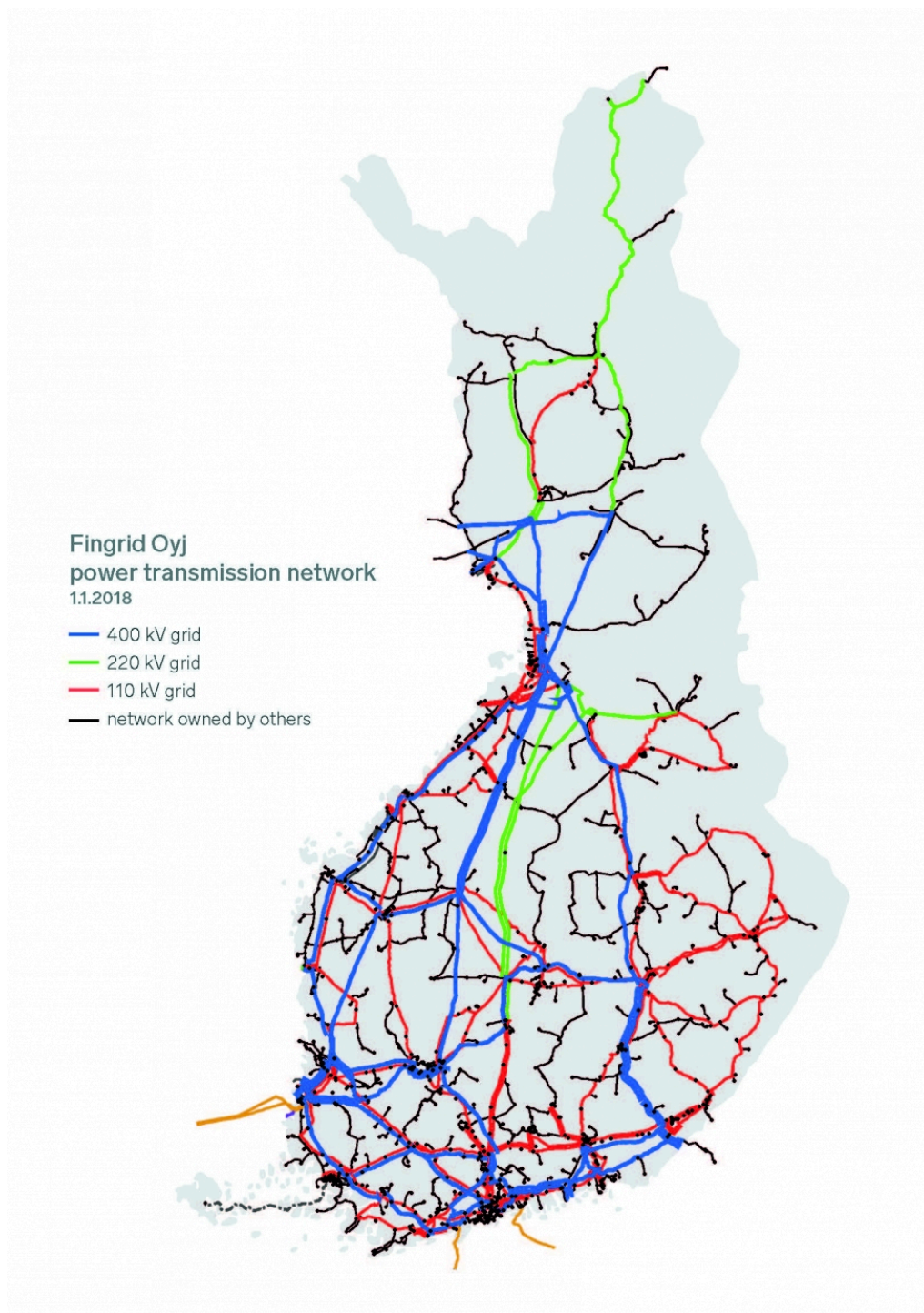
Copenhagen, Denmark.

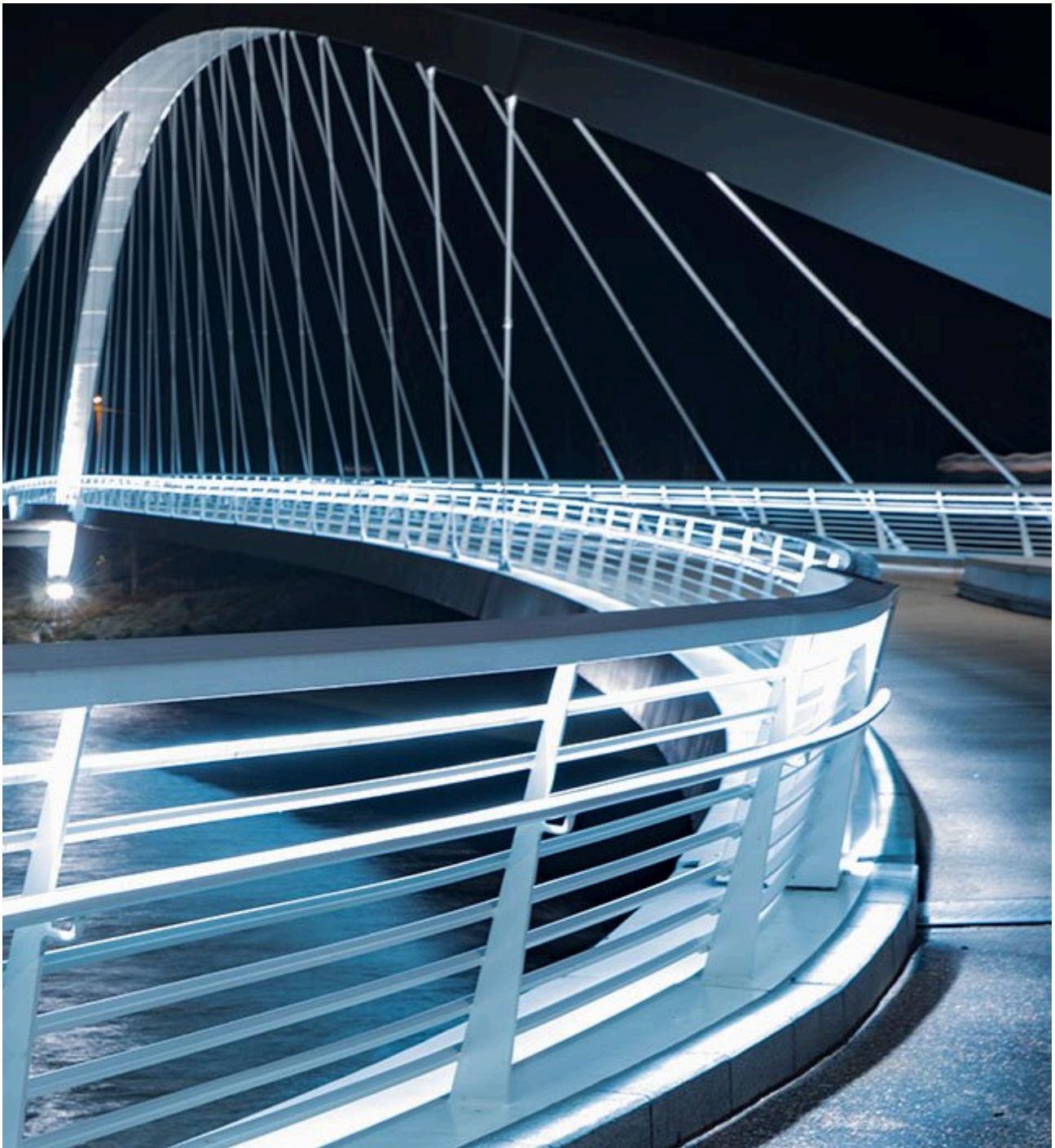
- Number of personnel at year-end: 355 (334), with 308 (291) permanent employees.
- Fingrid is headquartered in Helsinki, and the company also has offices in Hämeenlinna, Oulu, Petäjävesi, Rovaniemi and Varkaus.

## Fingrid Oyj's organisation



# Power transmission grid

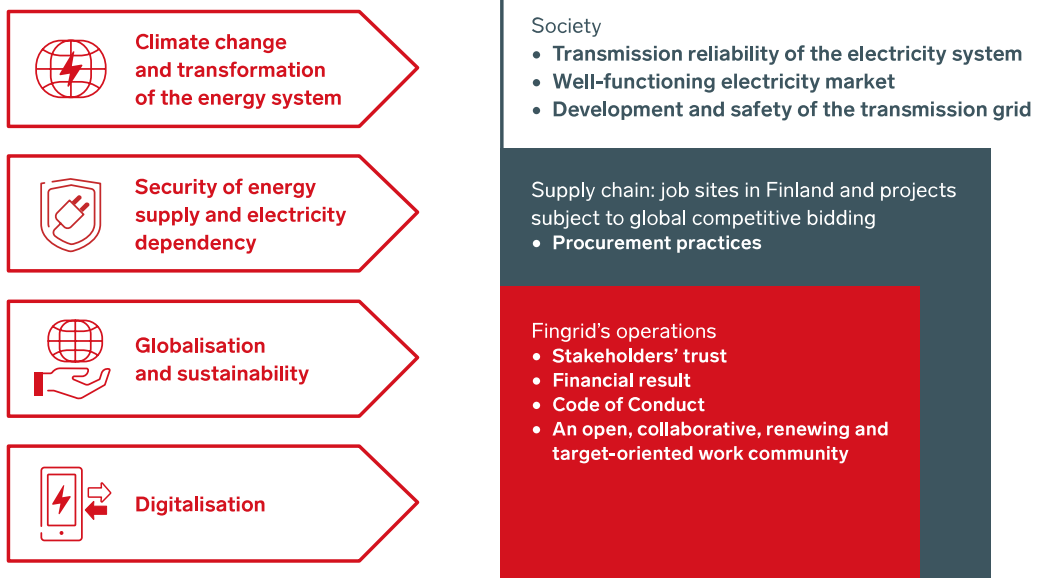




# Strategy and Management System

# Operating environment

## Megatrends influencing Fingrid's operations



# Climate change and transformation of the energy system

A new climate agreement was adopted at the UN's climate change conference in Paris in 2015. A qualified majority of 55 countries that produce at least 55% of the world's greenhouse gas emissions was required for the agreement to take effect. The threshold for the agreement's entry into force was crossed in October 2016, when it was ratified by the EU, among others. The Paris Agreement entered into force on 4 November 2016. Finland committed to the agreement on 14 November 2016.

In addition to emissions-reduction targets, the agreement includes long-term adaptation goals, as well as the goal of shifting towards low-carbon and sustainable development.

The energy industry plays a key role in combatting climate change. The structure of electricity production is changing as the share of renewable energy grows and adjustable fossil-fuel condensing power production decreases. Wind and solar energy will soon be profitable without subsidies.

An increase in wind and solar power will result in a scarcity of power, flexibility and system inertia. Price fluctuations will increase, which will bring business opportunities to flexible production and consumption and energy storage technologies.

Fingrid does its part to combat climate change by building and maintaining the main grid. The transformation in the structure of electricity generation due to the efforts to mitigate climate change results in changes in the power system. We make it possible to connect new forms of energy production to the grid. We ensure the sufficiency of system reserves also in the future and prepare for a decline in flexible production capacity while at the same time developing the electricity market to meet the needs of a low carbon power system.

Our role is to actively propose improvements to the electricity market model that will make it possible to stay on a market-based and clean path. We seek new solutions for grid operations to ensure that the power system functions reliably and, with support from the markets, to find a balance between production and consumption.

In future, our operating environment will expand to encompass an increasing number of themes, from retail markets to European-level international co-operation. New players will become our customers. Our co-operation with distribution system operators is more important than ever.

Climate change increases the likelihood of violent storms and other extreme weather phenomena. They can cause widespread and sustained damage to electrical networks. This requires a high level of preparedness from us, as part of continuity management.

# Security of energy supply and electricity dependency

More than half of the European Union's energy needs are met with imported electricity. The European Energy Union brings together climate policy, competitiveness policy and the security of energy supply.

Society is becoming increasingly dependent on electricity. At the same time, society's tolerance for disruptions to the availability of electricity is weakening: serious disturbances in electricity supply are among society's greatest safety threats. 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. According to the Winter Package, measures related to crises must be compatible with the rules for the common electricity markets.

For Fingrid's part, implementing our investment programme, promoting the markets and developing our grid operations improve the reliability of the electricity supply and our preparedness in the face of crisis situations. In risk and continuity management, we continuously prepare for serious disturbances to the power system in different threat scenarios.

We are actively involved in international co-operation to develop European rules, and we are preparing for power system disturbances in co-operation with the Baltic Sea region's TSOs.

# Globalisation and responsibility

Major climate and energy programmes offer international players business opportunities on the equipment and contracting markets. The mobility of the workforce is also 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 our corporate image. Regulations concerning corporate finance and social corporate responsibility are increasing on both a national and global scale. The importance of openness is growing. Concerns over the Earth reaching its limits highlight the importance of a circular economy and are reflected in the environmental obligations and expectations set for business.

For Fingrid, globalisation brings new opportunities, thanks to our expertise related to outsourcing services and international co-operation. We have also been successful for some time now in making use of the international financing markets. Going forward, too, we must be able to operate in international co-operation networks, where broad knowledge, networking and advocacy skills play a key role. International supply chains, however, can be long, reaching to developing countries, which highlights the importance of ensuring that our business and our procurement practices are responsible. Responsible procurement of goods and services can globally promote sustainable development and ethical practices.

Trust and openness are key words when assessing Fingrid's operations as a responsible corporate citizen.

# Digitalisation

According to some estimates, by the end of the current decade, seven billion individual devices and 30 billion industrial, logistics and monitoring and control system devices will be connected via the internet.

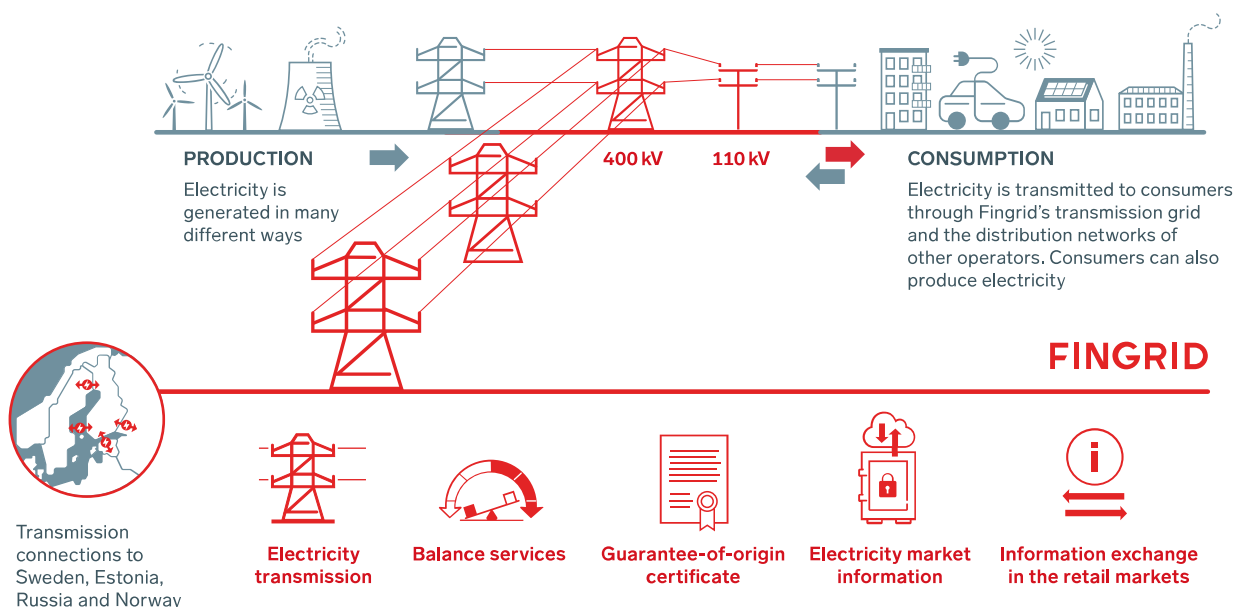
Mobile-integrated, device- and individual-based information technology is changing, more and more rapidly and extensively, people's day-to-day lives, corporate management and business models. Digital production processes are replacing human workforce in people-dominated industries. Digitalisation is changing the nature of work and enhancing the efficiency of data acquisition and processing.

Digitalisation brings opportunities to improve the profitability of operations and creates a wide range of new e-services. On the other hand, an integrated network of everything can become an avenue for targeted attacks, in the most extreme case, a weapon in cyberwarfare. This also imposes specific cybersecurity requirements on Fingrid's IT systems.

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 our customer field.

Digitalisation also makes a change in working methods possible. However, combining varied personal expertise and experience with collective skills demands more of the entire work community and, above all, of our management practices.

## Fingrid's role in the consumption of electricity production





# Stakeholder engagement

We maintain daily contact with our stakeholders, and being open to their expectations is an essential part of our sustainability approach. The operations of a transmission system operator are bound to affect several third parties.

In our stakeholder engagement, we operate openly, honestly and equally. 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 engage in dialogue, regularly survey the opinions of our stakeholders and publish material on our operations as openly as possible for all to see.











## **Our mission**

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

## **Our values**

Open, efficient, equal, responsible

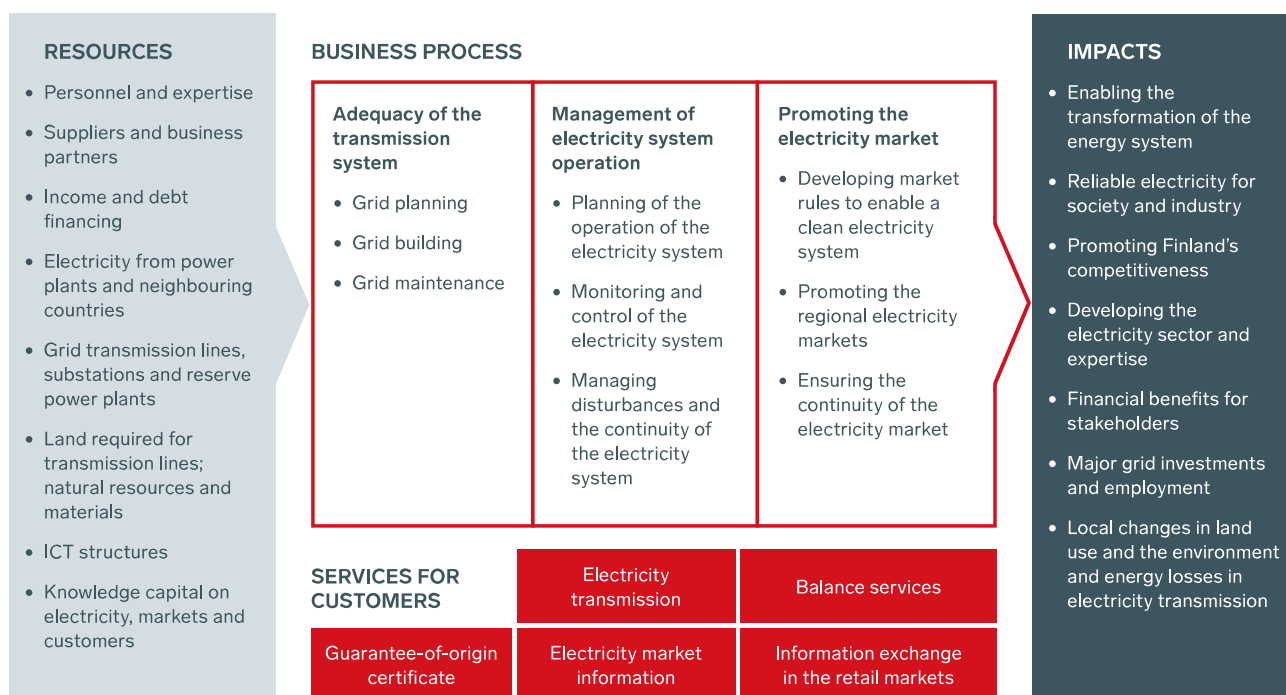
## Fingrid's key stakeholders and channels of engagement

Stakeholder	Stakeholder's expectations	Fingrid's measures
 <b>SOCIETY AND CONSUMERS</b>	<ul style="list-style-type: none"> <li>Reliable electricity</li> <li>Shaping the clean and market-oriented electricity 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>Latest news and news releases</li> <li>Social media</li> <li>Reputation&amp;Trust survey of the general public</li> </ul>
 <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 operations, maintenance and grid planning</li> <li>Customer service planning and continuous engagement</li> <li>Customer magazine and newsletters</li> <li>Customer committees</li> <li>Customer events</li> <li>Customer and stakeholder questionnaires</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>
 <b>SHAREHOLDERS</b>	<ul style="list-style-type: none"> <li>Responsible business and good governance</li> <li>Improvement in profitability</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>Shareholder information</li> <li>Current financial statements and management reviews</li> <li>Dividends</li> </ul>
 <b>FINANCERS AND CREDIT RATING AGENCIES</b>	<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> <li>Current financial statements and management reviews</li> <li>Stock exchange releases</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>Meetings, feedback sessions and theme days</li> <li>Training and audits</li> <li>Promoting occupational safety</li> <li>Joint development projects</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>Events for the public and other events</li> <li>Landowner bulletins</li> <li>Map feedback service</li> <li>Feedback surveys about completed investment projects</li> </ul>
 <b>MEDIA</b>	<ul style="list-style-type: none"> <li>Clear, reliable and timely communication</li> </ul>	<ul style="list-style-type: none"> <li>Press conferences and meetings</li> <li>News and stock exchange releases</li> <li>Personal contacts</li> <li>Media monitoring and publicity analysis</li> <li>Media barometer survey</li> </ul>
 <b>AUTHORITIES AND ORGANISATIONS</b>	<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 with the Energy Authority</li> </ul>
 <b>OTHER PARTNERS</b>	<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>Recruitment fairs</li> <li>Reputation&amp;Trust survey of policymakers and business and technology experts</li> </ul>

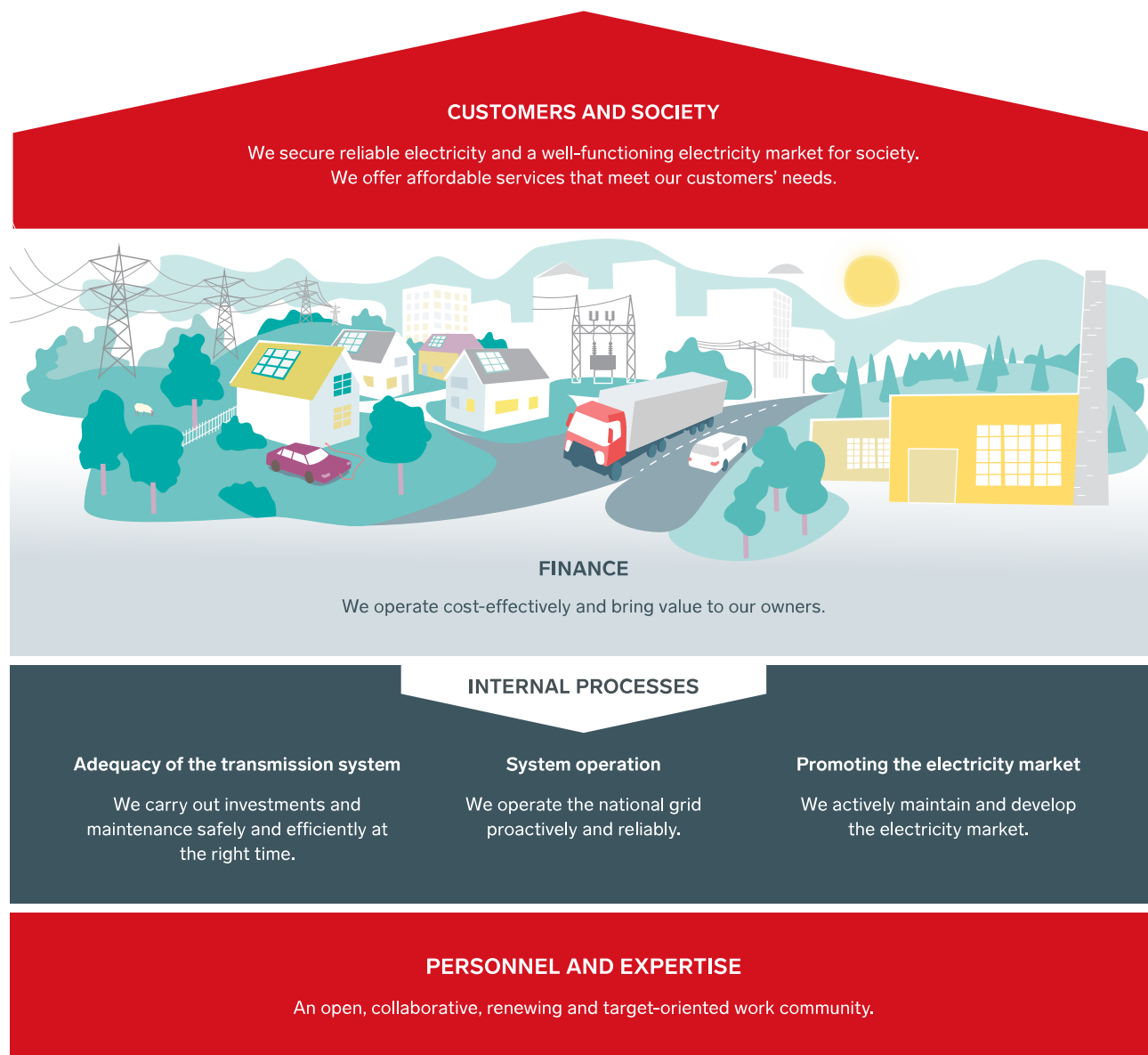
# Mission and business model

Fingrid ensures disturbance-free availability of electricity in Finland now and in future. We are involved in developing Finnish society and the well-being of all citizens. We have a positive effect on the daily lives of Finns via our mission: to transmit electricity reliably, to actively promote the electricity market, and to develop the transmission system over the long term.

## Fingrid's business model



# Strategy



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 operators in the world. By operating responsibly, we earn the trust of our customers, society, shareholders and the work community.

In preparing and executing Fingrid's strategy, we have examined the requirements set by our vision as fairly as possible from four different perspectives. Our organisation model is based on a matrix structure which supports effective implementation and comprehensively engages the personnel.

Our customers and stakeholders expect us to secure a reliable electricity supply for the nation, a well-functioning electricity market, and affordable grid transmission pricing. We develop our services together with our customers, according to their needs and business challenges. The foundation for all our customer work is asking, listening and clear communication. We operate fairly, and we take 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.

Financial management begins with the premise that we respond to the expectations of society in the long term, that we operate cost-effectively and that we provide value to our owners. Our decision-making and operations are based on the right information at the right time and on the desire to be efficient, profitable and responsible. We are a forerunner in transmission system operation on the increasingly international electricity market, which requires continuous development of our operations and our productivity. We pro-actively and thoroughly plan our investments on a sound financial basis, while also taking society into account. Successful financing activities secures our capital investments and operational maintenance. We make sure that the result of all the company's businesses is at the level permitted by regulation.

Our internal processes are described according to Fingrid's main duties.

Managing system security requires proactive and reliable electricity transmission. Our objective is to keep the nation powered and to ensure that the consumption and production of electricity in Finland's power system is always balanced. Developing the Nordic power system as a unified whole promotes system security and the efficient use of resources. We uphold strong competence in grid operations through in-house control room operations. We also own most of the reserve power plants, which serve as fast disturbance reserves.

We promote the operations of the electricity markets, and we actively develop them in co-operation with our stakeholders. 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 markets. We actively participate in the preparation and implementation of European grid legislation. We aim to keep electricity transmission connections between countries and within Finland sufficient. We provide information about the markets to meet market needs, and we manage balance services efficiently. We build functional wholesale and retail markets and develop real-time markets.

To ensure transmission capacity, we aim for effective and timely grid investments from the perspective of the national economy, and good upkeep of the grid. We plan the transmission grid according to the needs of the coming decades. We build and maintain the grid safely and in a flexible manner in order to meet society's electricity production and consumption needs. Investments for the 2018–2027 ten-year period amount to approx. EUR 1.2 billion.

We develop our personnel and expertise to achieve a working community is productive, innovative and healthy. We ensure this through strategic management. Our target-oriented leadership approach includes the active participation of personnel. We see our employees as a resource closely engaged in developing the business and our strategy, culture and change. The company's strategy and HR management practices are aligned. We ensure the expertise and progress of personnel through clearly outlined managerial and expert career paths and by developing know-how to support these.

## Materiality assessment

We have set our key targets by identifying **matters that are essential** to Fingrid's strategy and the company's basic operations. 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. We use the fulfilment of the targets as the basis for executive management's and personnel's remuneration.

## Strategy process, materiality analysis and target monitoring as an integrated whole



## Strategic projects


In implementing the strategy, the goal is the continuous improvement of operations. The following, company-level, multi-year strategic projects are currently under way:

- Putting network codes into practice: well-functioning electricity markets and practices that ensure system security
- Connection of Olkiluoto 3 nuclear reactor to the grid: the world's largest nuclear power plant securely in the grid
- Real-time markets in the Nordics: secure balance between consumption and production in common markets
- Fingrid in the pocket: Fingrid at your service, regardless of time and place
- Putting data in order and in productive use: correct and essential information in efficient use
- Engaging corporate culture: Fingrid employees capable of renewal and boldly adapting to change
- Consumers to the market: electricity users participating in and benefiting from electricity markets

Each strategic project is assigned a person responsible on the Executive Management Group level. We implement strategic projects as part of our annual action plans, and the progress of projects is monitored regularly by the Board of Directors and the Executive Management Group.







# Fingrid's strategic targets and indicators

- ● ● ● ● 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

	Our target in 2017	How did we do?	What are our targets in 2018?	UN Sustainable Development Goals
<b>CUSTOMERS AND SOCIETY</b>				
Impact of disturbances on the national economy and customers	Economic disadvantage to customers caused by disturbances in the transmission grid less than EUR 7.5 million.	The economic disadvantage was EUR 5.0 million. ● ● ● ● ●	Target unchanged.	 
Customers' trust in Fingrid	Trust KPI in the customer survey: 4.0.	The result was 3.9. ● ● ● ● ●	Target unchanged.	 




				
Tariff level	Trust KPI in the customer survey: 4.0.	The result was 3.9. 	Target unchanged.	
<b>FINANCES</b>				
Credit rating	To maintain Fingrid's credit rating at least at the A- level.	Fingrid's credit rating at least at the A- level. 	Target unchanged.	 
Dividend payout capacity	Dividend income in line with shareholders' targets.	Dividend income in line with shareholders' targets was achieved. 	Target unchanged.	 
Cost-effectiveness	To maintain the current solid cost-effectiveness and to continuously improve productivity.	Good cost-effectiveness was maintained. 	Target unchanged.	



				
<b>INTERNAL PROCESSES</b>				
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.	<p>The capex projects proceeded on schedule and within budget.</p> <p>● ● ● ● ●</p>	Target unchanged.	  
Electricity market	Customer survey grade for Fingrid's actions to promote the electricity markets: 3.8	<p>The result was 3.8.</p> <p>● ● ● ●</p>	Target unchanged.	 
Procurement chain	No significant deviations or problems in contractor obligation or employment relationship matters.	<p>No significant deviations or problems in contractor obligation or employment relationship matters.</p> <p>● ● ● ● ●</p>	Target unchanged.	

				 
Occupational safety	LTIF less than 5 by the end of 2018 (both Fingrid personnel and service providers).	LTIF was 8. 	Target unchanged.	
Land use and environment	No significant environment-related deviations.	There was one significant environmental deviation, which did not have a substantial environmental or financial impact. 	Target unchanged.	 
	General grade of 'good' in landowner surveys.	The grade 'good' was achieved. 	Target unchanged.	
Efficiency in maintenance and physical asset management	Top three in international benchmark studies (ITOMS, ITAMS).	Placed in the top three. 	Target unchanged.	 

System security	System Average Interruption Duration Index less than 3 minutes.	SAIDI was 2.2. 	Target unchanged.	 
	Sufficiency of the system reserves at least 99.99%.	Sufficiency was 99.99%. 	Sufficiency of the system reserves at least 99.5%.	 
<b>PERSONNEL AND EXPERTISE</b>				
Workplace atmosphere	Top grade in the personnel survey.	The best grade was achieved. 	Target unchanged.	 
Leadership	Great Place to Work Finland survey, general series: Among the top 10 (survey every two years).	Came in 10th place. 	Target unchanged.	 

<p>Responsible operating methods</p>	<p>Grade 'good' for responsible operating methods in the personnel survey.</p>	<p>The grade was 'excellent'.</p> <p>● ● ● ● ●</p>	<p>Target unchanged.</p>	  
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# Management system

The aim of Fingrid's management and leadership is to implement the strategy approved by the Board of Directors and achieve the business goals effectively, responsibly and sustainably. The company's management complies with internal control procedures, which ensure good governance.

## Matrix

We have organised the company's operational strategy as an efficiently implemented matrix of four perspectives: customers & society, finances, internal processes, and personnel & expertise. The internal processes consist of: ensuring transmission capacity, managing system security and promoting the electricity market.

The target setting and operational control for each strategic perspective is managed by an owner appointed by the President & CEO, supported by a steering group approved by the Executive Management Group. The perspective owner acts as chair of the steering group and rules over any necessary teams and working groups under the control of the steering group. The targets and guidelines for each perspective are based on Fingrid's strategy and require the Executive Management Group's approval.

The perspective owner is responsible for all major cost, revenue and investment forecasts related to the perspective, risk management, communications and stakeholder relations as well as for ensuring the quality and cost effectiveness of the IT system, information management and business solutions supporting the operations. The company's ICT is organised in a similar manner. A steering group made up of key persons from the company's businesses and ICT function supports the ICT Director.

Personnel is organised according to function 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 target set in the strategy.

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, controls, risks and implementing practical risk management measures in compliance with the principles of internal control and risk management and Fingrid's other guidelines.

## 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.

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

- Fingrid's Code of Conduct
- Management principles
- Corporate Finance and Financing 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

# Personnel

Motivated employees are the key to success for an expert organisation like Fingrid. The leadership and development of Fingrid's work community aim at an open, social, innovative and goal-oriented corporate culture. Considerable demands are placed on personnel in an expert organisation, but on the other hand, the employees also have opportunities to take charge and accomplish goals in an industry that has a major impact on Finnish society. Engaging and responsible leadership aims at increasing the skills of leaders and promoting self-management.

## CEO of one's own work

As technology evolves, 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's personnel strategy aims at responding to changes by offering its employees opportunities to develop and grow their competence. Viewing 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 and diverse projects. During the year under review, a considerable amount of work rotations took place in the company.

**At Fingrid, equal opportunity and non-discrimination are part of the corporate culture. Alongside responsibility, openness and efficiency, impartiality is one of the company's values.**

The company's current status in equal opportunity and non-discrimination issues and the corresponding plan and its implementation are monitored annually during the HR reporting process. The surveys include various methods and channels, such as workplace atmosphere questionnaires, equal opportunity studies as well as feedback from management, supervisors and all employees.

We invest more than a million euros annually to develop both the work community and each employee's personal development. The company offers joint training, but personnel are also given the opportunity to independently suggest training to complement their competence. During the year under review, language instruction,

presentation and communication coaching, IT system training, as well as training support to units and teams in change situations and in developing their operations was arranged for personnel at the corporate level. In 2017, each Fingrid employee received an average of 4 (5) days of training.

In addition to securing expertise, we focus on the ability of the employees to lead themselves. In order for every employee to be the CEO of his or her own work, the management approach throughout the company must focus on coaching and engaging people. This goal is promoted both in supervisor training and during coaching days for the entire personnel. Our annual cycle of management includes regular supervisor days related to strategic focal points, leadership and the company's practices. All of the personnel traditionally convene twice a year. In May of 2017, our personnel coaching day centred on the themes of renewal and innovation.

Alongside the traditional managerial career path, we have developed a five-step model for an expert career path. Equal advancement opportunities through managerial and expert career paths give Fingrid employees the opportunity to draw on their competence and characteristics in an optimal way. We have renewed the company's expert career criteria as part of competence development. The starting point was to establish a career path suited to all types of expert work, regardless of tasks and functions. Work community skills were strongly emphasised, alongside enhanced personal competence.

Expert criteria were modified to match the principles of Fingrid's corporate culture. The company wishes to encourage personnel to work together, share their knowledge, learn new things and work productively. Productivity is strongly linked to an expert's impact on the financial result, extending beyond his or her own field of responsibilities, all the way through to the company level.

## Well-being through flexibility

Our slogan "Fingrid delivers" also extends to taking care of our employees. Caring and well-being are the goals of our personnel strategy. The common thread in caring is solutions supporting the individual, such as flexible working hour arrangements, support for recreational activities and comprehensive well-being.

In leadership, we primarily monitor work results rather than working hours. We are strongly in favour of flexible working arrangements, and in 2018 flexibility will be further increased at Fingrid based on employee feedback. The objective is to simplify the monitoring of working hours, eliminate double information systems and increase operations based on trust.

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 employees take care of themselves. 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. As in previous years, the number of occupational accidents at Fingrid remained low. A total of 6 (2) accidents took place, two of which led to a short absence from work. Absences due to accidents or illnesses accounted for 1 (1) per cent of working time during the year.

## Two personnel surveys

At Fingrid, strategic human resource management means managing people's capabilities and competencies, participation in decision-making, competitive remuneration systems and reinforcing collaboration and organisational openness. In addition, human resource management supports change leadership and strengthens personnel's motivation and commitment to the company.

We measure the success of the strategy annually in several ways. Corporate Spirit carried out a PeoplePower personnel survey at Fingrid. Compared to other expert organisations, the results were still excellent – the company received the best AAA rating, a result achieved only by around six per cent of all the surveyed organisations annually.

The survey is different from others in that it not only depicts employee satisfaction in a company, but also compares the results with those of peer companies. The PeoplePower index, which gives an overall picture of the organisation's situation, was 79.6 per cent. The commitment index describes the starting points created by the employee's work, immediate work community and perception about the whole organisation and its future outlook for personnel retention and commitment in the current labour market situation. At Fingrid, the total commitment index score was 81.4 per cent, which is clearly above the general norm among expert organisations (71.3).

During autumn, Fingrid carried out another personnel survey by participating in the Great Place to Work survey, which measures employees' trust in the company's management, their pride in their work and the pleasure they take in working with their colleagues. The results show that Fingrid employees are very proud of our mission and how we engage with society. Our Trust Index total score, at 87 per cent, was again at a good level. In addition, as many as 96 per cent of our employees consider Fingrid as a whole to be a great place to work.

## Independent professionals

Fingrid's personnel increased slightly during the year due to the company's new responsibilities and growth in the volume of its operations. New professionals were hired both in grid operation business processes and in IT tasks. At year-end, the company employed 355 industry experts.

In a bid to find new talent, we are making long-term efforts to develop our employer image. During the year, we participated in, among other things, several recruitment fairs and student events, produced videos to present our professions and clarified 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 2017 to around 40 young people. For a few years now, we have actively participated in, for instance, the Responsible Summer Job campaign, as we want to be a good example of a responsible employer for youths.

## Renewal and open innovation

Fingrid's goal is to create a work community that is more capable of renewal and has more courage to embrace changes. Fingrid's innovation efforts support this goal. Employees capable of renewal and embracing change improve the productivity and quality of operations and are able to respond to changes in the operating environment.

In driving innovation and cultural change, Fingrid has tried out a new type of ideation process that supports business innovation, involves new ways of operating and supports their implementation. During the year under review, the focus has been on creating bolder innovations and on using external insights as part of the innovation efforts.

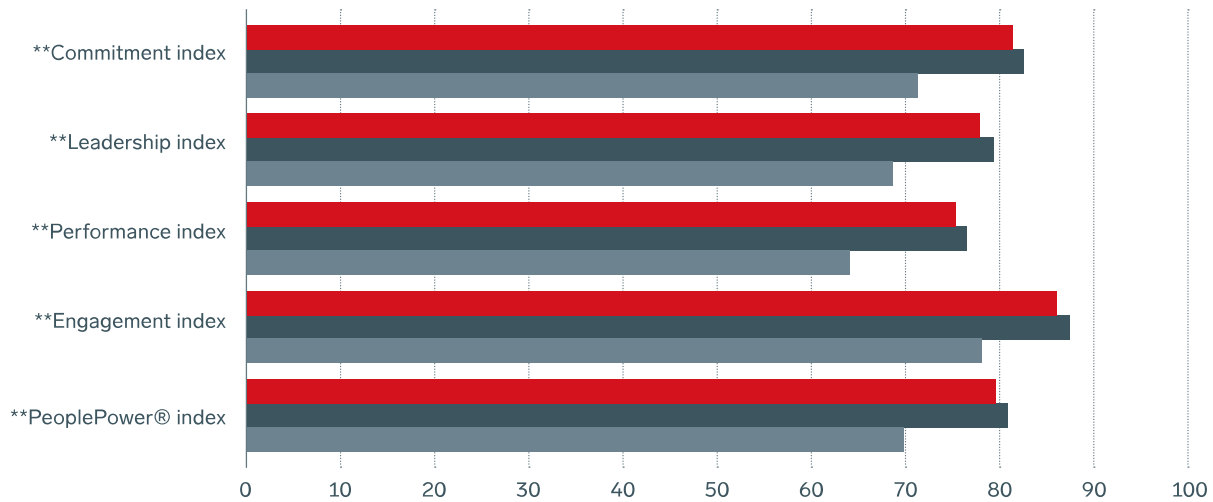
One example of new open innovation experiments is Fingrid's first-ever **hackathon**. A total of seven professional, high-level teams gathered at the company's headquarters to resolve two tasks by discovering new innovations.

Another example of testing new ways of operating is a power system control room development project, consisting of workshops geared towards creating insight into the kind of control room of the future that makes innovative use of new technology. The project also involved the use of artificial intelligence to map out existing



research material.

**PeoplePower®-index**



■ 2017 ■ 2016 ■ Finnish standard for expert organisations 2017

\*Statistically significant difference (95%) \*\*Very significant difference (99%) from the applied standard level Scale 0–100, 100 = best

The indices are calculated so that their minimum value would be 0 if all of the respondents were extremely critical, and the maximum value would be 100 if all of the respondents were extremely positive in answering all of the questions included in the index.

**The commitment index** describes the starting points created by the employee's work, immediate work community and perception about the whole organisation and its future outlook for personnel retention and commitment in the current labour market situation.

**The leadership index** describes the quality of leadership based on the employees' feelings of being valued, trusted and treated fairly.

**The performance index** describes the conditions that the available information and tools, organisation of operations and day-to-day practices create for efficient operations. (6 questions)

**The engagement index** describes how positively and unfalteringly employees feel about their work, the organisation and the values it represents and on how prepared they are to go the extra mile to achieve the organisation's goals where required.

**The PeoplePower® index** gives an overall picture of the organisation's state and its capability to meet internal and external challenges.

## Key events of 2017

### **Fingrid comes in seventh place in the Responsible Summer Job 2017 competition**

Fingrid came in seventh place in the large companies category in the Responsible Summer Job 2017 competition organised by the Economic Information Office TAT. Fingrid was among the top 10 employers for the third year in a row. The competition included 128 employers and responses were received from 6,000 summer employees. The winners of the competition, which was organised as an online survey, were selected based on the overall feedback received from the summer employees.

In summer 2017, close to 40 summer employees worked at Fingrid. The summer 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. Some also worked in ICT, legal services and communications and information management.

### **Fingrid ranked second in the survey Finland's Most Inspiring Workplaces 2017**

Fingrid Oyj received excellent results in the 2016 personnel survey: based on the assessments, Fingrid was one of Finland's most inspiring workplaces in 2017. The company ranked second in a survey involving around 200 companies with more than 100 employees. The result is based on the Peoplepower® personnel survey carried out by Corporate Spirit during 2016.

The Finland's Most Inspiring Workplaces award is proof that Fingrid has invested in developing its operations by listening to its employees' insights into matters that are important to the company. Our employees are enthusiastic, motivated and dedicated to working towards the company's goals and driving business growth.

### **Fingrid's employer promise clarified**

Fingrid is Finland's transmission system operator. Each and every Fingrid employee contributes to securing the electricity supply for our customers and society and shaping the clean power system of the future.

As a Fingrid employee, you are part of a team with diverse expertise, active sharing of information and a collaborative atmosphere. We encourage our employees to continuously learn on the job and to develop themselves. Open-mindedness, courage and openness are our assets on our shared journey taking Finland towards the power system of the future.

### **Personal data processing reviewed**

Fingrid launched a project to prepare for the EU's General Data Protection Regulation (GDPR). The project was started by mapping out the current state of personal data processing against the requirements of the GDPR and by collecting information for the data protection statements to be renewed. The outcome was a report on improvement areas and drafts for new data protection statements. In December, the Executive Management Group adopted Fingrid's data protection policy and appointed the company's data protection

officer.

During winter and spring 2018, preparations for the GDPR will continue at Fingrid by, among other things, completing and adopting the data protection statements, drawing up practical guidelines and training employees. In addition, contractual clauses concerning the processing of personal data will be incorporated in the contracts concluded with suppliers that process personal data.

## Fingrid came in 10th place in the Great Place to Work competition

Fingrid participated, for the fifth time, in the Great Place to Work Finland survey and came in 10th in the mid-sized companies category. The selection is based on the personnel survey conducted in 2017. In addition to the personnel survey, the Great Place to Work® Institute's experts assess Fingrid's personnel practices and how well they support a good workplace structure and the culture of the work community.



# Corporate responsibility

Fingrid's operations have a direct impact on the well-being of Finns. Responsibility is a natural value for us, and responsible business is a strategic choice for us in pursuing our socially significant mission. For us, responsibility and sustainability mean that in securing a reliable supply of electricity for Finns, we are also taking care of people and the environmental impacts of our operations and complying with good governance practices. We also contribute to promoting global sustainability goals. Among the UN's 17 Sustainable Development Goals, we promote the goals related to energy, infrastructure and climate action, in particular.

Fingrid's strategy and its various perspectives are the starting point for our corporate responsibility work. Corporate responsibility is key in implementing our strategy and in our business expertise. By operating responsibly in all areas we can best bring value to our stakeholders and ensure the acceptance of our projects by society.

We manage corporate responsibility as an integrated part of Fingrid's management system. Corporate responsibility is a systematic, targeted component of our basic operations and annual cycle of management. We have identified the **material topics** for our business and set **targets** for them (see section Strategy in this annual report). The Executive Management Group reviewed the materiality analysis as part of the strategy process 2017 and took into account the strong connection between sustainability and strategy and business, its impact on Fingrid's ability to create value, as well as the requirements of the GRI (Global Reporting Initiative) reporting guidelines, which extend throughout the value chain. Corporate responsibility is part of our planning of operations and an integral, strategy-based component when we assess development opportunities and risks and devise measures for the next year. Corporate responsibility risks are part of our risk management.

It is essential for us that responsibility shines through in the daily work of Fingrid employees. We disclose information pertaining to the outcomes and figures related to our integrated and goal-oriented sustainability efforts in the areas of, among other things, employee well-being, occupational safety, environmental impacts and tax footprint, in the section dedicated to each area of responsibility.

Fingrid's Board of Directors approves the company's Code of Conduct and monitors the company's compliance in operating responsibly. The Board is responsible for arranging corporate responsibility management and its integration into business operations. The CEO and the heads of functions are each responsible for corporate responsibility issues within their area of responsibility. Alongside profitability issues, social issues and environmental impacts are taken into account in a well-balanced way in all decision-making and when assessing operations. Corporate responsibility is co-ordinated at the company level by the steering group for Fingrid's finance and business development perspective, which is headed by the Chief Financial Officer. The steering group is supported by the company's business development working group, which is composed of development managers. A development manager is appointed to co-ordinate corporate responsibility work.

Every Fingrid employee is committed to working in compliance with our shared values and our Code of Conduct, which is based on the United Nations' Global Compact initiative and the principles guiding business operations and human rights. Under our Code of Conduct, we are committed to respecting people and human rights. To ensure we understand our impacts on 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 updated our action plan during the year under review.

Our managers and the entire work community ensure that behaviour is in line with the Code of Conduct. A confidential whistle-blower system managed by an independent third party is available to employees who suspect a breach of the Code of Conduct. We help new employees assimilate the Code of Conduct through online orientation. In 2017, we reinforced our personnel's understanding of responsibility in their role and in purchases, in particular. We participated in FIBS Corporate Responsibility Network's human rights coaching. We achieved an excellent AAA rating in a survey conducted during the year under review, where our personnel assessed the sustainability of our ways of operating.

Responsible procurement practices are impactful in our outsourcing-based business model. Fingrid has joined the United Nations' Global Compact initiative, and our Code of Conduct is in line with its principles on human rights, labour, environment and anti-corruption. Our commitment to this global initiative strengthens the strategic and operational integration of corporate social responsibility in our operating methods and supports the co-operation with agreement partners in promoting sustainable development and corporate responsibility. In our purchases, we require our contractual partners to commit to our responsibility requirements and monitor compliance through a risk-based approach. We are likewise prepared to commit to the corporate responsibility requirements set for Fingrid by our contractual partners.

Grid infrastructure construction and maintenance is subject to competitive bidding, and our work sites around Finland employ competent workforce also from abroad. We ensure that we meet our obligations to investigate and our responsibility when using external workforce. During the year under review, we carried out 13 audits on our work sites to verify compliance with contractor obligations, occupational safety and environmental management. The audits revealed that operations and induction at the work sites is generally on a good level. Improvement areas were typically related to safety planning and documentation. We monitored the progress made in rectifying them in work site meetings. We trained our new maintenance service providers and line clearing entrepreneurs also from the perspective of ensuring responsible business practices. In addition, responsibility was the theme of our service provider event in 2017.

During the year, we established a third-party audit service for our international sourcing operations. Compliance with our responsibility requirements was ensured through a total of 11 supplier audits carried out in Spain, China, Poland, France, Finland, Turkey, Hungary, Russia and Estonia. The audits covered both our direct contractual partners and their suppliers. The most important deviations identified during the audits were related to occupational safety and working hours and monitoring of subcontractor responsibility. We addressed any shortcomings collaboratively according to the action plans and the extent of our influence could be seen as concrete improvements. Our experts observed occupational safety and working conditions also in connection with technical factory tests.



In order to ensure transparency and comparability, we have reported on our corporate responsibility in accordance with the international Global Reporting Initiative (GRI) framework since 2011. The 2017 reporting follows the Core requirements of the GRI standards. In the Report of the Board of Directors, we also report on non-financial information, although the legislative changes in this area did not entail any obligations for Fingrid. Fingrid also reports its tax footprint in the Annual Report section 'Corporate finances, financing and risk management'. We do not make any special arrangements to minimise taxes, and dividends are mainly paid to the State of Finland and to Finnish pension insurance and insurance companies. The Social Enterprise Mark granted to Fingrid by the Association for Finnish Work bears testimony to Fingrid's responsibility in handling its socially important task.

## Key events of 2017

### **Colourful and productive power line right-of-ways**

There are a lot of power line right-of-ways in Finland. In addition to municipalities and cities, they cross the lands of tens of thousands of private landowners. The land under the power lines belongs to the landowner, but the transmission system operator has a permanent restricted right to use it.

Fingrid wishes to encourage landowners to utilise power line right-of-ways for the benefit of people and the environment. The diverse power line right-of-ways provide excellent habitats for, for example, game, pollinators or wetland species. Their use as recreational areas and to increase landscape diversity can be further increased. Fingrid offers ideas for various land-use applications in its new idea cards for landowners, which suggest safe and successful solutions for utilising power line right-of-ways. Today, power line right-of-ways in Finland are already used as cycling and skiing paths, nature trails, frisbee golf courses and gardening areas for the public.

During the year under review, Fingrid also started providing financial support for managing power line right-

of-ways as traditional environments. Fingrid's support involves the drawing up of a management plan and a subsidy paid to the manager. Heritage environments are meadows and pastures shaped by traditional agriculture, which have developed an original and rich fauna and flora as a result of grazing and reaping. Heritage landscapes include both built landscapes and heritage biotopes created through reaping and grazing. As a result of the changes taking place in agriculture, these beautiful heritage environments are at risk of disappearing. Power line right-of-ways are today's meadows, because they are kept open. They are called the new habitats of meadow species. Through active management, power line right-of-ways can be developed into alternative habitats for meadow species.



# Business operations



# Customers

Fingrid is an independent actor, which serves all its customers equally. Our customers include electricity producers, grid companies, large energy consumers and other electricity market players. 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 our customers in a variety of ways. We offer our customers the possibility to connect to the grid, we transmit electricity, we are in charge of maintaining continuous power balance and settling power balances, we grant guarantee-of-origin certificates, we publish electricity market information and develop information exchange on the retail markets.

In spring 2017, we published our conclusions on the goals and measures that are important from the electricity market's perspective in the booklet "[Our Shared Journey – a roadmap towards achieving a green power system](#)".

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. The theme of the Fingrid Current event in spring was the future of the electricity market and in the autumn event, the focus was on a safe, digital power system and smart grids. The spring event was attended by 220 people on site and followed by 240 people online, making it undoubtedly one of the industry's largest events in Finland.

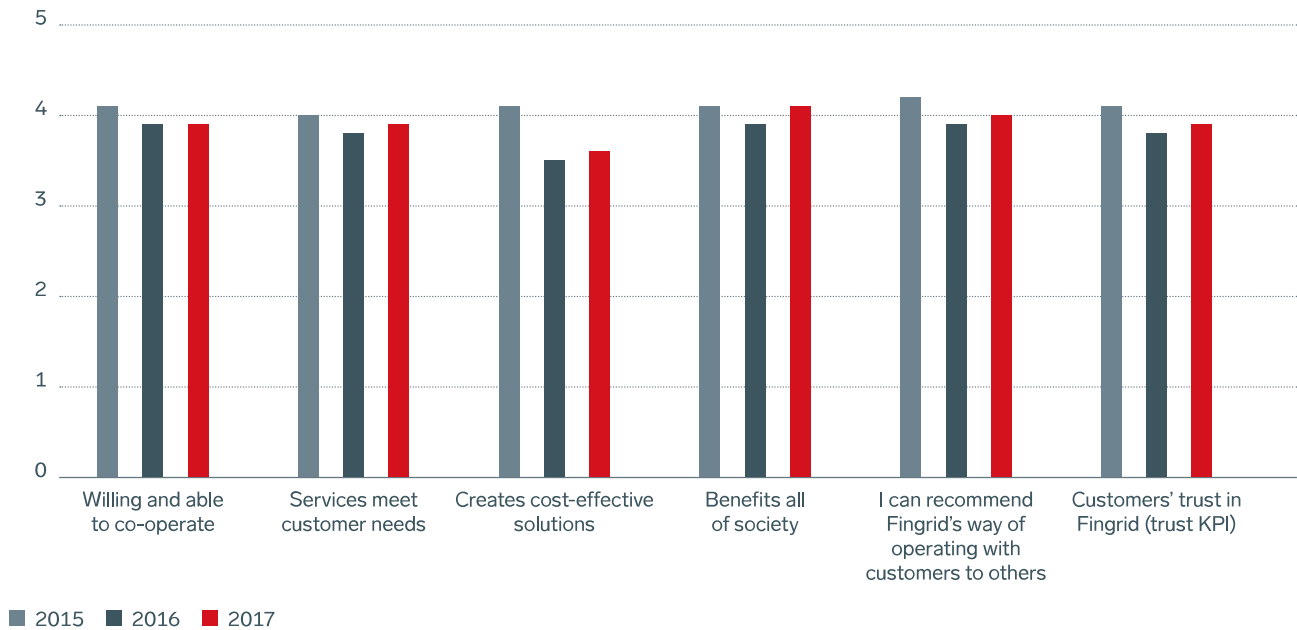
According to our annual customer survey, our customers are satisfied with our operations and services, with four out of five respondents willing to recommend our way of doing business with our customers. According to the survey, the trust KPI measuring the implementation of the customer strategy and customers' trust was 3.9 on a scale of 1–5. Among the services, the scores for electricity transmission, guarantee-of-origin certificates and electricity market information had improved substantially. In relation to our customers' expectations, we have succeeded best in active international collaboration, working for the benefit of society at large and treating our customers equally. The greatest gaps against expectations were in the cost-effectiveness of our decisions, willingness and ability to collaborate, and understanding our customers' business.

Towards the end of the year, the decision was made to keep the transmission grid tariffs unchanged for 2018. In addition to them, connection-point-specific reactive power fees were introduced to ensure that reactive power compensation takes place cost-effectively in the locations where reactive power is generated or consumed. The cabling of distribution networks and changes in consumption have significantly increased the amount of reactive power fed into the grid.

Our goals for 2018 are to ensure the cost-effectiveness of our solutions and communicating on them, as customers clearly expressed their concern in this area in the customer satisfaction survey. In addition, we will further develop systematic interaction with customers and begin to renew our electronic service channels.

During the year, two training sessions were organised for personnel working at the customer interface, focussing on increasing customer understanding and the need for changes in our services due to changing customer needs.

### Customers' trust in Fingrid



Trust KPI: Average of customer satisfaction survey questions measuring implementation of the customer strategy and customers' confidence. (scale: 1=poor...5=excellent)

### Price of electricity service

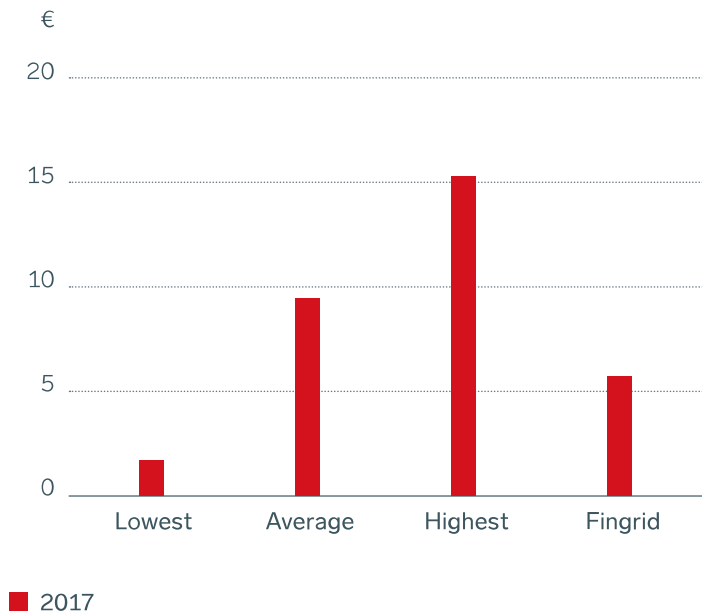


Figure: Price of electricity service. Costs related to transmission system operation, such as investments, loss power, system services, but not directly related to transmission system operation, such as public service obligations, feed-in tariff for renewable energy, and peak load

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.

## Key events of 2017

### Fingrid in the top 3 among global energy brands

Fingrid was ranked among the top three brands in the CHARGE 2017 competition organised in connection with the international energy industry's Branding Energy seminar.



### Energy sector in need of reputation boost

The Luottamus&Maine (Trust&Reputation) survey carried out in various sectors annually polls the opinions of the public. Based on the survey, the energy sector has been faced with a bit of a reputation crisis. In 2017, over 6,000 Finns responded to the survey, which covered 76 organisations.

The objective of the survey was to create an overall picture of what so-called ordinary people think about companies operating in Finland. Fingrid participates in the survey every year. Fingrid's results, as well as those of the other actors in the sector, have declined over the past two years.

Based on the open comments, the sector and its ways of operating are quite unknown to the general population. There seems to be confusion, at least partially, as to the players, ownership and the profit sharing

criteria among the public. KONE has held the top position for several years in the survey, followed by Supercell and Ponsse. Fingrid holds a middle position among the companies included in the survey.

# Customer committees and Advisory Committee

The Advisory Committee and three customer committees help Fingrid hear its customers' voice. The Advisory Committee serves as a channel of interaction between the company and its customers. Fingrid uses the committee to distribute information on its current affairs and plans. The representatives of the customer groups, in turn, can take a stand on the matters discussed within the committee.

The Advisory Committee deals with the company's entire field of operations and services offered to customers. The information dealt with by the Advisory Committee is openly available to all stakeholders. The matters dealt with by the Advisory Committee in 2017 were related to assessing Fingrid's operations, digitalisation, market development, challenges in grid operations, Nordic imbalance settlement and the opportunities and challenges in the operating environment of each Advisory Committee member.

The customer committees deal with matters in their respective sectors. The Operations Committee discusses and expresses opinions on matters related to the development of procedures used for the operation of the power system and maintenance of system security. The Market Committee is an advisory discussion forum which assists Fingrid in the development of the Nordic and European electricity markets. The Grid Committee serves as a co-operation body in system development and in the management of system-related property.

## Advisory committee



### Members

Ilkka Latvala (chairman), Metsä Group  
Riikka Hirvisalooja, Caruna Oy  
Timo Honkanen, Turku Energia Oy  
Esa Hyvärinen, Fortum Oyj  
Tony Lindström, Outokumpu Oyj  
Jarmo Kurikka, Nurmijärven Sähkö Oy  
Pekka Manninen, Helen Oy  
Juha Rintamäki, Vaasan Sähköverkko Oy  
Matti Ryhänen, Savon Voima Verkko Oy  
Stefan Sundman, UPM Energy Oy  
Jarmo Tanhua, Teollisuuden Voima Oyj  
Tuomas Timonen, Kemijoki Oy

## Fingrid's members

Jukka Ruusunen, Fingrid Oyj  
Jussi Jyrinsalo (secretary), Fingrid Oyj

## Grid Committee



## Members

Arto Gylén, PKS Sähkösiirto Oy  
Jyrki Havukainen, Aurora Kilpilahti Oy  
Ismo Heikkilä, Kemijoki Oy  
Risto Lappi, Vantaan Energia Sähköverkot Oy  
Arto Nikkanen, LESähköverkot Oy  
Jukka Rajala, EPV Alueverkko Oy  
Henrik Suomi, Caruna Oy

Esa Ukkonen, Stora Enso Oyj

## Fingrid's members

Kari Kuusela, Fingrid Oyj (chairman)

Petri Parviainen, Fingrid Oyj

Meri Viikari, Fingrid Oyj (secretary)

## Operations Committee



## Members

Tommi Hietala, TuuliWatti Oy

Teppo Härkönen, Helen Sähköverkko Oy

Teuvo Jouhten, PVOVesivoima Oy

Petri Kopi, Kemira Chemicals Oy



Heikki Paananen, Elenia Oy  
Pekka Pollari, UPM Energia  
Ismo Reinikka, Loiste Sähköverkko Oy  
Harri Salminen, Turku Energia Sähköverkot Oy

## Fingrid's members

Reima Päivinen, Fingrid Oyj (chairman)  
Jonne Jäppinen, Fingrid Oyj (secretary)

## Market Committee



## Members

Olli Hagqvist, Taaleri Oyj  
Mikko Halonen, SVoima Oy

Johanna Haverinen, Keravan Energia Oy  
Mika Laakkonen, PowerDeriva Oy  
Janne Laine, Enegia Group Oy  
Mikko Lepistö, SSAB (Chairman)  
Sami Oksanen, Nord Pool Finland Oy  
Raimo Peltola, Fortum Power and Heat Oy  
Jouni Pylvänäinen, Elenia Oy  
Heikki Rantamäki, PohjoisKarjalan Sähkö Oy  
Harri Sirpoma, HELEN  
Seppo Tuomisto, Kemira Oyj

### **Fingrid's members**

Asta Sihvonen Punkka, Fingrid Oyj  
Satu Viljainen, Fingrid Oyj (secretary)

# Finance and treasury

From the company's finance perspective, the year was successful and went according to plans. Both the result and the company's cost-effectiveness remained good. Considerable day-to-day efforts were made to maintain cost-effectiveness. The transmission grid tariffs were raised slightly at the start of the year, as a result of which, it is now in reasonably good balance in relation to the cost-level and investments for the coming years. Fingrid is still one of the lowest-priced TSOs in Europe, while the company's transmission reliability is among the best in the world. According to the company's own calculations, 2017 resulted in somewhat of a deficit in relation to the result that would have been permitted in regulation. The company's long- and short-term debt management and hedging against financing risks in the international capital markets required, as usual, a good deal of work from the company and was very successful. Increasingly effective use of capital employed, a key success factor for uninterrupted and continuously developing grid operations, 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.

The Group's turnover was EUR 672.0 (586.1) million. Grid service income increased to EUR 412.1 (382.4) million, as a result of the change in grid pricing enacted at the start of the year and due to the growth in electricity consumption, which is a key element in the tariff. Electricity consumption in Finland totalled 85.5 (85.1) terawatt hours during the year. Fingrid transmitted 66.2 (68.5) terawatt hours of electricity in its grid, which represents 75.5 (77.3) per cent of all electricity transmitted in Finland. Imbalance power sales amounted to EUR 213.9 (153.9) million. The increase in imbalance power sales resulted from the transfer of imbalance settlement to eSett Oy\*<sup>1</sup>, following which the imbalance power sold to cross-border imbalance responsible parties is reported as external turnover. Cross-border transmission income from the connection between Finland and Russia decreased to EUR 20.7 (24.0) million, as a result of Russia's lower realised 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 connections between Finland and Sweden decreased to EUR 25.5 (37.5) million, which was used for the Hirvisuo-Pyhänselkä grid investment. Other operating income totalled EUR 2.9 (12.7) million. The decline in other operating income resulted from the EUR 6.3 million in congestion income recognised in 2016 in compliance with the regulation concerning the costs from maintaining cross-border capacity and countertrade, and from a decline of EUR 3.5 million in capital gains on fixed assets.

The Group's total costs amounted to EUR 499.0 (442.2) million. Imbalance power costs grew from the previous year's level, to EUR 186.0 (121.7) million due to the above-mentioned transfer of imbalance settlement to eSett Oy. Loss power costs amounted to EUR 47.5 (57.6) million. The declining loss power costs have been affected by the lower price of loss power procurement and the slightly lower volume of loss power. The realised average price of loss power procurement was EUR 37.62 (43.87) per megawatt hour. The costs of reserves to safeguard the grid's system security amounted to EUR 51.5 (50.5) million. Depreciation totalled EUR 96.9 (99.2) million. Grid maintenance costs amounted to EUR 24.5 (24.1) million and personnel costs to EUR 29.4 (28.6) million.

The company's credit rating remained high, reflecting the company's strong overall financial situation and debt service capacity. The Group's net financial costs during the financial period were EUR 22.8 (18.7) million, including a change of EUR -8.2 (5.1) million in the fair value of financial derivatives.

Interest-bearing borrowings totalled EUR 1,082.7 (1,107.7) million, of which non-current borrowings accounted for EUR 813.4 (842.9) million and current borrowings for EUR 269.3 (264.9) million. In 2017, the company issued a EUR 100 million 10-year green bond to finance investments made by the company that are expected to have positive long-term net environmental impacts.

The company's liquidity remained good. Financial and cash assets recognised at fair value through profit or loss totalled EUR 83.3 (79.7) million on 31 Dec. 2017. The company additionally has an undrawn revolving credit facility of EUR 300 million to secure liquidity and EUR 50 million in uncommitted overdraft facilities. Fingrid used the second extension option of the revolving credit facility during the period under review. This extended the maturity

of the revolving credit facility until 11 December 2022.

The counterparty risk arising from derivative contracts relating to financing was EUR 8 (16) million. Fingrid's foreign exchange and commodity price risks were hedged.

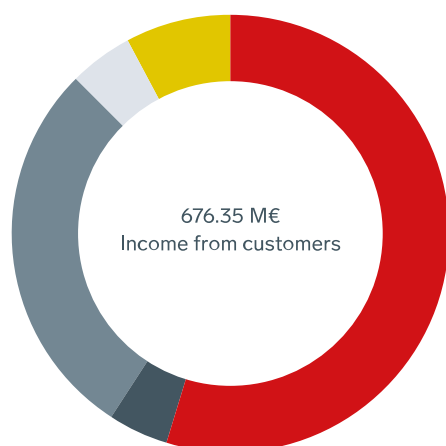
Fingrid has credit rating service agreements with S&P Global (S&P) and Fitch Ratings (Fitch).

- On 31 October 2017, S&P maintained the rating for Fingrid Oyj's unsecured senior debt and long-term company rating at 'AA-' and the short-term company rating at 'A-1+', with a stable outlook.
- On 5 December 2017, Fitch affirmed the rating for Fingrid Oyj's unsecured senior debt at 'AA-', the long-term company rating at 'A+', and 'F1' for the short-term company rating, with a stable outlook. The rating received by Fingrid was, at the time of issuing, the highest valid rating given by Fitch to any European regulated TSO.

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.

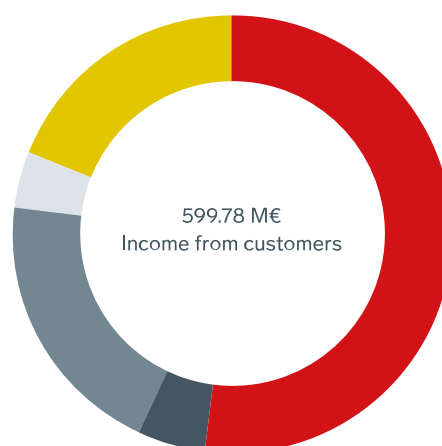
**Direct economic value generated and distributed, M€**

2017



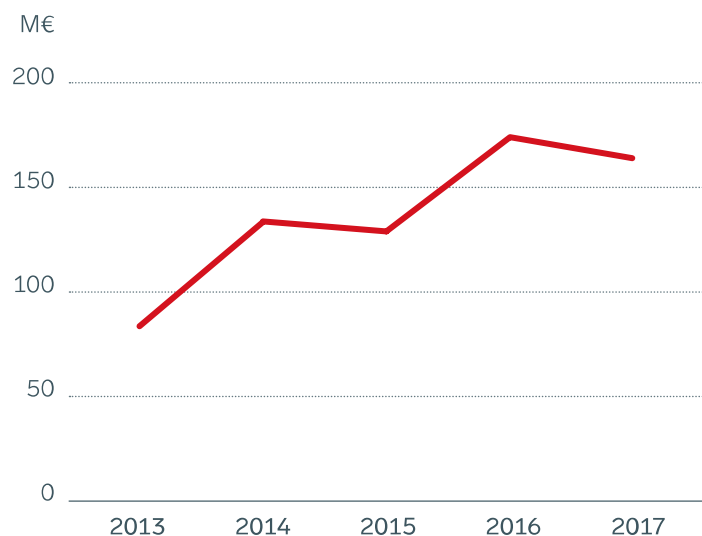
■ Payments to suppliers .....	370.68
■ Remuneration to personnel .....	31.00
■ Remuneration to financiers and shareholders .....	191.97
■ Support in public interest and taxes .....	31.03
■ Undistributed added value for developing Fingrid's operations .....	51.67

2016



■ Payments to suppliers .....	312.39
■ Remuneration to personnel .....	30.13
■ Remuneration to financiers and shareholders .....	119.06
■ Support in public interest and taxes .....	26.24
■ Undistributed added value for developing Fingrid's operations .....	111.96

## Profit before taxes



Fingrid's tax footprint, MEUR		2017	2016	2015
<b>Taxes payable</b>				
	Income tax	30.58	25.78	30.81
	Unemployment insurance contributions	0.74	0.85	0.48
	Social security contributions	0.22	0.46	0.44
	Real estate tax	0.42	0.41	0.39
	Electricity tax on auxiliary power	0.005	0.02	0.01
<b>Taxes payable total</b>		<b>31.96</b>	<b>27.52</b>	<b>32.13</b>
<b>Taxes to be collected and remitted</b>				
	Value added tax, net remitted	62.00	50.41	38.88
	Electricity tax (incl. emergency-preparedness contribution)	35.71	38.47	36.25
	Tax prepayments	7.23	6.97	6.78

<b>Taxes to be remitted total</b>		<b>104.95</b>	<b>95.85</b>	<b>81.90</b>
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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. For 2017, all taxes and similar charges have been paid in Finland. The Group did not have any operations outside Finland during the periods presented here.

\*eSett Oy is a company owned jointly by the Finnish, Swedish and Norwegian transmission system operators, responsible for imbalance settlement in Finland, Sweden and Norway.

## Key events of 2017

### Fingrid's green bond as part of the company's overall sustainability model

In November, Fingrid issued a EUR 100 million green bond, which sparked wide international interest and expanded the company's investor base. As part of its financing strategy, Fingrid has created a Green Bond Framework that has received a second opinion from the independent research institute CICERO.

Within the Green Bond Framework, the company finances projects that connect renewable energy production to Fingrid's transmission network, reduce electricity transmission losses and create smart solutions that save energy.

The financing collected through Fingrid's Green Bond also contributes to the global development of a sustainable debt investment market.

The listing of this Green Bond, the first issued at the corporate level in Finland, received attention at the London Stock Exchange on 11 January 2018, when Fingrid opened the market.



# Power system

Finland's electricity consumption rose 0.5 (3.2) per cent on the previous year and totalled 85.5 (85.1) terawatt hours in 2017. Fingrid transmitted a total of 66.2 (68.5) TWh of electricity in its grid, representing 75.5 (77.3) per cent of the transmission volume in Finland (consumption and inter-TSO).

The electricity import and production capacity was sufficient to cover the peak consumption during the year. According to our measurements, electricity consumption peaked at 14,300 megawatts on 5 January 2017 between 5 and 6 p.m. During that peak consumption hour, Finland generated 10,000 megawatts of electricity and the remaining electricity was imported from neighbouring countries. On the same day, a record-high 4,750 megawatts of electricity was imported.

The market mechanism steers electricity movements efficiently. Price signals steer electricity consumption and production, and electricity is imported in an amount corresponding to consumption, as steered by the markets. The import capacity from Russia and Sweden was commercially almost fully exploited during the peak consumption hour, but the commercially available import capacity from Estonia amounted to around 370 MW. Domestic combined heat and power plants and hydro power plants still had available capacity during the periods of peak consumption. Sufficient electricity supply was thus not in jeopardy in Finland during the peak consumption situations and the power system operated reliably during that time too. Peak-load capacity was not used during the period of peak consumption.

In 2017, electricity transmissions between Finland and Sweden consisted mostly of large imports to Finland. In the early part of the year, the electricity transmission between Finland and Estonia was dominated by exports from Finland to Estonia, and towards the end of the year, imports from Estonia to Finland were slightly dominant. The transmission was steered by the markets and the weekly transmission direction varied according to the current market situation. Electricity imports from Russia to Finland remained on the previous year's level. There were major intraday variations in import volumes, however.

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. No export capacity to Russia was available in June due to preplanned maintenance work. Otherwise, the planned maintenance shut-downs of transmission connections between Estonia, Sweden and Russia were on a normal level in 2017.

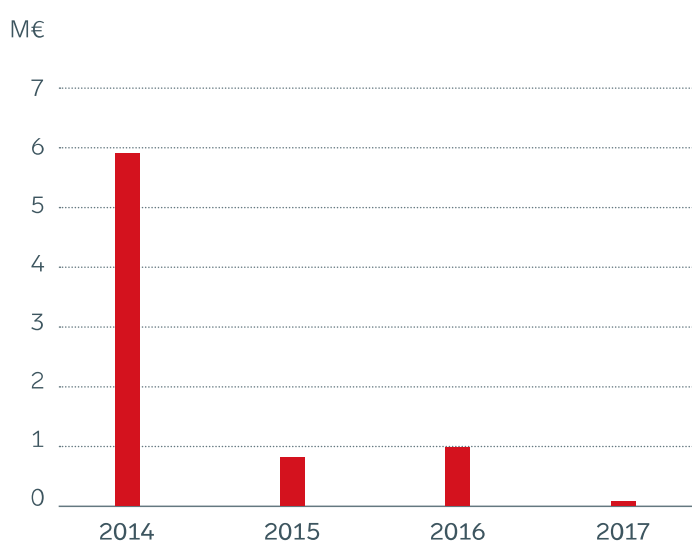
Countertrade	1–12/ 17	1–12/ 16	10–12/ 17	10–12/ 16
Countertrade between Finland and Sweden, €M	0.4	2.5	0.1	0.3
Countertrade between Finland and Estonia, €M	0.1	0.1	0.0	0.0
Countertrade between Finland's internal connections, €M	1.3	1.2	0.0	0.3
<b>Total countertrade, €M</b>	1.8	3.9	0.1	0.6

Our mission is to supply the electricity generated by power plants that are connected to the grid to our customers

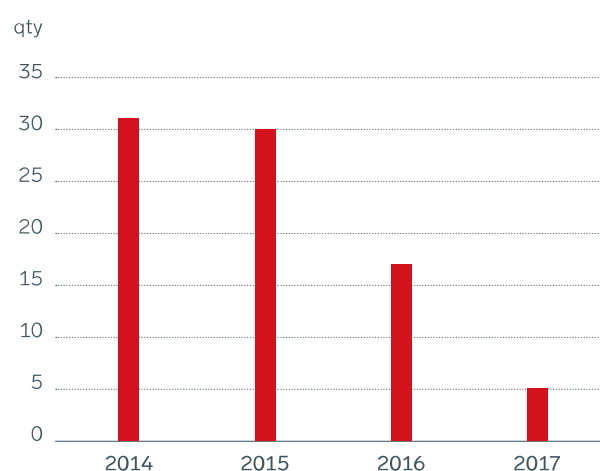
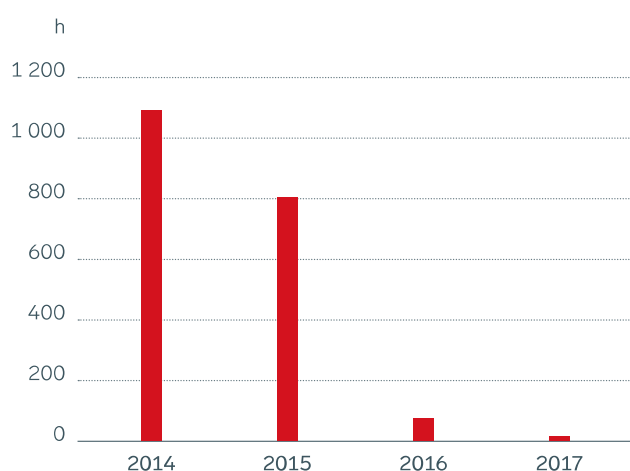


reliably and in a state of high quality. We continuously monitor the reliability of electricity transmission. As in the previous year, our transmission reliability rate remained at an excellent level during the year under review and was 99.9997 (99.9999) per cent. An outage in a connection point in the grid caused by a disturbance in Fingrid's electricity network lasted an average of 2.2 (1.4) minutes, which is clearly shorter than the ten-year average of 3.3 minutes. The cost of the disturbances (regulatory outage costs) was EUR 2.8 (3.1) million and, including the quick reconnections, EUR 5.0 million. The reliability of direct-current connections was on a record-high level in 2017. There were only five disturbances in Fingrid's four direct-current connections, the total duration of which was only around 16 hours. The total availability of the connections also reached its highest level in more than ten years. Thanks to record-high reliability and availability, countertrade costs remained at approximately EUR 100,000. As in 2016, disturbances in direct-current connections did not have any impact on the transmission capacity available to the electricity market.

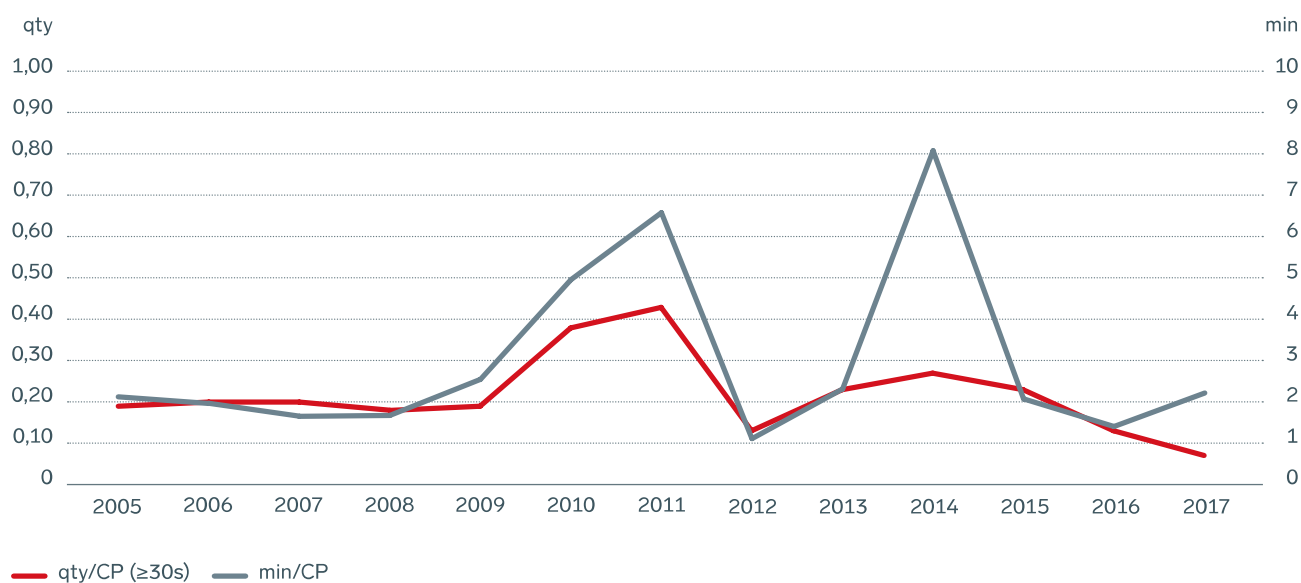
### Countertrade costs caused by HVDC disturbances



### HVDC disturbances, total duration and quantity



## Interruptions at connection points due to grid disturbances



The most significant single disturbance took place in December 2017 at the Porvoo-Ahvenkoski 110-kilovolt power line, when abundant snow damaged the tower structure and the lightning conductor.

The importance of our 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.

Countertrade costs totalled EUR 1.8 (3.9) million. 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 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 need for countertrade can arise from, for example, a power outage or disruption in a power plant or in the grid.

Transmission outages in connection with investment projects took place in all of Finland, particularly in Espoo, Alajärvi, Korja, Keminmaa and Vanaja. The outages are challenging and require careful advance planning and good cooperation with our customers. The outages were handled successfully.

Reserves required to maintain the power balance of the power system were procured from Finland, the other Nordic countries, Estonia and Russia. The availability of reserves was good, but weakened during the spring floods, when the adjustability of hydro power plants could not be utilised as it normally can. The costs of reserves remained clearly below the budgeted level. The supply of reserves has increased due to new actors and increasing demand-side management, in particular. The sales of frequency-controlled reserves to Sweden continued to grow compared to the previous years, and sales volumes were many times higher than the purchase volumes. Nordic transmission system operators continued using the automatic frequency restoration reserve to restore the deteriorated frequency quality. A maximum reserve of 300 megawatts, of which Fingrid's share was up to 70 megawatts, was maintained for the selected hours.

The volume of transmission losses in the Finnish grid decreased from the previous year and was 1.2 (1.3) terawatt hours. This is 1.4 (1.4) per cent of the total volume of transmitted electricity. The decrease in transmission losses can be attributed to the decline in ITC volumes from the previous year. The annual variation of losses is affected by the Nordic electricity production situation, such as sufficiency of hydropower.

<b>Power system operation</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Electricity consumption in Finland, TWh	85,5	85,1	82,5	83,4	84,0
Fingrids transmission volume, TWh	66,2	68,5	67,9	67,1	64,6
Fingrid's loss power volume, TWh	1,2	1,3	1,4	1,3	1,1
<b>Electricity transmission Finland–Sweden</b>					
Exports to Sweden, TWh	0,4	0,3	0,2	0,15	0,7
Imports from Sweden, TWh	15,6	15,7	17,8	18,1	12,8
<b>Electricity transmission Finland–Estonia</b>					
Exports to Estonia, TWh	1,7	3,1	5	3,6	1,6
Imports from Estonia, TWh	0,9	0,7	0,05	0,05	0,5
<b>Electricity transmission Finland–Norway</b>					
Exports to Norway, TWh		0,1	0,1	0,1	0,1
Imports from Norway, TWh	0,3	0,2	0,1	0,1	
<b>Electricity transmission Finland–Russia</b>					
Exports to Russia, TWh			0,2		
Imports from Russia, TWh	5,8	5,9	3,9	3,4	4,7

## Key events of 2017

### Nordic operational planning office in Copenhagen

During 2017, a joint Nordic operational planning office was opened in Copenhagen. The tasks of the operational planning office include compiling a joint grid model (initially covering the Nordics, later Europe-

wide) daily for each hour of consumption, system security calculation, capacity calculation, analysis of sufficient electricity supply and co-ordination of disruptions on the Nordic level. Two Fingrid employees started working at the office in January, and in October, a third employee joined the office's implementation project.

The year was spent building the office infrastructure, developing the service processes and setting up IT systems and data communication connections between the transmission system operators and the joint office. As the first service, disruption co-ordination was launched with a trial use period in November. The other services will be launched in early 2018, beginning with a trial use period.

## **Fingrid prepares for the connection of Olkiluoto 3 to the national grid**

According to the supplier of the Olkiluoto 3 (OL3) reactor unit that is under construction in Eurajoki, the unit's regular power production will begin during 2019. Transmission system operator Fingrid and nuclear power company Teollisuuden Voima (TVO) have begun preparations to connect Olkiluoto 3 to the national grid. The connection requires special arrangements, because once completed, OL3 will be considerably larger than previous electricity production units: the unit's net power generation capacity will be 1,600 megawatts.

Finland's power system can withstand the failure of a power plant of 1,300 megawatts. Fingrid and TVO had concluded a preliminary agreement already during the planning of the OL3 reactor unit concerning so-called system protection, whereby the reactor unit could be connected to the power system.

Meanwhile, Fingrid and TVO have agreed on the practical implementation of system protection for Olkiluoto 3. The agreement was preceded by an assessment by the authorities, which ensured that implementation of the system protection does not have an impact on Fingrid's handling of system responsibility under the Electricity Market Act. Next, an open competitive bid for industrial consumption included in system protection was carried out.

In addition to system protection, the connection of OL3 to the national grid is being prepared for by reducing electricity import capacity from Sweden by 300 megawatts via northern alternating-current connections and by increasing the volume of Fingrid's fast disturbance reserve.

As the transmission system operator with system responsibility under the Electricity Market Act, Fingrid must ensure the technical functioning of the electricity system and the upholding of national system security. The reliability of system protection and the sufficiency of its loads are prerequisites for upholding the security of the power system.

## **Ideas for power system development from Hackathon**

Fingrid organised its first Hackathon together with IndustryHack on 14–15 November 2017 at its Helsinki headquarters. Seven teams were invited to seek solutions to tasks that had been presented beforehand. One of them was related to the renewal of the power system and the real-time, secure and cost-effective exchange of information from decentralised production sites to Fingrid. The other task consisted of finding out how the state of the power system could be forecast by combining and analysing data from various sources, such as the electricity markets, national production capacity and other relevant sources.

From among the participants, four teams were selected as winners, and their proposals will be developed further in pilot projects: CollectiveCrunch (an international startup company), Hub Hackers (Solteq), Koodikeisarit (Visma Software's, Rejlers's and Adven's combined team) and OmegaPI (VTT's and Caruna's team). EUR 20,000 was granted to each pilot project. In addition, all teams participating in the Hackathon received a prize of EUR 1,500.

Hackathon is one example of the many ways in which Fingrid is preparing for the future and the transformation of the power system. Innovation is a strong focus both within the company and with partners.



### **Jäätyvä 2017 exercise highlighted co-operation in a crisis situation**

In the Kuopio and Siilinjärvi area, an exercise was organised on 4–5 October 2017 to practice co-operation between different parties in case of a widespread power outage caused by weather conditions, affecting both the local and the national grid. The nationwide exercise carried out by the National Supply Agency's Power and District Heat Pool involved more than 400 people. Fingrid had a double role as a planner and participant. The exercise proved that co-operation becomes much more difficult when communication lines break down. Therefore, co-ordination of operations and joint action must be planned and practiced beforehand.

In the exercise, an icy storm led to a widespread and long-lasting power outage, affecting both the grid and the distribution networks and paralysing the basic functions of society for a long time. This kind of crisis

requires the co-operation of several parties, reliable technology and communication. Challenges related to the provision of information and the importance of communications were highlighted in particular.

## **Geomagnetic storm did not affect the grid**

Just before two a.m. on Friday 8 September 2017, a coronal mass ejection caused a serious geomagnetic storm which reached its maximum intensity between two and four a.m.

The storm did not lead to any problems or disturbances in the grid, and the grid's operating situation remained on a normal level.

# Electricity market

Electricity market	2017	2016	2015
Day-ahead system price €/MWh	29.41	26.91	20.98
Area price Finland, average €/MWh	33.19	32.45	29.66
Congestion income in Nordic countries, €M	265.8	276.8	380.3
Congestion income between Finland and Sweden, €M	50.98	74.98	173.5
Congestion hours between Finland and Sweden %	24.2	32.7	47
Congestion income between Finland and Estonia, million €M	0.52	4.74	8.4
Congestion hours between Finland and Estonia %	1.4	9.7	12

An electricity market that functions well benefits everyone: a common regional market and strong transmission connections boost competition and ensure that electricity is produced in the most efficient way. Reinforcing the domestic and cross-border transmission systems in Finland will improve the operations of the electricity market. In a strong transmission network, electricity can freely flow to where demand is highest. A disturbance in a transmission link between Finland and Sweden, for example, may cost consumers several million euros a day.

## Markets in transformation

The energy system and with it the power system are in the midst of a major transformation aiming for a clean power system of the future. The ultimate goal of the transformation is to mitigate and combat climate change. The clean power system of the future must be supported by strong transmission connections and market rules revamped for the 2020s.

A special challenge during the transition period relates to the exit of existing non-profitable electricity production capacity, while the storage and other solutions required by the new system are not yet commercially available. This makes the active participation of flexible resources all the more important.

In terms of the functioning of the markets, key issues include the profitability of investments and the willingness of new operators to enter the electricity markets. A clean power system also requires solving many challenges related to technological development. The biggest challenges concern long-term storing of electricity. In addition to technical solutions, political decisions that enable implementation are needed in both Finland and the Baltic Sea Region.

Strong transmission connections help balance the major fluctuations in production and consumption in terms of time and location. In Finland, this means that cross-border transmission connections and internal transmission lines need to be strengthened. Fingrid targets extensive, efficient electricity markets that ensure power adequacy

in the Baltic Sea Region. 2017 was a peak year in terms of the availability of Fingrid's cross-border transmission connections. The total availability of HVDC connections was 99 per cent and the number, total duration and total cost of HVDC disturbances were significantly lower than in the previous years.

In spring 2017, Fingrid published an action plan titled "Our Shared Journey – a roadmap towards achieving a green power system". It contains concrete initiatives and measures and ongoing projects to develop the markets. The publication is a continuation of a project that was started a year ago to bring the electricity market back onto a market-based development path. Many of the measures call for extensive co-operation between electricity market stakeholders, both in Finland and internationally.

The electricity market development measures can be crystallised into strengthening the position of the electricity consumer, developing marketplaces in line with the changing structure of power generation, and the active role of market players in balancing the power system. Drawing on digitalisation and developing market models enable, for example, the indirect participation of household users in the electricity market on a new scale.

## Electricity market revamp underway

The European electricity markets are in a phase of transformation. There will be changes in trade rules and in calculating the transmission capacities made available to the markets. The purpose of the market rules is to promote electricity trading in the common markets and to ensure the effective and equal use of transmission connections. Along with the new market rules, the number of electricity market operators, or power exchanges, in Finland may increase.

Among the market rules, the implementation of the Capacity Allocation and Congestion Management guidelines (CACM GL) got off to a good start in 2017. Fingrid has participated in preparing both common European method proposals and Nordic and Baltic capacity calculation area proposals together with other transmission system operators. One proposal that is relevant for the wholesale markets concerns the day-ahead and intraday markets' transmission capacity calculation methods; they are expected to be approved during 2018.

Electricity market players that are capable of a quick response must have the incentive to trade electricity close to the hour of delivery. The objective is to enable trading as close to the start of the delivery period as possible without compromising system security. In September 2016, the electricity exchange Nord Pool extended the trading period by half an hour in the bidding areas of Finland, Estonia and Latvia and in the connections between them and continued the same practice in 2017.

Intraday electricity markets will expand also in geographical terms during 2018. The XBID solution that enables European intraday markets will be introduced in 2018. The introduction of XBID has been arranged through local implementation projects. Fingrid participates in both the Nordic and the Baltic implementation projects.

An integrating electricity market also expands the reserve market. Fingrid actively promotes the integration of the Baltic countries with the Nordic balancing power market. In 2017, it became possible to utilise balancing power bids from Latvia and Lithuania to meet the needs of Finland.

The importance of real-time market for the overall electricity markets is increasing. Most physical electricity trading has traditionally taken place in the day-ahead market. As the production structure changes, some of the current power plants will be replaced by plants with poorer availability and predictability. From the power system's perspective, this poses a challenge, since maintaining the system's balance requires that electricity is generated in exactly the same amount as is consumed at any given moment.

As variable electricity generation increases, more opportunities to trade closer to the delivery time are required. This change poses a challenge to develop the market rules such that they encourage the active participation of all parties capable of fast alterations in production and consumption. In Fingrid's view, this means, for example,



increasing the transparency of pricing in the balancing power markets, publishing bid curves and making market entry easier.

In order to increase market transparency, Fingrid implemented, in the winter of 2016–2017, a pilot project on the publication of balancing market prices during scarcity situations. The project resulted in a decision by Fingrid to continue publishing real-time prices during scarcity of up-regulating power. In late 2017, Fingrid expanded the publication of prices to cover real-time price information for down-regulating power as well.

The European electricity market is in the process of introducing a shorter, 15-minute trade period. The relevant legislation, which came into force in December 2017, requires the introduction of a 15-minute trade period also in Finland in late 2020, unless the roll-out is postponed by a decision by the authorities. The length of the trading period has an effect on the management of power system balance. In an effective electricity market, the trade period reflects the physical characteristics of the power system. The current one-hour period is problematic in terms of variable electricity generation and the use of cross-regional transmission connections. Some of the demand side management (DSM) potential in electricity consumption is also left unused in the current situation. On the other hand, it enables the price of electricity to reflect its real actual value over each imbalance settlement period. Fingrid has started an imbalance settlement project for the 15-minute period and established a reference group composed of stakeholders to support the planning of the transition.

Fingrid's objective is to create new opportunities for electricity market operators to participate in balancing the electricity system in real time. As an imbalance power model, this would mean a one-price system, in which the price of imbalance power would be available to the electricity market operators in real time. Fingrid considers it important that, also in future, the key balance management principles and imbalance power pricing are harmonised in the Nordic countries.

In the Nordic countries, 2017 was overshadowed by a dispute between the transmission system operators over the development and future model of balance management. The Norwegian and Swedish TSOs made a one-sided proposal both to Fingrid and the Danish TSO concerning the decision-making authority and balance settlement structure, both within the framework of European legislation. As a precondition for this agreement, the decision-making powers would have to be handed over to the Norwegian and Swedish TSOs. Negotiations to reach a solution continue.

## Consumer at centre stage

The changing electricity production structure increasingly requires the effective and market-based utilisation of the DSM potential. In the European debate this is evident, for example, in the clean energy package published by the European Commission late in 2016. The idea behind the strengthening role of consumption is that, e.g., in scarcity situations, power-intensive industry would benefit from being able to transfer consumption to another moment in time. The active involvement of major consumers alone is not enough.

In future, the goal is to include smaller-scale power consumption increasingly in DSM, including households as well as distributed production and energy storages. The key to the market integration of all these parties is aggregation. Over the past two years, Fingrid has carried out pilot testing on aggregation models and the aggregated units of DSM participate in Fingrid's frequency-controlled reserve market, for example. Two pilot projects will be carried out in 2018 to test aggregation models for balancing power markets. The participants for these projects have already been selected.

## Aiming for a smart power system

The Ministry of Economic Affairs and Employment's (MEAE) smart grid working group published in late 2017 an interim report that seeks solutions to accomplish the energy shift by means of a smart power system. Such a system would increase the capabilities to balance production and consumption at all times and thereby enable

the increasing use of clean energy. To make the smart power system a reality, it is necessary to offer financial incentives both to industry players and consumers.

The progress of technology and automation lowers the threshold for a consumer to participate in the electricity markets. Consumers can also make use of new types of services where service providers pass on electricity saved at points of consumption through DSM to meet the needs of the power system.

Through its subsidiary Fingrid Datahub Oy, Fingrid is building a solution for centralised information exchange, i.e. a datahub, to promote the functioning of the retail markets. Once completed, it will enable nearly real-time processes when changing suppliers and will provide electricity sellers with better conditions for serving their customers. The datahub will contain data from all of Finland's 3.5 million places of electricity consumption and customers. 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 electricity consumers.

As part of the datahub project, a data conversion service was acquired during the year for the quality control of customer and measurement data. The service was launched for the companies participating in pilot tests, and it will be made available to the entire industry in the spring of 2018. The first draft of the datahub's roll-out plan was drawn up in co-operation with industry players. The project will continue in close collaboration with stakeholders, as demonstrated by the highly popular 13 webinars that were held in 2017.

## Key events of 2017

### **Pioneering joint Nordic imbalance settlement introduced**

Joint imbalance settlement for the electricity markets of Finland, Sweden and Norway was introduced at the start of May. Joint imbalance settlement strengthens the markets across national market borders and is a step closer to the deeper integration of the Nordic electricity markets. Cross-border co-operation in imbalance settlement is entirely new in Europe. The imbalance settlement will be prepared in future by eSett Oy, which is jointly owned by the TSOs and operates out of Finland.

Joint imbalance settlement will increase the efficiency of balance responsible parties, DSOs, electricity sellers and service providers, as well as national TSOs, i.e. Fingrid, Svenska Kraftnät and Statnett. This new operational model will also lay the foundation for joint Nordic end-user markets.

### **Ollila's report steers the development of Nordic energy co-operation**

A report drawn up by Jorma Ollila for the Nordic Council on the development of Nordic energy co-operation was published in June. The report is based on the co-ordination of energy policies and well-functioning electricity markets.

A market-based approach requires strong political support. As a tangible measure, the report suggests that a Nordic electricity market forum be established to bring together all the relevant Nordic stakeholders to discuss the proposals brought up to develop the markets. Fingrid supports this approach and the suggested forum and believes that the most cost-effective way to implement the electricity market transformation is by strengthening the markets. In his report, Ollila draws attention to the significant role of broad regional

markets. Fingrid also considers the involvement of the Baltic countries to be of primary importance. This would boost power adequacy throughout the Baltic Sea area and strengthen the Nordic voice in the EU.

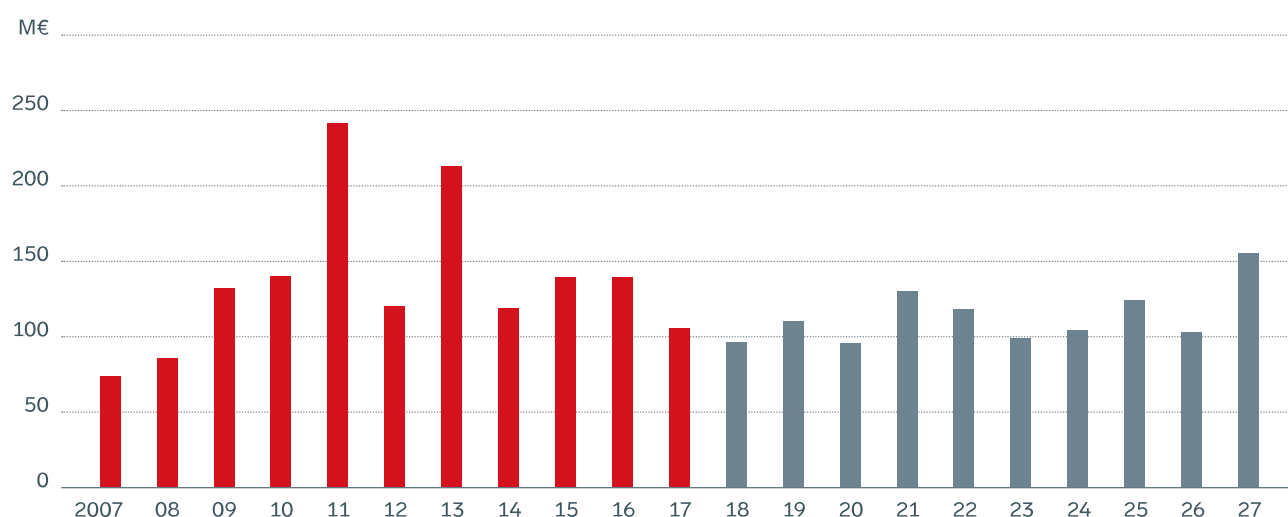
## **Open data to benefit the markets**

During the period, Fingrid became the first European TSO to introduce an **open service** that centrally distributes information about Finland's power system and electricity market. The open data service will enable the development of new services and applications. Open data means content and data in digital form that anyone can use and distribute freely, at no charge.

Offering open data conveniently in one place will enable the development of new services and applications. For Fingrid, providing open data is a cost-effective way to improve the operation of the electricity markets: for the markets to function effectively, market operators must have access to correct and up-to-date information in a readily available form.

# Grid development and maintenance

## Fingrid's capital expenditure in the main grid



The power system is going through an unprecedented shift. Fingrid targets efficient electricity markets in the Baltic Sea Region to ensure power adequacy in all conditions. ‘The clean power system of the future’ requires a grid with powerful transmission connections in order to function in the best possible way.

When it comes to investing in the power system, timing is everything – Fingrid insists on carefully choosing the right time for grid updates and avoiding excessive investments. Fingrid's effective tendering model guarantees the capability to expand the grid at a reasonable price. The company's annual capital expenditure will be around EUR 100 million in the next few years. This will be sufficient to keep the grid in good repair, yet with no pressure to increase grid service prices.

Fingrid's grid asset management lives up to any international standard. In spring, Fingrid placed at the top in the International Transmission Asset Management Study (ITAMS), as it has for several years now.

Our aim is to build the grid of the future. This often means a change in grid technology when replacing the existing power lines. Increasing digitalisation is an important aspect of our future. Fingrid is currently starting up its first digital substations, with focus on IoT (Internet of Things) technologies. IoT will bring changes to the existing substations as well.

## Ongoing projects

A total of 22 substation projects and 16 power line projects or transmission line arrangements were under way in 2017.

The biggest current projects are related to the modernisation of the aging ‘Iron Lady’ transmission line, connecting large-scale power plants to the grid, and maintaining system security for major cities.

The modernisation of the 'Iron Lady', the oldest part of the national grid, from Forssa to Lieto and Yllikkälä to Korja, proceeded according to plan. The project is expected to be completed early in 2018. The modernisation of the Korja substation and the related projects are a part of the long-term grid development plan.

A new 400 + 110-kilovolt power line is under construction between the Hikiä substation located in Hausjärvi and the new Orimattila substation to be constructed in Pennala, Orimattila. The transmission line between Hikiä and Iso-Henna will be dismantled and replaced with a new power line. Work on the foundations of transmission line pylons was started in December 2017 and will be followed by the assembly and erection of pylons and conductor installations. The entire transmission line will be completed in December 2019.

Olkiluoto's 400-kilovolt switching station, which is outdated and has insufficient system security, will be modernised in Eurajoki. The project will be completed during 2019. The modernisation of Inkoo's 400-kilovolt substation has also been started and is due for completion in 2019.

Fingrid has built a new 110-kilovolt power line from Äänekoski to Laukaa. The newly completed Metsä Group bio-product mill at Äänekoski is producing more than double the electricity required for its own operations. A new power line was needed to supply the surplus electricity to the grid. The 26-kilometre Vihtavuori–Koivisto power line between Laukaa's Vihtavuori and Äänekoski's Koivisto substations was built parallel to an existing power line. The power line project and the required extensions in substations were completed in January 2018.

The expansion of the 400-kilovolt switching station of the Länsisalmi substation progressed on schedule. The Länsisalmi substation is in a key location in Vantaa, close to Helsinki, as a transmission hub between Fingrid's grid system and the consumers of electricity in Helsinki and Vantaa. Due to increased consumption, Fingrid expanded the Länsisalmi substation to secure the supply of electricity throughout the capital region. The project was completed at the end of 2017.

A power transformer supplied to Fingrid was taken into use at the Espoo substation. The transformer will ensure sufficient transmission capacity in the Espoo region well into the future and facilitate grid operating situations in Southern Finland.

The commissioning of the upgraded Huutokoski reserve power plant was completed on schedule in November 2017. The Huutokoski reserve power plant upgrade project consisted of replacing outdated systems and improving the plant's environmental safety. The challenging project included a total of 16 subcontracts and equipment deliveries as well as numerous separate service and component deliveries and dismantling jobs required to support the main project.

## Investment decisions

Several new investments in grid maintenance and development were decided during 2017.

In late 2017, Fingrid made a decision on a grid upgrade in the North Karelia region, with plans including both new power lines and substations. A 36-kilometre section of power line falling into disuse will be dismantled and the right-of-way will again become available for agriculture and forestry. The production and consumption sites are far apart in North Karelia, often resulting in long transmission distances. A powerful and reliable grid will serve both Fingrid's customers and consequently all electricity users in the region.

The total investment costs for all the related projects, to be located north of Joensuu, will amount to nearly EUR 32 million. This investment decision by Fingrid entails an extensive set of rebuild projects on three power lines built mostly in the 1960s. The total length of the power lines, located north of Joensuu, in the municipalities of Joensuu and Kontiolampi, is approximately 112 kilometres. The implementation will take place within several projects, with a final deadline for completion in 2021.

The investment decisions of 2017 furthermore included the rebuilds of four obsolete substations. The substations, located in Uusikaupunki, Oulu, Jyväskylä and Kajaani, will be modernised to improve the system security of the respective regions. The projects will be completed during 2019.

## Maintenance

Maintenance operations are becoming increasingly proactive and digitalised. It has always been a critical priority for Fingrid to carry out any maintenance work with minimal disturbance to the grid service. New digital solutions help keep costs in check and outages short, and in the best case, even completely eliminate them. The goal is to avoid maintenance-related outages altogether.

In 2017, Fingrid carried out a competitive tender process for the basic maintenance on substations and power lines, as well as basic and special maintenance on secondary equipment. The new three-year contractual periods start at the end of 2018 and expire at the end of 2020.

## Future grid – planned investments

The bulk of electricity consumption in Finland takes place in the south of the country, where demand will exceed the production capacity even after the Olkiluoto 3 power plant is completed. Electricity produced in northern Finland and northern Sweden must be transferred to the south to serve the needs of industry and consumers. Strong transmission connections are required between the north and the south. Inadequate transmission capacity may in the future make it necessary to divide Finland into two price regions.

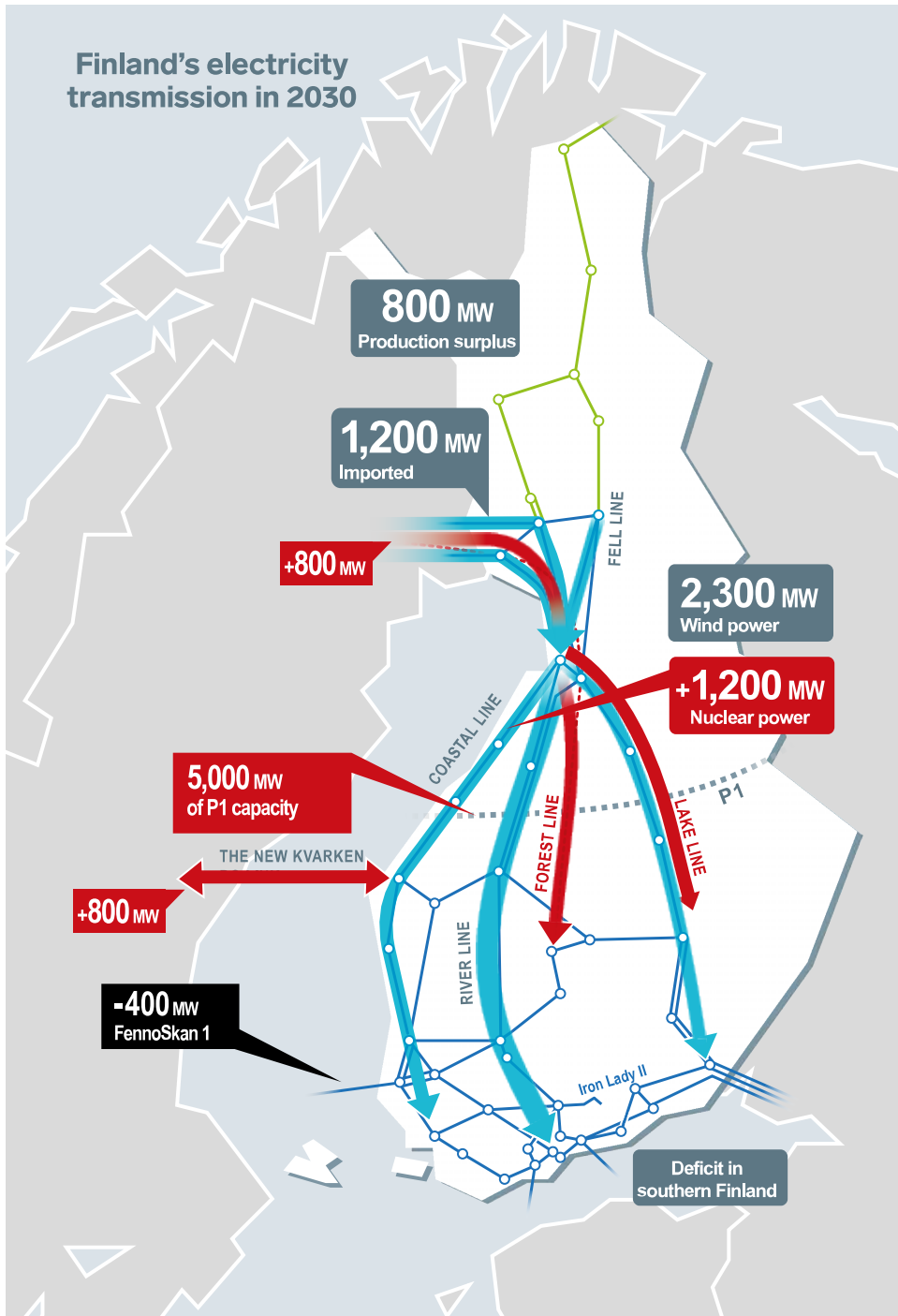
Growing wind and nuclear power production will further increase the surplus of electricity generated in the north of Finland, particularly on days with heavy winds in the north. According to current estimates, approximately 2,800 megawatts of new wind power capacity will be built in Finland by 2025, of which roughly 1,900 megawatts essentially in the northern parts of the west coast. The Fennovoima nuclear power plant project, rated at 1,200 megawatts, is also located north of the P1 section line critical for the transmission of electricity.

Sweden is the biggest producer of wind power in the Nordics. A substantial part of the Swedish wind power comes from the north of Sweden, from where it must be transmitted to the south. Thanks to the new transmission link between Finland and Sweden, to be completed in 2025, more Swedish wind power will become available in Finland.

Fingrid aims to ensure sufficient transmission capacity with four strong 400-kilovolt north-south transmission lines. The plans furthermore include an AC link from Sweden to Finland and the Kvarken DC link from the Vaasa region to Sweden. The planned transmission links will support a controlled and safe transition to a clean power system.

### Investment projects of hundreds of millions of euros

- New overland (“Forest Line”), 400 kV, from Oulu to Petäjävesi. Expected completion in 2022, EUR 85 million
- Third AC link between Sweden and Finland at the latest in 2025, EUR 200 million
- New marine (Kvarken) DC link from Vaasa region to Sweden. Expected completion by the end of the 2020s, around EUR 350–410 million



Planning of the transmission line between Oulu and Petäjävesi, named “Forest Line”, has begun and construction work will be started within a couple of years. The connection will be roughly 300 kilometres long and will have a transmission capacity of approximately 700 megawatts. The cost of the investment is estimated at EUR 85 million. The employment impact of the project amounts to around 500 man-years.

A third 400-kilovolt AC link will be built between Finland and Sweden at the latest in 2025. This is a joint project between Fingrid and the Swedish transmission system operator Svenska Kraftnät. The EUR-200-million

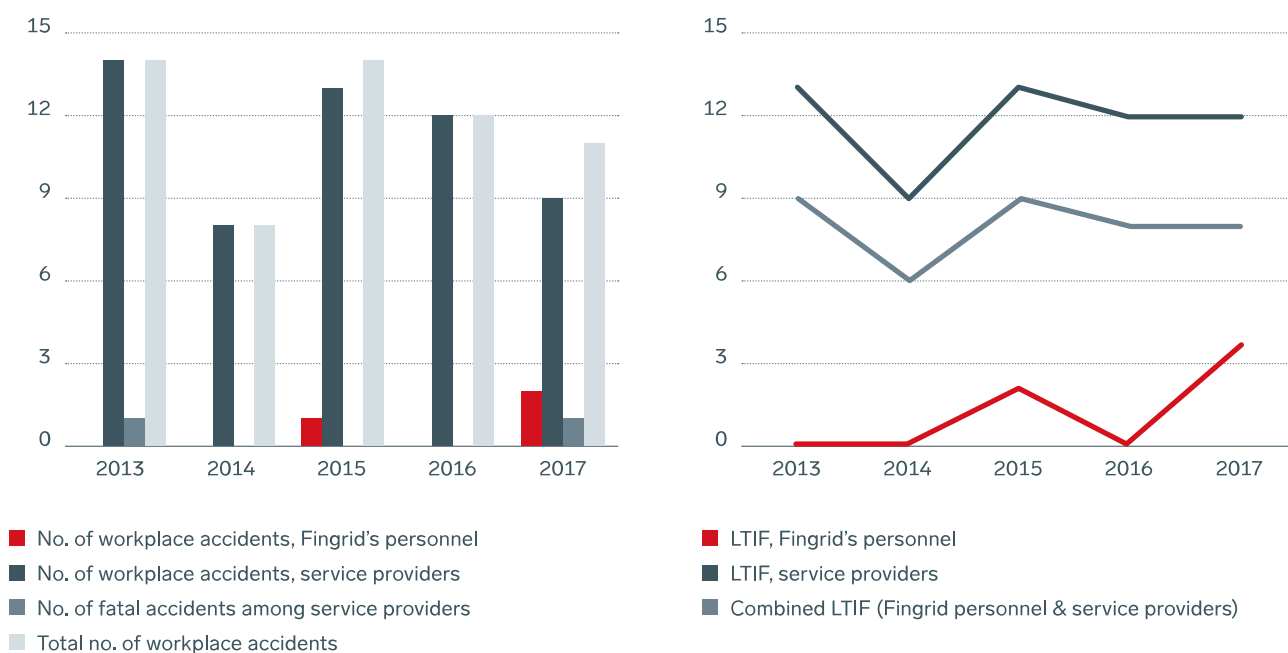
connection has been included in the EU's list of energy infrastructure priority projects and the European Commission has granted it PCI (Projects of Common Interest) status. Such status is granted to projects that are essential to the EU's internal energy markets and to achieving the targets of the EU's energy policies: secure, cost-competitive, and sustainable energy.

The new connection will increase the transmission capacity between the two countries by 800 megawatts. Fingrid initiated during the year under review an environmental impact assessment (EIA) for the Pyhänselkä–Keminmaa power line project. The transmission connection to Sweden also requires strengthening Finland's internal connections, including the Forest Line to be built between Oulu and Petäjävesi.

The Finnish and Swedish TSOs have started synchronised planning of the new Kvarken DC link. The plans envisage a new, roughly 800-megawatt connection to be built by the end of the 2020s. The Kvarken connection would replace the Fenno-Skan 1 DC connection, which is reaching the end of its service life. In Finland, the starting point for the new link would be in the Vaasa region. The new transmission connections would benefit the markets of the entire Baltic Sea Region and enable a transformation of the power system, including a major increase in renewable electricity generation.

## Occupational safety

### LTIF and workplace accidents



Corporate safety is a key part of Fingrid's operations, steered by the company's safety policy. The occupational safety management of Fingrid's asset management function and suppliers is steered by the safety management system and contractual terms concerning safety. These were updated in 2017 as part of the company's continuous development efforts. In addition to the above, Fingrid has created an extensive new development programme in order to learn from hazardous situations and prevent similar incidents from reoccurring.

The contractual conditions related to safety were updated. A safety culture survey was arranged for service suppliers and Fingrid's personnel an occupational safety group was established for service suppliers, and the



group started its activities by planning future targets. In addition, efforts were made to improve the supplier selection, and the work to develop a mobile reporting system for occupational safety, quality and environmental issues and safety management system continued. Due to a fatal accident, an extensive development programme was drawn up to prevent similar incidents, and more severe sanctions were imposed on safety deviations.

Fingrid's own personnel had two lost-time accidents (0). Suppliers had 9 (12) recordable incidents, one of which was fatal and eight were lost-time accidents. Among the lost-time accidents, two led to an absence of more than 30 days from work. The suppliers' and Fingrid's combined accident frequency rate remained unchanged, at 8 (8). Based on the investigation of the fatal accident, a programme for immediate corrective measures was drawn up in co-operation with the supplier. Fingrid drew up an extensive development programme to prevent any similar accidents from happening in future. The development programme focuses, for example, on increased supervision, more rigorous sanctions, instructional videos as well as developing the structural safety and guidelines on work at heights.

## Key events of 2017

### **Fingrid names main transmission lines in commemoration of Finland's centenary**

Fingrid has named the 400-kilovolt power line connections running between the north and south of Finland in the spirit of the nation's 100-year anniversary:

**Rannikkolinja** ("Coastal Power Line", from Turku to Keminmaa)

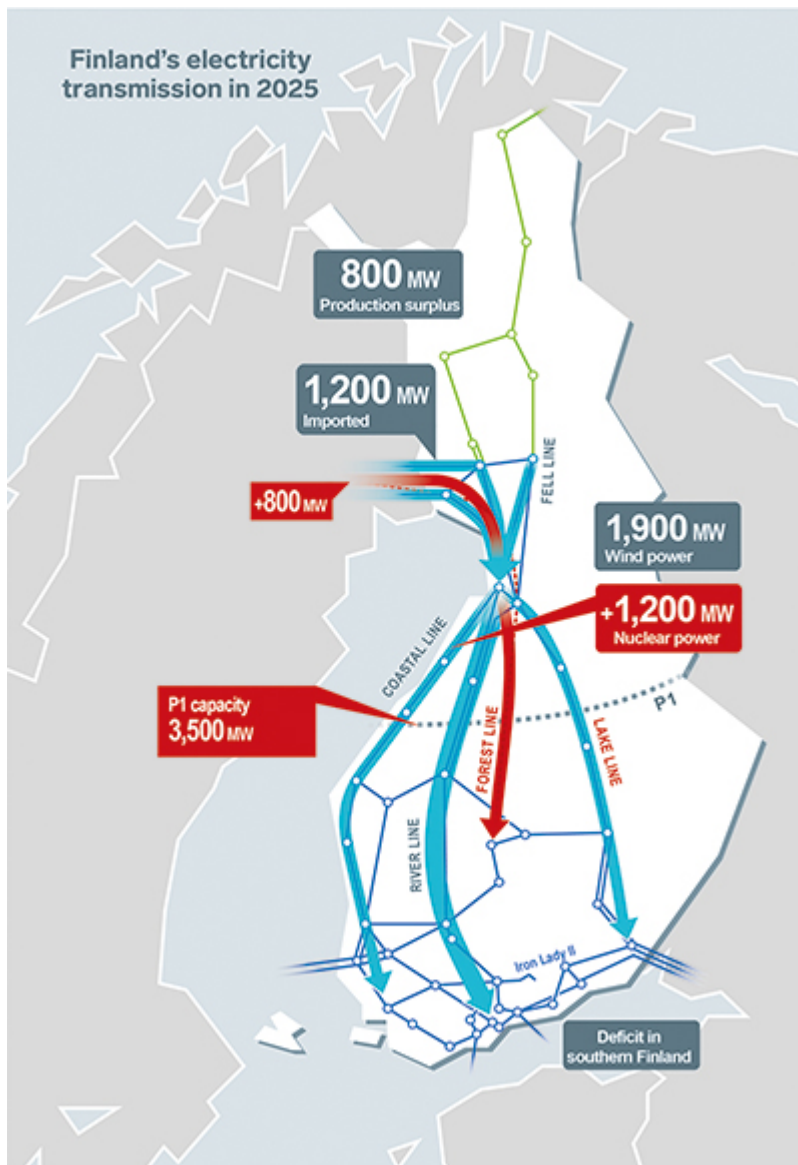
**Jokilinja** ("River Power Line", from Helsinki to Oulu, via Kangasala and Alajärvi)

**Järvilinja** ("Lake Power Line", from Lappeenranta to Oulu)

**Metsälinja** ("Forest Line", future connection from Petäjävesi to Oulu).

In addition to these, the 400/220-kilovolt connection from Oulu to the Norwegian border has been named **Tunturilinja** ("Fell Power Line").

Finland's electricity transmission grid got its start with the construction of a high-voltage line between Imatra and Turku in the late 1920s. This connection is now being modernised and, in keeping with tradition, the new line will be called **Rautarouva II** ("Iron Lady II").



## Pylon erection demo in Hämeenlinna

Fingrid demonstrated how power line pylons are erected in the Katinen neighbourhood of Hämeenlinna on 16 August 2017. The most important outcome of this event was the feedback from local citizens on how power line construction projects affect their everyday lives.

Fingrid invited anyone living close by to come and see how a 35-metre pylon weighing roughly 6,500 kilos is erected. The event attracted an interested crowd of more than a hundred.

## Blue and white light in the fence of the Tammisto substation

A new fence at the Tammisto substation in Vantaa was completed just before Finland's centennial celebration. Fingrid's substation and its surroundings are now lit up with LED lights that switch on and off in waves and change colours. On Independence Day and the Finland 100 celebration, the colours were blue and white.

The front and back part of the 250-metre fence are made of blue steel, and the middle section is made of a light-coloured aluminium sheet and more than a hundred LED lights. When the LEDs are on, light streams through the perforated steel sheets in the front.

A team of architects brainstormed several options, and Fingrid and the city of Vantaa together selected the most appropriate one. The chosen design was inspired by the shape of a sine wave. Read more and watch [a video of the lit fence](#).

## In June, Fingrid published a draft of its grid development plan for 2017–2027

The draft is based on the regional grid plans drawn up together with customers. The plan also takes into account the Baltic Sea region's development plan and the ten-year grid plan covering all of Europe.

# Environment

When we build and maintain power lines, substations and reserve power plants, we make sure that environmental and land-use issues are taken into account for the long term. We also relate our principles for reducing our environmental impacts in our land use and environmental policy. Key aspects include a thorough environmental impact assessment (EIA) and preparedness for environmental risks. Environmental management was developed during the year by certifying the environmental management system concerning the operation of the reserve power plants according to ISO 14 001.

We also encourage our contractors and service suppliers to commit to our operating practices with the help of contractual terms, environmental training and auditing related to environmental matters. All personnel working at our work sites complete online training on environmental matters. During the year under review, we arranged environmental training during the launching stages of investment projects and maintenance contracts, training on the management of fire-water at substations, on the implementation of an environmental management system at reserve power plants as well as on the maintenance of oil separator systems. We compiled environmental guidelines for work sites in a pocket-sized stack of info cards. On our construction sites, environmental aspects were monitored as part of work site monitoring. Compliance with environmental requirements, occupational safety and contractor obligations was verified in a total of 13 audits. In addition, two full safety audits were carried out at reserve power plants.

Our goal is to complete grid investment projects and maintenance without any environmental deviations. The chemical safety at substations and reserve power plants was improved through several development projects on themes such as transformer catch basin dewatering and oil separation systems. The applicability of biodegradable and fire-rated ester oils in Fingrid's transformers and their cost-effectiveness compared with traditional mineral oil transformers were investigated in two thesis projects. Following the completion of the Huutokoski reserve power plant upgrading project, the plant's environmental safety also improved. One significant environmental deviation occurred in our operations during the year, however, when a hydraulic oil leak of roughly 120 litres occurred at a power line work site in an accident involving work machinery.

Fingrid actively participates in land-use planning to ensure safety and land-use reservations for the grid. In 2017, we issued around 260 statements on land-use plans and EIAs. In addition, we directed the construction taking place near grid installations by issuing roughly 510 safety instructions and statements including land-use restrictions.

Fingrid participated in legislation work, for example to update the radiation legislation by drawing up new legislation on protection of the public from non-ionized radiation. Measurements related to the exposure of employees to electromagnetic fields at substations were continued and we commissioned a thesis project on the topic. We continued to publish, jointly with an independent expert party, status reports on global, medically oriented research on electromagnetic fields. While there is no new, conflicting evidence of the health impacts, we understand that people are concerned about the electromagnetic fields of power lines and will continue to monitor research reports.

The impacts of our transmission line projects on people and on the environment are determined, depending on the specific project, 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. Consultations with landowners are very important in terms of ensuring that the power line adapts to the environment, taking into account various perspectives and stakeholders. In our power line projects, we primarily utilise existing right-of-ways, in accordance with the nationwide land-use objectives stipulated in the Land Use and Building Act. When planning transmission line routes in a new right-of-way, a key aspect is to avoid residential areas and other significant sites.

EIAs were carried out for four power line projects during the year under review. The environmental impact assessments for the Pyhänselkä–Keminmaa and Pyhänselkä–Nuojuua power lines were started in accordance with the reformed EIA legislation, and the projects were presented to the public at four events. An environmental assessment was carried out on two power line projects (Imatra–Huutokoski and Kittilänjärvi–Taivalkoski). We promoted landowner engagement during the planning stages of these projects through a mailing campaign and an online feedback system. The Finnish Association for Impact Assessment granted the company their annual award for good EIA activities for the environmental assessment procedure carried out on the power lines required by the Hanhikivi 1 nuclear power plant.

In order to be able to build, operate and maintain a transmission line, Fingrid redeems a right of use to the transmission line area. A redemption decision was received for the Hikiä–Orimattila power lines. Five hearings in accordance with the Finnish Act on the Redemption of Immoveable Property and Special Rights were held with landowners. No purchases or redemption procedures of residential properties were necessary to accomplish appropriate transmission line planning. Co-operation with landowners is important in power line projects. In a questionnaire given to landowners on the completed Varkaus–Kontiolahti transmission line project, we received an overall grade of around 4 on a scale of 1 to 5. With 185 landowners responding to the questionnaire, the response rate was 51%. Landowners would like to see pro-active and accurate communication from Fingrid on the progress of construction work and highlight the importance of agreeing in advance on the use of roads and moving about in fields and yard areas. This feedback has been taken into account when developing our communication procedures. In addition to statutory communication, a total of over 10,000 letters were sent to landowners concerning topics such as environmental impact assessments, power line construction and trimming of vegetation in power line areas. We have also tried new communication channels, including social media.

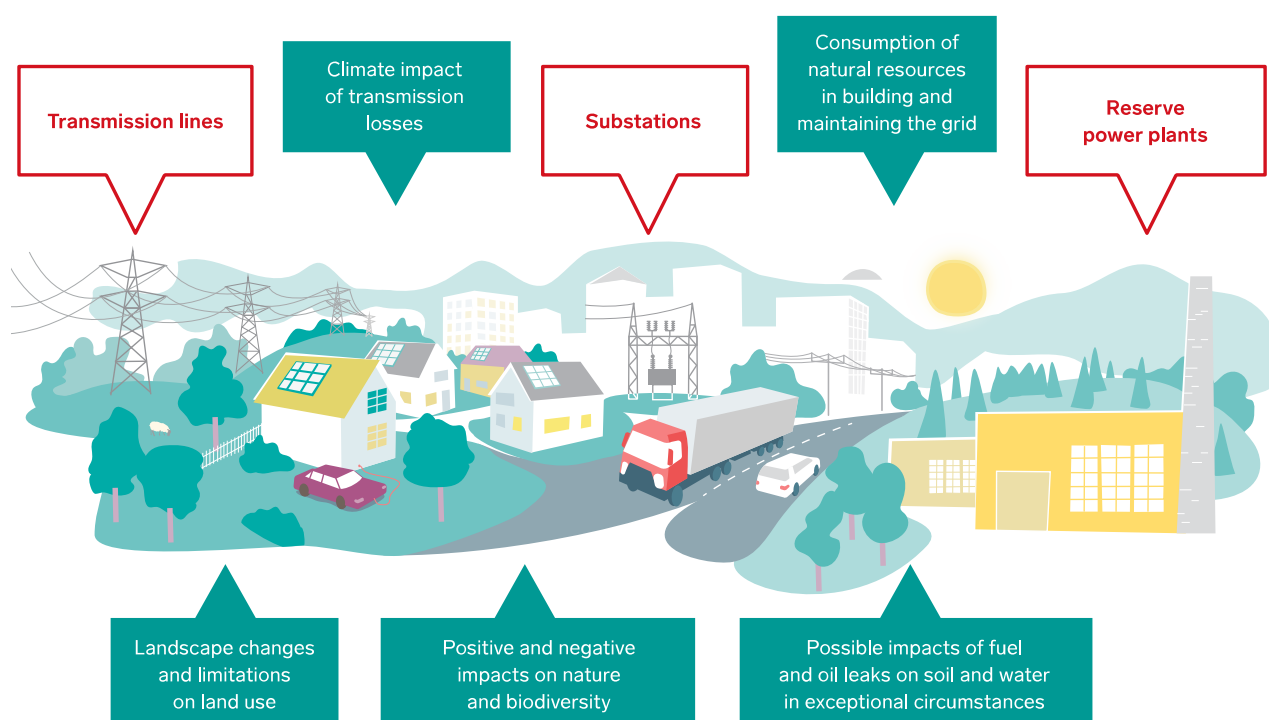
Our service providers who carry out maintenance work and trim vegetation along power line right-of-ways are also instructed to take landowners and environmental matters into account. During the year under review, negotiations were started with the Finnish Road Association, the Central Union of Agricultural Producers and Forest Owners (MTK) and the central union of Swedish-speaking agricultural producers in Finland (SLC) on new agreements concerning access roads for maintenance purposes. The agreements will be based on the updated recommendations on usage fees for maintenance roads and will cover a term of 10 years.

The transmission line right-of-ways that are kept permanently open by regular clearing transform the local land use and landscapes. The impacts on biodiversity can also be positive, as transmission line areas can act as a replacement habitat for species threatened by disappearing meadows or the drainage of peatlands. During the year under review, we promoted the utilisation of power line areas for the benefit of nature and people by publishing idea cards targeted at landowners and offering financial support for the management of heritage landscapes. We also informed municipalities of the opportunities offered by land-use planning to promote the sustainable use of power line areas. Trials were carried out to verify the effects of artificially increasing the amount of decaying wood, an important variable for biodiversity, in connection with the MTK's and the Finnish Energy Industries' project on securing forest biodiversity in the management of areas adjoining transmission line right-of-ways. For public safety reasons, it was necessary to remove an osprey nest from a transmission tower. Fingrid is responsible for the functioning and safety of the electricity supply system in all circumstances.

Power losses taking place during electricity transmission amount to roughly one per cent of Finland's total electricity consumption. The production of electricity to cover the losses results in climate impacts. We minimise losses by keeping the voltage of the transmission grid as high as possible and by making grid investments and equipment procurements that promote energy efficiency. Fingrid participates in the energy efficiency agreement

of Finnish industries for 2017–2025 with a target of cutting energy use by six per cent, which translates to roughly 84,500 megawatt hours, by 2025. Climate impacts also result from our reserve power plants and from sulphur hexafluoride (SF6), a powerful greenhouse gas used in our substation equipment. Our SF6 gas emissions in 2017 were approximately 24 (21) kg. At the end of 2017, there was a total of approximately 45 (37) tonnes of SF6 gas at our substations, while the annual leakage rate in the long-term averages less than 0.2 per cent. Fingrid’s methods of monitoring SF6 gas are at an internationally high standard, and even minor leaks are detected in real time. Fingrid’s direct CO2 emissions and indirect CO2 emissions due to the company’s own electricity consumption and losses amounted to 230,341 tonnes of CO2 in 2017, the majority of which (approx. 96%) were caused by disturbances.

## Fingrid's main environmental impacts



## Key events of 2017

### Fingrid receives its second EIA award

The Finnish Association for Impact Assessment granted Fingrid their annual award for good EIA activities for the environmental assessment procedure carried out on the power lines required to connect the Hanhikivi 1 nuclear power plant to the grid.

Fingrid has also previously received the award, in 2011. The EIA procedure is a valuable planning tool for Fingrid to find the environmentally best right-of-way locations for new transmission lines in co-operation with landowners, authorities and other stakeholders. Fingrid has developed its ways of working to match the EIA procedure as optimally as possible with the needs of all the related parties.

The communication and engagement measures aimed at landowners have been increased, and the communications on Fingrid projects have been made easier to understand. New ways of presenting the impacts have been developed to make it easy for all interested parties to find the information relevant for them in the extensive materials on transmission line projects. It is also important to ensure effective follow-up of information on the subsequent project stages after the EIA.

### **Certification for the environmental management system on reserve power plants**

Fingrid's environmental management system on reserve power plants was audited according to the ISO 14001 standard in August and September 2017.

The operations of Fingrid's reserve power plants, based on proactive operational procedures, have for a long time met the requirements set for certified environmental management systems. The certificate officially recognises that the environmental aspects of Fingrid's reserve power plants are taken care of in a systematic and target-oriented manner. It also introduces more accurate ways of working: in future, the realisation of the targets will be followed up on by means of performance indicators.

The regular use of reserve power plants is minimal, but the plant areas contain significant fuel storages. In exceptional situations and emergencies, the operations can have a major impact on the environment. The most important environmental risk at the reserve power plants is environmental damage such as fuel and oil leaks to the soil or water.

# Research and development

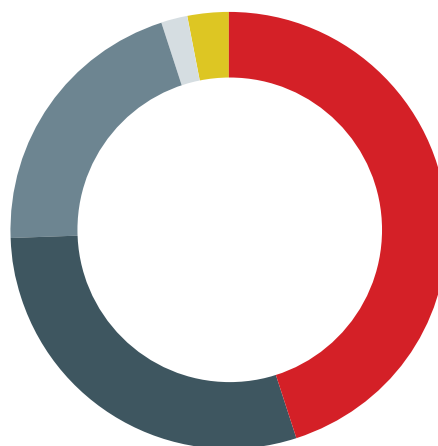
## Breakdown of R&D costs

2017



■ Ensuring transmission capacity .....	40.6 %
■ System operation .....	27.2 %
■ Promoting the electricity market .....	27.7 %
■ R&D administration .....	2.4 %
■ Other projects .....	2.2 %

2016



■ Ensuring transmission capacity .....	45.0 %
■ System operation .....	29.6 %
■ Promoting the electricity market .....	20.4 %
■ R&D administration .....	2.2 %
■ Other projects .....	2.9 %

The volume of research and development (R&D) activities continued to increase during the year under review, amounting to EUR 2.4 (2.4) million. Most of the research activities, 67%, was outsourced to universities, research institutions and other players. Fingrid's own work mainly consisted of thesis projects (9) and steering of R&D projects. The biggest R&D investment was made in maintenance management of grid assets and grid development (33% of the total expenditure). The second most important target for resources (25%) was the development of the electricity market. The development of system security management received 19% of the expenditure.

The single most extensive project was the development of maintenance management according to a status- and risk-based approach to match new types of equipment and modern measurement and monitoring systems, for example for switchgear. A highly significant set of R&D projects, in terms of impacts, focused on developing the electricity markets and operational models in such a way that smart grid solutions can cost-effectively accomplish adequate flexibility in the power system to maintain a good level of system security. Both of these programmes will continue in the coming years.

R&D co-operation is important in terms of utilising synergies and benefiting from a broader base of expertise. Fingrid participates in a joint European project called **MIGRATE**, which mainly focuses on the inertia calculation and forecasting methodology for power systems. In the Nordic arena, Fingrid participates in several joint R&D projects of the Nordic TSOs to develop areas such as load modelling and inertia control in the Nordic power system. One of the joint projects at the national level, the **FLEXe project** (Tekes) focusing on flexibility capabilities in the Finnish power system, was completed in 2017. Fingrid additionally participates in the EL-TRAN project (Academy of Finland) to create a roadmap towards a resource-efficient power system. Fingrid also independently finances several industry projects, either directly or through systems such as the Finnish Energy organisation's Electricity Research Pool.



# Corporate responsibility GRI disclosures

## GENERAL DISCLOSURES

Standard	GRI content	Location	Additional information	Global Compact
<b>Organisational profile</b>				
GRI 102-1	Name of the reporting organisation		Fingrid Oyj	
GRI 102-2	Activities, brands, products and services	Fingrid in brief		
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	Fingrid in brief		
GRI 102-5	Ownership and legal form of the organisation	Fingrid in brief		
GRI 102-6	Markets served	Fingrid in brief		
GRI 102-7	Scale of the organisation	Fingrid in brief		
GRI 102-8	Number of employees by employment type and employment contract, by region and by gender			6

TOTAL NUMBER OF EMPLOYEES	2017			2016			2015		
	2017	Men	Women	2016	Men	Women	2015	Men	Women
Permanent	308	237	71	291	220	71	280	211	69
	87 %	77 %	23 %	87 %	76 %	24 %	89 %	75 %	25 %
Temporary	47	34	13	43	30	13	35	27	8
	13 %	72 %	28 %	13 %	70 %	30 %	11 %	77 %	23 %
Full-time	328	249	79	302	226	76	293	220	73

	92 %	76 %	24 %	90 %	75 %	25 %	93 %	75 %	25 %
Part-time	27	22	5	32	24	8	22	18	4
	8 %	81 %	19 %	10 %	75 %	25 %	7 %	82 %	18 %
<b>Total</b>	355	271	84	334	250	84	315	238	77
Average	352			336			319		

**PERSONNEL BY LOCATION**

	2017	2016	2015
Helsinki	303	285	267
Hämeenlinna	16	16	15
Oulunsalo	11	9	9
Petäjävesi	14	13	12
Rovaniemi	1	2	2
Varkaus	10	9	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 2017, grid building and maintenance operations amounted to 751,789 work hours, equalling 442 man-years.

6

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

	2017	2016	2015
Man-years, Fingrid's personnel	321	300	287
Man-years, service providers	442	575	593
<b>Man-years total</b>	763	876	880

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

supply chain

Code covers issues such as business practices, human rights, labour rights, occupational safety and the environment. The Supplier Code of Conduct is applied for procurements worth at least EUR 30,000 and they are linked, e.g., to material, equipment or ICT 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 basic maintenance on power lines and substations is also in place. Fingrid has around 60 direct contractual partners, the 10 biggest of which account for roughly 90 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, hailing from countries such as Spain, Italy, Croatia, Latvia, Lithuania, Portugal, Sweden and Estonia, work mainly on transmission line work sites, but to some extent also at substations. Grid maintenance suppliers and their suppliers use Finnish workforce. Some non-Finnish personnel is used in vegetation trimming at 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	<b>Report of the Board of Directors</b>	No significant changes
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period

CUSTOMERS CONNECTED TO THE GRID	December 2017		December 2016		December 2015	
	Customers	Connection points	Customers	Connection points	Customers	Connection points
Distribution networks	62	412	62	412	62	414
Production	34	58	32	56	29	54
Industry	24	48	24	48	25	49
Institutional customers	1	43	1	43	1	44
<b>Total</b>	121	561	119	559	117	561

Length of above and underground transmission and distribution lines

The transmission grid owned by Fingrid encompasses approx. 14,400 kilometres of 400, 220 and 110 kilovolt transmission lines, plus 115 substations and four HVDC substations.

Allocation of CO<sub>2</sub>e emissions allowances or equivalent, broken down by carbon trading framework

**Report of the Board of Directors**

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 5,817 (10,335) units (tCO<sub>2</sub>) of emission allowances were returned, 10% of which consisted of purchased and 90% of acquired emission rights units. Fingrid has not been granted free-of-charge emission rights for the emissions trade period 2013–2020. Purchased emission rights units amounted to 4,150 in 2017. Emissions trading had minor financial significance for Fingrid.

GRI 102-11

Application of the precautionary principle

**Corporate Governance Statement Environment**

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</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, Association for Finnish Work
<b>Strategy and analysis</b>			
GRI 102-14	Statement from senior decision-maker	<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>	
<b>Ethical business principles</b>			
GRI 102-16	Values, principles, standards, and norms of behaviour	<b>Corporate responsibility</b>	1-10
GRI 102-17	Mechanisms for advice on ethical and lawful behaviour and for reporting concerns about unethical or unlawful behaviour		Fingrid's employees can receive advice in applying Fingrid's Code of Conduct from the company's legal services. Suspected behaviour that goes against Fingrid's Code of Conduct must be reported to a supervisor, Fingrid's management or internal audit without delay. An independent so-called whistleblowing channel is also in use. No reports were made via the whistleblowing 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. 1-10
<b>Governance</b>			

GRI 102-18	Governance structure and committees	Corporate Governance Statement	
GRI 102-19	Delegating authority	Corporate Governance Statement Corporate responsibility	
GRI 102-20	Executive-level responsibility	Corporate responsibility	
GRI 102-22	Composition of the highest governance body	Corporate Governance Statement	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 Statement	
GRI 102-24	Nominating and selecting the highest governance body	Corporate Governance Statement	The report accounts for the selection of Board members and the related criteria.
GRI 102-25	Avoidance of conflicts of interest	Corporate Governance Statement	
GRI 102-26	Role of the highest governance body in setting purpose, values and strategy	Corporate Governance Statement Corporate responsibility	
GRI 102-29	Highest governance body's role in identifying and managing risks	Corporate Governance Statement 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	Corporate Governance	

	management processes	<b>Statement Report of the Board of Directors</b>	
GRI 102-31	Frequency of risk reviews	<b>Corporate Governance Statement Report of the Board of Directors</b>	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	<b>Corporate Governance Statement</b>	The executive management group approves the corporate responsibility reporting.
GRI 102-35	Remuneration policies for the highest governance body and senior executives	<b>Remuneration statement</b>	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	<b>Remuneration statement</b>	The report describes the approval process of remuneration systems and forms of remuneration.
<b>Stakeholder engagement</b>			
GRI 102-40	List of stakeholder groups	<b>Stakeholder engagement</b>	
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. 3
	Fingrid's contractors' personnel covered by the collective labour agreements by country		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.
GRI 102-42	Identifying and selecting stakeholders	<b>Stakeholder engagement</b>	

GRI 102-43	Approach to stakeholder engagement	<b>Stakeholder engagement</b>	
GRI 102-44	Key topics and concerns raised through stakeholder engagement	<b>Customers Corporate responsibility Environment</b>	
<b>Report profile</b>			
GRI 102-45	Entities included in the consolidated financial statements	<b>Contents of the annual report and reporting principles</b>	
GRI 102-46	Defining report content	<b>Strategy</b>	An assessment of the material economic, social and environmental impacts of Fingrid's operations, as well as the impacts on stakeholders' decision-making was updated in 2016, taking into account the strong connection between sustainability and strategy and business and its impact on Fingrid's ability to create value, as well as the requirements of the GRI reporting guidelines, which extend throughout the value chain. The starting point for the update was a thorough materiality analysis 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. In 2016, the need to update the materiality analysis was evaluated by Fingrid's development managers, and the executive management group confirmed the most important issues concerning Fingrid's operations as well as the adequacy of the management approach for these issues. In 2017, the executive management group confirmed that the materiality analysis was up to date.
GRI 102-47	Material topics	<b>Strategy Operating environment</b>	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 2017.
GRI 102-51	Date of most recent report		The previous annual report was published on 20 March 2017.



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	Fingrid's corporate responsibility reporting is realised in accordance with the Core requirements of the GRI standards.
GRI 102-55	GRI content index	<a href="#">GRI index</a>
GRI 102-56	External assurance	Corporate responsibility information has not been assured externally except for the account for carbon dioxide emissions which has been assured by an external emissions trading verifier.

**MATERIAL TOPICS**

MATERIAL TOPICS FOR FINGRID	MANAGEMENT PERFORMANCE PROCEDURE AT FINGRID	FINGRID'S MANAGEMENT INDICATORS	MATERIAL TOPICS FOR FINGRID'S OPERATIONS	DISCLOSURE OF MATERIAL INFORMATION FOR FINGRID'S OPERATIONS
Reliability of the electricity system	Principles for managing system security	Grid disturbances: financial harm to customers	GRI: Indirect economic impacts	GRI 203-2 Significant indirect economic impacts
	Reserve policy	System security: System Average Interruption Duration Index in connection points	Electricity availability and transmission reliability	Power outage frequency Average power outage duration
	Contingency policy	Sufficiency of the system reserves	Demand-side management	
	Reserve power plant management policy		System efficiency	Transmission and distribution losses
			Research and development	R&D activities and expenses related to electricity supply
	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 CO2e emissions allowances or equivalent, broken down by carbon trading framework
				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 NOx, SOx and other significant air emissions
Stakeholder engagement	Fingrid's Code of Conduct	Trust KPI in the customer survey	GRI: Stakeholder engagement	GRI 102-43 Approach to stakeholder engagement
				102-44 Key topics and concerns raised
		ENTSO-E: ranking in price level comparisons	GRI: Local communities	
	Land use and environment policy	Landowner survey grade	GRI: Marketing and labelling	Number of residential, industrial, institutional and commercial customer accounts
	Communications policy			Results of surveys measuring customer satisfaction
Financial result	Management principles	Credit rating	GRI: Economic performance	GRI 201-1 Direct economic value generated and distributed
				GRI 201-4 Financial assistance received from

				government
	Corporate Finance and Financing Principles	Dividend payout capacity		
	Financing policy	Cost-effectiveness		
Procurement practices	Fingrid's corporate responsibility requirements for suppliers Procurement policy	Deviations or problems in contractor obligation or employment relationship matters	GRI: Procurement practices	GRI 102-9 Description of the supply chain
Development and safety of the transmission grid	Main grid development and maintenance management principles	Implementation of capital investments	GRI: Occupational health and safety	GRI 403-2 Type of injury and rates of injury (LTIF), occupational diseases, lost days and absenteeism, and total number of work-related fatalities
	Contingency policy	Maintenance efficiency: ranking in international benchmarks (ITOMS, ITAMS)	GRI: Employment	Proportion of suppliers' and contractors' employees who have taken part in occupational safety training
	Company security policy	LTIF	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
	Grid planning, construction, maintenance management policies	Environmental deviations		GRI: Environmental compliance
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	Grade for developing the electricity market in the customer survey	GRI: Customer privacy	GRI 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data
	Loss power procurement policy			
	Transmission capacity allocation and congestion management policy			
An open, collaborative, renewing and target-oriented work community	Management principles	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
	HR policy	Management: ranking in the Great Place to Work Finland survey		GRI 102-41 Employees covered by collective bargaining agreements
	Equal opportunity and non-discrimination plan			
			Percentage of employees retiring within the next 5 and 10 years	
			GRI: Education	
	GRI 404-2 Programmes for upgrading employee skills and transition assistance programmes			
GRI 404-3 Performance and career development reviews				
			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	Fingrid's Code of	Grade for	GRI: Business ethics	GRI 102-16 Values,

Code of Conduct	Conduct	responsible operations in personnel survey		principles, standards, and norms of behaviour
	Management principles			GRI 102-17 Mechanisms for advice on ethical and lawful behaviour and for reporting concerns about unethical or unlawful behaviour
	Internal control and risk management principles		GRI: Non-discrimination	GRI 406-1 Incidents of discrimination and corrective actions taken
	HR policy		GRI: Anti-corruption and anti-bribery	GRI 205-3 Confirmed incidents of corruption and actions taken
	Data security policy		GRI: Public policy	GRI 415-1 Political contributions
	Data protection policy		GRI: Anti-competitive behaviour	GRI 206-1 Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes
	Document management policy		GRI: Socioeconomic compliance	GRI 419-1 Significant fines and non-monetary sanctions for non-compliance with laws and/or regulations

**Standard    GRI content    Location    Notes**

Management approach			
GRI 103	Disclosures on Management Approach	Strategy Fingrid's strategic targets and indicators Personnel Corporate responsibility Environment Corporate Governance Statement Report of the Board of	

**Directors**
**ECONOMIC RESPONSIBILITY STANDARDS**
**Economic performance**

GRI 201-1 Direct economic value generated and distributed (€)

<b>Income from customers</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Turnover	671,992,154	586,119,500	600,224,476
Other operating income	2,933,448	12,688,847	5,199,164
Contributions received	-170,141	-282,023	-199,475
Dividend income	1,119,088	564,840	555,518
Income from investments and loans	478,062	688,991	623,881
<b>Total</b>	<b>676,352,612</b>	<b>599,780,155</b>	<b>606,403,565</b>

**Payments to suppliers**

Purchases, materials and services	301,947,504	248,358,502	240,642,741
Electricity tax on auxiliary power	-4,818	-18,978	-9,858
Other costs	61,918,444	30,585,523	82,287,655
Changes in fair value	8,884,281	35,444,373	-24,275,675
Voluntary additional personnel expenses and	-1,617,363	-1,533,407	-1,406,409

compensation for expenses (excl. training)			
Real estate tax	-421,385	-409,145	-393,259
Contributions	-28,014	-32,424	-79,538
<b>Total</b>	<b>370,678,649</b>	<b>312,394,445</b>	<b>296,765,659</b>

**Remuneration to personnel**

Salaries, remunerations, social security contributions	29,384,630	28,597,902	25,804,350
Voluntary additional personnel expenses and compensation for expenses (excl. training)	1,617,363	1,533,407	1,406,409
<b>Total</b>	<b>31,001,993</b>	<b>30,131,309</b>	<b>27,210,758</b>

**Payments to providers of capital**

Dividend*	173,518,010	97,999,992	90,000,004
Finance costs	18,455,841	21,058,652	22,738,413
<b>Total</b>	<b>191,973,851</b>	<b>119,058,645</b>	<b>112,738,417</b>

**Payments to government and community investment**

Income tax for the financial year	30,576,223	25,780,172	30,807,079
Real estate tax	421,385	409,145	393,259
Electricity tax on auxiliary	4,818	18,978	9,858

power			
Contributions and sponsoring	28,014	32,424	79,538
<b>Total</b>	<b>31,030,439</b>	<b>26,240,719</b>	<b>31,289,733</b>
<b>Economic value retained for developing Fingrid's operations**</b>	<b>51,667,679</b>	<b>111,955,038</b>	<b>138,398,998.00</b>

2017: \*The dividend for 2017 is the Board of Directors' proposal to the Annual General Meeting

2016: \*\*Figure corrected

GRI 201-4      Financial assistance received from government      Financial statements, note 2, other operating income

	<b>2017</b>	<b>2016</b>	<b>2015</b>
Tekes	25,141	75,714	34,475
The National Emergency Supply Agency	145,000	145,000	145,000
Real-Smart (EU)	0	0	
EU investment grant	0	0	15,000,000
Other financial assistance	0	0	
<b>Total</b>	<b>170,141</b>	<b>262,023</b>	<b>15,179,475</b>

**Indirect economic impacts**

GRI 203-2      Significant indirect economic impacts      **Power system**

**Procurement practices**

GRI 103      Management **GRI-index**      See GRI 102-9



approach

**Anti-corruption 10**

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

**Anti-competitive behaviour**

GRI 206-1 Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes  
 No legal actions during the reporting period.

**Electricity availability and transmission reliability**

GRI 103 Management approach  
 Grid development and maintenance  
 Power system

**Demand-side management**

GRI 103 Management approach  
 Power system  
 Electricity market

**Research and development**

GRI 103 Management approach  
 Research, development and innovation

**System efficiency**

GRI 103	Transmission and distribution losses	<b>Power system</b>	See also GRI 302-1
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**ENVIRONMENTAL RESPONSIBILITY STANDARDS**
**Energy**

GRI 302-1, GRI 302-2	Energy consumption within and outside of the organisation	7, 8
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ENERGY CONSUMPTION		2017	2016	2015
Direct				
Light fuel oil	t	1,801	3,217	2,068
	GJ	77,425	138,320	88,905
Indirect				
Electricity transmission energy losses	GWh	1,223	1,270	1380
	GJ	4,402,800	4,572,000	4,968,431
Energy produced with the fuels consumed by leased reserve power plants	GWh	0.9	1.3	3.4
	GJ	3,162	4,676	12,700
Reserve power plants' auxiliary energy	GWh	10.3	9.9	9.4
	GJ	37,080	35,724	33,719
Reserve power plants' district heating	GWh	0.6	0.6	0.6
	GJ	2,272	2,319	2,242

2017: Fingrid's environmental data reporting encompasses the entire company, except for the data on substation electricity consumption, electricity and heating for premises, and the related carbon dioxide emissions. The compilation of this data will be developed in the coming years. Reporting does not include emissions data from transportation carried out by service providers. Fingrid does not own any motor vehicles.

GRI 302-3	Energy intensity			7,8
<b>ENERGY INTENSITY</b>		<b>2017</b>	<b>2016</b>	<b>2015</b>
Fingrid's total energy consumption divided by net sales	GJ/€1000	6.73	8.11	8.51

**Biodiversity**

GRI 304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas			8
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	2017	2016	2015
Grid transmission lines in protected areas and Natura sites <sup>1</sup>	258	257	260
km			

Reported transmission line kilometres in protected and Natura areas.

<sup>1</sup> Approx. 2% of Fingrid's transmission lines are located in a nature reserve or Natura site. Protected areas amounted to around 9 per cent of Finland's total area in 2017.

**Emissions**

GRI 305-1	Direct greenhouse gas (GHG)			7,8
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emissions  
(Scope 1)

Direct emissions (Scope 1)		2017	2016	2015
	Reserve power plant fuels, tCO <sub>2</sub>	5,817	10,326	6,502
	Substations' sulphur hexafluoride, tCO <sub>2</sub> e	547	479	1,459
	<b>Total, tCO<sub>2</sub>e 1)</b>	<b>6,364</b>	<b>10,805</b>	<b>11,000</b>

1) According to Statistics Finland, the total CO<sub>2</sub> equivalent emissions in Finland in 2016 were 58.8 million carbon dioxide tonnes. Fingrid's share of all Finnish CO<sub>2</sub> emissions amounted to approximately 0.2% in 2016. 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 2007 (AR4) 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 2017 were calculated using Statistics Finland's emissions factor of 181 kg CO<sub>2</sub>/MWh. District heating CO<sub>2</sub> emissions were calculated using the emissions factor of 176 kg CO<sub>2</sub>/MWh published by the Finnish Energy Industries for the last three statistical years.

GRI 305-2 Energy indirect greenhouse gas (GHG) emissions (Scope 2) 7, 8

Energy indirect emissions (Scope 2)	2017	2016	2015
Transmission losses, tCO <sub>2</sub> -e	221,363	265,430	303,626
Energy produced with the fuels consumed by leased reserve power plants, tCO <sub>2</sub> -e	638	775	897
Reserve power plants' auxiliary energy, tCO <sub>2</sub> -e	1,864	2,074	2,061
Reserve power plants' district heating, tCO <sub>2</sub> -e	111	118	116
<b>Total, tCO<sub>2</sub>e</b>	<b>223,976</b>	<b>268,397</b>	<b>306,700</b>

GRI 305-3	Other indirect greenhouse gas (GHG) emissions (Scope 3)			7,8
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Other indirect emissions (Scope 3)	2017	2016	2015
Business travel (flights and kilometre-reimbursed business trips), tCO2-e	640	694	752
<b>Total, tCO2e</b>	<b>640</b>	<b>694</b>	<b>752 1)</b>

1) 2015 calculation includes CH4 and N2O emissions.

GRI 305-4	GHG emissions intensity			7,8
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GREENHOUSE GAS EMISSIONS INTENSITY	2017	2016	2015
Fingrid's direct (Scope 1) and indirect (Scope 2) GHG emissions divided by net sales KgCO2/€1000	0.34	0.48	0.61

GRI 305-7	NOx, SOx and other significant air emissions			7,8
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Reserve power plants' sulphur dioxide and nitrogen oxide emissions	2017	2016	2015
	tonnes	tonnes	tonnes
Sulphur dioxide, SO <sub>2</sub>	0.90	0.80	0.50
Nitrogen oxide, NO <sub>x</sub>	30	61	40

Effluents and waste	
GRI 306-2	Total weight of waste by type and disposal method
	8

Total weight of waste by type and disposal method	2017	2016	2015
	tonnes	tonnes	tonnes
Total waste volume	9,314	7,397	6,052
Hazardous waste	355	481	333
Recycling and reuse	6,909	5,275	4,770
Other utilisation, e.g. for civil engineering	1,943	1,195	955
Combustion in a power plant	24	40	37
Final disposal, e.g. landfill	438	887	290
Recycling rate, %	74	63	76
Utilisation rate, %	95	84	93

GRI 306-3	Significant spills	<p><b>Report of the Board of Directors Environment</b></p> <p>One major environment-related deviation occurred in the company's operations during the year</p>
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 age group, gender and region
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TYPES OF EMPLOYMENT	2017	2016	2015
New permanent employment contracts	18	15	10
Number of expired employment contracts	8	7	7
Retired	1	3	8
Average retirement age	63	65	65
Average length of employment* (y)	15.0	10.3	8.3
Number of persons made redundant	0	0	0
Incoming turnover rate	5.8 %	5.2 %	3.6 %
Outgoing turnover rate	2.9 %	3.4 %	4.6 %

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. 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	2017	2016	2015
	No. of people	No. of people	No. of people
Under 29 yrs.	5	2	3
30–39	7	7	4
40–49	4	5	2
50–59	1	1	1
60–69	1	0	0

NUMBER OF EXPIRED PERMANENT EMPLOYMENT CONTRACTS BY AGE GROUP	2017	2016	2015
	No. of people	No. of people	No. of people
Under 29 yrs.	0	1	0
30–39	3	5	3
40–49	3	1	2
50–59	1	0	2
60–69	1	3	6

Percentage of employees retiring within the next 5 and

Percentage of employees retiring within the next 5 years, %:

14 Salaried 5 Senior 95  
% employees % salaried %  
employees employees



10 years

Percentage of employees retiring within the next 10 years, %:	26	Salaried employees	5	Senior salaried employees	95
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\*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

**Grid development and maintenance**

The source of the report is the OHS development project.

Occupational health and safety 6

Type of injury and rates of injury (LTIF), occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender

**Grid development and maintenance Personnel Report of the Board of Directors**

GRI 403-2

NUMBER OF OCCUPATIONAL ACCIDENTS AND ABSENCES DUE TO ILLNESS	2017		2016		2015	
	Workplace	Business travel	Workplace	Business travel	Workplace	Business travel
Absences due to illness	1% (3.2 days/person)		1% (3.4 days/person)		2% (3.6 days/person)	
Accidents resulting in absence from work	2	0	0	0	1	0
Accidents not resulting in absence from work	0	4	1	1	3	3
LTIF (accidents/million work hours)*	3.7	0	0.0	0	2.1	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 2017. 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 and severity of accidents, LTIF and fatalities.

**Training and education** 6

Average hours of training per year per employee by gender, and by employee category  
GRI 404-1

NUMBER OF TRAINING HOURS BY EMPLOYEE GROUP AND GENDER			
	2017	2016	2015
	h	h	h
Number of training hours by gender, Women	34	40	32
Number of training hours by gender, Men	32	34	40
Number of training hours by employee group, salaried employees	19	21	23
Number of training hours by employee group, senior salaried employees	34	38	40
EDUCATION LEVEL OF PERMANENT PERSONNEL			
	2017	2016	2015
Basic and secondary education	20	21	21
Lowest level of tertiary education	33	34	33
Bachelor's degree	109	104	101
Master's degree	137	123	116
Second stage of tertiary education	9	9	9
Training days per person	4	5	5
GRI 404-2	Programmes for upgrading employee skills and transition assistance programmes that facilitate continued employability and the management of career	Personnel	6

endings

GRI 404-3 Percentage of employees receiving regular performance and career development reviews

**PERFORMANCE REVIEWS**

	2017	2016	2015
% who participated	99	99	99

Performance reviews apply to all permanent employees. Performance reviews conducted twice a year include a discussion on personal goals and results as well as an individual long-term and short-term development plan.

**Diversity and equal opportunities**

6

GRI 405-1 Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity

**Corporate Governance Statement**

**AGE DISTRIBUTION OF PERMANENT PERSONNEL**

2017

2016

2015

Under 29 yrs.	27	25	22
30–39	86	80	81
40–49	91	91	86
50–59	75	76	75
60–69	29	19	16
Average age	44	44	44

GENDER DISTRIBUTION BY EMPLOYEE GROUP	2017		2016		2015	
	Men	Women	Men	Women	Men	Women
Board of Directors	3	2	3	2	3	2
Management	6	3	6	2	7	1
Senior salaried employees	230	59	213	57	203	56
Salaried employees	1	9	1	12	1	12

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 **Environment**

survey

**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.
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**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	<b>Power system</b>	No known 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.
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**Availability**

	Power outage frequency	<b>Power system</b>
	Average power outage duration	<b>Power system</b>

**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	No significant fines or sanctions during the reporting period.
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finances and  
non-  
monetary  
sanctions for  
non-  
compliance  
with laws  
and/or  
regulations



# Governance



# Board of Directors



Members of the board: Anu Hämäläinen, Juhani Järvi, Esko Torsti, Juha Majanen ja Sanna Syri



### **Juhani Järvi, Chair**

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



### **Juha Majanen, Deputy Chair**

LL.B, born in 1969  
Board member as of 22 March 2012  
Main position: Budget Counsellor,  
Deputy Director General, Ministry of  
Finance, Budget Department, Fiscal Policy  
Unit 2014-



### **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,  
born in 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-

Secretary of the Board

**Marina Louhija**

LLM, born in 1968  
Secretary of the Board  
General Counsel, Fingrid Oyj

# Executive management group



Members of the executive management group: Tiina Miettinen, Jussi Jyrinsalo, Reima Päivinen, Kari Suominen, Marina Louhija, Kari Kuusela, Asta Sihvonen-Punkka, Jan Montell, Jukka Ruusunen



## **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



### **Kari Kuusela**

M.Sc. (Tech.), born in 1955  
Executive Vice President since 2007,  
Asset Management

Member of the executive management  
group since 1999, employed by Fingrid  
since 1997



### **Jussi Jyrinsalo**

Licentiate in Technology, born in 1964  
Senior Vice President since 2005,  
Customers and Grid Planning

Member of the executive management  
group since 2005, employed by Fingrid  
since 1997



### **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 Senior Vice President since 2016,  
 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, employed by Fingrid since 2013



### **Marina Louhija**

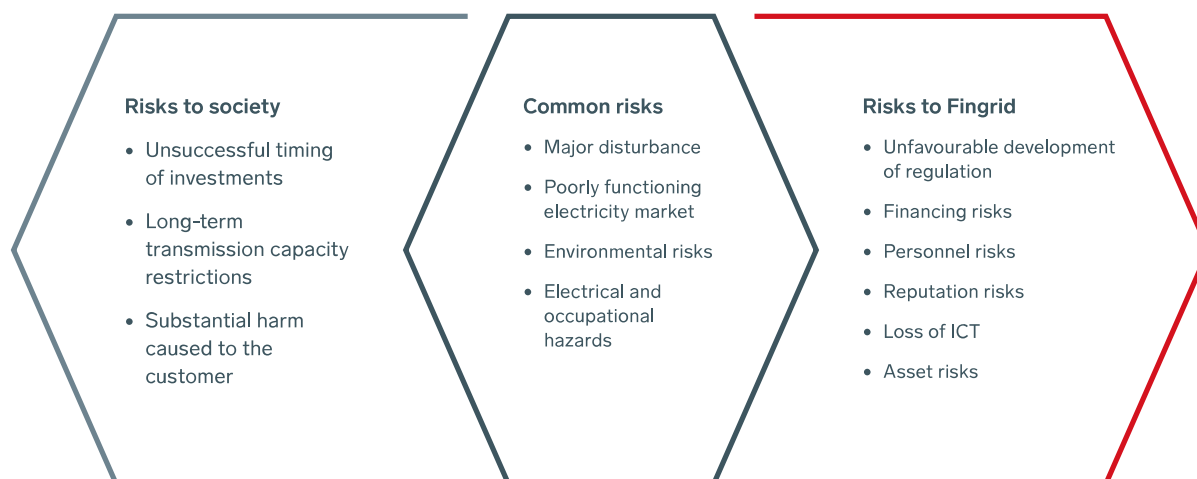
LLM, General Counsel since 2013, legal and administrative affairs, born in 1968

Member of the executive management group since 2017, employed by Fingrid since 2009

Secretary of the company's Board of Directors since 2013

# Foremost uncertainty factors and risks

Since the company plays a significant role in Finnish society, the impact of risks is assessed from both the company's and society's perspective. The following have been identified as strategic risks:



One of the company's biggest business risks and the biggest risk where society is concerned is a major disturbance related to the functioning of the power system. A widespread disturbance in the power system may be caused by several simultaneous faults in the grid or in electricity production. A disturbance can also result from the combination of a technical fault and human operating error, from an unexpected meteorological phenomenon, work error, accident, vandalism or deliberate intrusion in critical IT systems. The extent or duration of the disturbance can be increased by a severe fault, appearing in the company's operation control system or other system, that hinders the operation of the grid. A major disturbance can cause significant financial and physical damage to Fingrid and society in general. Through capital investments in the transmission grid and reserve power, we are prepared for a widespread disturbance affecting Finland or the Nordic power system. We develop the operations together with other transmission system operators. In our strategy, we focus on the diverse utilisation of the operation control system, expedited disturbance clearing and management of power shortages. We prepare for disturbances through continuity management, procedural guidelines, continuity plans and exercises, and by building up various reserves. Fingrid limits its financial claims liability in all cases of disturbances through contracts and insurance policies.

A poorly functioning electricity market is a significant risk for Fingrid and society. The reasons that may lead to the materialisation of this risk are a lack of regional energy policy co-ordination, market-distorting state subsidies and problems in the formation of the price of electricity. The impacts can be seen as a lack of investments and the exit of adjustable capacity from the markets due to unprofitability. In electricity market disturbances, a price cannot be calculated for electricity on the electricity exchange to guide production plants and electricity consumption. Efforts are being made to manage the risk by promoting market integration on the domestic and Nordic level. The risks faced by the electricity market can be reduced by promoting demand-side management, developing smart grid solutions for the retail market, increasing cross-border transmission capacity and carrying out investments that make it possible to maintain Finland as a single bidding area.

From the point of view of society and Fingrid, the most significant environmental risks are related to

environmental damage and the failure to anticipate the environmental obligations set for the company's operations. The most concrete risks in our view are fuel and oil leaks, and tank and transformer fires. The key contingency measures for these environmental risks are proactive assessment of environmental impacts, monitoring of changes in legislation, prevention of accidents by technical means, contractual terms related to environmental issues and auditing.

Serious accidents are linked to the electrical safety of the transmission grid, especially in connection with construction and repair work. Electrical safety risks may also affect bystanders. Causes that can result in a realised risk include, for example, human error or an accident close to live components, an error occurring in construction work, damage or vandalism to live structures, and carelessness. We constantly improve the safety of the transmission grid by promoting safe ways of working and developing, for example, technical solutions, work methods, skills and communications.

## Risks to society

Investments can sometimes take place at the wrong time. The reasons for incorrect timing of capital investments may be, for example, changes in the overall economic situation, regulation, or in electricity consumption and production, a postponement of a permit process, lack of resources or strike. Changes in energy policy goals can affect investments. Unsuccessful timing may cause restrictions in the electricity market whereby the market fails to operate efficiently. We carefully plan and build key projects to strengthen the cross-border transmission connections and the grid, and take into account the long-term effects on the market through regularly updated grid plans. Co-operation with customers, Nordic transmission system operators, other stakeholders and cross-national decision-making bodies reduces the risk of incorrect timing.

Long-term transmission capacity restrictions may be caused by, for example, technical failures or limitations related to system security and other operators. Restrictions and outages in power transmission may cause financial harm to customers and society. We manage the risk by securing the critical parts of the transmission grid and cross-border connections and by means of efficient outage planning. We maintain disturbance-clearing readiness by ensuring know-how and developing back-up systems.

A problem or error in the production of a service or the functioning of technology can cause significant harm to a customer. The consequences may be seen as a disturbance in the services produced by the power system or in the electricity market. Errors in Fingrid's guidelines or decisions may also cause harm.

## Risks to Fingrid

Fingrid's operations are subject to official regulation and supervised by the Energy Authority. Risks related to the unfavourable development of official regulation, such as changes in Finnish or European regulation or legislation, can weaken the company's financial position or its opportunities to pursue the objectives related to the development of the electricity market. We aim to establish effective co-operation and interaction models with the various stakeholders and to contribute actively to the reports and working groups of authorities and to increase understanding of grid operations.

Financing risks include currency risks, interest rate risks, commodity price risks, liquidity and refinancing risks, and credit risks. Financing risks can be caused by a major deviation in our operating environment or business, disturbances in the capital and money markets, by the realisation of counterparty risks in terms of derivatives or investments, by the realisation of credit risks in operations or disturbances in payment transactions. Liquidity risks can be caused by, e.g., an unexpected increase in market-based costs or an unexpected decrease in income. The goal is to limit risks through internal control, a high and stable credit rating, and a diverse financing structure with an even maturity profile. We aim to restrict unanticipated increases in costs or decreases in income by enhancing financial control and forecasting in the Group and assessment concerning financial latitude. We use derivative contracts to hedge against changes in the price of electricity. The counterparty risk related to obligations of

parties having a contractual relationship with Fingrid is limited contractually, by defining limits and by regularly monitoring the financial position of the counterparties. More information about financing risks can be found in the consolidated financial statements, section 6.2 and 6.3.

Personnel risks concern the maintenance of expertise. We strive to limit personnel risks by the company's strategic long-term personnel planning, training programmes targeted at personnel and high-quality stakeholder communication. Developing deputy systems and occupational safety is part of our personnel planning. We strive to develop competence in the energy industry.

ICT risks can materialise as a result of an accident in ICT hardware facilities, long-term inoperability of telecommunications or a serious ICT system failure. Such a situation may also be caused by a work error or breach of data security. We prepare for these risks through sufficient and solid ICT expertise and by ensuring that the operations are secured in terms of hardware facilities, telecommunications and systems. We also ensure sufficient expertise in terms of service providers. We have drawn up continuity plans for the most critical systems and we monitor and anticipate possible data-security and cyber-security threats.

Asset risks cover significant damage to Fingrid's assets, such as widespread failures or failures rendering significant assets beyond repair. A permanent failure of significant assets, such as the grid, a reserve power plant or a submarine cable, may cause extensive damage. Further causes of damage may include other significant and unanticipated events such as violent storms, protests or war. Asset risks can be managed through grid safety planning, geographical diversification, preventive maintenance management, insurance policies for key grid components, detailed specifications for and quality control of projects and maintenance management, and by using proven technology and suppliers with extensive expertise.

Reputation risks can be caused by, for example, serious disturbances or accidents, changes in prices, redemption of land areas or delayed grid investments. Serious accusations linked to the company's operations or various reputation risks in the media, such as allegations of corruption, may increase criticism of the company's operations. We strive to reduce these risks by means of effective risk and change management as well as responsible, transparent and impartial operations, a high standard of communication and active stakeholder dialogue.

# Corporate Governance Statement

## 1. General

Fingrid is a public limited company whose governance is based on the Finnish Limited Liability Companies Act, the Securities Market Act, its articles of association and its shareholder agreements. Fingrid complies in its operations with the 2015 Corporate Governance Code for Finnish listed companies (“Corporate Governance Code”) published by the Securities Market Association because the company has issued bonds listed on the London Stock Exchange. This Corporate Governance Statement has been drawn up in accordance with the recommendations of the Corporate Governance Code. Fingrid’s shares are not subject to public trading.

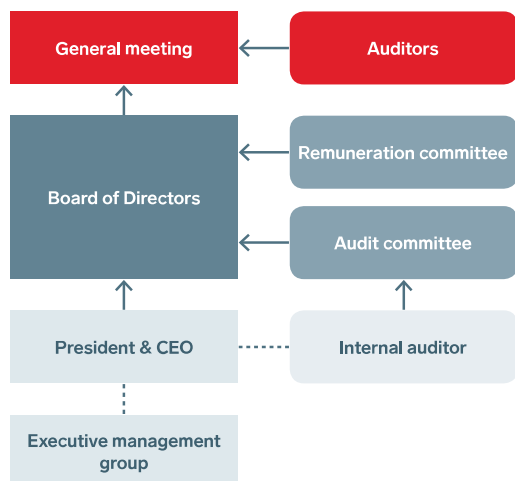
The company’s activities are primarily regulated by the Electricity Market Act. The Electricity Market Act stipulates that Fingrid’s governance and its grid operations must be independent of the production and sale of electricity and natural gas. Fingrid’s owners must ensure that they keep separate decision-making 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 2020–2030 entered into force on 1 January 2016.

Fingrid’s corporate governance statement has been drawn up in accordance with the reporting requirements of the Corporate Governance Code. The 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 Finnish Corporate Governance Code is 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 to the shareholders at the earliest four (4) weeks and at the latest two (2) weeks before the meeting by mailing the invitation to the general 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 dates 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, Fingrid's President & CEO, Chair of the Board and other Board members, together with the auditor, are



present in a 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 24 May 2017. The minutes of the annual general meeting have been published on the company's website.

## 4. Board of Directors

Fingrid's annual general meeting elects a Board 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 Board member to serve as the Chair of the Board and one 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 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, interim reports 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 the 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.
- Deals with 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 2017

The Board of Directors in 2017 was represented by Juhani Järvi (Chair), Juha Majanen (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; the other members are independent from the company. 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 2016, and decided on, among other things, Fingrid's new strategy, the budget and annual action plan for 2018, the grid service pricing for 2018, new investments in the grid and ICT, the principles of risk management and continuity management, the remuneration of executives and all significant policies affecting the company. In its meeting, the Board additionally addressed how the third alternating current (AC) connection between Finland and Sweden and the Datahub project are progressing, as well as the proposal by the Norwegian and Swedish TSOs concerning balance management in the real-time markets.

### Fingrid's Board of Directors on 31 December 2017

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 5/5 Remuneration committee 4/4
Deputy Chair Juha Majanen	1969	LL.B.	Ministry of Finance, Budget Counsellor, Deputy Head of Budget Department, independent from the company, non-independent of significant	10/11	Audit committee 2/5 (until 24 May 2017) Remuneration

Name	Year of birth	Education	Main position and independence	Attendance at Board meetings	Attendance at committee meetings
			shareholders		committee 3/4 (as of 24 May 2017)
Anu Hämäläinen	1965	M.Sc. (Accounting and Finance)	Wärtsilä Corporation, Vice President, Group Treasury and Financial Services & Support, independent from the company and significant shareholders	11/11	Remuneration committee 4/4
Sanna Syri	1970	D.Sc. (Technology)	Aalto University, Professor, independent from the company, independent from significant shareholders	11/11	Audit committee 3/5 (as of 24 May 2017) Remuneration committee 1/4 (until 24 May 2017)
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 5/5

### 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 and to comply with the gender equality targets recommended by the state ownership steering. A proposal on the Board composition is prepared by significant shareholders.

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. Forty per cent of the Board members are female and 60 per cent male. The ages of the Board members range between 47 and 66 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 Esko Torsti (Chair), Juhani Järvi, Juha Majanen (until 24 May 2017) and Sanna Syri (as of 24 May 2017). The committee convened five times in 2017. 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 draft interim reports, the auditor's reports, the internal audit's reports on the key observations on the company's data security, investment management and continuity management audits, 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 debt 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 remuneration committee, among other things, prepares for the Board of Directors the principles of the remuneration system applied to the executive management and other personnel. 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), Anu Hämäläinen, Juha Majanen (as of 24 May 2017) and Sanna Syri (until 24 May 2017). In 2017, the remuneration committee convened four 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. The remuneration committee was also responsible for the management of the boardwork assessment process in 2017.

## 6. President & CEO

The President & CEO, in compliance with the Limited Liability Companies Act, 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 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 the main grid in Finland and thereby for the functioning of society as a whole. 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 the power reserve system 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.
- 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 2017 consisted of:

- Kari Kuusela, M.Sc. (Tech.), born in 1955, Executive Vice President, Asset Management,
- Jussi Jyrinsalo, Licentiate in Technology, born in 1964, Senior Vice President, Grid Services and Planning
- Marina Louhija, LL.M., born in 1968, General Counsel, Legal and Administrative Affairs (as of 25 October)

2017)

- 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, Senior Vice President, 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 14 times in 2017.



## 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 grid 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. The topics discussed in the advisory committee's meetings included, in particular, the transformation of the power system and the electricity market as well as the opportunities offered by digitalisation and smart grids and the impact of these, particularly from the point of view of customers. The Nordic balance management situation was presented in many meetings and raised considerable debate.

# 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. Due to the nature of the company's basic mission, risks are also assessed from the perspective of society in general.

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 is responsible for organising internal control and risk management, and it approves the principles of internal control and risk management on an annual basis. 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 more 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 interim reports 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 interim reports, 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. The goal is to avoid risky work combinations 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 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 general meeting 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 authorisation-related tasks commissioned by the Board or management.

The annual general meeting of 2017 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.

The fees will be added at the turn of January–February

Auditor's fees, EUR 1,000	2017	2016
Auditing fees	68,00	65,00
Other fees	61,69	84,46
TOTAL	129,69	149,46

## 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 2017, Deloitte & Touche Oy served as Fingrid's internal auditor and carried out a total of three audits. The audits concerned the company's data security, investment management and continuity management. The total fees paid to Deloitte & Touche Oy for auditing tasks amounted to EUR 63,200.

# 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.

## 12. Main procedures relating to insider administration

Fingrid complies with Nasdaq Helsinki Oy's insider guidelines as well as 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 an insider guideline approved by the Board of Directors, which describes 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 have regular 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 interim reports, 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 interim reports and management reviews.

# Remuneration statement

## 13 Arrangement of remuneration decision-making

The annual general meeting decides on the remuneration for Board members and the financial auditor. Fingrid's Board of Directors approves the remuneration for the President & CEO and the members of the executive management group, the remuneration systems for a given year, and the principles of remuneration for personnel.

## 14 Key remuneration principles at Fingrid

### 14.1 Remuneration and other benefits for the members of the Board of Directors

Each member of the Board is paid a fixed annual fee and a meeting fee. The meeting fee is also paid for committee meetings. The members of the Board have no share or share-related remuneration schemes or supplementary pension schemes. Fingrid does not pay pension fees for the Board's remuneration.

### 14.2 Remuneration of the President & CEO

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 2017 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). 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 criteria for the President & CEO's one-year bonus scheme in 2017 were the company's result, customers' confidence, success in developing the electricity market, and the functionality of the workplace community and leadership. An additional criterion was the realisation of a strategic project, i.e. success in developing the electricity market. The criteria for the long-term incentive scheme are system security, electricity market functionality and shareholder value. Corporate social responsibility is taken into account in both the year-long and long-term incentive schemes.

The mutual period of notice for the President & CEO 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.

### 14.3 Remuneration of executive management

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 is 20 per cent of the annual pay for the earnings year. The annual maximum amount of the long-term incentive scheme is 25 per cent of the annual pay for the earnings year.



The criteria for the executive management's one-year bonus scheme in 2017 were the company's result, customers' confidence, the functionality of the workplace community, and leadership. The criteria additionally comprised the attainment of the key objectives of each member of the executive management group. The criteria for the long-term incentive scheme are operational reliability, electricity market functionality and shareholder value. Corporate social responsibility is taken into account in both the year-long and long-term incentive schemes.

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.

## 14.4 Remuneration of the personnel

Personnel salaries comprise 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 is supplemented by other benefits and worktime flexibility organised by the company. Results which form the basis of quality bonuses are measured using annually defined company and function-level indicators. Incentive bonuses are paid for good performance as part of the daily management of personal performance.

The average CEO-to-employee annual median income ratio in 2017 was 6:1, and the female-to-male annual median income ratio was 1:1.

## 15 Remuneration report

### 15.1 Board of Directors

The annual general meeting confirmed, on 24 May 2017, the following monthly fees for the Board members:

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

In addition, it was decided that Board members will be paid a meeting fee of EUR 600 for each meeting and committee meeting attended by the member. In 2017, the Board convened 11 times, the audit committee convened five times and the remuneration committee convened four times.

#### Total fees paid to Board members in 2017:

	On the Board in 2017	Fees total 2017*	On the Board in 2016	Fees total 2016*
Chair Juhani Järvi	1.1.–31.12.	39,000	1.1.–31.12	34,000
Deputy Chair Juha Majanen	1.1.–31.12.	24,000	1.1.–31.12	23,400
Sanna Syri, Board member	1.1.–31.12.	19,200	1.1.–31.12	19,800
Esko Torsti, Board member	1.1.–31.12.	20,400	1.1.–31.12	19,800

On the Board in 2017 Fees total 2017\* On the Board in 2016 Fees total 2016\*

Anu Hämäläinen, Board member	1.1.–31.12.	19,200	6.4.–31.12.	14,260
Helena Walldén, Chair	-	-	1.1.–6.4.	11,140

\* Including monthly fees and meeting fees

## 15.2 President & CEO and executive management group

The table below indicates the salaries and benefits of Fingrid's President & CEO and other members of the executive management group in 2017:

	Salaries and benefits	Variable merit pay*	2017	2016
President & CEO	290,000	126,000	416,000	352,000
Executive management group	1,011,000	293,000	1,304,000	1,218,000
<b>TOTAL</b>	<b>1,301,000</b>	<b>419,000</b>	<b>1,720,000</b>	<b>1,570,00</b>

\* Merit pay earned in 2016 and paid in 2017

# Stock exchange releases 2017

**28 December 2017**

Fingrid Oyj's financial reports in 2018

**25 October 2017**

Marina Louhija appointed to Fingrid's executive management group

**25 October 2017**

Fingrid Group – Management's Review 1 January–30 September 2017

**2 October 2017**

Fingrid's main grid pricing remains unchanged in 2018

**27 July 2017**

Fingrid Group's Half-year report 1 January–30 June 2017

**24 May 2017**

Resolutions of the Annual General Meeting of Fingrid Oyj

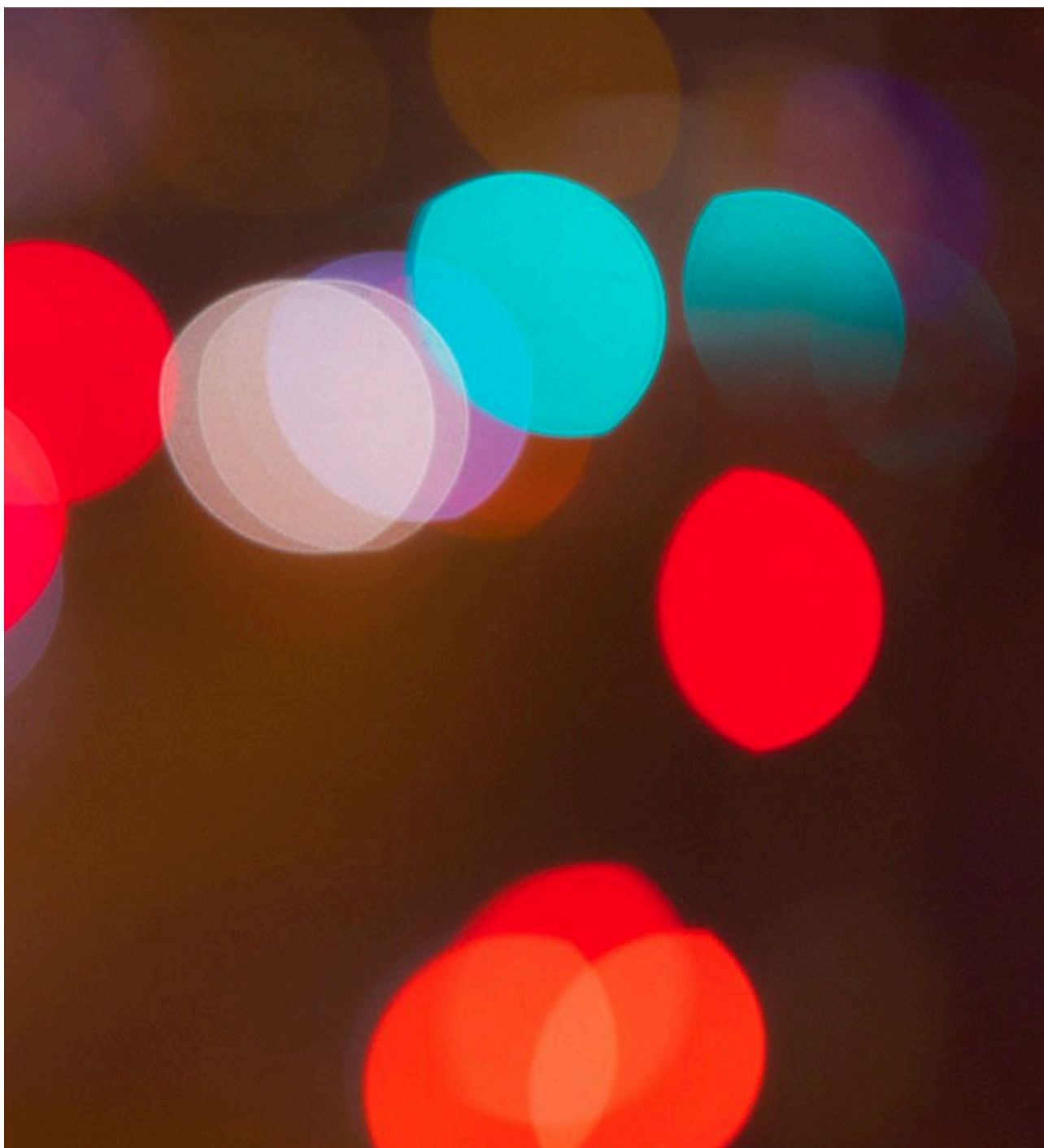
**5 May 2017**

Fingrid Group – Management's Review 1 January–31 March 2017

**17 February 2017**

Fingrid Group's Financial Statements Bulletin January–December 2016.

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



# Annual review and financial statements

# 1 Report of the board of directors

## 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.

In preparing these consolidated financial statements, the Group has followed the same standards as in 2016.

The Group's turnover was EUR 672.0 (586.1) million. Grid service income increased to EUR 412.1 (382.4) million, as a result of the change in grid pricing enacted at the start of the year and due to the growth in electricity consumption. Electricity consumption in Finland totalled 85.5 (85.1) terawatt hours during the year. Fingrid transmitted 66.2 (68.5) terawatt hours of electricity in its grid, which represents 75.5 (77.3) per cent of all electricity transmitted in Finland. Imbalance power sales amounted to EUR 213.9 (153.9) million. The increase in imbalance power sales resulted from the transfer of imbalance settlement to eSett Oy\*, following which the imbalance power sold to cross-border imbalance responsible parties is reported as external turnover. Cross-border transmission income from the connection between Finland and Russia decreased to EUR 20.7 (24.0) million, as a result of Russia's lower realised 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 connections between Finland and Sweden decreased to EUR 25.5 (37.5) million, which has been used for the Hirvisuo-Pyhänselkä grid investment. Other operating income totalled EUR 2.9 (12.7) million. The decline in other operating income resulted from the EUR 6.3 million in congestion income recognised in 2016 in compliance with the regulation concerning the costs from maintaining cross-border capacity and countertrade, and from a decline of EUR 3.5 million in capital gains on fixed assets.

The Group's total costs amounted to EUR 499.0 (442.2) million. Imbalance power costs grew from the previous year's level, to EUR 186.0 (121.7) million due to the above-mentioned transfer of imbalance settlement to eSett Oy. Loss power costs amounted to EUR 47.5 (57.6) million. The declining loss power costs have been affected by the lower price of loss power procurement and the lower volume of loss power. The realised average price of loss power procurement was EUR 37.62 (43.87) per megawatt hour. The costs of reserves to safeguard the grid's system security amounted to EUR 51.5 (50.5) million. Depreciation totalled EUR 96.9 (99.2) million. Grid maintenance costs amounted to EUR 24.5 (24.1) million and personnel costs to EUR 29.4 (28.6) million.

[1] \*eSett Oy is a company owned jointly by the Finnish, Swedish and Norwegian transmission system operators, responsible for imbalance settlement in Finland, Sweden and Norway.

Turnover and other operating income, € million				
	Jan-Dec/17	Jan-Dec/16	July-Dec/17	July-Dec/16
Grid service revenue	412.1	382.4	191.8	184.4
Sales of imbalance power	213.9	153.9	128.9	79.3
Cross-border transmission income	20.7	24.0	9.9	13.3

Peak load capacity income*	8.3	7.0	4.7	3.5
ITC income	8.6	13.2	4.8	5.3
Other turnover	8.4	5.6	5.8	3.0
Other operating income	2.9	12.7	1.9	4.4
<b>Turnover and other income total</b>	<b>674.9</b>	<b>598.8</b>	<b>347.8</b>	<b>293.2</b>

Costs, € million				
	Jan-Dec/17	Jan-Dec/16	July-Dec/17	July-Dec/16
Purchase of imbalance power	186.0	121.7	116.3	63.6
Cost of loss energy	47.5	57.6	26.2	26.9
Depreciation	96.9	99.2	48.4	51.0
Cost of reserves	51.5	50.5	26.6	26.4
Personnel costs	29.4	28.6	14.7	14.3
Maintenance management costs	24.5	24.1	14.9	14.7
Cost of peak load capacity*	8.0	6.6	4.6	3.3
ITC charges	13.0	12.6	6.4	6.9
Other costs	42.4	41.1	21.0	19.6
Costs total	499.0	442.2	279.1	226.7
<b>Operating profit excluding the change in the fair value of commodity derivatives</b>	<b>175.9</b>	<b>156.6</b>	<b>68.7</b>	<b>66.5</b>
<b>Operating profit of Group, IFRS</b>	<b>184.8</b>	<b>192.0</b>	<b>81.0</b>	<b>91.6</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 184.8 (192.0) million. To recognise changes in the fair value of electricity derivatives and the currency derivatives related to capital expenditure and other operating expenses, EUR 8.9 (35.4) million was recorded in operating profit. The Group's profit before taxes was EUR 163.7 (173.9) million. The biggest differences from the previous year are explained by changes in the market value of derivatives (EUR -33.1 million), the decline in other operating income (EUR -9.8 million), and the growth in grid service income (EUR +29.7 million). Profit for the financial year was EUR 130.8 (138.7) million. The equity ratio was 37.8 (36.4) per cent at the end of the year.

The parent company's turnover was EUR 665.4 (581.4) million, profit for the financial year EUR 123.4 (103.9) million and the distributable funds EUR 201.3 million.

By the company's own calculations, the result according to the regulatory model that governs grid operations amounts to a deficit of around EUR 5 million for 2017. Towards the end of 2017, the company decided to maintain the grid service fees unchanged in 2018.

# Financing

The company's credit rating remained high, reflecting the company's strong overall financial situation and debt service capacity. The Group's net financial costs in 2017 were 22.8 (18.7) million, including a change of EUR -8.2 (5.1) million in the fair value of financial derivatives.

Interest-bearing borrowings totalled EUR 1,082.7 (1,107.7) million, of which non-current borrowings accounted for EUR 813.4 (842.9) million and current borrowings for EUR 269.3 (264.9) million. In 2017, the company issued a EUR 100 million 10-year green bond to finance the company's investments, which are expected to have positive long-term net environmental impacts.

The company's liquidity remained good. Financial and cash assets recognised at fair value through profit or loss totalled EUR 83.8 (79.7) million on 31 December 2017. The company additionally has an undrawn revolving credit facility of EUR 300 million to secure liquidity and EUR 50 million in uncommitted overdraft facilities. Fingrid used the second extension option of the revolving credit facility during the period under review. This extended the maturity of the revolving credit facility until 11 December 2022.

The counterparty risk arising from derivative contracts relating to financing was EUR 8 (16) million. Fingrid's foreign exchange and commodity price risks were hedged.

Fingrid has credit rating service agreements with S&P Global (S&P) and Fitch Ratings (Fitch).

- On 31 October 2017, S&P maintained the rating for Fingrid Oyj's unsecured senior debt and long-term company rating at 'AA-' and the short-term company rating at 'A-1+', with a stable outlook.
- On 5 December 2017, Fitch affirmed the rating for Fingrid Oyj's unsecured senior debt at 'AA-', the long-term company rating at 'A+', and 'F1' for the short-term company rating, with a stable outlook. The rating received by Fingrid was, at the time of issuing, the highest valid rating given by Fitch to any European regulated TSO.

# Capital expenditure

The company's total capital expenditure in 2017 amounted to EUR 111.1 (146.7) million. This included a total of EUR 91.1 (135.8) million invested in the transmission grid and EUR 14.2 (3.3) million for reserve power. ICT investments amounted to EUR 5.7 (7.5) million. A total of EUR 2.6 (2.4) million was used for R&D projects during the year under review. The company's capital expenditure will be around EUR 100 million in the next few years.

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

A total of 22 substation projects and 16 power line projects were under way in 2017. The biggest current projects are related to the modernisation of the aging 'Iron Lady' transmission line, connecting large-scale power plants to the grid, and maintaining system security for major cities.

- The modernisation of the oldest part of the national grid, from Forssa to Lieto and Yllykkälä to Korja, proceeded according to plan. The project will be completed in early 2018.
- A 400- + 110-kilovolt powerline will be constructed between the Hikiä substation located in Hausjärvi and the new Orimattila substation to be constructed in Pennala, Orimattila. The power line work was started in late 2017 and it will be completed by the end of 2019.
- Olkiluoto's 400-kilovolt switching station, which is outdated and has insufficient system security, will be modernised in Eurajoki. The project will be completed during 2019. The modernisation of Inkoo's 400-kilovolt substation has also been started, and is due for completion in 2019.
- Construction work on the 26-kilometre Vihtavuori-Koivisto power line between Laukaa's Vihtavuori and Äänekoski's Koivisto substations progressed and will be completed in early 2018.
- The expansion of the 400-kilovolt switching station of the Länsisalmi substation located in Vantaa in the Helsinki region aims to secure electricity supply in the capital city region. The project was completed at the end of 2017.
- A power transformer supplied to Fingrid was taken into use at the Espoo substation. The transformer will ensure sufficient transmission capacity in the Espoo region well into the future and ease grid operating situations in Southern Finland.
- The implementation within the upgrading project on the Huutokoski reserve power plant was completed in late 2017. The project consisted of replacing outdated systems and improving the plant's environmental safety.

Finland's electricity consumption is focussed on the south, where electricity production is insufficient with regard to consumption. In future, increasing amounts of electricity will be produced in northern Finland and northern Sweden, and this electricity must be transmitted to the south to be used by industry and consumers. This requires strong transmission connections between the north and the south. Fingrid is preparing three transmission connections to promote the functioning of the electricity markets:

- Planning of the 'Forest Line' (400 kV) between Oulu and Petäjävesi has begun, and construction work will be started in a couple of years. The connection will be roughly 300 kilometres long and will have a transmission capacity of approximately 700 megawatts. It is expected to be completed in 2022.
- A third 400-kilovolt alternating-current link will be built between Finland and Sweden at the latest in 2025. This is a joint project between Fingrid and the Swedish transmission system operator Svenska Kraftnät. The connection will increase the transmission capacity between the two countries by 800 megawatts. The connection has been included in the EU's list of energy infrastructure priority projects and the European



Commission has granted it PCI (Projects of Common Interest) status.

- The Finnish and Swedish transmission system operators have started planning the new Kvarken direct-current link. According to the plans, the roughly 800-megawatt connection will be built by the end of the 2020s. The Kvarken connection will replace the Fenno-Skan 1 direct-current connection, which is reaching the end of its service life.

In June, Fingrid published its grid development plan for 2017–2027. The plan is based on the regional grid plans drawn up together with customers. The plan also takes into account the Baltic Sea region's development plan and the ten-year grid plan covering all of Europe.

In 2017, Fingrid carried out a competitive tender process for the basic maintenance on substations and power lines, as well as basic and special maintenance on secondary equipment. The new three-year contractual periods started in the beginning of 2018 and will expire at the end of 2020.

During the period under review, the company's personnel had two lost-time accidents (0). Suppliers had 9 (12) recordable incidents, one of which was fatal and eight were lost-time accidents. Among the lost-time accidents, two led to an absence of more than 30 days from work. The suppliers' and Fingrid's combined accident frequency rate remained unchanged, at 8 (8).

Corporate safety is a key part of Fingrid's operations, steered by the company's safety policy. The occupational safety management of Fingrid's asset management function and suppliers is steered by the safety management system and contractual terms concerning safety. These were updated in 2017 as part of the company's continuous development efforts. In addition to the above, Fingrid has drawn up an extensive new development programme to prevent similar accidents from happening in the future.

# Power system

Electricity consumption in Finland totalled 85.5 (85.1) terawatt hours in 2017. A total of 66.2 (68.5) terawatt hours of electricity was transmitted in Fingrid's grid, representing 75.5 (77.3) 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. Electricity consumption peaked at 14,300 megawatts on 5 January 2017 between 5 and 6 p.m. During that peak consumption hour, Finland generated 10,000 megawatts of electricity, and the remaining electricity was imported from neighbouring countries. On the same day, a record-high 4,750 megawatts of electricity was imported. The availability of electricity in Finland was not in danger even during peak consumption periods, and peak load capacity was not used during the consumption peak.

Electricity transmissions between Finland and Sweden consisted mostly of large imports to Finland. In 2017, 15.6 (15.7) terawatt hours of electricity was imported from Sweden to Finland, and 0.4 (0.3) terawatt hours was exported from Finland to Sweden. The electricity transmissions between Finland and Estonia were mainly exports to Estonia, amounting to 1.7 (3.1) terawatt hours. Imports from Estonia amounted to 0.9 (0.7) terawatt hours. Electricity imports from Russia remained on the previous year's level, at 5.8 (5.9) terawatt hours. Nearly the full transmission capacity was available. In 2017, 0.3 (0.2) terawatt hours of electricity was imported from Norway to Finland, and 0.0 (0.1) terawatt hours was exported from Finland to Norway.

The transmission reliability rate remained at an excellent level and was 99.9997 (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 2.2 (1.4) minutes, which is clearly shorter than the ten-year average. The cost of the disturbances (regulatory outage costs) was EUR 2.8 (3.1) million and, including the quick reconnections, EUR 5.0 million. The most significant single disturbance took place in December 2017 at the Porvoo-Ahvenkoski 110-kilovolt power line, when abundant snow damaged the tower structure and the lightning conductor.

The reliability of direct-current connections was on a record-high level in 2017. There were only four disturbances in Fingrid's four direct-current connections, the total duration of which was only around 10 hours. The total availability of the connections reached its highest level in five years. Thanks to high reliability and availability, countertrade costs declined considerably. Disturbances in direct-current connections did not have any impact on the transmission capacity available to the electricity market.

The volume of transmission losses in the Finnish grid decreased from the previous year and was 1.2 (1.3) terawatt hours. This is 1.4 (1.4) per cent of the total volume of transmitted electricity. The decrease is attributable to a decline in ITC volumes from the previous year. The annual variation of losses is affected by the situation of Nordic electricity production, particularly the great variation in hydro power production. 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.

Counter trade	Jan-Dec/17	Jan-Dec/16	July-Dec/17	July-Dec/16
Counter-trade between Finland and Sweden, €M	0.4	2.5	0.1	1.1
Counter-trade between Finland and Estonia, €M	0.1	0.1	0.0	0.0
Counter-trade between Finland's internal connections, €M	1.3	1.2	0.0	0.4

<b>Total counter-trade, €M</b>	<b>1.8</b>	<b>3.9</b>	<b>0.1</b>	<b>1.5</b>
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Reserves required to maintain the power balance of the electricity system were procured from Finland, the other Nordic countries, the Baltic countries and Russia. Countertrade costs amounted to EUR 1.8 (3.9) million. 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) from the grid. 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, a power outage or disruption in a power plant or in the grid.

<b>Power system operation</b>	<b>Jan-Dec/17</b>	<b>Jan-Dec/16</b>	<b>July-Dec/17</b>	<b>July-Dec/16</b>
Electricity consumption in Finland TWh	85.5	85.1	41.8	41.5
TSO transmission in Finland, TWh	2.1	3.5	1.3	0.9
Transmission within Finland, TWh	87.6	88.6	43.1	42.4
Fingrid's transmission volume TWh	66.2	68.5	33.4	33.2
Fingrid's electricity transmission to customers, TWh	63.9	64.9	32.0	32.2
Fingrid's loss energy volume TWh	1.2	1.3	0.6	0.6
<b>Electricity transmission Finland - Sweden</b>				
Exports to Sweden TWh	0.4	0.3	0.3	0.3
Imports from Sweden TWh	15.6	15.7	8.1	6.8
<b>Electricity transmission Finland - Estonia</b>				
Exports to Estonia TWh	1.7	3.1	1.1	0.6
Imports from Estonia TWh	0.9	0.7	0.3	0.6
<b>Exports to Norway TWh</b>				
Imports from Norway TWh	0.0	0.1	0.0	0.0
Imports from Norway TWh	0.3	0.2	0.2	0.1
<b>Electricity transmission Finland - Russia</b>				
Imports from Russia TWh	5.8	5.9	2.8	2.9

# Electricity market

The average market price of spot electricity on the electricity exchange (system price) was EUR 29.41 (26.91) per megawatt hour. The rise in wholesale prices of electricity that started in summer 2016 levelled out in 2017. In Finland, prices on the Finnish wholesale market were higher than they were in other Nordic countries. However, the price differences and thus the congestion income decreased from the previous year as a result of a general increase in prices.

Fingrid accrued EUR 25.5 (37.5) million in congestion income from the cross-border power lines between Finland and Sweden. EUR 10.5 (29.9) million of this was accrued during the first half of the year and EUR 15.1 (7.6) million during the second half of the year. The difference in Finland's and Sweden's area prices narrowed due to a general increase in the price of electricity, which also reduced the number of congestion hours. The links between Finland and Estonia generated EUR 0.3 (2.4) million in congestion income. In accordance with the regulation on congestion income, Fingrid has used the congestion income it received in 2017 for the Hirvisuo–Pyhänselkä grid investment project, which supports the transmission of electricity from northern Sweden to southern Finland.

Imports From Russia remained at the 2016 level. Hourly import volumes from Russia vary considerably. Russia's capacity mechanism, in particular, has reduced electricity trade.

The energy system and with it the power system are in the midst of a major transformation aiming for a clean power system of the future. The ultimate goal of the transformation is to mitigate and combat climate change. The clean power system of the future must be supported by strong transmission connections and revamped market rules.

In spring 2017, Fingrid published an action plan titled "Our Shared Journey – a roadmap towards achieving a green power system". It contains initiatives and measures and ongoing projects to develop the markets. The Ministry of Economic Affairs and Employment's (MEAE) smart grid working group published in late 2017 an half-year report that seeks solutions to accomplish the energy shift by means of a smart power system. Fingrid has been actively involved in the working group's activities. A smart power system will increase the capabilities to balance production and consumption and thereby enable the increasing use of clean energy.

Fingrid is building a solution for centralised information exchange to promote the functioning of retail markets, a so-called datahub, through its subsidiary Fingrid Datahub Oy. Once accomplished, this will enable nearly real-time processes when changing suppliers and at the same time provide electricity sellers with better conditions for serving their customers.

The European electricity market is introducing a shorter, 15-minute trade period. The relevant legislation, which came into force in December 2017, requires the introduction of a 15-minute trade period by the end of 2020, unless the roll-out is postponed by a decision by the authorities. Fingrid launched an imbalance settlement project for the 15-minute period to support the planning of the transition.

Nordic co-operation has been overshadowed by a dispute between the transmission system operators over the development and future model of imbalance settlement. However, Nordic transmission system operators have continued negotiations to reach an understanding on the future imbalance settlement model and the related decision-making.

## Electricity market

Jan-Dec/17

Jan-Dec/16

July-Dec/17

July-Dec/16

Nord Pool system price, average €/MWh	29.41	26.91	29.54	29.83
Area price Finland, average €/MWh	33.19	32.45	34.44	34.55
Congestion income between Finland and Sweden, € million*	51.0	75.0	30.1	15.2
Congestion hours between Finland and Sweden %**	24.0	32.7	26.6	19.3
Congestion income between Finland and Estonia, € million*	0.5	4.7	0.2	0.2
Congestion hours between Finland and Estonia %	1.4	9.7	1.4	1.7

\* 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 both Sweden's SE1 and its SE3 area prices.

# 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.

# Personnel and remuneration systems

Fingrid employed 355 (334) persons, including temporary employees, at the end of the year. The number of permanent personnel was 308 (291).

Of the personnel employed by the company, 24 (25) per cent were women and 76 (75) per cent were men. The average age of the personnel was 44 (44).

During 2017, the personnel received a total of 11,408 (11,647) hours of training, with an average of 32 (36) 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 applies incentive bonus schemes.

For an expert organisation like Fingrid, employees are an important resource, which is taken good care of. The leadership and development of the work community aim at an open, social, innovative and goal-oriented corporate culture.

At Fingrid, strategic human resource management means managing people's capabilities and competencies, participation in decision-making, competitive remuneration systems and reinforcing collaboration and organisational openness. In addition, human resource management supports change leadership and strengthens personnel's motivation and commitment to the company.

Fingrid's personnel strategy aims at responding to changes by offering its employees opportunities to develop and grow their competence. Viewing securing expertise as a strategic choice improves the quality of personnel planning and helps the company to better prepare for future needs. In addition to securing expertise, efforts are focused on the ability of the employees to lead themselves.

Caring and well-being are the goals of the company's personnel strategy. This can be seen in the form of solutions supporting the individual, such as flexible working hour arrangements, support for recreational activities and comprehensive well-being. In accordance with Fingrid's personnel policy, employees are treated with respect and fairness, based on the company's values and in compliance with the principles of equal opportunity and non-discrimination. At Fingrid, equal opportunity and non-discrimination are part of the corporate culture. Alongside responsibility, openness and efficiency, impartiality is one of the company's values.

The success of the strategy is measured annually in various ways. Corporate Spirit carried out a PeoplePower personnel survey at Fingrid during the year. The company also participated in the Great Place to Work survey, which measures employees' trust in the company's management, their pride in their work and the pleasure they take in working with their colleagues. Compared to other expert organisations, Fingrid's results from the PeoplePower survey were excellent. The company received the highest rating, AAA, which is only achieved by around six per cent of all the surveyed organisations annually. The company has also fared very well in the Great Place to Work survey, according to which Fingrid is one of Finland's best companies.

# Board of Directors and corporate management

Fingrid Oyj's Annual General Meeting was held in Helsinki on 24 May 2017. Juhani Järvi was re-elected Chair of Fingrid's Board of Directors and Juha Majanen was re-elected Vice Chair. Anu Hämäläinen, Sanna Syri and Esko Torsti continued as Board members.

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 Esko Torsti (Chair), Juhani Järvi, Juha Majanen (until 24 May 2017) and Sanna Syri (as of 24 May 2017).

The Remuneration Committee consisted of Juhani Järvi (Chair), Anu Hämäläinen, Juha Majanen (as of 24 May 2017) and Sanna Syri (until 24 May 2017).

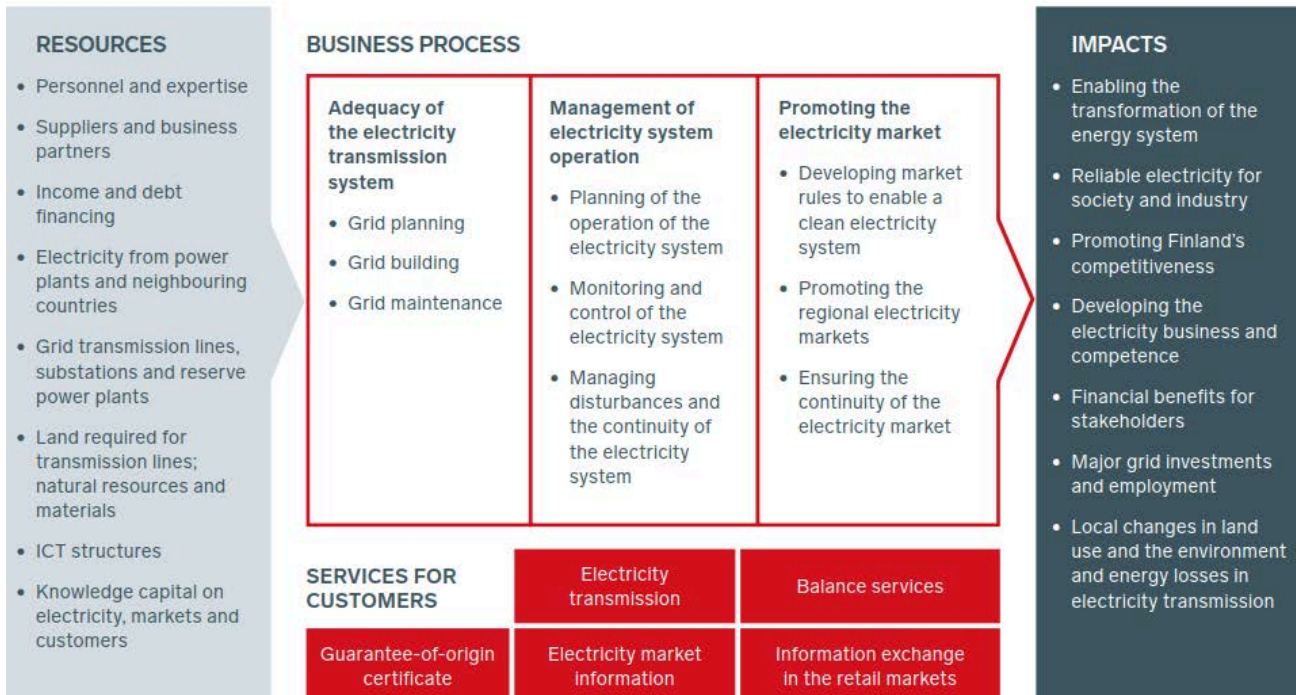
Jukka Ruusunen serves as President & CEO of the company. Fingrid has an Executive Management Group which supports the CEO in the company's management and decision-making.

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).



# Fingrid's business model

Fingrid ensures disturbance-free availability of electricity in Finland now and in future. The company is involved in developing Finnish society and the well-being of all citizens. The company has a positive effect on the daily lives of Finns via its mission: to transmit electricity reliably, to actively promote the electricity market, and to develop the transmission system over the long term.



# 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 of quality and 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. Due to the nature of the company's core mission, risks are also assessed from the perspective of society in general.

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 is responsible for organising internal control and risk management, and it approves the principles of internal control and risk management on an annual basis. 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 more 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.

#### 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 general meeting 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.

# Foremost risks and uncertainty factors for society and Fingrid

One of the company's biggest business risks and the biggest risk where society is concerned is a major disturbance related to the functioning of the power system. A major disturbance or other electrical system disruption can cause significant financial and physical damage to Fingrid and society in general.

Other major risks for Fingrid and society are the sector's operators losing confidence in the functioning of the electricity market, environmental risks and electricity and occupational health and safety risks.

The risks to Fingrid's operations are risks related to the unfavourable trend in official regulation, capital investments which have become idle, financing risks, personnel risks, risks related to ICT and data transfer, asset risks and reputation risks.

Risks to society arising from Fingrid's operations are unsuccessful timing of capital investments and long-term restrictions in transmission capacity.

The most significant of the above-mentioned risks to Fingrid are explored in greater detail in the company's annual report. Fingrid's financing risks are described in more detail in sections 6.2 and 6.3 of the consolidated financial statements (IFRS). No substantial risks were realised in 2017.

# Corporate responsibility

Responsibility is one of Fingrid's corporate values and responsible business conduct is a strategic choice for the company. In addition to successfully fulfilling its societally important core mission, the following aspects are important to Fingrid: safety, procurement practices, stakeholder confidence, financial result, Code of Conduct and taking care of the work community. Fingrid's compliance with corporate responsibility is steered by the set strategy targets. The key 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. Fulfilment of the targets serves as the basis for executive management's and personnel's remuneration.

Corporate responsibility is managed as an integrated part of Fingrid's management system. Fingrid's Board of Directors approves the company's Code of Conduct and monitors the company's compliance in operating responsibly. The Board is responsible for arranging corporate responsibility management and its integration into business operations. The CEO and the heads of functions are each responsible for corporate responsibility issues within their area of responsibility. Social issues and environmental impacts are taken into account in all decision-making and when assessing operations alongside profitability issues.

Fingrid's human rights commitment has been made as part of the company's Code of Conduct. To ensure its understanding of human rights impacts, the company carried out an assessment in compliance with the due diligence process recommended in the UN's Guiding Principles on Business and Human Rights, and updated its action plan during the year under review.

In accordance with its Code of Conduct, Fingrid is a responsible tax payer and combats the grey economy, and does not engage in money laundering or corruption, such as blackmail and bribery. No cases related to corruption and bribery occurred during the year under review. Fingrid reports on its tax footprint and does not carry out special arrangements to minimise taxes.

Managers and the entire work community ensure that behaviour is in line with the Code of Conduct. New employees must complete the online induction training on the Code of Conduct. A confidential whistle-blower system managed by an independent third party is available to employees who suspect a breach of the Code of Conduct. The company received an excellent AAA rating in a survey carried out during the year under review, where Fingrid employees assessed the responsibility 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 3.9 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, environment and anti-corruption. In procurements, Fingrid requires its contractual partners to commit to Fingrid's corporate responsibility requirements and monitors compliance using a risk-based approach. 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 conditions related to the use of subcontractors and workforce, and to occupational safety and environmental matters. During the year under review, Fingrid carried out 13 audits on its work sites to verify compliance with contractor obligations, occupational safety and environmental management. The audits revealed that operations and induction at the work sites are generally on a good level. A third-party audit service for the international sourcing operations was established during the year. Compliance with the corporate responsibility requirements was ensured through a total of 11 supplier audits.

To ensure transparency and comparability, Fingrid reports on its corporate responsibility in accordance with the international Global Reporting Initiative (GRI) framework. Information pertaining to the outcomes and figures related to our integrated and goal-oriented sustainability efforts in the areas of, among other things, employee

well-being, occupational safety, environmental impacts and tax footprint, is disclosed in the section dedicated to each area of sustainability in the annual report.

# Environmental matters

The most significant environmental impacts caused by the company's operations are related to landscape changes and land use restrictions, nature and biodiversity, energy losses occurring during electricity transmission, possible fuel and oil leaks in exceptional situations and the consumption of natural resources when constructing and maintaining the grid.

Environmental management was developed during the year by certifying the environmental management system concerning the operation of the reserve power plants according to ISO 14 001. Contractors and service suppliers were encouraged to commit themselves to environmentally responsible operating practices with the help of contractual terms related to environmental matters, environmental training and audits. Environmental aspects were monitored as part of work site monitoring. Compliance with environmental requirements, occupational safety and contractor obligations was verified in a total of 13 audits. In addition, two full safety audits were carried out at reserve power plants.

Fingrid's environmental goals include completing grid investment projects and maintenance without any environmental deviations. Several development projects were carried out to improve chemical safety at substations and reserve power plants. Following the completion of the Huutokoski reserve power plant upgrading project, the plant's environmental safety also improved. One significant environmental deviation occurred in the company's operations during the year, however, when a hydraulic oil leak of roughly 120 litres occurred at a power line work site in an accident involving work machinery. The deviation did not have a significant environmental or financial impact.

Fingrid actively participates in land-use planning to ensure safety and land-use reservations for the grid. In 2017, Fingrid issued around 260 statements on land-use plans and EIAs. In addition, the company directed the construction taking place near grid installations by issuing statements containing safety guidelines and land use restrictions. Some 510 such statements were issued.

EIAs were carried out for four power line projects during the year under review. The environmental impact assessments for the Pyhänselkä-Keminmaa and Pyhänselkä-Nuojua power lines were started in accordance with the reformed EIA legislation. An environmental assessment was carried out on two power line projects (Imatra-Huutokoski and Kittilänjärvi-Taivalkoski). The Finnish Association for Impact Assessment granted the company their annual award for good EIA activities for the environmental assessment procedure carried out on the power lines required by the Hanhikivi 1 nuclear power plant.

In order to be able to build, operate and maintain a transmission line, Fingrid redeems a right of use to the transmission line area. A redemption decision was received for the Hikiä-Orimattila power lines. In addition to statutory communication, a total of over 10,000 letters were sent to landowners, concerning, among other things, environmental impact assessments, power line construction and handling vegetation in power line areas.

The service providers who carry out maintenance work and trim vegetation along power line right-of-ways are instructed to take landowners and environmental matters into account. During the year under review, Fingrid promoted the utilisation of power line areas for the benefit of nature and people by publishing idea cards targeted at landowners and offering financial support for the management of heritage landscapes. The company also informed municipalities of the opportunities offered by land-use planning to promote the sustainable use of power line areas.

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 5,817 (10,335) units (tCO<sub>2</sub>) of emission allowances were returned, 10 per cent of which consisted of purchased and 90 per cent of acquired emission rights units. Fingrid has not been

granted free-of-charge emission rights for the emissions trade period 2013–2020. Purchased emission rights units amounted to 4,150 in 2017. Emissions trading had minor financial significance for Fingrid.



# Legal proceedings and proceedings by authorities

A lawsuit was initiated against Fingrid in December 2016, demanding non-specified liquidated damages due to an alleged breach of contract. The legal proceedings ended with the district court issuing an interlocutory judgement in December 2017, according to which Fingrid had not been proven to have committed a contractual breach.

Fingrid has appealed to the Market Court against the decision issued by the Energy Authority on 2 January 2017 to the extent where the Energy Authority required Fingrid to submit the terms and conditions concerning the balancing power agreements and the grounds for the determination of fees for approval by the Energy Authority. According to Fingrid, under the legislation in force at the time the decision was issued, it was not required to submit the terms and conditions related to the procurement of balancing power beforehand to the authority for approval. The matter is still before the Market Court. The legal proceedings do not have a substantial impact on the company's financial result or financial position.

# Events after the review period and estimate of future outlook

On 15 January 2018, Fingrid informed the Energy Authority and the European Agency for the Cooperation of Energy Regulators (ACER) that the Nordic transmission system operators were unable to submit a joint proposal on a new imbalance settlement structure within the timeframe required under the EU directive. The matter will be referred to the European Commission.

Fingrid Group's profit for the 2018 financial period, excluding changes in the fair value of derivatives and before taxes, is expected to remain on the previous year's level. Fingrid did not change the grid service pricing for 2018 and it aims to achieve a regulatory-allowed result for 2018.

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 particularly 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 its nearby areas, and thereby also the volume of electricity transmission in the grid. The company's debt service capacity is expected to remain stable.

# 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 123,358,401.74 and distributable funds in the financial statements total EUR 201,312,662.75. 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

- a dividend of EUR 68,470.00 at maximum per share will be paid for Series A shares and EUR 25,050.00 at maximum for Series B shares, for a total of EUR 173,518,010.00 at maximum. The dividends shall be paid in two instalments. The first instalment of EUR 48,700.00 for each Series A share and EUR 17,820.00 for each Series B share, totalling EUR 123,420,140.00 in dividends, shall be paid on 4 April 2018. The second instalment of EUR 19,770.00 at maximum per share for each Series A share and EUR 7,230.00 at maximum per share for each Series B share, totalling EUR 50,097,870.00 at maximum in dividends, shall be paid subject to the Board's decision after the half-year report has been confirmed, based on the authorisation given to the Board in the Annual General Meeting. The Board of Directors has the right to decide, based on the authorisation granted to it, on the payment of the second dividend instalment after the half-year report has been confirmed and it has assessed the company's solvency, financial position and financial development. The dividends that have been 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.
- EUR 27,794,652.75 at minimum be retained in unrestricted equity.

# Annual General Meeting 2018

Fingrid Oyj's Annual General Meeting is scheduled to be held on 28 March 2018 in Helsinki.

In Helsinki, on 1 March 2018  
Fingrid Oyj  
Board of Directors

# 2 Consolidated Key Figures

## 2 Consolidated key figures

		CONSOLIDATED KEY FIGURES				
		2017	2016	2015	2014	2013
		IFRS	IFRS	IFRS	IFRS	IFRS
<b>Extent of operations</b>						
Turnover	MEUR	672.0	586.1	600.2	567.2	543.1
Capital expenditure, gross	MEUR	111.1	146.7	147.5	129.5	225.3
- % of turnover	%	16.5	25.0	24.6	22.8	41.5
Research and development expenses	MEUR	2.6	2.4	1.8	1.7	1.8
- % of turnover	%	0.4	0.4	0.3	0.3	0.3
Personnel, average		352	336	319	305	277
Personnel at the end of period		355	334	315	313	287
Salaries and remunerations total	MEUR	24.2	22.7	21.3	20.5	19.0
<b>Profitability</b>						
Operating profit	MEUR	184.8	192.0	162.6	142.8	115.3
- % of turnover	%	27.5	32.8	27.1	25.2	21.2
Profit before taxes	MEUR	163.7	173.9	129.3	132.9	87.3
- % of turnover	%	24.4	29.7	21.5	23.4	16.1
Return on investments (ROI)	%	10.0	10.4	8.7	7.6	6.3
Return on equity (ROE)	%	16.7	18.8	15.0	16.3	15.0
<b>Financing and financial position</b>						
Equity ratio	%	37.8	36.4	33.5	31.0	29.5
Interest-bearing net borrowings	MEUR	998.9	1,028.0	1,026.9	1,046.1	1,076.7

Net gearing		1.3	1.3	1.4	1.6	1.7
<b>Share-specific key figures</b>						
Profit/share	€	39,350.8	41,706.1	31,150.8	32,027.9	27,277.9
Dividend/A shares	€	68470*	37,536.09	33,686.24	21,655.44	29,788.26
Dividend/B shares	€	25050*	16,038.49	16,038.49	16,038.49	16,038.50
Dividend payout ratio A shares	%	174.0	90.0	108.1	67.6	109.2
Dividend payout ratio series B shares	%	63.7	38.5	51.5	50.1	58.8
Equity/share	€	240,017	230,301	213,822	200,568	193,293
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

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.

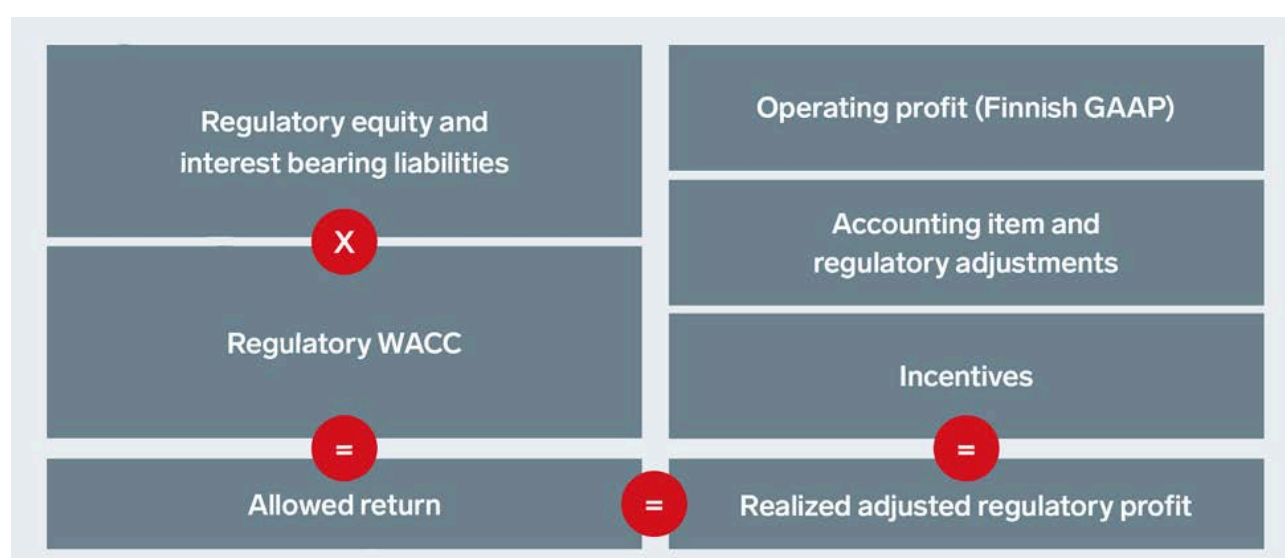
The reasonable financial result allowed by the regulation forms the basis of Fingrid's financial planning and pricing. One can calculate the required amount of turnover by adding operating expenses in the result. Fingrid's turnover mainly consists of the electricity transmission volume multiplied by the unit prices. 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 main aim of Fingrid’s business operations is to achieve the allowed financial result each year.



The Energy Market Authority determines Fingrid’s allowed financial result over four-year regulatory periods (2016–2019 and 2020–2023). The table below presents Fingrid’s own rough approximations for 2017, 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 of approx. EUR 40 million in the current regulatory period.

WACC (pre-tax) 2017	Adjusted capital 2017	Allowed financial result 2017	Deficit(-)/Surplus(+) 2017	Cumulative Deficit (-)/Surplus(+) 2016-2019
6.19%	Approx. EUR 2,950 million	Approx. EUR 180 million	Approx. EUR -5 million	Approx. EUR -45 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

# Income statement

## 3.1 Income statement

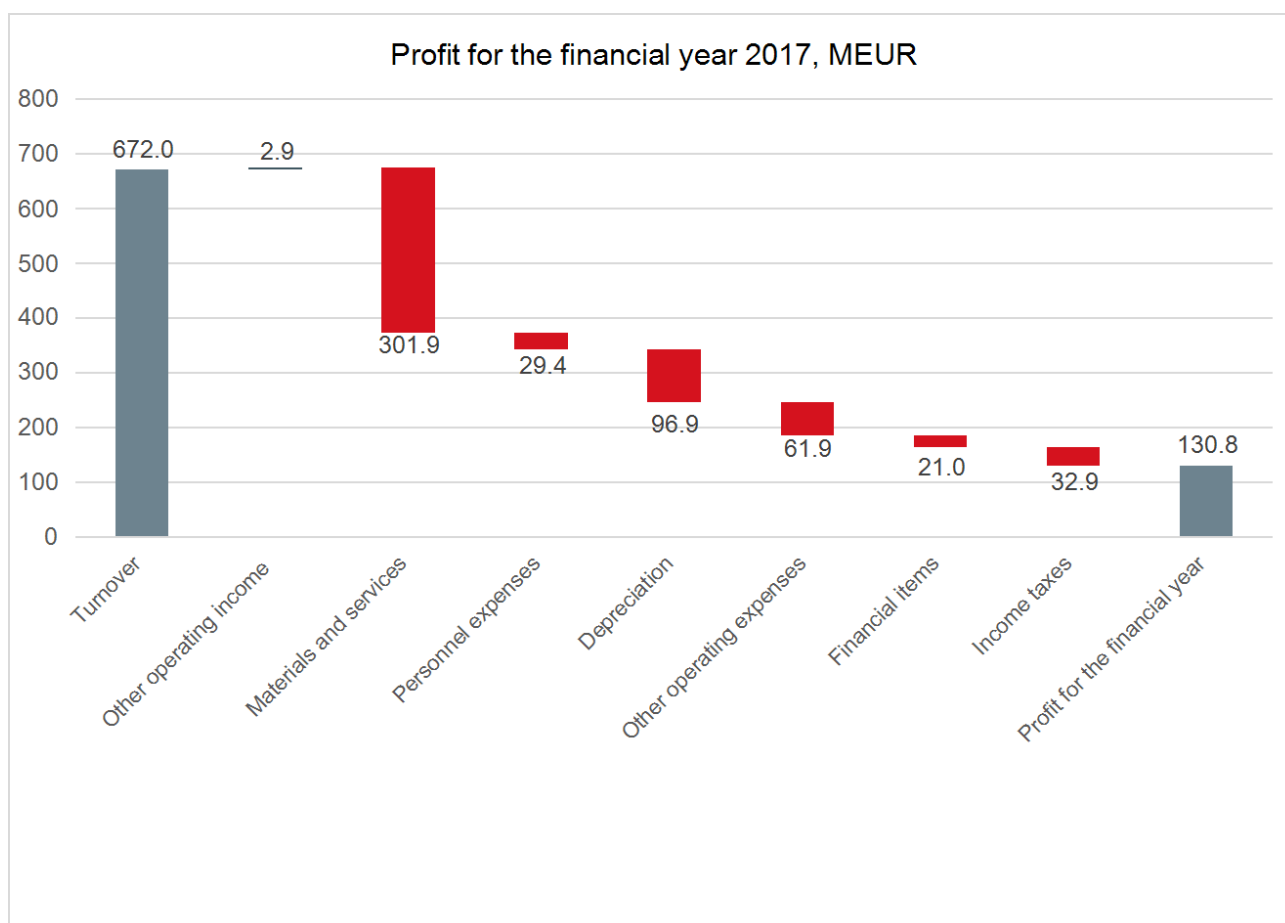
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME			
		1 Jan - 31 Dec, 2017	1 Jan - 31 Dec, 2016
	Notes	€ 1,000	€ 1,000
<b>TURNOVER</b>	1	<b>671,992</b>	<b>586,120</b>
Other operating income	2	2,933	12,689
Materials and services	5	-301,948	-248,359
Personnel expenses	9	-29,385	-28,598
Depreciation	11,12	-96,889	-99,222
Other operating expenses	6,13	-61,918	-30,586
<b>OPERATING PROFIT</b>		<b>184,786</b>	<b>192,045</b>
Finance income	17	483	694
Finance costs	17	-23,261	-19,385
Finance income and costs		-22,778	-18,691
Share of profit of associated companies		1,734	511
<b>PROFIT BEFORE TAXES</b>		<b>163,742</b>	<b>173,865</b>
Income taxes		-32,901	-35,192
<b>PROFIT FOR THE FINANCIAL YEAR</b>		<b>130,841</b>	<b>138,673</b>
<b>OTHER COMPREHENSIVE INCOME</b>			
Items that may subsequently be transferred to profit or loss			
Cash flow hedges			7,232
Translation reserve		-475	318
Available-for-sale investments		-59	17
Taxes related to other items in total comprehensive income			-1,450
<b>TOTAL COMPREHENSIVE INCOME FOR THE FINANCIAL PERIOD</b>		<b>130,308</b>	<b>144,790</b>
<b>Profit attributable to:</b>			
Equity holders of parent company		130,841	138,673
<b>Total comprehensive income attributable to:</b>			

Equity holders of parent company	130,308	144,790
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**Earnings per share for profit attributable to the equity holders of the parent company:**

Undiluted and diluted earnings per share, €	39,351	41,706
Weighted average number of shares, quantity	3,325	3,325

Notes are an integral part of the financial statements.



# Consolidated balance sheet

## 3.2 Consolidated balance sheet

ASSETS			
		31 Dec 2017	31 Dec 2016
	Notes	€ 1,000	€ 1,000
<b>NON-CURRENT ASSETS</b>			
Intangible assets:	12		
Goodwill		87,920	87,920
Other intangible assets		99,795	96,580
		187,715	184,500
Property, plant and equipment:	11		
Land and water areas		15,974	15,701
Buildings and structures		209,792	193,716
Machinery and equipment		562,049	578,281
Transmission lines		786,237	825,038
Other property, plant and equipment		7,060	7,602
Prepayments and purchases in progress		94,888	69,825
		1,675,999	1,690,162
Investments in associated companies	24	14,303	14,158
Available-for-sale investments and receivables			101
Derivative instruments	23	27,762	29,657
Deferred tax assets	10	13,918	6,155
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,919,696</b>	<b>1,924,733</b>
<b>CURRENT ASSETS</b>			
Inventories	8	13,529	12,269
Derivative instruments	23	245	2,861

Trade receivables and other receivables	3	96,068	82,191
Financial assets recognised in the income statement at fair value	20	63,465	57,790
Cash in hand and cash equivalents	19	20,303	21,939
<b>TOTAL CURRENT ASSETS</b>		<b>193,610</b>	<b>177,050</b>
<b>TOTAL ASSETS</b>		<b>2,113,306</b>	<b>2,101,782</b>

Notes are an integral part of the financial statements.

## EQUITY AND LIABILITIES

	Notes	31 Dec 2017 € 1,000	31 Dec 2016 € 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
Revaluation reserve	21		59
Translation reserve	21	-888	-413
Retained earnings	21	687,100	654,258
<b>TOTAL EQUITY</b>		<b>798,057</b>	<b>765,749</b>
<b>NON-CURRENT LIABILITIES</b>			
Deferred tax liabilities	10	127,003	125,778
Borrowings	14	813,404	842,866
Provisions	25	1,474	1,481
Derivative instruments	23	12,387	18,567
		<b>954,268</b>	<b>988,692</b>
<b>CURRENT LIABILITIES</b>			
Borrowings	14	269,304	264,865
Derivative instruments	23	8,190	7,859
Trade payables and other liabilities	7	83,488	74,617
		<b>360,981</b>	<b>347,341</b>
<b>TOTAL LIABILITIES</b>		<b>1,315,249</b>	<b>1,336,033</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>2,113,306</b>	<b>2,101,782</b>

Notes are an integral part of the financial statements.

# Consolidated statement of changes in equity

## 3.3 Consolidated statement of changes in equity

Attributable to equity holders of the parent company, € 1,000

	Share capital	Share premium account	Revaluation reserves	Translation reserve	Retained earnings	Total equity
<b>Balance on 1 Jan 2016</b>	<b>55,922</b>	<b>55,922</b>	<b>-5,740</b>	<b>-731</b>	<b>605,585</b>	<b>710,960</b>
<b>Comprehensive income</b>						
Profit or loss					138,673	138,673
<b>Other comprehensive income</b>						
Cash flow hedges			5,785			5,785
Translation reserve				318		318
Available-for-sale investments			13			13
<b>Total other comprehensive income adjusted by tax effects</b>			<b>5,799</b>	<b>318</b>		<b>6,117</b>
<b>Total comprehensive income</b>			<b>5,799</b>	<b>318</b>	<b>138,673</b>	<b>144,790</b>
<b>Transactions with owners</b>						
Dividend relating to 2015					-90,000	-90,000
<b>Balance on 31 December 2016</b>	<b>55,922</b>	<b>55,922</b>	<b>59</b>	<b>-413</b>	<b>654,258</b>	<b>765,749</b>
<b>Balance on 1 Jan 2017</b>						
<b>Balance on 1 Jan 2017</b>	<b>55,922</b>	<b>55,922</b>	<b>59</b>	<b>-413</b>	<b>654,258</b>	<b>765,749</b>
<b>Comprehensive income</b>						
Profit or loss					130,841	130,841
<b>Other comprehensive income</b>						
Cash flow hedges						
Translation reserve				-475		-475
Available-for-sale investments			-59			-59
<b>Total other comprehensive income adjusted by tax effects</b>			<b>-59</b>	<b>-475</b>		<b>-534</b>
<b>Total comprehensive income</b>			<b>-59</b>	<b>-475</b>	<b>130,841</b>	<b>130,308</b>
<b>Transactions with owners</b>						

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Dividend relating to 2016					-98,000	-98,000
<b>Balance on 31 Dec 2017</b>	<b>55,922</b>	<b>55,922</b>	<b>0</b>	<b>-888</b>	<b>687,100</b>	<b>798,057</b>

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Notes are an integral part of the financial statements.

# Consolidated cash flow statement

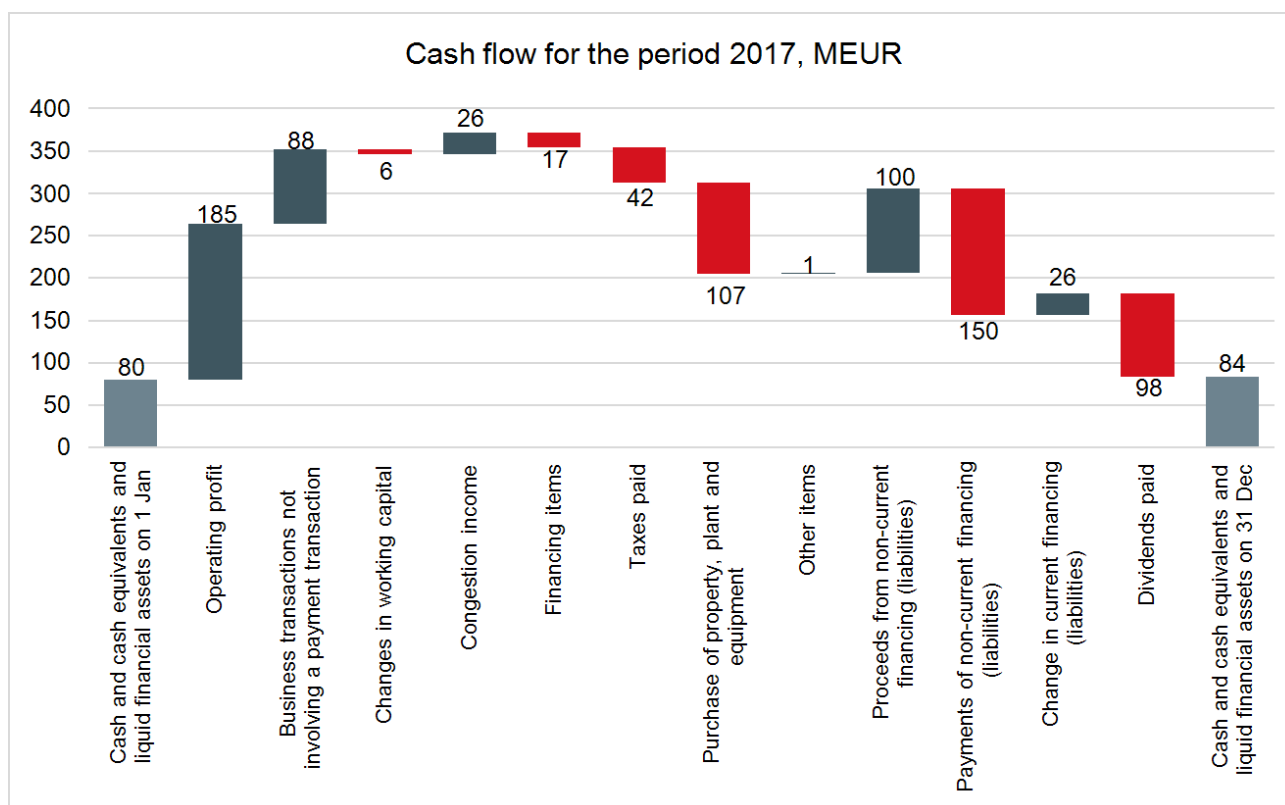
## 3.4 Consolidated cash flow statement

CONSOLIDATED CASH FLOW STATEMENT			
		1 Jan - 31 Dec, 2017	1 Jan - 31 Dec, 2016
	Notes	€ 1,000	€ 1,000
<b>Cash flow from operating activities:</b>			
Profit for the financial year	21	130,841	138,673
Adjustments:			
Business transactions not involving a payment transaction:			
Depreciation		96,889	99,222
Capital gains/losses (-/+ ) on tangible and intangible assets		-321	-3,792
Share of profit of associated companies		-1,734	-511
Gains/losses from the assets and liabilities recognised in the income statement at fair value		-8,884	-35,378
Interest and other finance costs		23,261	19,385
Interest income		-478	-689
Dividend income		-5	-5
Taxes		32,901	35,192
Impact from changes in the fair value of the investment		101	203
Changes in working capital:			
Change in trade receivables and other receivables		-13,056	-13,121
Change in inventories		-1,260	396
Change in trade payables and other liabilities		7,990	7,371
Congestion income		25,752	39,863
Change in provisions	25	-7	-187
Interests paid		-17,756	-20,496
Interests received		344	440
Taxes paid		-41,911	-33,887
<b>Net cash flow from operating activities</b>		<b>232,668</b>	<b>232,679</b>



<b>Cash flow from investing activities:</b>			
Purchase of property, plant and equipment	11	-100,271	-138,084
Purchase of intangible assets	12	-7,111	-4,108
Proceeds from sale of other assets		119	152
Proceeds from sale of property, plant and equipment		544	5,885
Loans granted			-1,500
Dividends received		1,119	565
Capitalised interest paid	17	-1,223	-2,016
<b>Net cash flow from investing activities</b>		<b>-106,823</b>	<b>-139,106</b>
<b>Cash flow from financing activities:</b>			
Proceeds from non-current financing (liabilities)		100,000	80,000
Payments of non-current financing (liabilities)		-149,732	-164,824
Change in current financing (liabilities)		25,926	44,430
Dividends paid	21	-98,000	-90,000
<b>Net cash flow from financing activities</b>		<b>-121,806</b>	<b>-130,394</b>
<b>Change in cash as per the cash flow statement</b>		<b>4,039</b>	<b>-36,822</b>
<b>Opening cash as per the cash flow statement</b>		<b>79,729</b>	<b>116,550</b>
<b>Closing cash as per the cash flow statement</b>	19,20	<b>83,768</b>	<b>79,729</b>

Notes are an integral part of the financial statements.



## 4 Benchmark for TSO Operations

- 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.

# 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. 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 transmission system 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 Spot AS (ownership 18.8%) and eSett Oy (ownership 33.3%). 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 listed on the London Stock Exchange. 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

Deferred tax assets and liabilities	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

In preparing these consolidated financial statements, the Group has followed the same standards as in 2016. New standards, interpretations and changes took effect during the year, but these have not had a material effect on the consolidated financial statements. Fingrid adopted, ahead of their entry into force on 1 January 2017, the amendments to IAS 7 Statement of Cash Flows, according to which companies must now present disclosures on changes in liabilities arising from financing activities. This includes changes from financing cash flows (e.g. drawdowns and payments of debt), as well as changes in non-cash items, such as procurements, disposals, accrued interest and unrealised foreign currency exchange differences. The note is presented in chapter 6.3. The new IFRS 15 standard that enters into effect at the start of 2018 will somewhat affect the current year's recognition practices and the next consolidated financial statements; however, the new IFRS 9 standard will not have a significant impact on the company's practices. The notes and related amendments are presented in chapters 4.3 and 6.3.

IASB has published the following new and amended standards and interpretations, which the company has not yet applied. The company will begin applying the standard and interpretation from the date of its entry into force. The estimated impact of the standards is described in the notes listed in the table.

IFRS 9 Financial instruments, effective 1 January 2018	Chapter 6.6
IFRS 15 Revenue from Contracts with Customers, effective 1 January 2018	Chapter 4.3
IFRS 16 Leases, effective 1 January 2019	Chapter 5.3

## 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.

# The company's general risk management processes and policies

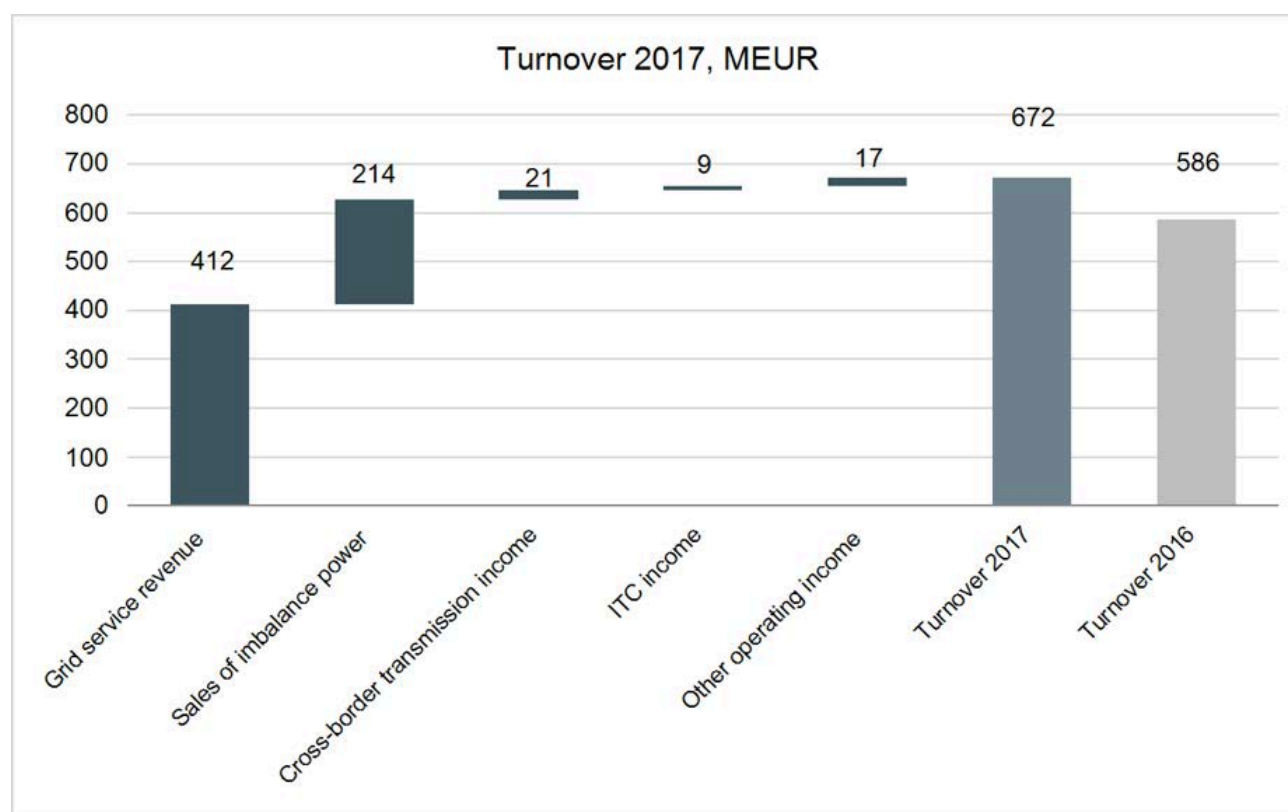
The objective of Fingrid's risk management is to make preparations for cost-effective measures providing protection against damage and loss relating to risks and to ensure the commitment of the entire personnel to considering the risks pertaining to the company, its various organisational units and each 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 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. 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.

# Formation of turnover and financial result

Turnover consists of the following:



1. TURNOVER, €1,000	2017	2016
Grid service revenue	412,082	382,395
Sales of imbalance power	213,872	153,881
Cross-border transmission income	20,711	24,015
ITC income	8,647	13,199
Peak load capacity	8,264	7,023
Other operating income	8,416	5,607
<b>Total</b>	<b>671,992</b>	<b>586,120</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 strives 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.

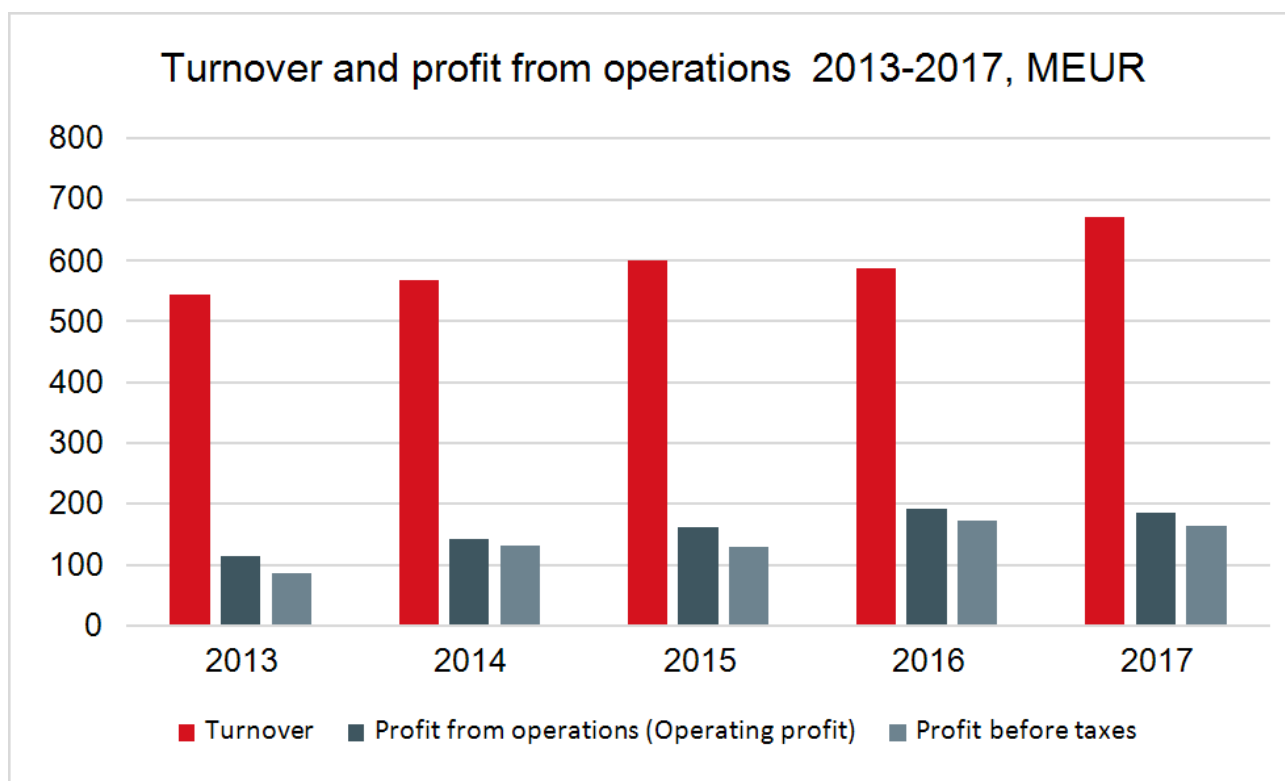
Fingrid is responsible for the continuous power balance in Finland at all times by buying and selling regulating power in Finland. The balance responsible parties can participate in the Nordic balancing power market by submitting bids on their available capacity. The terms and conditions of participation in the regulating power market and the pricing of balancing power are based on the balance service agreement.

Transmission services on the cross-border connections to the other Nordic countries enable participation in the Nordic Elspot and Elbas exchange trade. Fingrid makes transmission services on the cross-border connections with Russia available to all electricity market parties. The transmission service is intended for fixed electricity imports. When making an agreement on transmission services from Russia, the customer reserves a transmission right (in MW) for a period of time to be agreed upon separately. The smallest unit that can be reserved is 50 MW. 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 can consist of both power plants and facilities capable of adjusting their electricity consumption.

2. OTHER OPERATING INCOME, €1,000	2017	2016
Rental income	942	922
Capital gains on fixed assets	321	3,792
Contributions received	170	282
Congestion income		6,325
Other income	1,500	1,368
<b>Total</b>	<b>2,933</b>	<b>12,689</b>



## 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. Non-recurring connection fees are recognised when the connection is agreed on with the customer. Indirect taxes and discounts, etc., are deducted from the sales income when calculating turnover.

### Adoption of the IFRS 15 Revenue from Contracts with Customers standard, effective 1 Jan 2018

IFRS 15 will replace IAS 18, which outlines the accounting requirements for the sale of goods and services, and IAS 11 applied to long-term projects.

The fundamental principle of the new standard is that sales revenue should be recognised when control over the goods or the service is transferred to the customer; in other words, control of the asset is the criterion to be examined instead of the previous criteria of risks and rewards.

A new five-step process should be applied when recognising sales revenue:

- Identify the contract(s) with a customer
- 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.

A significant change from current practice is the change in the timing of sales recognition: with the new standard, the timing of recognition of grid connection fees will change. Like all new standards, this one also includes new

requirements for the notes to the financial statements. These changes in the accounting procedures somewhat affect the company's business practices regarding systems, processes, controls, compensation arrangements, and investor relations.

Sales recognition takes place on the basis of the delivery of the service. Electricity transmission is recognised once the transmission has taken place. 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. 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. This will change Fingrid's principles for recognising revenue regarding connection fees, as the timing of their recognition will change. Connection agreements are long term and can be terminated, at the earliest, 15 years from the date when it entered into force. Whereas connection fees were previously recognised on the agreement signing date, they will in future be recognised over 15 years from when the connection to the electricity grid took place.

For Fingrid, the identified performance obligations will not bring significant changes to the current recognition practices.

In adopting the standard, the cumulative effect method will be used. Adjustments caused by the application of the standard will be recorded in retained earnings on the date of commencement of its application, i.e. on 1 January 2018. With the cumulative effect method, the information on the comparison period is left as it was according to the previously applied standards.

#### **Calculation of the standard's impacts on the financial statements**

Application of the standard does not have significant impacts on the company's result and balance sheet. If sales in 2017 were recognised according to the IFRS 15 revenue recognition standard, it would have had a reducing effect of EUR 1.2 million on net sales on 31 Dec. 2017, in which case net sales would have amounted to EUR 670.8 million. Until 31 Dec. 2017, non-recurring connection fees have been recognised when the connection is agreed on with the customer. If the connection fees were recognised over 15 years, it would have had a reducing effect on equity of EUR 35.1 million on the balance sheet date of 31 Dec. 2017, and it would have increased the deferred tax assets and accruals. The total impact in the balance sheet would have been EUR 8.8 million. Impacts on the income statement and balance sheet are presented in the table below.

<b>Consolidated Income Statement € 1,000</b>	<b>Reported</b>	<b>Change, IFRS 15</b>	<b>Revised</b>
	<b>31.12.2017</b>	<b>31.12.2017</b>	<b>31.12.2017</b>
Turnover	671 992	-1 208	670 784
Operating profit	184 786	-1 208	183 578
Profit before taxes	163 742	-1 208	162 534
Income taxes	-32 901	242	-32 659
<b>Profit for financial year</b>	<b>130 841</b>	<b>-966</b>	<b>129 875</b>
<b>Consolidated Balance Sheet € 1,000</b>			
	<b>Reported</b>	<b>Change, IFRS 15</b>	<b>Revised</b>
	<b>31.12.2017</b>	<b>31.12.2017</b>	<b>31.12.2017</b>
Deferred tax assets	5 071	8 786	13 858
<b>Total assets</b>	<b>2 113 306</b>	<b>8 786</b>	<b>2 122 093</b>
Equity	-798 057	35 146	-762 912
Long-term deferred income		-40 140	-40 140
Short-term deferred income	-20 627	-3 792	-24 419
<b>Total equity and liabilities</b>	<b>2 113 306</b>	<b>-8 786</b>	<b>2 122 093</b>



### 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 2017 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.

# Revenue-related receivables and credit risk management

## 4.4 Revenue-related receivables and credit risk management

3. TRADE RECEIVABLES AND OTHER RECEIVABLES, €1,000	2017	2016
Trade receivables	80,915	72,914
Trade receivables from associated companies	3,888	125
Prepayments and accrued income from associated companies	46	18
Prepayments and accrued income	9,771	7,835
Other receivables	1,448	1,298
<b>Total</b>	<b>96,068</b>	<b>82,191</b>
<b>Essential items included in prepayments and accrued income</b>	<b>2,017</b>	<b>2,016</b>
Accruals of sales	1,634	1,153
Accruals of purchases/prepayments	2,281	2,364
Interest receivables	2,737	4,118
Rents/prepayments	789	200
Tax assets	2,331	
<b>Total</b>	<b>9,771</b>	<b>7,835</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, with assistance from the Treasury unit. The Treasury has defined an operating process for monitoring customers' payment defaults in the terms and conditions of the Main Grid Contract. Any collateral required by Fingrid will be 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 few outstanding receivables, the credit risk for which 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**

	2017			2016		
	Gross amount of trade receivables/ trade payables	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	94,764	-9,961	84,803	88,176	-15,136	73,040
Trade payables	43,583	-9,961	33,622	40,113	-15,136	24,976

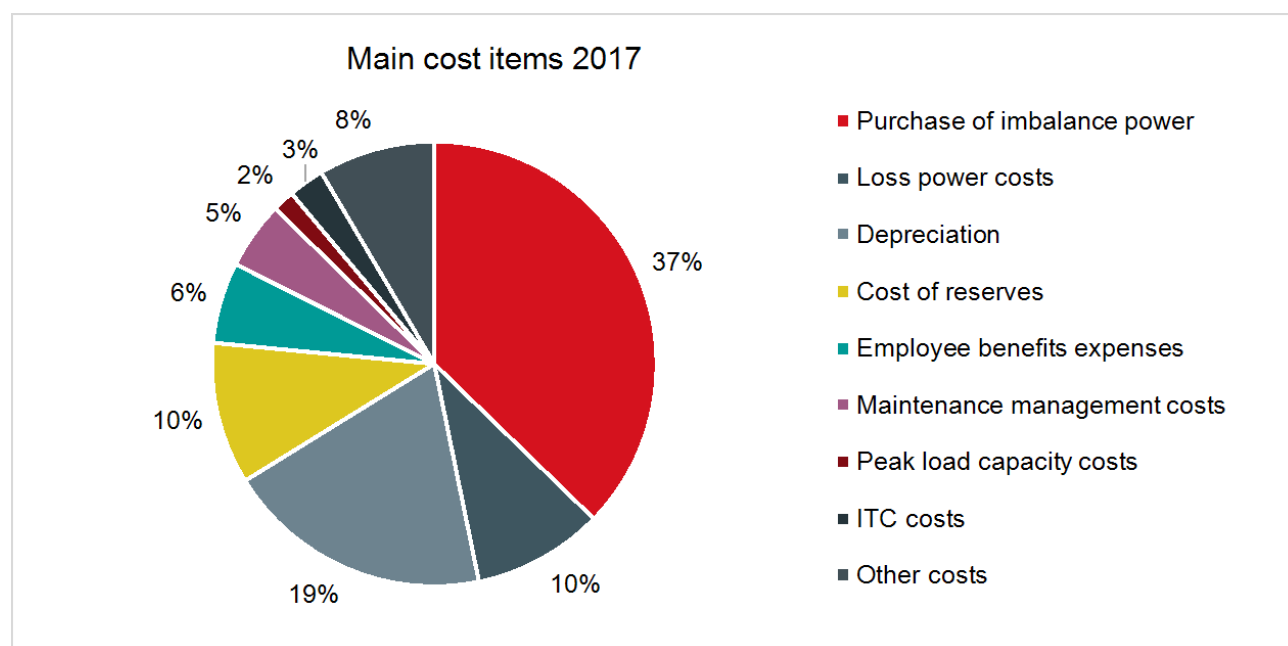

**Accounting principles**
**Trade and other receivables**

Loans and other receivables are recognised initially at fair value; subsequently they are measured at amortised cost using the effective interest rate method. The amount of doubtful receivables is estimated based on the risks of individual items. An impairment loss is recorded on receivables when there is valid evidence that the Group will not receive all of its receivables at the original terms (e.g. due to the debtor's serious financial problems, likelihood that the debtor will go bankrupt or be subject to other financial rearrangements, and payments overdue by more than 90 days). 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.

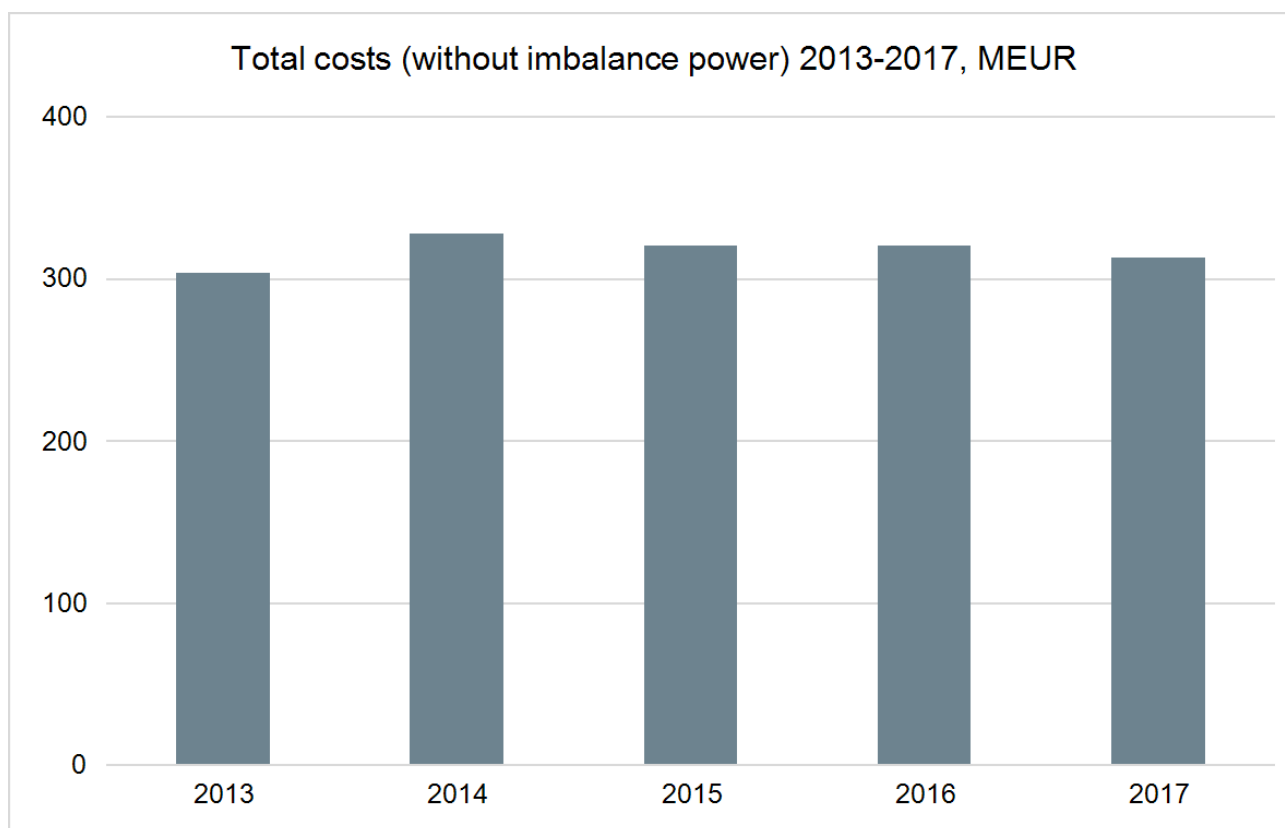
In addition to trade receivables and other receivables, the company has a small amount of loan receivables from associated companies. These are long-term and described in Chapter 7.1. The receivables from associated companies are recognised according to these same accounting principles.

# 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 involve, among other things, developing the Nordic imbalance markets, changes required by the new Electricity Market Act and the European network codes and the R&D expenses for these tasks. 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 2017 amounted to EUR 2.6 (2.4) million.



5. MATERIALS AND SERVICES, €1,000	2017	2016
Loss power costs	47,397	57,555
Purchase of imbalance power	183,426	121,697
Cost of reserves	46,245	44,907
Other material costs	4,562	4,189
Change in inventories, increase (-) or decrease (+)	-1,260	396
Peak load capacity costs	7,963	6,604
ITC costs	13,015	12,645
Other external services	600	365
<b>Total</b>	<b>301,948</b>	<b>248,359</b>

6. OTHER OPERATING EXPENSES, €1,000	2017	2016
Contracts, assignments etc. undertaken externally	56,746	53,427
Gains/losses from measuring electricity derivatives at fair value	-9,053	-35,310
Other rental expenses	3,622	2,816



Other expenses	10,603	9,653
<b>Total</b>	<b>61,918</b>	<b>30,586</b>

Auditors' fees	2017	2016
PricewaterhouseCoopers Oy		
Auditing fee	68	65
Tax advisory fees	20	21
Assignments referred to in the Auditing Act, Chapter 1, Section 1, Subsection 2		3
Other fees	41	60
<b>Total</b>	<b>130</b>	<b>149</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	2017	2016
Trade payables	30,246	24,825
Trade payables to associated companies	3,376	152
Interest payable	12,257	13,751
Value added tax	12,378	11,860
Collaterals received	923	923
Electricity tax	3,092	3,093
Accruals	20,627	19,259
Other debt	588	755
<b>Total</b>	<b>83,488</b>	<b>74,617</b>

Essential items included in accruals	2017	2016
Personnel expenses	6,613	5,693
Accruals of sales and purchases	8,848	7,849

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Tax liabilities	5,150	5,305
Other accruals	16	413
<b>Total</b>	<b>20,627</b>	<b>19,259</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 how they should be monitored.

**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 realised without a competitive tender or it can be realised 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 2017: EUR 418,000 for goods and services and EUR 5,225,000 for construction projects) are exceeded, the company follows the public procurement legislation applied to special sectors.

# 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 in case of faults and events possibly occurring during times of crisis at the substations and on the transmission lines owned by Fingrid.

8. INVENTORIES, €1,000	2017	2016
Materials and consumables at 1 Jan		
Material stocks	6,836	6,144
Fuel stocks	6,412	5,995
Work in progress	281	131
<b>Total</b>	<b>13,529</b>	<b>12,269</b>

The use of inventories was entered as an expense of EUR 2.6 (2.1) 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.

# Management of electricity price and volume risk and 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 and Financing Principles approved by the Board of Directors. Moreover, the company has a loss power purchasing 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 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 service fees 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 of loss power purchases, the company mainly uses NASDAQ OMX Commodities quoted futures. The company can also use OTC futures comparable with NASDAQ OMX Commodities futures. The nominal values, fair values and exposures of electricity futures 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 unhedged for reasons of cost-effectiveness.

# Personnel - the cornerstone of our operations

Fingrid Oyj employed 355 (334) persons, including temporary employees, at the end of the year. The number of permanent personnel was 308 (291). Of the personnel employed by the company, 24 (25) per cent were women and 76 (75) per cent were men. The average age of the personnel was 44 (44).

9. PERSONNEL EXPENSES, €1,000	2017	2016
Salaries and bonuses	24,187	22,735
Pension expenses - contribution-based schemes	4,139	4,433
Other additional personnel expenses	1,059	1,430
<b>Total</b>	<b>29,385</b>	<b>28,598</b>
<b>Salaries and bonuses of top management</b>	<b>1,720</b>	<b>1,570</b>

In 2017, 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 15 December 2016. 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 20 per cent of the annual salary. The maximum amount of the annual long-term incentive scheme payable to the CEO was 35 per cent (in programmes 2015–2017 and 2016–2018) or 40 per cent (in programme 2017–2019), 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:	2017	2016
Personnel, average	352	336
Personnel, 31 Dec	355	334



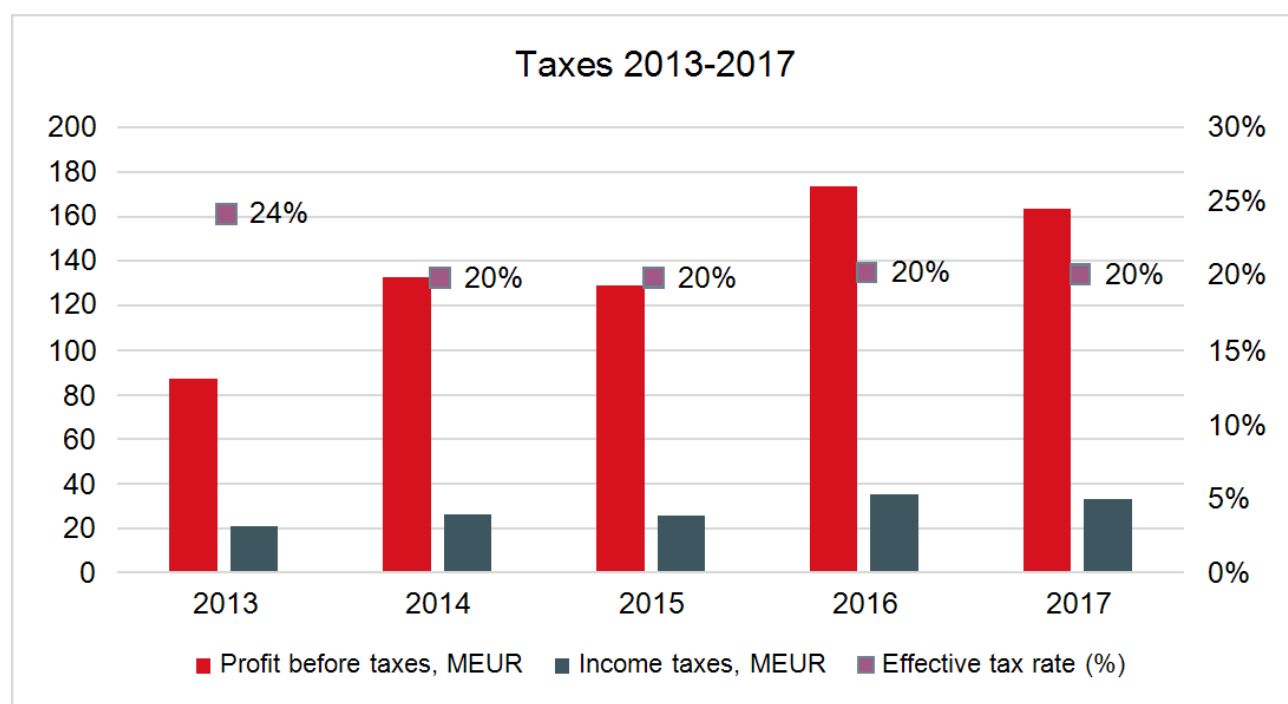
## Accounting principles

**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.

# 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 -39.4 (-25.8) million and EUR 6.5 (-9.4) 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 2017 to EUR 0.2 (0.4) million. The table below illustrates the development of Fingrid's effective tax rate. The impact of a change in the tax rate has been eliminated over the year in the 2013 figures.



## 10. DEFERRED TAX ASSETS AND LIABILITIES, € 1,000

### Changes in deferred taxes in 2017:

	31 Dec, 2016	Recorded in income statement at profit or loss	Recorded in other comprehensive income	31 Dec, 2017
<b>Deferred tax assets</b>				
Provisions	296	-1		295
Current financial receivables	12	-9		3
Trade payables and other liabilities	1,858	-291		1,566
Derivative instruments	3,989	-781		3,207
Congestion income		8,846		8,846

<b>Total</b>	<b>6,155</b>	<b>7,763</b>	<b>0</b>	<b>13,918</b>
<b>Deferred tax liabilities</b>				
Accumulated depreciations difference	-89,779			-89,779
Property, plant and equipment, tangible and intangible assets	-27,120	-1,545		-28,665
Available-for-sale investments	-20	20		
Other receivables	-840	280		-560
Financial assets recognised in the income statement at fair value	-79	-20		-99
Borrowings	-2,332	-287		-2,619
Derivative instruments	-5,608	327		-5,281
<b>Total</b>	<b>-125,778</b>	<b>-1,225</b>	<b>0</b>	<b>-127,003</b>

**Changes in deferred taxes in 2016:**

<b>Deferred tax assets</b>	31 Dec, 2016	Recorded in income statement at profit or loss	Recorded in other comprehensive income	31 Dec, 2017
Provisions	334	-37		296
Current financial receivables	3	9		12
Trade payables and other liabilities	6,336	-4,478		1,858
Derivative instruments	9,800	-4,365	-1,446	3,989
Other items	6		-6	
<b>Total</b>	<b>16,479</b>	<b>-8,872</b>	<b>-1,452</b>	<b>6,155</b>

<b>Deferred tax liabilities</b>				
Accumulated depreciations difference	-89,779			-89,779
Property, plant and equipment, tangible and intangible assets	-24,896	-2,224		-27,120
Available-for-sale investments	-33		13	-20
Other receivables	-1,005	166		-840
Financial assets recognised in the income statement at fair value	-39	-41		-79
Borrowings	-3,259	927		-2,332



Derivative instruments	-6,230	622		-5,608
<b>Total</b>	<b>-125,240</b>	<b>-551</b>	<b>13</b>	<b>-125,778</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.

## 5 Long-term Investor

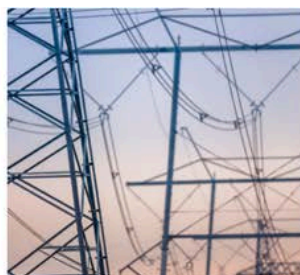
- This chapter focusses on Fingrid's assets, and above the most important ones: Grid assets and the indicators related to them.
- The chapter also takes a look at the company's goodwill and provides a description of other property, plant and equipment, and intangible assets.
- Leases are also included in this chapter as, for example, right-of-use agreements make up a considerable share of the company's operations and are as important as the company's other assets. Their share will be especially highlighted when all lease agreements are included in the company's balance sheet following the introduction of the new IFRS 16 standard.

# 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.



14 400 km of power lines  
300 km of submarine cable



over  
47 000 towers

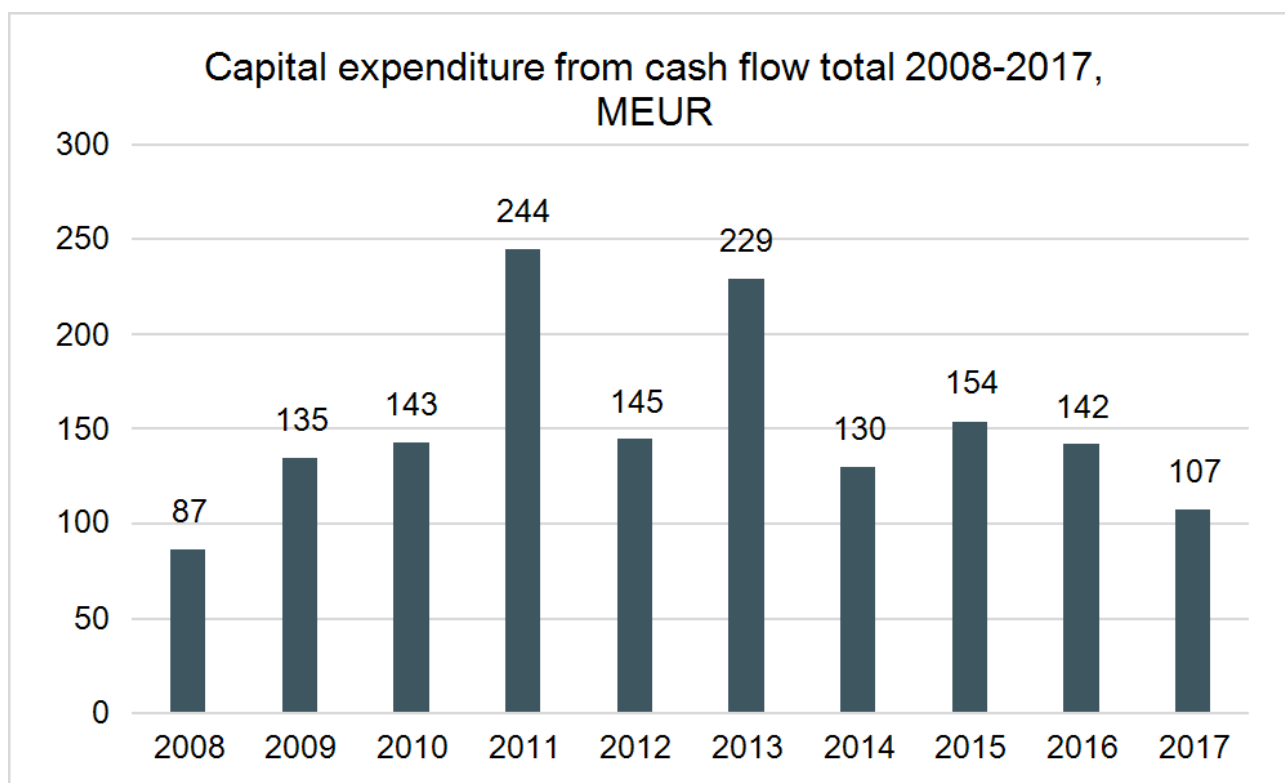


115 substations

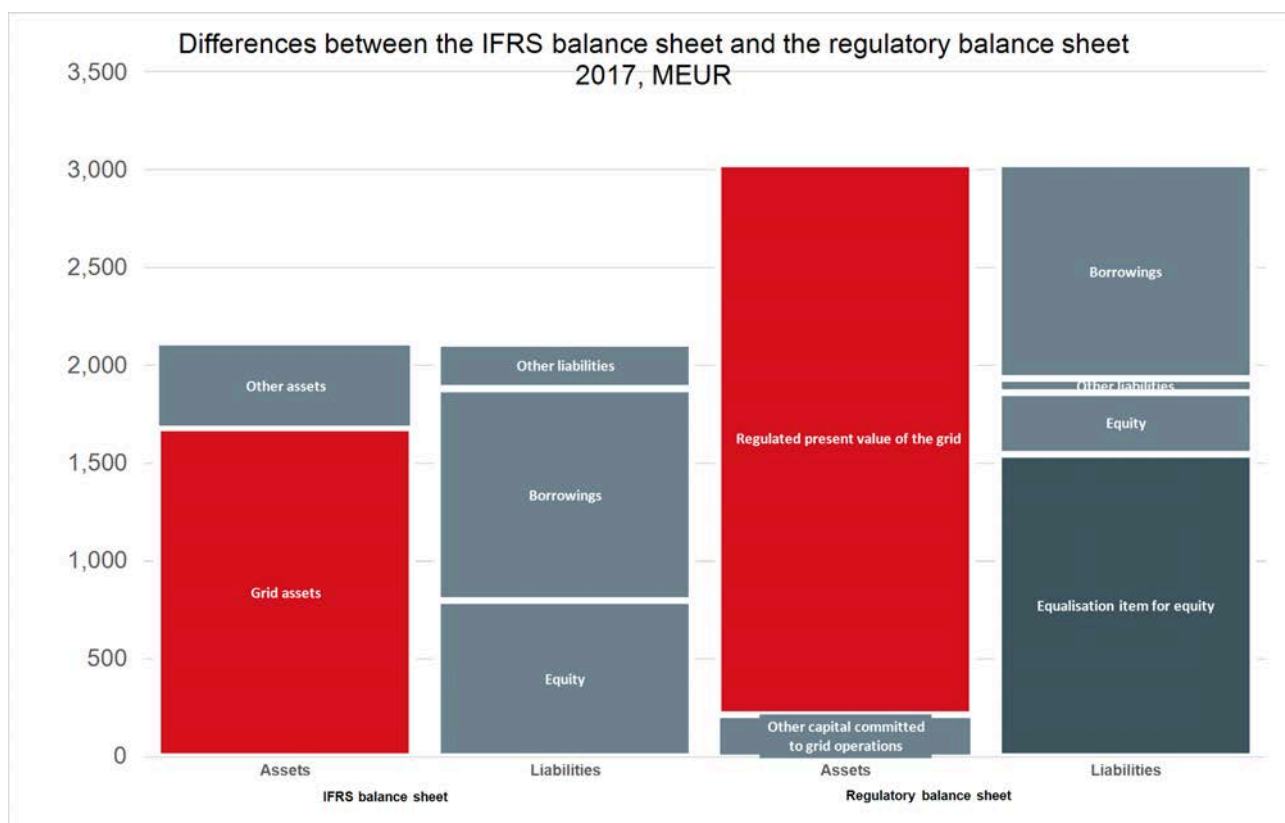


10 reserve power plants  
> 935 MW reserve

The company's total capital expenditure in 2017 amounted to EUR 111.1 (146.7) million. This included a total of EUR 91.1 (135.8) million invested in the transmission grid and EUR 14.2 (3.3) million for reserve power. ICT investments amounted to EUR 5.7 (7.5) million. A total of EUR 2.6 (2.4) million was used for R&D projects during the year under review. A total of 22 substation projects and 16 power line projects or transmission line arrangements were under way in 2017. The biggest current projects are related to the modernisation of the aging 'Iron Lady' transmission line, connecting large-scale power plants to the grid, and maintaining system security for major cities

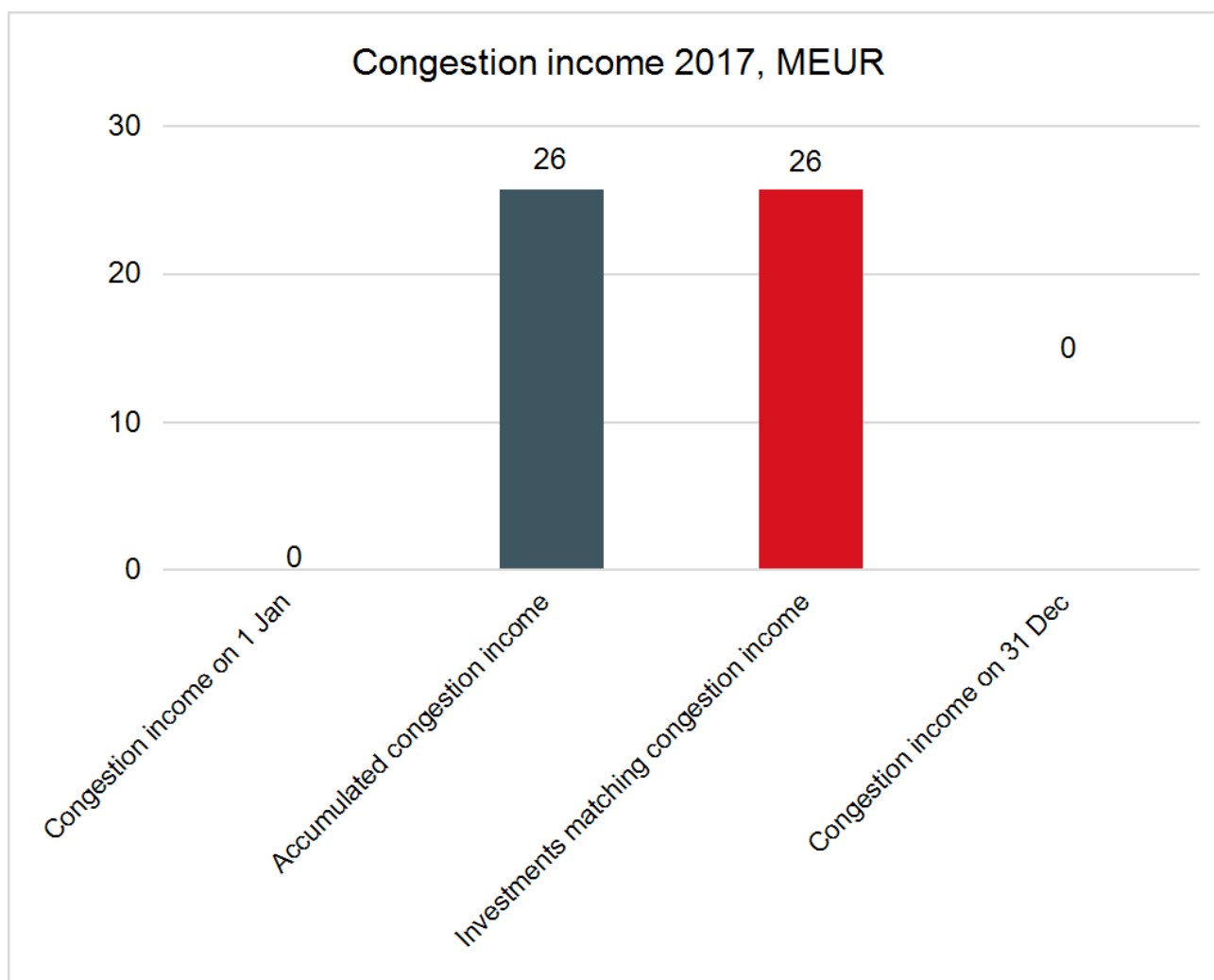


Grid assets are recognised at fair value for the purposes of the company’s regulatory balance sheet, as described above. The fair value of the transmission network assets (adjusted replacement cost) is calculated by adding up the adjusted replacement costs for each grid component; these are calculated 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 of the grid component and its mean lifetime data.



### 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:  $\text{congestion income [€/h]} = \text{transmission volume in the day-ahead markets [MW]} * \text{area price difference [€/MWh]}$ . 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 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.



The congestion income from 2017 was used for the Hirvisuo–Pyhänselkä transmission network investment, which promotes the cross-border transmission from northern Sweden.



**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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# Tangible and intangible assets

## 5.2 Tangible and intangible assets

11. PROPERTY, PLANT AND EQUIPMENT, € 1,000	2017	2016
<b>Land and water areas</b>		
Cost at 1 Jan	15,701	15,349
Increases 1 Jan - 31 Dec	274	393
Decreases 1 Jan - 31 Dec		-41
<b>Cost at 31 Dec</b>	<b>15,974</b>	<b>15,701</b>
<b>Carrying amount 31 Dec</b>	<b>15,974</b>	<b>15,701</b>
<b>Buildings and structures</b>		
Cost at 1 Jan	254,823	220,357
Increases 1 Jan - 31 Dec	24,614	34,634
Decreases 1 Jan - 31 Dec	-5	-168
<b>Cost at 31 Dec</b>	<b>279,432</b>	<b>254,823</b>
Accumulated depreciation 1 Jan	-61,108	-53,077
Decreases, depreciation 1 Jan - 31 Dec	5	73
Depreciation 1 Jan - 31 Dec	-8,538	-8,103
<b>Carrying amount 31 Dec</b>	<b>209,792</b>	<b>193,716</b>
<b>Machinery and equipment</b>		
Cost at 1 Jan	1,115,218	1,053,479
Increases 1 Jan - 31 Dec	31,992	61,839
Decreases 1 Jan - 31 Dec	-718	-100
<b>Cost at 31 Dec</b>	<b>1,146,492</b>	<b>1,115,218</b>
Accumulated depreciation 1 Jan	-536,937	-485,852
Decreases, depreciation 1 Jan - 31 Dec	718	8
Depreciation 1 Jan - 31 Dec	-48,224	-51,094
<b>Carrying amount 31 Dec</b>	<b>562,049</b>	<b>578,281</b>
<b>Transmission lines</b>		
Cost at 1 Jan	1,307,111	1,238,261



Increases 1 Jan - 31 Dec	-1,658	74,414
Decreases 1 Jan - 31 Dec	-433	-5,565
<b>Cost at 31 Dec</b>	<b>1,305,020</b>	<b>1,307,111</b>
Accumulated depreciation 1 Jan	-482,073	-448,647
Decreases, depreciation 1 Jan - 31 Dec	184	3,944
Depreciation 1 Jan - 31 Dec	-36,894	-37,370
<b>Carrying amount 31 Dec</b>	<b>786,237</b>	<b>825,038</b>
<b>Other property, plant and equipment</b>		
Cost at 1 Jan	23,721	22,756
Increases 1 Jan - 31 Dec	424	966
<b>Cost at 31 Dec</b>	<b>24,145</b>	<b>23,721</b>
Accumulated depreciation 1 Jan	-16,119	-15,208
Depreciation 1 Jan - 31 Dec	-966	-911
<b>Carrying amount 31 Dec</b>	<b>7,060</b>	<b>7,602</b>
<b>Prepayments and purchases in progress</b>		
Cost at 1 Jan	59,404	120,816
Increases 1 Jan - 31 Dec	94,299	116,534
Transfers to other tangible and intangible assets 1 Jan - 31 Dec	-70,047	-177,946
<b>Cost at 31 Dec</b>	<b>83,656</b>	<b>59,404</b>
<b>Carrying amount 31 Dec</b>	<b>83,656</b>	<b>59,404</b>
<b>Capitalised interest</b>		
Cost at 1 Jan	11,442	9,426
Increases 1 Jan - 31 Dec	1,223	2,016
<b>Cost at 31 Dec</b>	<b>12,664</b>	<b>11,442</b>
Accumulated depreciation 1 Jan	-1,021	-676
Depreciation on capitalised interest 1 Jan - 31 Dec	-412	-345
<b>Carrying amount 31 Dec</b>	<b>11,232</b>	<b>10,421</b>
<b>Carrying amount 31 Dec</b>	<b>94,888</b>	<b>69,825</b>
<b>Property, plant and equipment</b>	<b>1,675,999</b>	<b>1,690,162</b>

**12. INTANGIBLE ASSETS, €1,000**
**2017**
**2016**

<b>Land use rights</b>		
Cost at 1 Jan	94,507	92,749
Increases 1 Jan - 31 Dec	706	2,022
Decreases 1 Jan - 31 Dec	-126	-263
<b>Cost at 31 Dec</b>	<b>95,087</b>	<b>94,507</b>
<b>Carrying amount 31 Dec</b>	<b>95,087</b>	<b>94,507</b>
<b>Other intangible assets</b>		
Cost at 1 Jan	31,644	30,853
Increases 1 Jan - 31 Dec	4,974	848
Decreases 1 Jan - 31 Dec	-485	-57
<b>Cost at 31 Dec</b>	<b>36,133</b>	<b>31,644</b>
Accumulated depreciation 1 Jan	-29,571	-28,173
Depreciation 1 Jan - 31 Dec	-1,855	-1,398
<b>Carrying amount 31 Dec</b>	<b>4,707</b>	<b>2,073</b>
<b>Carrying amount 31 Dec</b>	<b>99,795</b>	<b>96,580</b>

Land use rights are not depreciated but tested annually for impairment in connection with the testing of goodwill. No need for impairment has been noted as a result of the testing.

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 1,863.7 million in net assets, which includes land use rights and goodwill, the book value of the asset items has not decreased.



## Accounting principles

### Propert, 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 commodity 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 40 years**  
**Substation buildings and separate buildings 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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# Lease agreements

The lease agreements of the Group mainly relate to office premises. 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.

In addition to real estate, the Group has additionally leased assets such as several land areas under substations and transmission lines and some 110 kilovolt transmission lines and circuit breaker bays.

13. LEASE AGREEMENTS, € 1,000	2017	2016
<b>Rental obligations from lease agreements:</b>		
In one year	4079	3536
In more than one year and less than five years	14279	13676
In more than five years	13913	14977
<b>Total</b>	<b>32270</b>	<b>32189</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. In accordance with the principles of standard IAS 17 Leases, those leases which transfer substantially all the risks and rewards incident to ownership to the company are classified as finance leases. The company has not leased tangible or intangible assets using finance leases.

### Adoption of the IFRS 16 Leases standard, effective 1 Jan 2019

The company has started an assessment of the impacts of the adoption of the IFRS 16 standard. From the point of view of a lessee, the standard eliminates the current classification of leases as either operating leases or finance leases, and instead requires the recognition of practically all lease agreements as assets (right-of-use of the leased property) and the obligation of lease payments as a financial liability. Exceptions are possible for leases concerning short-term asset items of insignificant value.

Consequently, the standard will affect both Fingrid's corporate balance sheet and income statement. The rental expenses now included in other operating expenses will be replaced by interest and depreciation to be recognised under operating profit. The liability will be amortized using the effective interest rate method, where the relative amount of interest expenditure decreases along with the loan capital. The expenditure is thus recognised in the income statement over the lease term according to a front-end-loaded schedule.

The cash flow from operating activities will increase, as the capital repayment in rental payments will be classified as cash flow from financing activities. The interest component will continue to be disclosed in the cash flow from operating activities.

## 6 Strong Financial Position

- 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. The management of electricity price risk is described in chapter 4.7.

# Capital management

Equity and liabilities as shown in the balance sheet are managed by the company as capital. The principal aim of Fingrid's capital management is to ensure that the company is capable of uninterrupted operations and can rapidly recover from any exceptional circumstances. Additional key goals include maintaining an optimal 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 has not set specific financial ratio targets for capital management, but instead monitors and controls the overall capital structure based on credit ratings and their underlying parameters.

The company's credit rating remained high in 2017. This reflects the company's strong overall financial situation and debt service capacity. Fingrid has credit rating service agreements with S&P Global (S&P) and Fitch Ratings (Fitch).

- On 31 October 2017, S&P maintained the rating for Fingrid Oyj's unsecured senior debt and long-term company rating at 'AA-' and the short-term company rating at 'A-1+', with a stable outlook.
- On 5 December 2017, Fitch affirmed the rating for Fingrid Oyj's unsecured senior debt to 'AA-', the long-term company rating to 'A+', and 'F1' for the short-term company rating, with a stable outlook. The rating received by Fingrid was, at the time of issuing, the highest valid rating given by Fitch to any European regulated TSO.

The company aims to maintain a credit rating of at least 'A-'. The credit rating target and criteria guide financing activities.

# 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:

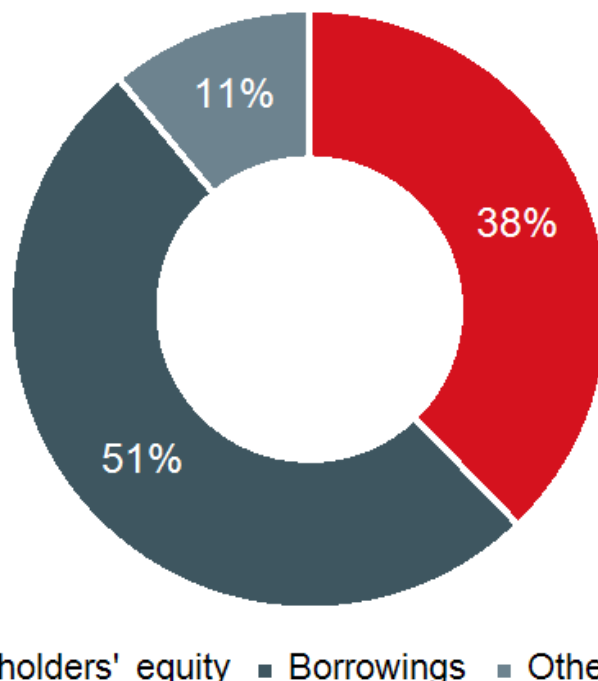
- Protecting shareholder value by securing the financing required for the company's business operations, by hedging against the main financial risks and by minimising financial costs within the risk limits;
- Maintaining adequate liquidity even in unexpected situations;
- Long-term financing from diverse 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 37.8% and that of liabilities 62.2% in 2017. Equity according to the regulatory balance sheet amounted to 61.4% and the corresponding liabilities to 38.6% of regulatory balance sheet total in 2017.



## Capital structure 2017



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 and financing principles

The Board of Directors of Fingrid Oyj approves the Corporate Finance and Financing 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 and Financing 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 and Financing 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.

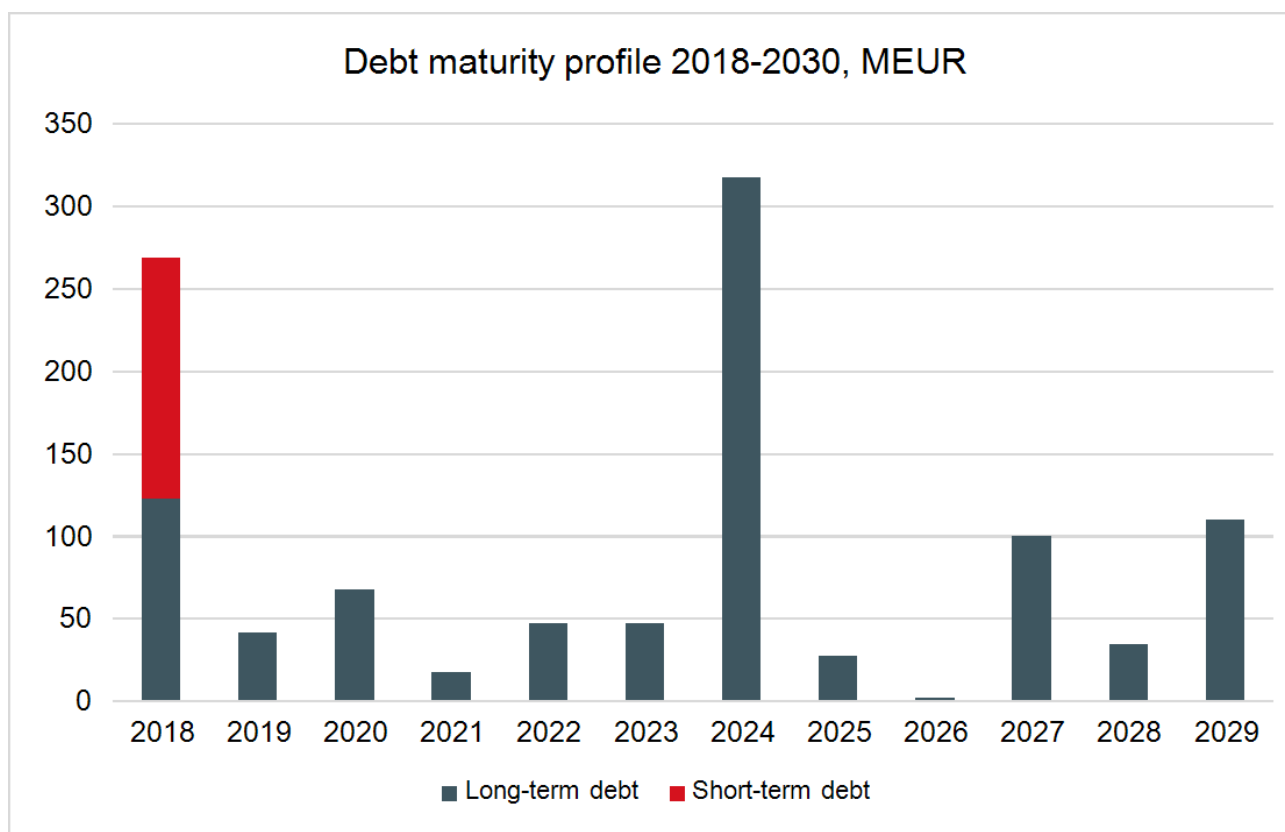
Level 3: inputs are not publicly quoted and are unobservable market parameters.

# Financial liabilities, financial costs and managing the financial risks of liabilities

The company takes advantage of the possibilities offered by its credit ratings at any given time on the international and domestic debt capital and money markets. Market-based and diversified financing is sought from several sources aiming at 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. In 2017, the company issued a 10 year EUR 100 million green bond.

14. BORROWINGS, €1,000	2017			2016			Hierarchy level
	Fair value	Balance sheet value	%	Fair value	Balance sheet value	%	
<b>Non-current</b>							
Bonds	766,069	683,863		791,948	691,662		Level 2
Loans from financial institutions	138,942	129,541		163,895	151,203		Level 2
	<b>905,011</b>	<b>813,404</b>	75 %	<b>955,843</b>	<b>842,866</b>	76 %	
<b>Current</b>							
Bonds	102,112	101,587		125,885	123,074		Level 2
Loans from financial institutions	23,817	22,474		23,246	21,662		Level 2
Other loans/Commercial papers (international and domestic)	145,116	145,243		120,059	120,128		Level 2
	271,045	269,304	25 %	269,190	264,865	24 %	
<b>Total</b>	<b>1,176,057</b>	<b>1,082,707</b>	100 %	<b>1,225,033</b>	<b>1,107,730</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.



15. BONDS INCLUDED IN BORROWINGS, €1,000					2017	2016
Currency	Nominal value	Maturity	Interest	Balance sheet value		
EUR	20,000	42,836.00	floating rate		20,000	
EUR	25,000	42,836.00	floating rate		25,000	
EUR	30,000	42,901.00	3.07%		30,000	
EUR	50,000	44,094.00	floating rate	50,000	50,000	
EUR	30,000	44,823.00	floating rate	30,000	30,000	
EUR	30,000	45,180.00	2.71%	30,000	30,000	
EUR	300,000	45,385.00	3.50%	299,089	298,961	
EUR	100,000	46,714.00	1.13%	99,286		
EUR	25,000	46,839.00	2.71%	25,000	25,000	
EUR	10,000	47,008.00	3.27%	10,000	10,000	
EUR	80,000	47,232.00	2.95%	80,000	80,000	

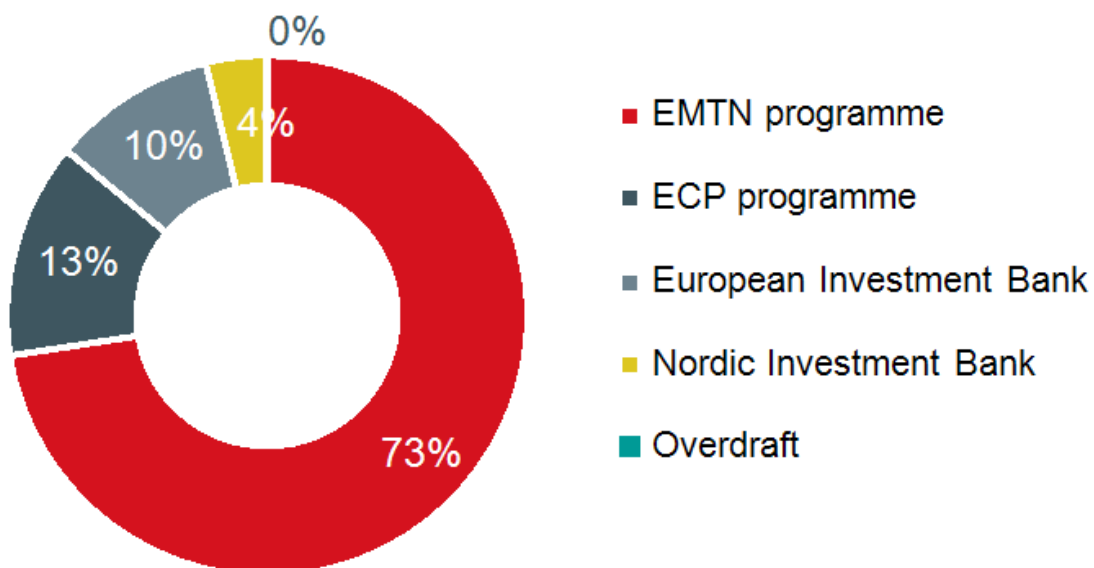
EUR	30,000	47,268.00	2.89%	30,000	30,000
				653,376	628,961
JPY	500,000	42,908.00	1.28%		4,052
					4,052
NOK	200,000	42,836.00	5.16%		22,011
NOK	200,000	43,049.00	5.12%		22,011
NOK	200,000	43,781.00	5.37%	20,325	22,011
NOK	100,000	45,916.00	4.31%	10,162	11,006
				30,487	77,039
SEK	1,000,000	43,423.00	floating rate	101,587	104,685
				101,587	104,685
Bonds, long-term total				683,863	691,663
Bonds, short-term total				101,587	123,074
<b>Total</b>				<b>785,449</b>	<b>814,737</b>

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

- For long-term financing, the company has a Medium Term Note Programme (“EMTN Programme”), totalling EUR 1.5 billion.
- Fingrid has a 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).

The graph below illustrates Fingrid’s various sources of debt financing. Fingrid obtains debt financing mainly from the international debt capital markets.

### Total debt by source 2017



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.

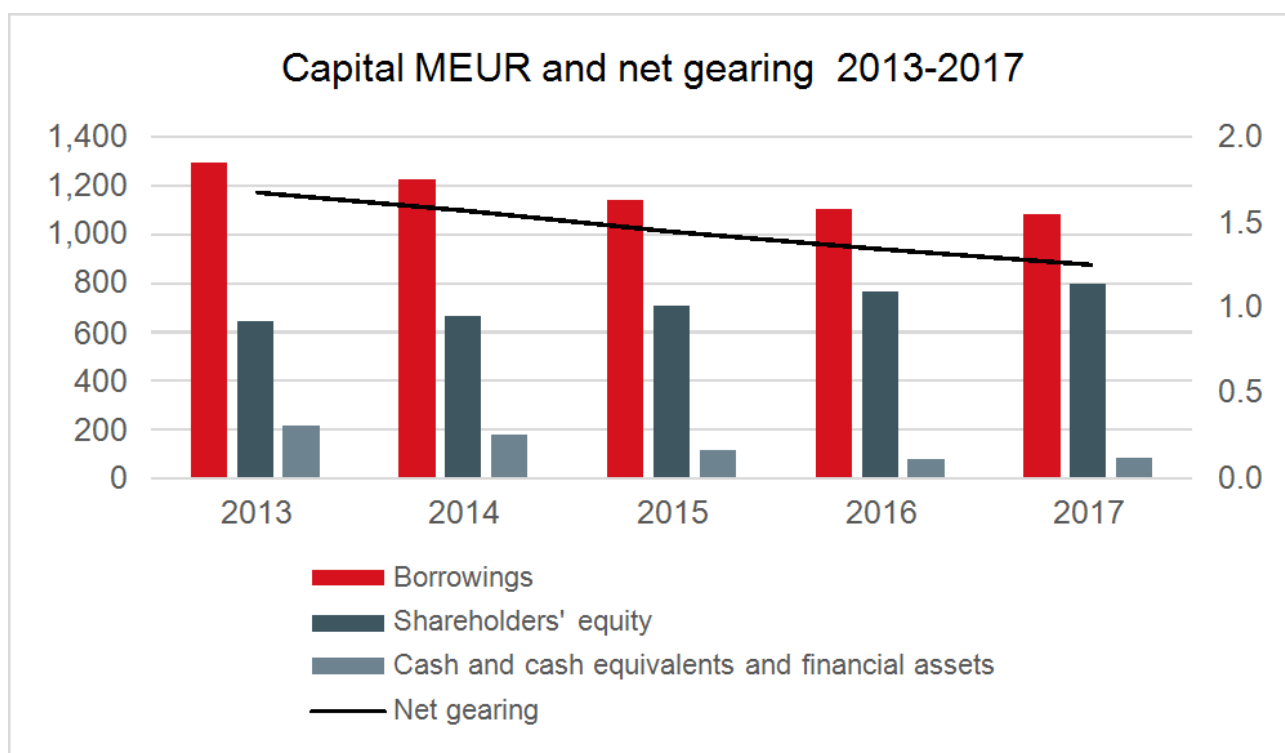
#### 16. RECONCILIATION OF DEBT, €1,000

	Borrowings due within 1 year	Borrowings due after 1 year	Total
<b>Debt on 1 Jan 2016</b>	<b>236,217</b>	<b>907,232</b>	<b>1,143,448</b>
Cash flow from financing activities	-119,917	80,000	-39,917
Exchange rate adjustments	-1,192	5,243	4,051
Other changes not involving a payment transaction	25	124	149
Transfer to short-term loans	149,732	-149,732	
<b>Debt on 31 Dec 2016</b>	<b>264,865</b>	<b>842,866</b>	<b>1,107,731</b>
Cash flow from financing activities	-123,806	100,000	-23,806
Exchange rate adjustments	-842	210	-632
Other changes not involving a payment transaction		-586	-586
Transfer to short-term loans	129,086	-129,086	
<b>Debt on 31 Dec 2017</b>	<b>269,304</b>	<b>813,404</b>	<b>1,082,707</b>

Financial assets recognised in the income statement at fair value are liquid investments traded on active markets.

Reconciliation of net debt, € 1,000	2017	2016
Cash in hand and cash equivalents	20,303	21,939
Financial assets recognised in the income statement at fair value	63,465	57,790
Borrowings - repayable within one year	269,304	264,865
Borrowings - repayable after one year	813,404	842,866
<b>Net debt</b>	<b>998,939</b>	<b>1,028,002</b>

Net debt is the difference between the company's debt and its cash in hand and cash equivalents



Interest income and costs on loans and other receivables are as follows:

17. INTEREST INCOME AND EXPENSES FROM LOANS AND OTHER RECEIVABLES, €1,000	2017	2016
Interest income on held-for-trading financial assets	312	500
Interest income on cash, cash equivalents and bank deposits	166	189

Dividend income	5	5
	483	694
Interest expenses on borrowings	-21,843	-27,017
Net interest expenses on interest rate and foreign exchange derivatives	4,752	7,261
Gains from measuring derivative contracts at fair value	656	6,016
Losses from measuring derivative contracts at fair value	-6,477	-5,346
Net foreign exchange gains and losses from borrowings, derivatives and FX-accounts	-115	-67
Other finance costs	-1,457	-2,248
	-24,484	-21,401
Capitalised finance costs, borrowing costs; at a capitalisation rate of 2 % (note 11)	1,223	2,016
<b>Total</b>	<b>-22,778</b>	<b>-18,691</b>

### Managing the market risks of debt

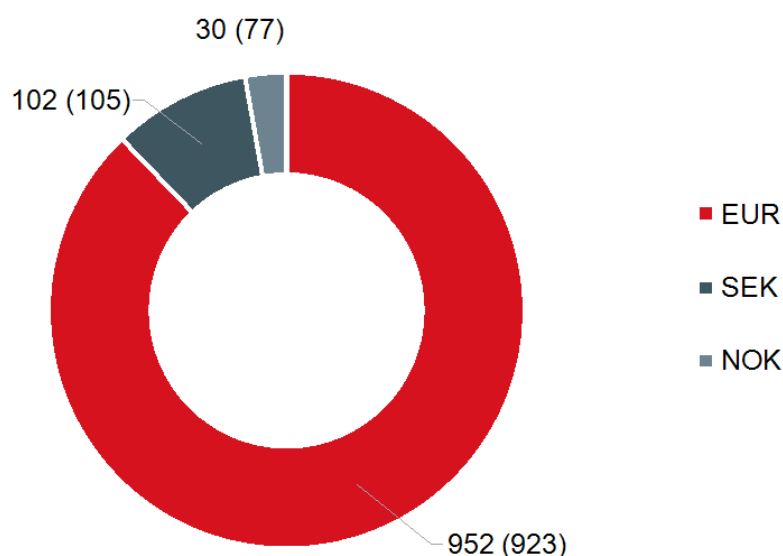
Fingrid's debts are issued in both fixed and floating interest rates and in several currencies. They thus expose Fingrid's cash flow to interest rate and exchange rate risks. Fingrid uses derivative contracts to hedge against these risks. Fingrid generally holds issued bonds to maturity and thus does 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 unhedged for reasons of cost-effectiveness.

### Transaction risk



Total debt in original currency 2017, MEUR

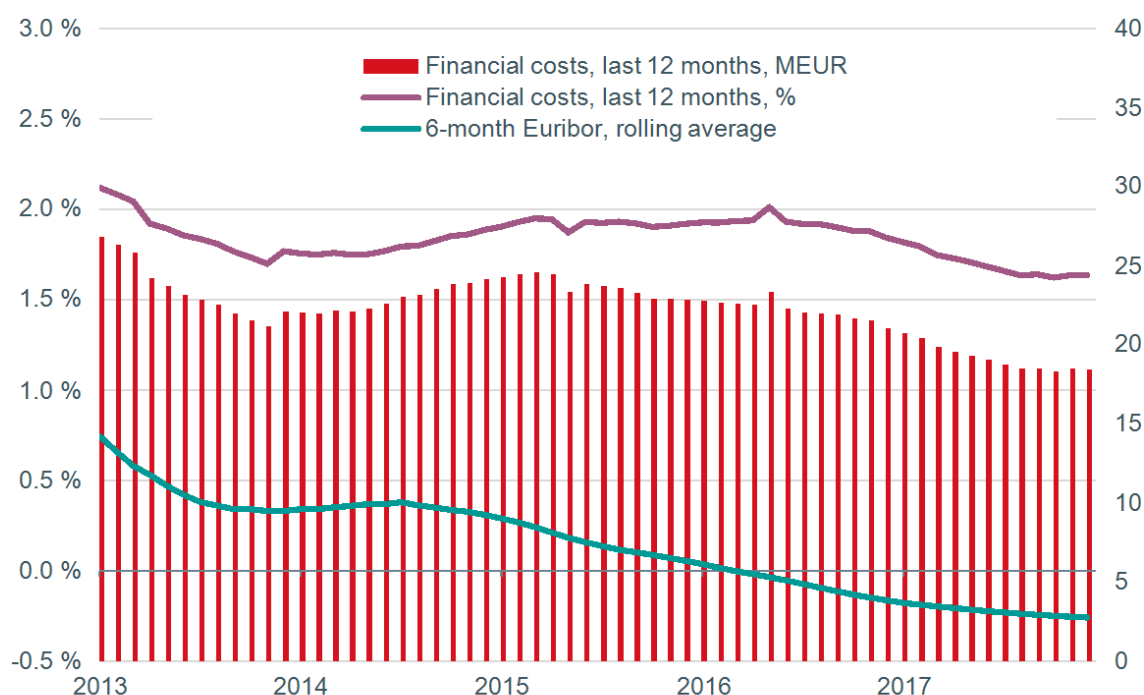


The company issues bonds in the international and domestic money and debt capital markets. The company's loan portfolio is spread across euro and non-euro currencies, and the total debt portfolio and the related interest rate flows are hedged against the currency risk. The currency risk for each bond is 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 sensitivity analysis of changes in the foreign exchange rate is measured as a 10 per cent change between the euro and the currency in question. The most important foreign currency for the Group is the Swedish krona (SEK). If the rate of SEK on 31 December 2017 had been 10% lower/higher than the euro, with all other variables remaining unchanged, the profit after taxes would have been EUR 1,000 lower/EUR 1,000 higher (2016: EUR 1,000 higher/EUR 1,000 lower). The main impact on the net profit is caused by the change in the fair value of derivatives. The impact of SEK-denominated forward curve and change in exchange rate are taken into account in the sensitivity analysis.

Financial costs 2013-2017



**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, and 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) together with company’s net debt interest rate risk through a regulatory model specified by the Energy Authority.

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 always makes a separate decision on the hedging of operational interest rate risks. The interest rate risk included in business operations was not hedged in 2017. 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 basic principle is to keep the interest rate exposure of the company’s loan portfolio linked to floating interest rates, targeting at most an average interest refixing period of 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 exposure 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 expenditure will amount to no more than EUR 20 (20) 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 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.

$$WACC_{post-tax} = C_E \times \frac{E}{E+D} + C_D \times (1 - ctr) \times \frac{D}{E+D}$$

WACC<sub>post-tax</sub> = reasonable rate of return after corporate tax  
 C<sub>E</sub> = reasonable cost of equity  
 C<sub>D</sub> = 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<sub>D</sub> = R<sub>r</sub> + DP**

R<sub>r</sub> = risk-free interest rate  
 DP = risk premium of debt

**C<sub>E</sub> = R<sub>r</sub> + βlevered × (R<sub>m</sub> – R<sub>r</sub>) + LP**

R<sub>r</sub> = 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.

$$WACC_{\text{pre-tax}} = \frac{WACC_{\text{post-tax}}}{(1 - ctr)}$$

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:

$$WACC_{\text{pre-tax}} = \frac{C_E \times 0,5}{(1 - ctr)} + C_D \times 0,5$$

$$R_{k,\text{pre-tax}} = WACC_{\text{pre-tax}} \times (E + D)$$

$R_{k,\text{pre-tax}}$  = 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

Reasonable cost of equity	Variable	Value used
$C_E = R_f + \beta_{\text{debt-free}} \times (1 + (1 - t) \times D/E) \times (R_m - R_f) + LP$ $C_E = \text{Finland's 10y govt. bond} + 0.4 \times (1 + (1 - 20\%) \times 50/50) \times 5\% + 0.6\%$ $C_E = \text{Finland's 10y government bond} + 4.2\%$	Risk-free interest rate ( $R_f$ )	Higher: a) 10-year daily average of Finland's 10y government bond b) Daily average of previous year April–September of Finland's 10y government bond rate
Reasonable cost of liabilities	Asset beta ( $\beta_{\text{debt-free}}$ )	0.4
$C_D = R_f + DP$ $C_D = \text{Finland's 10y government bond} + 1.4\%$	Market risk premium ( $R_m - R_f$ )	5.0%
WACC (pre-tax)	Liquidity premium (LP)	0.6%
$WACC_{\text{post-tax}} = C_E \times 50 / 100 + C_D \times (1 - t) \times 50 / 100$ $WACC_{\text{post-tax}} = \text{Finland's 10y government bond} \times 0.9 + 2.66\%$ $WACC_{\text{pre-tax}} = \text{Finland's 10y government bond} \times 1.125 + 3.33\%$	Capital structure (D/E)	50/50
	Risk premium of debt (DP)	1.4%*
	Corporate income tax rate (t)	20%

\*Will be updated by end of 2019 for regulatory period 2020-2023 based on Bloomberg's utility sector A-BBB rated companies' fixed income indices

## Liquidity risk and refinancing 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 110% of the refinancing needs for the next 12 months can be covered by liquid assets (cash and cash equivalents, and financial assets recognised in the income statement at fair value) and available long-term committed credit lines.

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, both of them 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. DEBT REPAYMENTS, INTEREST PAYMENTS AND PAYMENTS AND RECEIVABLES UNDER DERIVATIVE CONTRACTS IN CASH, €1,000**

<b>31 Dec 2017</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023-</b>	<b>Total</b>
Bonds	- repayments	101,587	20,325	50,000		30,000	583,538	<b>785,449</b>
	- interests	18,635	18,404	17,559	17,416	17,386	57,364	<b>146,765</b>
Loans from financial institutions	- repayments	21,662	21,662	17,662	17,662	17,662	54,892	<b>151,203</b>
	- interests	2,848	2,512	2,317	2,038	1,695	2,691	<b>14,102</b>
Commercial papers	- repayments	145,000						<b>145,000</b>
Overdraft	- payments	811						<b>811</b>
Currency swaps	- payments	107,753	23,928	97	140	174	13,193	<b>145,286</b>
Interest rate swaps	- payments	2,355	1,105	908	1,365	1,712	10,625	<b>18,070</b>
Forward contracts	- payments	1,270						<b>1,270</b>
<b>Total</b>		<b>401,923</b>	<b>87,936</b>	<b>88,544</b>	<b>38,622</b>	<b>68,629</b>	<b>722,302</b>	<b>1,407,956</b>
Currency swaps	- receivables	103,397	21,854	438	438	438	11,476	<b>138,041</b>
Interest rate swaps	- receivables	5,181	5,014	4,584	4,185	3,953	10,846	<b>33,764</b>
Forward contracts	- receivables	1,167						<b>1,167</b>
<b>Total</b>		<b>109,745</b>	<b>26,868</b>	<b>5,022</b>	<b>4,622</b>	<b>4,391</b>	<b>22,323</b>	<b>172,972</b>
<b>Total</b>		<b>292,178</b>	<b>61,068</b>	<b>83,522</b>	<b>34,000</b>	<b>64,238</b>	<b>699,979</b>	<b>1,234,984</b>
<b>31 Dec 2016</b>		<b>2,017</b>	<b>2,018</b>	<b>2,019</b>	<b>2,020</b>	<b>2,021</b>	<b>2022-</b>	<b>Total</b>
Bonds	- repayments	123,074	104,685	22,011	50,000		514,967	<b>814,737</b>
	- interests	20,874	17,555	17,361	16,398	16,247	68,012	<b>156,447</b>
Loans from financial institutions	- repayments	21,662	21,662	21,662	17,662	17,662	72,554	<b>172,866</b>
	- interests	3,264	2,859	2,572	2,305	1,999	4,383	<b>17,382</b>

Commercial papers	- repayments	120,000							<b>120,000</b>
Currency swaps	- payments	53,453	107,833	23,967	87	118	13,342		<b>198,800</b>
Interest rate swaps	- payments	2,287	2,204	845	269	370	2,204		<b>8,180</b>
Forward contracts	- payments	2,214							<b>2,214</b>
<b>Total</b>		<b>346,829</b>	<b>256,798</b>	<b>88,419</b>	<b>86,721</b>	<b>36,397</b>	<b>675,463</b>		<b>1,490,626</b>
Currency swaps	- receivables	49,434	110,878	22,394	449	449	12,209		<b>195,812</b>
Interest rate swaps	- receivables	4,933	4,015	3,859	3,662	3,371	8,381		<b>28,221</b>
Forward contracts	- receivables	2,271							<b>2,271</b>
<b>Total</b>		<b>56,638</b>	<b>114,893</b>	<b>26,253</b>	<b>4,111</b>	<b>3,820</b>	<b>20,590</b>		<b>226,304</b>
<b>Total</b>		<b>290,191</b>	<b>141,905</b>	<b>62,165</b>	<b>82,610</b>	<b>32,577</b>	<b>654,873</b>		<b>1,264,322</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 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.

# Cash and cash equivalents and other financial assets

## 6.4 Cash and cash equivalents and other financial assets

19. CASH AND CASH EQUIVALENTS, €1,000	2017	2016
Bank deposits	10,000	10,000
Cash assets and bank account balances	10,303	11,939
<b>Total</b>	<b>20,303</b>	<b>21,939</b>

20. FINANCIAL ASSETS RECOGNISED IN THE INCOME STATEMENT AT FAIR VALUE, €1,000	2017	2016	Hierarchy level
Commercial papers	6,499	12,998	Level 2
Short-term money market funds	56,966	44,792	Level 1
<b>Total</b>	<b>63,465</b>	<b>57,790</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.

#### Held-for-trading financial assets

This category consists of the financial assets held specifically for trading purposes. The financial assets classified in this category include short-term money market securities (certificates of deposit, commercial papers and municipality bills) and current investments in short-term fixed income funds. 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**

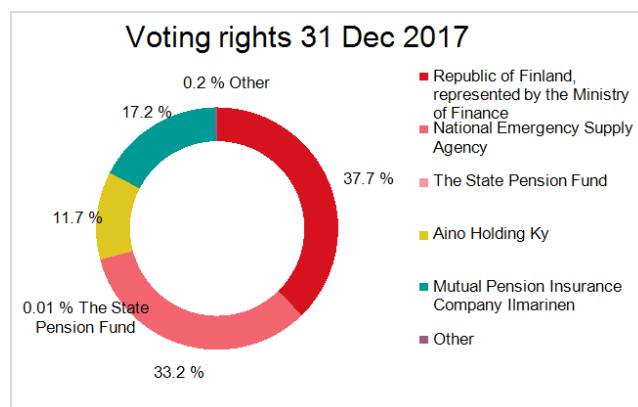
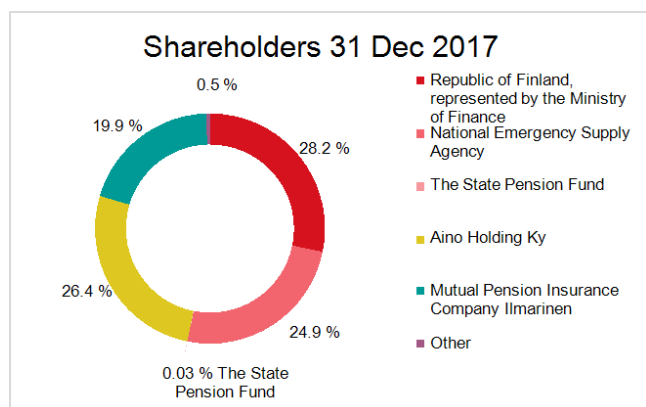
Fingrid does not have financing assets classified as available-for-sale investments.

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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# 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 BY CATEGORY 31 DEC 2017	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>3,325.00</b>	<b>100.00</b>	<b>100.00</b>

Shareholders, 31 Dec 2017	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</b>	<b>100</b>
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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 2016. 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. Series B shares have no right to receive any other dividend.

#### **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 posted 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>

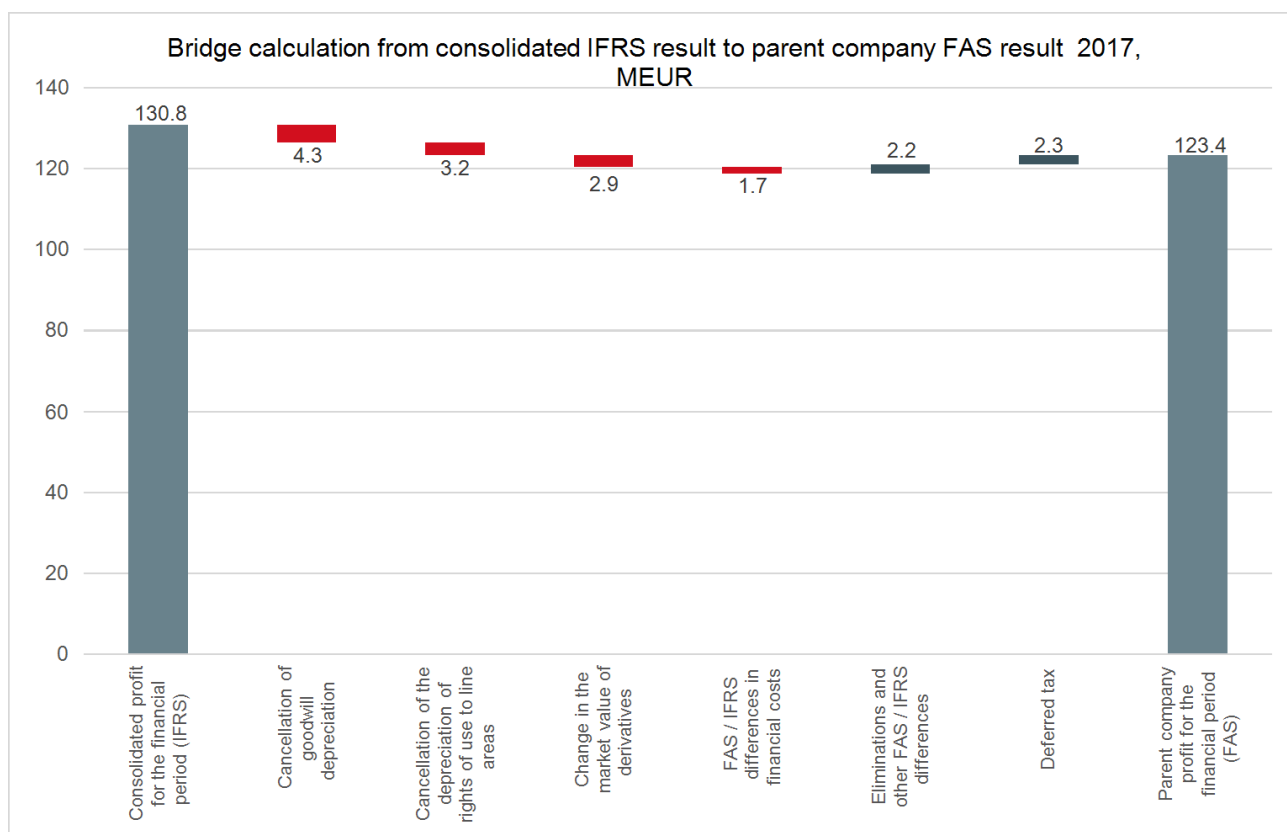
Fingrid's dividends are distributed such that the shareholders receive a reasonable return on their invested capital, but also such that the company's financial position is maintained.

Fingrid Oyj's distributable funds in the financial statements total EUR 201,312,662.75. In 2017, EUR 98.0 million was paid in dividends (EUR 90.0). Since the closing date, the Board of Directors has proposed that a dividend of EUR 68,470.00 at maximum per share will be paid for Series A shares, and EUR 25,050.00 at maximum for Series B shares (2016: A shares 37,536.09, B shares 16,038.49) for a total of EUR 173.5 (98.0) million at maximum. The dividends shall be paid in two instalments. The first instalment of EUR 48,700.00 for each Series A share and EUR 17,820.00 for each Series B share, totalling EUR 123,420,140.00 in dividends, shall be paid on 4 April 2018. The second instalment of EUR 19,770.00 at maximum per share for each Series A share and EUR 7,230.00 at maximum per share for each Series B share, totalling EUR 50,097,870.00 at maximum in dividends, shall be paid subject to the Board's decision after the half-year report has been confirmed, based on the authorisation given to the Board in the Annual General Meeting. The Board of Directors has the right to decide, based on the authorisation granted to it, on the payment of dividends after the half-year report has been confirmed and it has assessed the company's solvency, financial position and financial development. The dividends that have been 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.

# 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					
Balance sheet item 31 Dec 2017	Assets/ liabilities recognised in income statement at fair value	Available- for-sale financial assets	Financial assets/ liabilities measured at amortised cost	Total	Note
<b>Non-current financial assets</b>					
Interest rate and currency derivatives	25097			25097	23
Electricity derivatives	2665			2665	23
Loan receivables			4000	4000	
<b>Current financial assets</b>					
Interest rate and currency derivatives	5			5	23
Electricity derivatives	240			240	23
Trade receivables and other receivables			90330	90330	3
Financial assets recognised in the income statement at fair value	63465			63465	20
Cash in hand and cash equivalents			20303	20303	19
<b>Financial assets total:</b>	<b>91472</b>		<b>114633</b>	<b>206105</b>	
<b>Non-current financial liabilities:</b>					
Borrowings			813404	813404	14
Interest rate and currency derivatives	12387			12387	23
Electricity derivatives					23
<b>Current financial liabilities:</b>					
Borrowings			269304	269304	14
Interest rate and currency derivatives	6945			6945	23
Electricity derivatives	1244			1244	23
Trade payables and other liabilities			46818	46818	7

<b>Financial liabilities total</b>	<b>20576</b>	<b>1129526</b>	<b>1150102</b>		
	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 2016</b>					
<b>Non-current financial assets</b>					
Available-for-sale investments		101		101	
Interest rate and currency derivatives	29403			29403	23
Electricity derivatives	254			254	23
Loan receivables			4000	4000	
<b>Current financial assets</b>					
Interest rate and currency derivatives	1475			1475	23
Electricity derivatives	1385			1385	23
Trade receivables and other receivables			79887	79887	3
Financial assets recognised in the income statement at fair value	57790			57790	20
Cash in hand and cash equivalents			21939	21939	19
<b>Financial assets total:</b>	<b>90308</b>	<b>101</b>	<b>105826</b>	<b>196235</b>	
<b>Non-current financial liabilities:</b>					
Borrowings			842,866	842,866	14
Interest rate and currency derivatives	13,196			13,196	23
Electricity derivatives	5,371			5,371	23
<b>Current financial liabilities:</b>					
Borrowings			264,865	264,865	14
Interest rate and currency derivatives	5,072			5,072	23
Electricity derivatives	2,786			2,786	23
Trade payables and other liabilities			39,666	39,666	7
<b>Financial liabilities total</b>	<b>26,426</b>		<b>1,147,397</b>	<b>1,173,823</b>	

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 7.6 million in 2017 (15.8). Fingrid uses collaterals to cover the market value of

electricity futures. 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 hedging the loan portfolio, and purchased cap options 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 to hedge the price risk of future loss power purchases.

The table below includes all of the Group's derivatives.

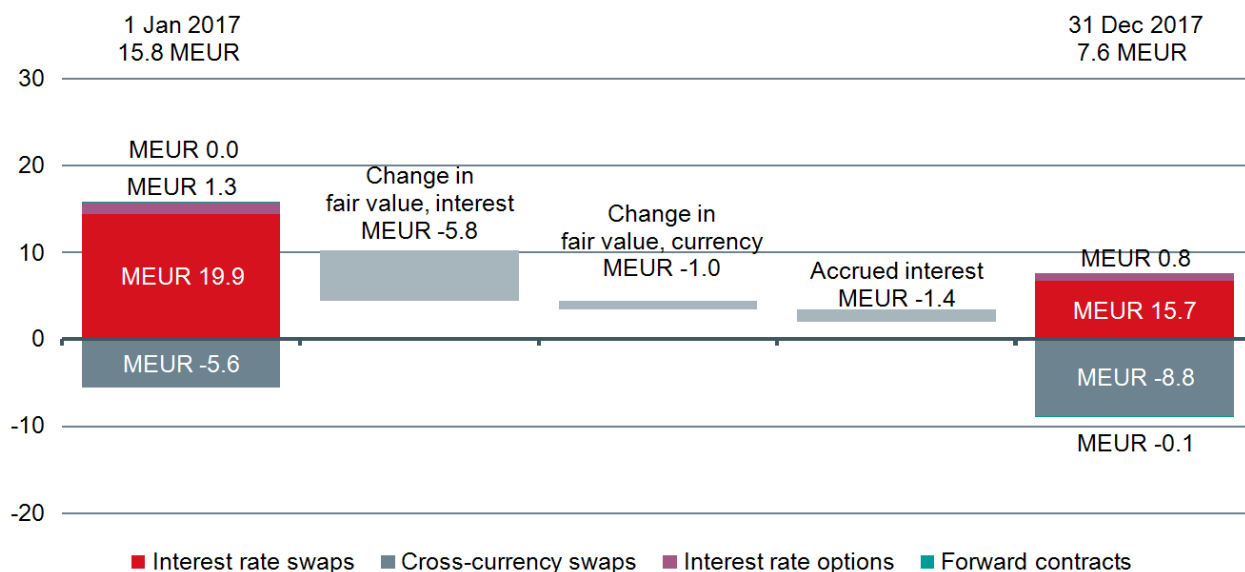
23. DERIVATIVE INSTRUMENTS, € 1,000									
	2017				2016				Hierarchy level
Interest rate and currency derivatives	Fair value pos.	Fair value neg.	Net fair value	Nominal value	Fair value pos.	Fair value neg.	Net fair value	Nominal value	
	31.12.17	31.12.17	31.12.17	31.12.17	31.12.16	31.12.16	31.12.16	31.12.16	
Cross-currency swaps	3,837	-12,660	-8,822	143,544	6,930	-12,487	-5,558	196,396	Level 2
Forward contracts		-123	-123	1,167	46		46	2,271	Level 2
Interest rate swaps	23,209	-7,487	15,722	430,000	26,667	-6,725	19,943	360,000	Level 2
Bought interest rate options	787		787	571,587	1,350		1,350	514,685	Level 2
<b>Total</b>	<b>27,833</b>	<b>-20,270</b>	<b>7,563</b>	<b>1,146,298</b>	<b>34,993</b>	<b>-19,212</b>	<b>15,781</b>	<b>1,073,352</b>	
Electricity derivatives	Fair value pos.	Fair value neg.	Net fair value	Volume TWh	Fair value pos.	Fair value neg.	Net fair value	Volume TWh	
	31.12.17	31.12.17	31.12.17	31.12.17	31.12.16	31.12.16	31.12.16	31.12.16	
Electricity future contracts. NASDAQ OMX Commodities	1,010	-135	875	1.13					Level 1
Electricity forward contracts. NASDAQ OMX Commodities	2,905	-1,244	1,661	3.75	1,640	-8,157	-6,518	4.07	Level 1
<b>Total</b>	<b>3,915</b>	<b>-1,379</b>	<b>2,536</b>	<b>4.88</b>	<b>1,640</b>	<b>-8,157</b>	<b>-6,518</b>	<b>4.07</b>	

The net fair value of derivatives indicates the realised profit/loss if they had been closed on the last trading day of 2017. 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 2017.



**Change in the value of financial derivatives 2017**

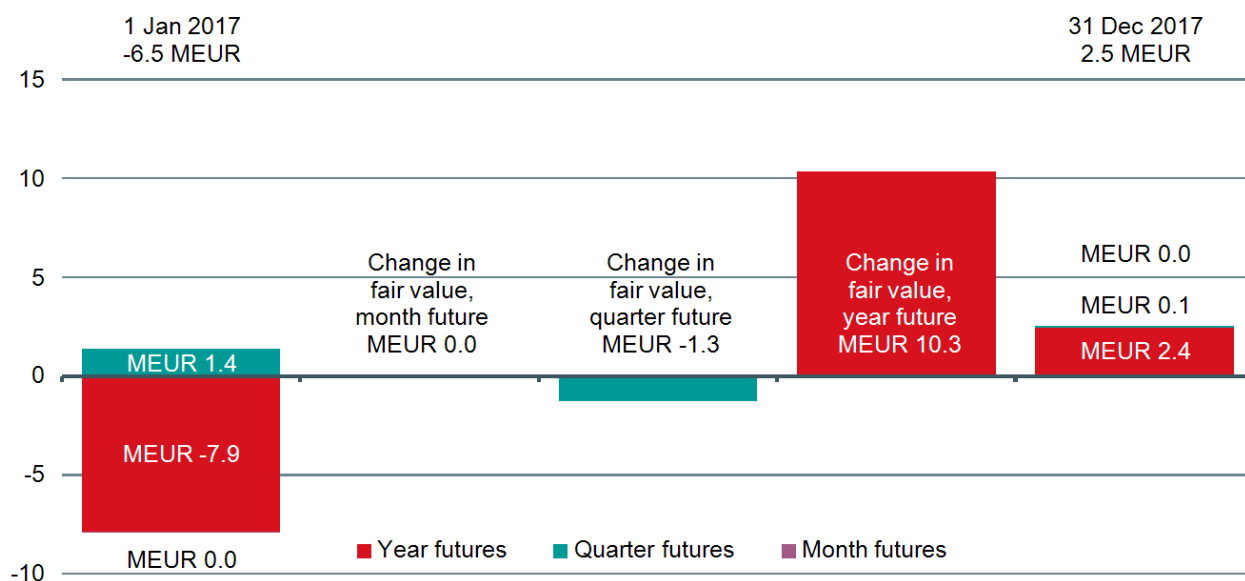


The purpose of Fingrid’s loss power price hedging is to reduce the effect of volatility in market prices to the loss power purchase costs and to give adequate predictability in order to keep the pressure to change transmission fees moderate. The change in the fair value of electricity futures used in Fingrid’s loss power price hedging was EUR 9.1 million positive (EUR 35.3 million positive). The volatility in the fair value of electricity futures can be significant. The positive impact on profit was caused by the impact of increased spot price of electricity to the fair value of electricity futures. Fingrid holds its bought futures to maturity.

The sensitivity of electricity price to the fair value of electricity futures is measured as the difference a 10 per cent fluctuation in market price would have on outstanding electricity futures on the reporting date. A positive/negative change of 10 per cent in the market price of electricity would have an impact of EUR 9.4 million/EUR -9.4 million on the Group’s profit before taxes.

The graph below indicates the change of value of all of the company's electricity futures in 2017.

**Change in the value of electricity futures 2017**



**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 and Financing principles and the loss energy hedging policy.

**Electricity futures**

The company enters into electricity future contracts in order to hedge the price risk of electricity purchases in accordance with the loss energy forecast. Fingrid discontinued hedge accounting for electricity futures at the beginning of 2014. As a result, the entire change in the fair value of electricity futures was recorded and will continue to be recorded in the income statement. The hedge fund in the balance sheet was dismantled in the income statement during 2015 and 2016 in fixed instalments such that it decreases the result by EUR 11.6 million.

**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 and Financing 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.

**Adoption of the IFRS 9 standard, effective 1 January 2018**

IFRS 9 Financial instruments replaces IAS 39 and brings changes to how financial assets are recognised and measured, the application of impairment and hedge accounting principles.

The Group's financial assets and liabilities have been reviewed, and the introduction of the new IFRS 9 standard on 1 January 2018 is not expected to have material impacts on the company's reported financial position and result. The Group's financial assets include investments in short-term money-market securities (certificates of deposit, commercial papers and municipality bills) and investments in short-term fixed income funds. Currently, investments in short-term fixed income funds are classified and entered at fair value in the income statement, and the same entering and valuing principle, in the income statement at fair value, continues also under IFRS 9. Investments in short-term money-market securities have previously been entered at fair value in the income statement, and with the application of IFRS 9, they are entered at amortised cost; the change does not, however, have a material impact on the company's financial result.

The Group's available-for-sale investments were divested in 2017, for which reason their value in the balance sheet on 31 Dec. 2017 is nil, and no entries on these are made in the opening balance sheet on 1 January 2018.

There are no changes in the accounting procedures for financial liabilities, as the new requirements only affect the accounting procedures for financial liabilities specifically classified at fair value in the income statement, and the Group does not have such liabilities. The rules concerning balance sheet derecognition have not changed from the standard IAS 39 standard 'Financial Instruments: Recognition and Measurement'.

The Group does not apply hedge accounting, and the rules that apply to hedge accounting according to the new IFRS 9 standard do not affect the company's accounting procedures.

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## 7 Other Information

- This chapter contains the rest of the notes.
- First comes a joint presentation of the Group companies and insider data.
- After that, other notes follow in the same sequence they appear in the income statement and balance sheet.

# 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 maintenance, 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 63,000. The realised return during the regulatory period consisted of a deficit of roughly EUR 111,000.

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 places of electricity consumption. 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 AS (ownership 18.8%) and eSett Oy (ownership 33.3%).

The investments in associated companies included in the balance sheet are composed of the following:

24. INVESTMENTS IN ASSOCIATED COMPANIES, € 1,000	2017	2016
Interests in associated companies	10,303	10,158
Loan receivables from associated companies	4,000	4,000
<b>Total</b>	<b>14,303</b>	<b>14,158</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 2.5 (2.5) 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 beginning one year from when eSett begins its operations. The amount of the loan capital is one third 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.

**Capital loan:**

The loan capital is EUR 1.5 (0) million. The fixed annual interest rate is 3.0 per cent. The loan repayment is ten equal instalments every six months beginning one year from when eSett begins its operations. The loan repayment is three equal instalments once a year beginning one year from when eSett begins its operations. The repayment is subordinated to all of the company's other liabilities and to the Limited Liability Companies Act's terms to be applied to capital loans.

Financial summary of associated companies, €1,000									
	Non-current		Current assets		Turnover	Profit/ loss	Dividends received during the financial period	Ownership (%)	
	Assets	Liabilities	Assets	Liabilities					
<b>2017</b>									
Nord Pool AS	1,346		151,389	121,007	38,265	4,988	1,114	18.80	
eSett Oy	8,232	11,250	39,540	33,246	7,560	2,677		33.30	
	Non-current		Current assets		Turnover	Profit/ loss	Dividends received during the financial period	Ownership (%)	
	Assets	Liabilities	Assets	Liabilities					
<b>2016</b>									
Nord Pool AS	2,465		121,162	94,420	26,965	7,103	560	18.80	
eSett Oy	7,507	12,000	5,748	657		-2,392		33.30	

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	2017	2016
Cost at 1 Jan	10,158	9,888
Share of profit	1,734	511
Translation reserve	-475	318

Dividends	-1,114	-560
<b>Carrying amount 31 Dec</b>	<b>10,303</b>	<b>10,158</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	2017	2016
Sales	520	471
Expense adjustments	81	48
Purchases	3,276	832
Receivables	3,934	343
Liabilities	3,376	152
Loan receivables	4,000	4,000



## 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. 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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# 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 2017 amounted to 4,150 units (tCO<sub>2</sub>). Emissions trading had minor financial significance for Fingrid. CO<sub>2</sub> emissions included in emissions trading totalled 5,817 tonnes in 2017 (10,335).



## Accounting principles

### 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	2017	2016
Provisions for creosote-impregnated towers 1 Jan	1,481	1,668
Provisions used	-7	-187
<b>Provisions 31 Dec</b>	<b>1,474</b>	<b>1,481</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	2017	2016
<b>Pledges</b>		
Pledge covering property lease agreements		9
Pledge covering customs credit account	200	280
Pledge covering excise duty	280	
	<b>480</b>	<b>289</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	400	395
Commitment fee for subsequent years	<b>1,154</b>	<b>1,154</b>
	1,592	1,587
<b>Unrecognised investment commitments</b>	<b>93,991</b>	<b>84,572</b>

The investment commitments consist of agreements signed by the company to carry out grid construction projects.

<b>Payment obligations from right-of-use agreements for reserve power plants:</b>		
In one year	10,769	7,601
In more than one year and less than five years	34,124	36,477
In more than five years	27,888	36,201
<b>Total</b>	<b>72,780</b>	<b>80,278</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

A lawsuit was initiated against Fingrid in December 2016, demanding non-specified liquidated damages due to an alleged breach of contract. The legal proceedings ended with the district court issuing an interlocutory judgement in December 2017, according to which Fingrid had not been proven to have committed a contractual breach.

Fingrid has appealed to the Market Court against the decision issued by the Energy Authority on 2 January 2017 to the extent where the Energy Authority required Fingrid to submit the terms and conditions concerning the balancing power agreements and the grounds for the determination of fees for approval by the Energy Authority. According to Fingrid, under the legislation in force at the time the decision was issued, it was not required to submit the terms and conditions related to the procurement of balancing power beforehand to the authority for approval. The matter is still before the Market Court. The legal proceedings do not have a substantial impact on the company's financial result or financial position.

#### **EVENTS AFTER THE CLOSING DATE**

The Group management is not aware of such significant events after the closing date that would affect the financial statements.

#### **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 1 March 2018. 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.

# Parent company income statement

## 8 Parent company financial statements (FAS)

### 8.1 Parent company income statement

		Jan-Dec/2017	Jan-Dec/2016
	Notes	€	€
<b>TURNOVER</b>	2	<b>665,392,912.15</b>	<b>581,409,910.01</b>
Other operating income	3	2,952,426.51	12,693,378.54
Materials and services	4	-293,984,228.25	-241,754,851.27
Personnel costs	5	-29,384,630.35	-28,597,902.39
Depreciation and amortisation expense	6	-103,744,514.46	-108,266,566.81
Other operating expenses	7,8	-70,125,942.52	-65,773,725.99
<b>OPERATING PROFIT</b>		<b>171,106,023.08</b>	<b>149,710,242.09</b>
Finance income and costs	9	-17,179,788.71	-20,121,491.84
<b>PROFIT BEFORE EXTRAORDINARY ITEMS</b>		<b>153,926,234.37</b>	<b>129,588,750.25</b>
<b>PROFIT BEFORE APPROPRIATIONS AND TAXES</b>		<b>153,926,234.37</b>	<b>129,588,750.25</b>
Income taxes	10	-30,567,832.63	-25,722,449.53
<b>PROFIT FOR THE FINANCIAL YEAR</b>		<b>123,358,401.74</b>	<b>103,866,300.72</b>

Notes are an integral part of the financial statements.

# Parent company balance sheet

## 8.2 Parent company balance sheet

ASSETS		31 Dec 2017	31 Dec 2016
	Notes	€	€
<b>Intangible assets:</b>			
Goodwill	11	0.00	4,288,792.08
Other intangible assets	12	79,273,488.45	79,770,462.84
		<b>79,273,488.45</b>	<b>84,059,254.92</b>
<b>Tangible assets</b>			
	13		
Land and water areas		15,974,431.21	15,700,654.61
Buildings and structures		209,719,017.99	193,639,539.82
Machinery and equipment		560,151,242.49	576,316,710.23
Transmission lines		770,540,624.65	808,874,948.90
Other property, plant and equipment		117,516.35	117,516.35
Prepayments and purchases in progress		83,656,395.80	59,404,402.54
		<b>1,640,159,228.49</b>	<b>1,654,053,772.45</b>
<b>Investments:</b>			
	14		
Interests in Group companies		507,063.77	507,063.77
Interests in associated companies		8,587,578.95	8,587,578.95
Other shares and interests		2,096,934.13	1,965,313.45
		<b>11,191,576.85</b>	<b>11,059,956.17</b>
<b>TOTAL NON-CURRENT ASSETS</b>		<b>1,730,624,293.79</b>	<b>1,749,172,983.54</b>
<b>CURRENT ASSETS</b>			
<b>Inventories</b>	15	<b>13,528,910.29</b>	<b>12,269,117.70</b>
<b>Receivables</b>			
<b>Non-current</b>			
Loan receivables from Group companies	16	5,000,000.00	2,807,700.00
Loan receivables from associated companies	16	4,000,000.00	4,000,000.00
Deferred tax assets	10	8,846,460.43	0.00
		<b>17,846,460.43</b>	<b>6,807,700.00</b>

<b>Current</b>			
Trade receivables		75,073,908.08	70,674,359.79
Receivables from Group companies	17	833,329.87	826,575.41
Receivables from associated companies	18	3,934,309.64	143,749.03
Other receivables		1,447,709.38	1,298,105.32
Prepayments and accrued income	19,20	11,866,139.02	9,198,988.07
		93,155,395.99	82,141,777.62
<b>Financial securities</b>	21	<b>62,968,050.83</b>	<b>57,393,757.42</b>
<b>Cash in hand and bank receivables</b>	21	<b>20,302,954.11</b>	<b>21,939,069.16</b>
<b>TOTAL CURRENT ASSETS</b>		<b>207,801,771.65</b>	<b>180,551,421.90</b>
<b>TOTAL ASSETS</b>		<b>1,938,426,065.44</b>	<b>1,929,724,405.44</b>

Notes are an integral part of the financial statement.

<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>		31 Dec 2017	31 Dec 2016
	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		77,954,261.01	72,087,952.34
Profit for the financial year		123,358,401.74	103,866,300.72
<b>TOTAL SHAREHOLDERS' EQUITY</b>		<b>313,157,633.85</b>	<b>287,799,224.16</b>
<b>ACCUMULATED APPROPRIATIONS</b>	23	<b>448,896,757.27</b>	<b>448,896,757.27</b>
<b>PROVISIONS FOR LIABILITIES AND CHARGES</b>	30	<b>1,474,146.78</b>	<b>1,480,946.78</b>
<b>LIABILITIES</b>			
<b>Non-current liabilities</b>			
Bonds	24,25	691,236,522.43	698,544,173.57
Loans from financial institutions		129,541,125.54	151,203,463.20
		820,777,647.97	849,747,636.77
<b>CURRENT LIABILITIES</b>			
Bonds	24	107,307,651.26	127,852,092.56

Loans from financial institutions		22,473,741.62	21,662,337.66
Trade payables		25,308,354.72	24,801,601.35
Liabilities to Group companies	26	1,157,812.70	1,102,734.71
Liabilities to associated companies	27	3,375,839.59	151,737.02
Other liabilities	28	162,224,988.65	136,671,358.46
Accruals	29	32,271,491.03	29,557,978.70
		<b>354,119,879.57</b>	<b>341,799,840.46</b>
<b>TOTAL LIABILITIES</b>		<b>1,174,897,527.54</b>	<b>1,191,547,477.23</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>		<b>1,938,426,065.44</b>	<b>1,929,724,405.44</b>

Notes are an integral part of the financial statements.

# Parent company cash flow statement

## 8.3 Parent company cash flow statement

		1 Jan - 31 Dec, 2017	1 Jan - 31 Dec, 2016
	Note	€	€
<b>Cash flow from operating activities:</b>			
Profit for the financial year	22	123,358,401.74	103,866,300.72
Adjustments:			
Business transactions not involving a payment transaction	33	103,404,458.81	104,488,603.07
Interest and other finance costs		23,205,080.13	28,312,997.36
Interest income		-4,767,603.36	-7,332,443.33
Dividend income		-1,257,688.06	-859,062.19
Taxes		30,567,832.63	25,722,449.53
Changes in working capital:			
Change in trade receivables and other receivables		-9,443,145.18	-13,573,931.59
Change in inventories		-1,259,792.59	395,852.70
Change in trade payables and other liabilities		4,185,979.27	7,437,144.67
Congestion income		25,752,020.51	39,864,046.47
Change in provisions		-6,800.00	-186,600.00
Interest paid		-19,012,238.47	-22,481,770.87
Interest received		415,917.88	436,541.27
Taxes paid	10	-41,871,316.36	-33,782,121.37
Net cash flow from operating activities		233,271,106.95	232,308,006.44
<b>Cash flow from investing activities:</b>			
Purchase of property, plant and equipment	13	-101,357,371.07	-138,768,010.88
Purchase of intangible assets	12	-5,893,088.91	-3,284,749.24
Purchase of other assets	14	-131,620.68	-82,347.14
Proceeds from sale of other assets	14	118,990.19	152,000.00
Proceeds from sale of property, plant and equipment	13	543,925.81	5,885,200.00



Loans granted		-2,120,610.67	-4,300,000.00
Dividends received	9	1,257,688.06	859,062.19
<b>Net cash flow from investing activities</b>		<b>-107,582,087.27</b>	<b>-139,538,845.07</b>
<b>Cash flow from financing activities:</b>			
Proceeds from current financing (liabilities)		451,535,449.76	240,118,091.67
Payments of current financing (liabilities)		-425,554,006.96	-195,087,574.26
Proceeds from non-current financing (liabilities)		100,000,000.00	80,000,000.00
Payments of non-current financing (liabilities)		-149,732,292.07	-164,824,440.82
Dividends paid	22	-97,999,992.05	-90,000,003.75
<b>Net cash flow from financing activities</b>		<b>-121,750,841.32</b>	<b>-129,793,927.16</b>
<b>Change in cash and cash equivalents and financial assets</b>		<b>3,938,178.36</b>	<b>-37,024,765.79</b>
<b>Cash and cash equivalents and financial assets 1 Jan</b>		<b>79,332,826.58</b>	<b>116,357,592.37</b>
<b>Cash and cash equivalents and financial assets 31 Dec</b>	21	<b>83,271,004.94</b>	<b>79,332,826.58</b>

Notes are an integral part of the financial statements.

# 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 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 energy purchases by employing futures instruments quoted 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 money-market 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	2017	2016
Grid service income	412,082	382,395
Imbalance power sales	213,872	153,881
Cross-border transmission	20,711	24,015
ITC income	8,647	13,199
Income from peak load capacity services	293	295
Income from guarantee-of-origin services	234	244
Other operating income	9,553	7,382
<b>Total</b>	<b>665,393</b>	<b>581,410</b>

3. OTHER OPERATING INCOME, €1,000	2017	2016
Rental income	942	922
Capital gains of fixed assets	340	3,796
Contributions received	170	282
Congestion income	0	6,325
Other income	1,500	1,368
<b>Total</b>	<b>2,952</b>	<b>12,693</b>

4. MATERIALS AND SERVICES, €1,000	2017	2016
Purchases during the financial year	234,232	170,793
Loss energy purchases	47,397	57,555
Change in inventories, increase (-) or decrease (+)	-1,260	396
Materials and consumables	280,369	228,745
Services	13,615	13,010
<b>Total</b>	<b>293,984</b>	<b>241,755</b>

5. PERSONNEL EXPENSES, €1,000	2017	2016
Salaries and bonuses	24,187	22,735
Pension expenses	4,139	4,433
Other personnel expenses	1,059	1,430
<b>Total</b>	<b>29,385</b>	<b>28,598</b>

Salaries and bonuses of the members of the Board of Directors and President and CEO, €1,000	2017	2016
Juhani Järvi, Chairman (since 6 June 2014)	39	34
Helena Walldén, Chairman (until 6 April 2016)		11
Juha Majanen, Vice Chairman (since 22 March 2012)	24	23
Sanna Syri, Member of the Board (since 14 April 2015)	19	20
Esko Torsti, Member of the Board (since 22 March 2012)	20	20

Anu Hämäläinen, Member of the Board (since 6 April 2016)	19	14
Jukka Ruusunen, Presiden and CEO	416	352

**Number of salaried employees in the company during the financial year:**

Personnel, average	352	336
Personnel, 31 Dec	355	334

DEPRECIATION ACCORDING TO PLAN, €1,000	2017	2016
Goodwill	4,289	6,433
Other non-current expenses	6,390	5,856
Buildings and structures	8,535	8,100
Machinery and equipment	48,104	50,973
Transmission lines	36,427	36,904
<b>Total*</b>	<b>103,745</b>	<b>108,267</b>
* depreciation on the electricity grid (notes 12 and 13)	89,658	88,967

7. OTHER OPERATING EXPENSES, €1,000	2017	2016
Contracts, assignments etc. undertaken externally	56,173	53,277
Grid rents	241	241
Other rental expenses	3,381	2,575
Other costs	10,331	9,681
<b>Total</b>	<b>70,126</b>	<b>65,774</b>

8. AUDITORS' FEES, €1,000	2017	2016
PricewaterhouseCoopers Oy:		
Auditing fee	63	61
Tax consulting	20	21
Assignments referred to in the Auditing Act, Chapter 1, Section 1, Subsection 2	0	3
Other fees	41	60

<b>Total</b>	<b>124</b>	<b>145</b>
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9. FINANCE INCOME AND COSTS, €1,000	2017	2016
Dividend income from Group companies	139	294
Dividend income from others	1,119	565
Interest and other finance income from others	4,768	7,332
	6,025	8,192
Interest and other finance costs to Group companies	0	0
Interest and other finance costs to others	-23,205	-28,313
	-23,205	-28,313
<b>Total</b>	<b>-17,180</b>	<b>-20,121</b>

10. INCOME TAXES, €1,000	2017	2016
Income taxes for the financial year	33197	25722
Income taxes for the previous financial years	6217	
Changes in deferred taxes	-8,846	0
<b>Total</b>	<b>30,568</b>	<b>25,722</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	8,846	0
<b>Total</b>	<b>8,846</b>	<b>0</b>

Deferred tax assets and liabilities of balance sheet, €1,000		
<b>Deferred tax assets</b>		
On temporary differences	295	296
	295	296
<b>Deferred tax liabilities</b>		
On temporary differences	220	242
On appropriations	89,779	89,779
	90,000	90,021
<b>Total</b>	<b>89,705</b>	<b>89,725</b>

11. GOODWILL, €1,000	2017	2016
Cost at 1 Jan	128,664	128,664
Cost at 31 Dec	128,664	128,664
Accumulated depreciation according to plan 1 Jan	-124,375	-117,942
Depreciation according to plan 1 Jan–31 Dec	-4,289	-6,433
<b>Carrying amount 31 Dec</b>	<b>-0</b>	<b>4,289</b>
Accumulated depreciation difference 1 Jan	-4,289	-10,722
Decrease in depreciation difference reserve 1 Jan–31 Dec	4,289	6,433
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>0</b>	<b>-4,289</b>
<b>12. OTHER NON-CURRENT EXPENSES, €1,000</b>	<b>2017</b>	<b>2016</b>
Cost at 1 Jan	183,719	180,861
Increases 1 Jan–31 Dec	5,959	3,548
Decreases 1 Jan–31 Dec	-126	-690
<b>Cost at 31 Dec</b>	<b>189,553</b>	<b>183,719</b>
Accumulated depreciation according to plan 1 Jan	-103,949	-98,519
Decreases, depreciation according to plan 1 Jan–31 Dec	60	427
Depreciation according to plan 1 Jan–31 Dec	-6,390	-5,856
<b>Carrying amount 31 Dec*</b>	<b>79,273</b>	<b>79,770</b>
Accumulated depreciation difference 1 Jan	-52,620	-53,378
Increase in depreciation difference reserve 1 Jan–31 Dec	-5,908	-737
Decrease in depreciation difference reserve 1 Jan–31 Dec	6,481	1,496
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>-52,047</b>	<b>-52,620</b>
<b>*Net capital expenditure in electricity grid, €1,000</b>	<b>2017</b>	<b>2016</b>
Carrying amount 31 Dec	71,258	74,378
Carrying amount 1 Jan	-74,378	-77,101
Depreciation according to plan 1 Jan–31 Dec	4,030	3,941
Decreases 1 Jan–31 Dec	66	263
<b>Total</b>	<b>976</b>	<b>1,482</b>



13. TANGIBLE ASSETS, €1,000	2017	2016
Land and water areas		
Cost at 1 Jan	15,701	15,349
Increases 1 Jan–31 Dec	274	393
Decreases 1 Jan–31 Dec	0	-41
<b>Cost at 31 Dec</b>	<b>15,974</b>	<b>15,701</b>
<b>Buildings and structures</b>		
Cost at 1 Jan	253,104	218,637
Increases 1 Jan–31 Dec	24,614	34,634
Decreases 1 Jan–31 Dec	-5	-168
<b>Cost at 31 Dec</b>	<b>277,712</b>	<b>253,104</b>
Accumulated depreciation according to plan 1 Jan	-59,464	-51,436
Decreases, depreciation according to plan 1 Jan–31 Dec	5	73
Depreciation according to plan 1 Jan–31 Dec	-8,535	-8,100
<b>Carrying amount 31 Dec</b>	<b>209,719</b>	<b>193,640</b>
Accumulated depreciation difference 1 Jan	-12,694	-12,649
Increase in depreciation difference reserve 1 Jan–31 Dec	-9,383	-970
Decrease in depreciation difference reserve 1 Jan–31 Dec	8,535	925
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>-13,542</b>	<b>-12,694</b>
<b>Machinery and equipment</b>		
Cost at 1 Jan	1,091,578	1,029,839
Increases 1 Jan–31 Dec	31,938	61,839
Decreases 1 Jan–31 Dec	-718	-100
<b>Cost at 31 Dec</b>	<b>1,122,798</b>	<b>1,091,578</b>
Accumulated depreciation according to plan 1 Jan	-515,261	-464,296
Decreases, depreciation according to plan 1 Jan–31 Dec	718	8
Depreciation according to plan 1 Jan–31 Dec	-48,104	-50,973
<b>Carrying amount 31 Dec</b>	<b>560,151</b>	<b>576,317</b>
Accumulated depreciation difference 1 Jan	-90,425	-97,309
Increase in depreciation difference reserve 1 Jan–31 Dec	-44,144	-782
Decrease in depreciation difference reserve 1 Jan–31 Dec	48,104	7,665
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>-86,466</b>	<b>-90,425</b>

<b>Transmission lines</b>		
Cost at 1 Jan	1,290,658	1,221,808
Increases 1 Jan–31 Dec	-1,658	74,414
Decreases 1 Jan–31 Dec	-433	-5,565
<b>Cost at 31 Dec</b>	<b>1,288,567</b>	<b>1,290,658</b>
Accumulated depreciation according to plan 1 Jan	-481,783	-448,824
Decreases, depreciation according to plan 1 Jan–31 Dec	184	3,944
Depreciation according to plan 1 Jan–31 Dec	-36,427	-36,904
<b>Carrying amount 31 Dec</b>	<b>770,541</b>	<b>808,875</b>
Accumulated depreciation difference 1 Jan	-288,869	-274,839
Increase in depreciation difference reserve 1 Jan–31 Dec	-44,400	-50,934
Decrease in depreciation difference reserve 1 Jan–31 Dec	36,427	36,904
<b>Accumulated depreciation in excess of plan 31 Dec</b>	<b>-296,842</b>	<b>-288,869</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>
<b>Prepayments and purchases in progress</b>		
Cost at 1 Jan	59,404	120,816
Increases 1 Jan–31 Dec	94,299	116,534
Transfers to other tangible and intangible assets 1 Jan - 31 Dec	-70,047	-177,946
<b>Cost at 31 Dec</b>	<b>83,656</b>	<b>59,404</b>
<b>Tangible assets total*</b>	<b>1,640,160</b>	<b>1,654,054</b>
<b>*Net capital expenditure in electricity grid, €1,000</b>	<b>2017</b>	<b>2016</b>
Carrying amount 31 Dec	1,609,354	1,618,586
Carrying amount 1 Jan	-1,618,586	-1,635,324
Depreciation according to plan 1 Jan–31 Dec	85,628	85,026
Decreases 1 Jan–31 Dec	249	1,742
<b>Total</b>	<b>76,645</b>	<b>70,030</b>

Fingrid's reserve power plants are included in the property, plant and equipment of the transmission system.

14. INVESTMENTS, €1,000	2017	2016
<b>Interests in Group companies</b>		
Cost at 1 Jan	507	505
Increases 1 Jan–31 Dec	0	3
<b>Cost at 31 Dec</b>	<b>507</b>	<b>507</b>
<b>Interests in associated companies</b>		
Cost at 1 Jan	8,588	8,588
Decreases 1 Jan–31 Dec	0	0
<b>Cost at 31 Dec</b>	<b>8,588</b>	<b>8,588</b>
<b>Other shares and interests</b>		
Cost at 1 Jan	1,965	1,885
Increases 1 Jan–31 Dec	139	227
Decreases 1 Jan–31 Dec	-8	-147
<b>Cost at 31 Dec</b>	<b>2,097</b>	<b>1,965</b>
<b>Investments total</b>	<b>11,192</b>	<b>11,060</b>

15. INVENTORIES, €1,000	2017	2016
<b>Materials and consumables at 31 Dec</b>	<b>13,248</b>	<b>12,139</b>
Work in progress	281	131
<b>Total</b>	<b>13,529</b>	<b>12,269</b>

16. OTHER NON-CURRENT RECEIVABLES, €1,000	2017	2016
Loan receivables from Group companies	5,000	2,808
Loan receivables from associated companies	4,000	4,000
<b>Total</b>	<b>9,000</b>	<b>6,808</b>

17. RECEIVABLES FROM GROUP COMPANIES, €1,000	2017	2016
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<b>Current:</b>		
Trade receivables	772	799
Interest receivables	62	27
<b>Total</b>	<b>833</b>	<b>827</b>

18. RECEIVABLES FROM ASSOCIATED COMPANIES, €1,000	2017	2016
<b>Current:</b>		
Trade receivables	3,888	125
Interest receivables	46	18
<b>Total</b>	<b>3,934</b>	<b>144</b>

19. PREPAYMENTS AND ACCRUED INCOME, €1,000	2017	2016
Interest and other financial items	6,545	7,333
Accruals of sales and purchases	2,201	1,666
Tax assets	2,331	0
Other prepayments and accrued income	789	200
<b>Total</b>	<b>11,866</b>	<b>9,199</b>

20. UNRECORDED EXPENSES AND PAR VALUE DIFFERENTIALS ON THE ISSUE OF LOANS INCLUDED IN PREPAYMENTS AND ACCRUED INCOME, €1,000	2017	2016
Par value differentials	1,624	1,039

21. CASH AND CASH EQUIVALENTS, €1,000	2017	2016
Commercial papers	6,496	12,991
Short-term money market funds	56,472	44,402
Bank deposits	10,000	10,000
Cash in hand and bank receivables	10,303	11,939
<b>Total</b>	<b>83,271</b>	<b>79,333</b>

22. SHAREHOLDERS' EQUITY, €1,000	2017	2016
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>175,954</b>	<b>162,088</b>
Dividend distribution	-98,000	-90,000
<b>Profit from previous financial years 31 Dec</b>	<b>77,954</b>	<b>72,088</b>
<b>Profit for the financial year</b>	<b>123,358</b>	<b>103,866</b>
<b>Shareholders' equity 31 Dec</b>	<b>313,158</b>	<b>287,799</b>
<b>Distributable shareholders' equity</b>	<b>201,313</b>	<b>175,954</b>

Number of shares	Series A	Series B	Total
	shares	shares	
1 Jan 2017	2,078	1,247	3,325
31 Dec 2017	<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. Series B shares have no right to receive any other dividend.

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	2017	2016
Accumulated depreciation from the difference between depreciation according to plan and depreciation carried out in taxation	448,897	448,897

24. BONDS, €1,000	2017	2016
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Currency	Nominal value	Maturity date	Interest		
EUR	20,000	11.04.2017	floating rate		20,000
EUR	25,000	11.04.2017	floating rate		25,000
EUR	30,000	15.06.2017	3,07%		30,000
EUR	50,000	20.09.2020	floating rate	50,000	50,000.00
EUR	30,000	19.09.2022	floating rate	30,000	30,000.00
EUR	30,000	11.09.2023	2,71%	30,000	30,000
EUR	300,000	03.04.2024	3,50%	300,000	300,000
EUR	100,000	23.11.2027	1,125 %	100,000	
EUR	25,000	27.03.2028	2,71%	25,000	25,000
EUR	10,000	12.09.2028	3,27%	10,000	10,000
EUR	80,000	24.04.2029	2,95%	80,000	80,000
EUR	30,000	30.05.2029	2,89%	30,000	30,000
				<b>655,000</b>	<b>630,000</b>

JPY	500,000	22.06.2017	1,28%		4,507
				<b>0</b>	<b>4,507</b>

NOK	200,000	11.04.2017	5,16%		24,620
NOK	200,000	10.11.2017	5,12%		23,725
NOK	200,000	12.11.2019	5,37%	23,725	23,725

NOK	100,000	16.09.2025	4,31%	12,512	12,512
				<b>36,237</b>	<b>84,582</b>

SEK	1,000,000	19.11.2018	floating rate	107,307.65	107,308
				<b>107,308</b>	<b>107,308</b>

Bonds, non-current, total				691,237	698,544
Bonds, current, total				107,308	127,852
<b>Total</b>				<b>798,544</b>	<b>826,396</b>

<b>25. LOANS FALLING DUE IN FIVE YEARS OR MORE, €1,000</b>	<b>2017</b>	<b>2016</b>
Bonds	617,512	517,512
Loans from financial institutions	72,554	90,216
<b>Total</b>	<b>690,066</b>	<b>607,728</b>

<b>26. LIABILITIES TO GROUP COMPANIES, €1,000</b>	<b>2017</b>	<b>2016</b>
<b>Current:</b>		
Other liabilities	1,158	1,103
<b>Total</b>	<b>1,158</b>	<b>1,103</b>

<b>27. LIABILITIES TO ASSOCIATED COMPANIES, €1,000</b>	<b>2017</b>	<b>2016</b>
<b>Current:</b>		
Trade payables	3,376	152
<b>Total</b>	<b>3,376</b>	<b>152</b>

<b>28. OTHER LIABILITIES, €1,000</b>	<b>2017</b>	<b>2016</b>
<b>Current:</b>		

Other loans/Commercial papers (international and domestic)	145,243	120,128
Value added tax	12,378	11,860
Electricity tax	3,092	3,093
advances received	923	923
Other liabilities	588	667
<b>Total</b>	<b>162,225</b>	<b>136,671</b>

29. ACCRUALS, €1,000	2017	2016
<b>Current:</b>		
Interest and other financial items	11,757	12,822
Salaries and additional personnel expenses	6,613	5,693
Accruals of sales and purchases	8,751	5,766
Other accruals	5,150	5,277
<b>Total</b>	<b>32,271</b>	<b>29,558</b>

30. PROVISIONS FOR LIABILITIES AND CHARGES, €1,000	2017	2016
Creosote-impregnated and CCA-impregnated wooden towers, disposal costs	1,474	1,481
<b>Total</b>	<b>1,474</b>	<b>1,481</b>



31. DERIVATIVE AGREEMENTS, €1,000									
	2017				2016				Hierarchy level
	Fair value pos. 31.12.17	Fair value neg. 31.12.17	Net fair value 31.12.17	Nominal value 31.12.17	Fair value pos. 31.12.16	Fair value neg. 31.12.16	Net fair value 31.12.16	Nominal value 31.12.16	
<b>Interest rate and currency derivatives</b>									
	3,837	-12,660	-8,822	143,544	6,930	-12,487	-5,558	196,396	Level 2
Forward contracts		-123	-123	1,167	46		46	2,271	Level 2
Interest rate swaps	23,209	-7,487	15,722	430,000	26,667	-6,725	19,943	360,000	Level 2
Bought interest rate options	787		787	571,587	1,350		1,350	514,685	Level 2
<b>Total</b>	<b>27,833</b>	<b>-20,270</b>	<b>7,563</b>	<b>1,146,298</b>	<b>34,993</b>	<b>-19,212</b>	<b>15,781</b>	<b>1,073,352</b>	
<b>Electricity derivatives johdannaiset</b>	Fair value pos. 31.12.17	Fair value neg. 31.12.17	Net fair value 31.12.17	Nominal value 31.12.17	Fair value pos. 31.12.16	Fair value neg. 31.12.16	Net fair value 31.12.16	Nominal value 31.12.16	
Electricity future contracts. NASDAQ OMX Commodities	1,009.71	-134.63	875.08	1.13					Level 1
Electricity forward contracts. NASDAQ OMX Commodities	2,904.97	-1,244.44	1,660.52	3.75	1,639.52	-8,157.40	-6,517.87	4.07	Level 1
<b>Total</b>	<b>3915</b>	<b>-1379</b>	<b>2536</b>	<b>4.88</b>	<b>1640</b>	<b>-8157</b>	<b>-6518</b>	<b>4.07</b>	

32. COMMITMENTS AND CONTINGENT LIABILITIES, €1,000			2017	2016
<b>Rental liabilities</b>				
Liabilities for the next year			4,079	3,536
Liabilities for subsequent years			28,192	28,653
			<b>32,270</b>	<b>32,189</b>

<b>Right-of-use agreements</b>		
Liabilities for the next year	10,769	7,601
Liabilities for subsequent years	62,011	72,677
	<b>72,780</b>	<b>80,278</b>
<b>Pledges</b>		
Pledge covering property lease agreements	0	9
Pledge covering customs credit account	200	280
Pledge covering excise duty	280	0
	<b>480</b>	<b>289</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	400	395
Liabilities for subsequent years	1,154	1,154
	<b>1,592</b>	<b>1,587</b>

<b>33. OPERATING CASH FLOW ADJUSTMENTS, €1,000</b>	<b>2017</b>	<b>2016</b>
<b>Business transactions not involving a payment transaction</b>		
Depreciation	103,745	108,267
Capital gains/losses (-/+ ) on tangible and intangible assets	-340	-3,778
<b>Total</b>	<b>103,404</b>	<b>104,489</b>

#### 34. LEGAL PROCEEDINGS AND PROCEEDINGS BY AUTHORITIES

A lawsuit was initiated against Fingrid in December 2016, demanding non-specified liquidated damages due to an alleged breach of contract. The legal proceedings ended with the district court issuing an interlocutory judgement in December 2017, according to which Fingrid had not been proven to have committed a contractual breach.

Fingrid has appealed to the Market Court against the decision issued by the Energy Authority on 2 January 2017 to the extent where the Energy Authority required Fingrid to submit the terms and conditions concerning the balancing power agreements and the grounds for the determination of fees for approval by the Energy Authority. According to Fingrid, under the legislation in force at the time the decision was issued, it was not required to submit the terms and conditions related to the procurement of balancing power beforehand to the authority for approval. The matter is still before the Market Court. The legal proceedings do not have a substantial impact on the company's financial result or financial position.

#### 35. 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 regulating 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 and Norwegian 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 2017 was 11 (12). The operating profit was 0,5 (3,7) per cent of turnover.

MANAGEMENT OF BALANCE OPERATION, SEPARATED INCOME STATEMENT	1 Jan - 31 Dec, 2017	1 Jan - 31 Dec, 2016
	1 000 €	1 000 €
<b>TURNOVER*</b>	<b>219,344</b>	<b>165,393</b>
Other operating income	1	1
Materials and services*	-213,014	-156,520
Personnel costs	-1,148	-1,385
Depreciation and amortisation expense	-434	-181
Other operating expenses	-3,718	-1,129
<b>OPERATING PROFIT</b>	<b>1,028</b>	<b>6,178</b>
Finance income and costs	81	48
<b>PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES</b>	<b>1,110</b>	<b>6,226</b>
Appropriations	-81	-89
Income taxes	-206	-884
<b>PROFIT/LOSS FOR THE FINANCIAL YEAR</b>	<b>823</b>	<b>5,253</b>

Turnover includes EUR 56.7 (9.2) million in sales of imbalance power to balance provider Fingrid Oyj, and Materials and services includes EUR 54.7 (6.5) million euros in purchases by Fingrid Oyj.

\*The increase in imbalance power sales and purchases resulted from the transfer of imbalance settlement to eSett Oy, following which the imbalance power sold to cross-border imbalance responsible parties is reported as external turnover and the imbalance power purchased from them is reported as external purchases.

MANAGEMENT OF BALANCE OPERATION, SEPARATED BALANCE SHEET	31 Dec 2017	31 Dec 2016
<b>ASSETS</b>	€1,000	€1,000
<b>NON-CURRENT ASSETS</b>		
<b>Intangible assets</b>		
Other non-current expenses	1,311	385
<b>Tangible assets</b>		
Machinery and equipment	461	247
Prepayments and purchases in progress		62
<b>Investments</b>		
Interests in associated companies	2,001	2,001
<b>TOTAL NON-CURRENT ASSETS</b>	<b>3,772</b>	<b>2,695</b>

<b>CURRENT ASSETS</b>		
<b>Non-current</b>		
Loan receivables from associated companies	4,000	4,000
<b>Current receivables</b>		
Trade receivables	2,649	27,420
Receivables from Group companies	10,594	18,469
Receivables from associated companies	13,214	144
Other receivables	2,234	1,504
	28,690	47,537
Cash in hand and bank receivables	1	1
<b>TOTAL CURRENT ASSETS</b>	<b>32,691</b>	<b>51,538</b>
<b>TOTAL ASSETS</b>	<b>36,463</b>	<b>54,233</b>

	31 Dec 2017	31 Dec 2016
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>€1,000</b>	<b>€1,000</b>
<b>EQUITY</b>		
Share capital	32	32
Share premium account	286	286
Profit from previous financial years	21,873	16,620
Profit for the financial year	823	5,253
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>23,013</b>	<b>22,190</b>
<b>ACCUMULATED APPROPRIATIONS</b>	<b>-389</b>	<b>-470</b>
<b>LIABILITIES</b>		
<b>Current liabilities</b>		
Trade payables	520	30,724
Liabilities to Group companies		906
Liabilities to associated companies	13,113	
Accruals	206	884
	13,839	32,513
<b>TOTAL LIABILITIES</b>	<b>13,839</b>	<b>32,513</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>36,463</b>	<b>54,233</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

<b>DEVELOPMENT OF INFORMATION EXCHANGE, SEPARATED INCOME STATEMENT</b>	<b>1 Jan - 31 Dec, 2017</b>	<b>1 Jan - 31 Dec, 2016</b>
	<b>€1,000</b>	<b>€1,000</b>
<b>TURNOVER</b>	<b>575</b>	<b>595</b>
Personnel costs	-116	-144
Other operating expenses	-374	-392
<b>OPERATING PROFIT</b>	<b>86</b>	<b>59</b>
<b>PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES</b>	<b>86</b>	<b>59</b>
Income taxes	-17	-12
<b>PROFIT/LOSS FOR THE FINANCIAL YEAR</b>	<b>69</b>	<b>48</b>

<b>DEVELOPMENT OF INFORMATION EXCHANGE, SEPARATED BALANCE SHEET</b>		
	<b>31 Dec 2017</b>	<b>31 Dec 2016</b>
<b>ASSETS</b>	<b>€1,000</b>	<b>€1,000</b>
<b>CURRENT ASSETS</b>		
Trade receivables	0.78	

Other receivables	130	147
<b>TOTAL CURRENT ASSETS</b>	<b>131</b>	<b>147</b>
<b>TOTAL ASSETS</b>	<b>131</b>	<b>147</b>

	31 Dec 2017	31 Dec 2016
	€1,000	€1,000
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>		
<b>EQUITY</b>		
Share capital	3	3
Profits/losses from previous financial years	-589	-636
Profit for the financial year	69	48
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>-518</b>	<b>-586</b>
<b>LIABILITIES</b>		
Current liabilities		
Trade payables	11	12
Liabilities to Group companies	575	686
Other liabilities	62	36
	649	734
<b>TOTAL LIABILITIES</b>	<b>649</b>	<b>734</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>131</b>	<b>147</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 data hub 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
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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, 2017	1 Jan - 31 Dec, 2017
<b>SEPARATED INCOME STATEMENT</b>	<b>€1,000</b>	<b>€1,000</b>
<b>TURNOVER</b>	<b>663,176</b>	<b>2,217</b>
Other operating income	2,952	
Materials and services	-293,984	
Personnel costs	-28,182	-1,203
Depreciation and amortisation expense	-103,745	
Other operating expenses	-69,112	-1,014
<b>OPERATING PROFIT</b>	<b>171,106</b>	<b>0</b>
Finance income and costs	-17,424	245
<b>PROFIT BEFORE EXTRAORDINARY ITEMS</b>	<b>153,682</b>	<b>245</b>
<b>PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES</b>	<b>153,682</b>	<b>245</b>
Income taxes	-30,519	-49
<b>PROFIT/LOSS FOR THE FINANCIAL YEAR</b>	<b>123,163</b>	<b>196</b>

SEPARATED BALANCE SHEET	TRANSMISSION SYSTEM OPERATION	OTHER OPERATION
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<b>ASSETS</b>	<b>31 Dec 2017</b>	<b>31 Dec 2017</b>
	<b>€1,000</b>	<b>€1,000</b>
<b>Intangible assets:</b>		
Goodwill		
Other intangible assets	79,273	
	<b>79,273</b>	
<b>Tangible assets</b>		
Land and water areas	15,974	
Buildings and structures	209,719	
Machinery and equipment	560,151	
Transmission lines	770,541	
Other property, plant and equipment	118	
Prepayments and purchases in progress	83,656	
	<b>1,640,159</b>	
<b>Investments:</b>		
Interests in Group companies		507
Interests in associated companies	8,588	
Other shares and interests	2,097	
	<b>10,685</b>	<b>507</b>
<b>TOTAL NON-CURRENT ASSETS</b>	<b>1,730,117</b>	<b>507</b>
<b>CURRENT ASSETS</b>		
Inventories	13,528.91	
<b>Receivables</b>		
<b>Non-current</b>		
Loan receivables from Group companies		5,000
Loan receivables from associated companies	4,000	
Deferred tax assets	8,846	
	<b>12,846</b>	<b>5,000</b>
<b>Current</b>		
Trade receivables	75,074	
Receivables from Group companies	5,445	833
Receivables from associated companies	3,934	

Other receivables	1,448	
Prepayments and accrued income	11,866	
	<b>97,767</b>	<b>833</b>
Financial securities	62,968	
Cash in hand and bank receivables	20,303	
<b>TOTAL CURRENT ASSETS</b>	<b>207,413</b>	<b>5,833</b>
<b>TOTAL ASSETS</b>	<b>1,937,530</b>	<b>6,340</b>

<b>SEPARATED BALANCE SHEET</b>	<b>TRANSMISSION SYSTEM OPERATION</b>	<b>OTHER OPERATION</b>
<b>SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>31 Dec 2017</b>	<b>31 Dec 2017</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	77,695	259
Profit for the financial year	123,163	196
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>312,700</b>	<b>458</b>
<b>ACCUMULATED APPROPRIATIONS</b>	<b>448,897</b>	
<b>PROVISIONS FOR LIABILITIES AND CHARGES</b>	<b>1,474</b>	
<b>LIABILITIES</b>		
<b>Non-current liabilities</b>		
Bonds	691,237	
Loans from financial institutions	129,541	
	<b>820,778</b>	
<b>Current liabilities</b>		
Bonds	107,308	
Loans from financial institutions	22,474	
Trade payables	25,308	

Liabilities to Group companies	1,158	5,445
Liabilities to associated companies	3,376	
Other liabilities	162,053	172
Accruals	32,006	266
	<b>353,682</b>	<b>5,883</b>
<b>TOTAL LIABILITIES</b>	<b>1,174,459</b>	<b>5,883</b>
<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>	<b>1,937,530</b>	<b>6,340</b>

## Other non-current assets included in the separated balance sheet for grid operations

SEPARATED BALANCE SHEET	TRANSMISSION SYSTEM OPERATION
ASSETS	31 Dec 2017
	€1,000
<b>Intangible assets:</b>	
Other intangible assets	8,016
	<b>8,016</b>
<b>Tangible assets</b>	
Land and water areas	15,732
Buildings and structures	4,258
Machinery and equipment	9,557
Transmission lines	1,140
Other property, plant and equipment	118
Prepayments and purchases in progress	83,656
	<b>114,462</b>
<b>TOTAL NON-CURRENT ASSETS</b>	<b>122,477</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. The congestion income from 2017 was used entirely for the Hirvisuo–Pyhänselkä grid investment, and the congestion income from 2016 was used for improving and maintaining the cross-border transmission connections, and in part also for the Hirvisuo–Pyhänselkä grid investment. The Hirvisuo–Pyhänselkä grid investment supports the cross-border transmission from northern Sweden to Finland.

Congestion income, €1,000	2017	2016
Congestion income on 1 Jan		
Accumulated congestion income	25,752	39,863
Expenses matching congestion income		-6,325
Investments matching congestion income	-25,752	-33,538
Congestion income on 31 Dec		

## 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	2017	2016
Counter-trade between Finland and Sweden	366	2,531
Counter-trade between Finland and Estonia	96	87
Counter-trade between Finland's internal connections	1,295	1,242
<b>Total counter-trade</b>	<b>1,756</b>	<b>3,861</b>

## 36. 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 2016.

	2017	2016
Total CO <sub>2</sub> emissions tCO <sub>2</sub>	5,817	10,335

# 9 Signatures for the Annual Review and for the Financial Statements

Helsinki, 1 March 2018

Juhani Järvi  
Chair

Juha Majanen  
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, 1 March 2018

PricewaterhouseCoopers Oy  
Authorised Public Accountants

Heikki Lassila, APA

# Auditor's Report

(Translation of the Finnish Original)

To the Annual General Meeting of Fingrid Oyj

## Report on the Audit of the Financial Statements

### Opinion

In our opinion

- the consolidated financial statements give a true and fair view of the group's financial position and financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of the financial statements in Finland and comply with statutory requirements.

Our opinion is consistent with the additional report to the Audit Committee.

### What we have audited

We have audited the financial statements of Fingrid Oyj (business identity code 1072894-3) for the year ended 31 December 2017. The financial statements comprise:

- the consolidated balance sheet, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies
- the parent company's balance sheet, income statement, statement of cash flows and notes.

### Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Independence

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, the non-audit services that we have provided to the parent company and to the group companies are in accordance with the applicable law and regulations in Finland and we have not provided non-audit services that are prohibited under Article 5(1) of Regulation (EU) No 537/2014. The non-audit services that we have provided are disclosed in note 6 to the Financial Statements.

## Our Audit Approach

### Overview

- Overall group materiality: € 12 million.
- Group audit scope includes, in addition to the parent company Fingrid Oyj, all the Group's subsidiaries that are Finnish entities.
- Turnover
- Property, plant and equipment, and depreciation
- Financial items and derivatives

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we considered where management made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

### Materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall group materiality for the consolidated financial statements as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements on the financial statements as a whole.

Overall group materiality	€ 12 million
How we determined it	Profit before tax and balance sheet total combined
Rationale for the materiality benchmark applied	We chose the combination described above as the basis for determining materiality because, in our view, these are the benchmarks against which the group's financial position and financial performance are commonly measured by users. In our view, neither figure alone is sufficient for determination of materiality due to the specific characteristics of the company's operations, such as operating in a regulated market. Certain weights have been determined for these benchmarks, based on which the group materiality has been determined.

## How we tailored our group audit scope

We tailored the scope of our audit, taking into account the structure of the group, the accounting processes and controls, and the industry in which the group operates.

## Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Key audit matter in the audit of the group	How our audit addressed the key audit matter
<p><b>Turnover</b></p> <p>Note 1 “Turnover” and the accounting principle “Revenue recognition” as well as the note pertaining to judgement and estimates “Estimate of the purchase and sale of imbalance power”</p> <p>The most significant revenue streams are grid service revenue and sale of imbalance power, which generally are invoiced on a monthly basis.</p> <p>The income of imbalance power is ascertained through a nationwide imbalance settlement procedure and final imbalance settlement is completed 13 days after the delivery at the latest. Due to this, the revenue recognized for sale of imbalance power in the financial statements involves partial judgement. Company management determines the revenue periodization based on preliminary information derived from imbalance settlement.</p>	<p>The audit of turnover as a whole was a combination of audit of controls and substantive audit procedures. The substantive audit procedures included both analytical and detailed audit procedures.</p> <p>In our audit of grid service revenue and other revenue streams we have focused that invoicing is based on appropriate decisions and invoicing inputs. In addition, we have audited recognition of income in correct financial period by comparing invoiced amounts of transfers to reporting of actual amounts of transfers during financial period.</p> <p>In auditing the periodization of imbalance power revenue, we have been able to use the actual information available at the time of the audit and compare this in assessing the accuracy of the periodization. In addition we have tested the accuracy of the earlier forecasts.</p>
<p><b>Property, plant and equipment, and depreciation</b></p> <p>Note 11 “Property, plant and equipment” as well as the accounting principle “Property, plant and equipment”</p> <p>We defined these items as key audit matters based on their quantitative significance for the company financial statements and due to significance of estimates related to assets economic life. The transmission grid owned by the company is also the basis for calculation of carrying amount of grid assets in the regulatory balance sheet of the grid operations, when calculating the adjusted value</p>	<p>As part of our audit of transmission grid investments, we performed a review of consistency of capitalization principles compared with previous accounting periods and conformity with the accounting principles for the consolidated financial statements. For the basis of our audit, we obtained understanding of the group investment process and related controls. Substantive audit included e.g. assessment of investments recorded on the balance sheet for</p>



<p>of the grid assets for purposes of determining reasonable return as defined by the Energy Authority. Property, plant and equipment per 31 December 2017 were valued at € 1 676 million which is 79% of total assets. Accumulated depreciation for the period totalled € -97 million.</p> <p>Transmission grid investments comprise of both power lines and construction of connecting and transforming substations. The projects are completed usually as 2-3 subassemblies, due to which it is possible to utilise some subassembly financially or take it into use prior to completion of the entire project. We determined as key audit matters the assessment of costs allocated to the investment projects to meet the criteria for capitalization, the completed investment or a part of it economic life is correctly defined using consistent principles, and that depreciation calculation initiated in a timely manner. As to replacement investments completed, it is essential to assess their effect on the economic lifetimes of the assets replaced.</p>	<p>eligibility for capitalization. The testing methods we used were a combination of control testing and detailed substantive testing. Regarding investments, we tested whether completed investments were classified to correct balance sheet items, depreciation initiated in a timely manner and the economic lives defined were consistent to economic lives used by the company and presented in the accounting principles.</p> <p>In addition to the procedures described above, we discussed with the management the depreciation times used in reasonable return calculation and related regulatory reporting. Regarding replacement investments, we tested through substantive audit procedures whether the economic lives of assets to be replaced had been adjusted in accordance with company practice where the remaining carrying value is depreciated when the replacement investment is taken into use.</p>
<p><b>Financial items and derivatives</b></p> <p>Note 14 “Borrowings”, 19 “Cash and cash equivalents”, 20 “Financial assets recognised in the financial statements at fair value” and 23 “Derivative instruments” as well as the related accounting principles and notes concerning the income statement items 6 “Other operating expenses” and 17 “Interest income and expenses from loans and other receivables”</p> <p>We defined financial liabilities and derivative instruments as key audit matters based on their quantitative significance in the company financial statements as well as the effect of changes in derivatives fair value on the company profit.</p> <p>Financial items in the financial statements comprise mainly of bonds issued by the company. Carrying value of financial liabilities per 31 December 2017 totalled € 1 083 million, i.e. 51 % of balance sheet total.</p> <p><b>Financing derivatives</b></p> <p>The company has derivative instruments to hedge against interest rate and exchange rate risks according to Corporate Finance and Financing Principles approved by the Board of Directors. Company’s derivative transactions consists of interest and currency derivatives as well as cap options to hedge against debt portfolio for sudden changes of interest rates.</p> <p>Valuations of the interest rate and currency derivatives used by the company are not always available directly from publicly traded markets, but input data needed on valuations is based on observable market information directly or indirectly.</p>	<p>Audit of financing instruments as a whole was a combination of different audit procedures. In our audit, we assessed the key controls the company utilizes to ensure recording of transactions in the company’s accounting system, as well as practices related to valuation. Our substantive audit procedures included both analytical procedures and detailed audit procedures.</p> <p>Focus of our audit of financial liabilities was on reconciling them with external confirmations, correctness of measurement and periodization of cost and presentation of short and long-term liabilities. As concerns the income statement, we verified bookings of financing income and expenses through analytical and detailed substantive audit procedures.</p> <p>We verified derivatives recorded to company’s systems and presented in the financial statements for existence, completeness and accuracy by reconciling them against external confirmations obtained from third parties.</p> <p>As concerns, valuation of derivatives, we assessed both consistency of valuation methods applied and whether they were based on generally applied valuation methods. Our audit included testing of the valuations reported by the company treasury system by reconciling them against the valuations we obtained independently using market price information from generally known pricing sources. Valuations of electricity</p>

<p>Electricity derivatives Transmission of electricity incurs losses, which the company is obliged to compensate. The company purchases loss power at an electricity exchange. The company uses electricity derivatives to hedge against market price volatility. Price hedging is implemented over a four years horizon such that by the end of September in the year preceding the delivery, the price risk for the next year is fully hedged. The company mainly uses exchange quoted products for price hedging, but can also use equivalent OTC products.</p>	<p>derivatives were reconciled with the price information available in the quoted exchanges. We verified accuracy of fair value bookings in the income statement by reconciling them with fair value changes derived from the balance sheet.</p>
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We have no key audit matters to report with respect to our audit of the parent company financial statements.

There are no significant risks of material misstatement referred to in Article 10(2c) of Regulation (EU) No 537/2014 with respect to the consolidated financial statements or the parent company financial statements.

## Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or to cease operations, or there is no realistic alternative but to do so.

## Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement

resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

## Other Reporting Requirements

### Appointment

We were first appointed as auditors by the incorporation meeting on 29 November 1996. Our appointment represents a total period of uninterrupted engagement of 21 years.

### Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other

information comprises the report of the Board of Directors and the information included in the Annual Report, but does not include the financial statements and our auditor's report thereon. We have obtained the report of the Board of Directors prior to the date of this auditor's report and the Annual Report is expected to be made available to us after that date.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion

- the information in the report of the Board of Directors is consistent with the information in the financial statements
- the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

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

## Other Opinions

We support that the financial statements should be adopted. The proposal by the Board of Directors regarding the use of the profit shown in the balance sheet is in compliance with the Limited Liability Companies Act. We support that the Members of the Board of Directors and the Managing Director of the parent company should be discharged from liability for the financial period audited by us.

Helsinki 1 March 2018

**PricewaterhouseCoopers Oy**  
Authorised Public Accountants

Heikki Lassila  
Authorised Public Accountant (KHT)