# Finland's Transmission System Operator

FINGRID

# Disclaimer

These materials have been prepared based upon information that Fingrid Oyj believes to be reliable. Market data presented is based on the information and belief of Fingrid Oyj's management and has not been independently verified. Certain data in this presentation was obtained from various external data sources and Fingrid Oyj has not verified such data with independent sources. Such data involves risks and uncertainties and is subject to change based on various factors. Fingrid Oyj makes no representation or warranty, express or implied, as to the accuracy or completeness of the information contained in these materials and accordingly, Fingrid Oyj accepts no responsibility or liability (in negligence or otherwise) for the information contained herein.

These materials may contain forward-looking statements. These forward-looking statements are based on management’s current expectations and beliefs, as well as a number of assumptions concerning future events. These statements are subject to risks, uncertainties, assumptions and other important factors, many of which are outside management’s control, that could cause actual results to differ materially from the results discussed in the forward-looking statements. You should not place undue reliance on these forward-looking statements, which speak only as of the date of this presentation.

Fingrid Oyj assumes no obligation to, and expressly disclaims any obligation to, update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

The circulation of these materials may, in certain countries, be subject to specific regulation and the person(s) in possession of this presentation should observe such restrictions.

Nothing in these materials shall constitute or form part of any legal agreement, or any offer to sell or the solicitation of any offer to buy any securities or notes issued under Fingrid Oyj's commercial paper or medium-term note programs.

# Table of Contents



# 01

# Executive summary

# Fingrid is the sole transmission system operator (TSO) in continental Finland[1]

Fingrid transmits in its own network approximately

**78%**

of electricity transmitted in Finland

Fingrid manages cross-border connections between **Finland and Sweden, Estonia and Norway**

Fingrid continuously **ensures power system production and consumption balance** in Finland

[1]Kraftnät Åland is the transmission system operator of Åland

# Fingrid’s network covers entire Finland

**14,500**
km of power lines

**320**
km of submarine cable

**46,000**
towers

**121**
substations

**10**
reserve power plants

**3**
HVDC stations

# Fingrid has achieved its targets in 2011-2022

| | 2011 | 2022 |
|---|---|---|
| **Net profit (IFRS)** | MEUR 33 | MEUR 206 |
| **Return** | Below regulatory allowed | Around regulatory allowed* |
| **Dividend** | MEUR 7 | MEUR 133** |
| **Efficiency** | High benchmark study rankings | High benchmark study rankings |
| **Investments** | In schedule and budget | In schedule and budget |

*Cumulative deficit approximately MEUR -10 in 2020-2022

** Total amount proposed by Board of Directors

Fingrid has a proven track record of continuously executing its defined strategy

# Fingrid has achieved its targets in 2011-2022

| | |
|---|---|
| **Regulation** | Fair, stable and predictable TSO regulatory model (until 12/2023) |
| **Ownership** | The Finnish state owns 53% and Finnish financial institutions 47%* |
| **Strategic importance** | Considered strategically important holding to the Finnish state** |
| **Operating leverage** | Construction and maintenance of the electricity transmission network is outsourced |
| **Efficiency & quality** | Fingrid is one of the most cost efficient and reliable TSOs worldwide |
| **Financials** | Continuously solid profitability |
| **Rating** | Fingrid benefits from AA-/A+ ratings (S&P, Fitch***) |

* The Finnish state has 71% of the voting rights in the company

** Source: Prime Minister's Office, Finland. (2016). *Government resolution on state-ownership policy.*

*** Rating for unsecured senior debt from Fitch is 'AA-' and issuer default rating 'A+'

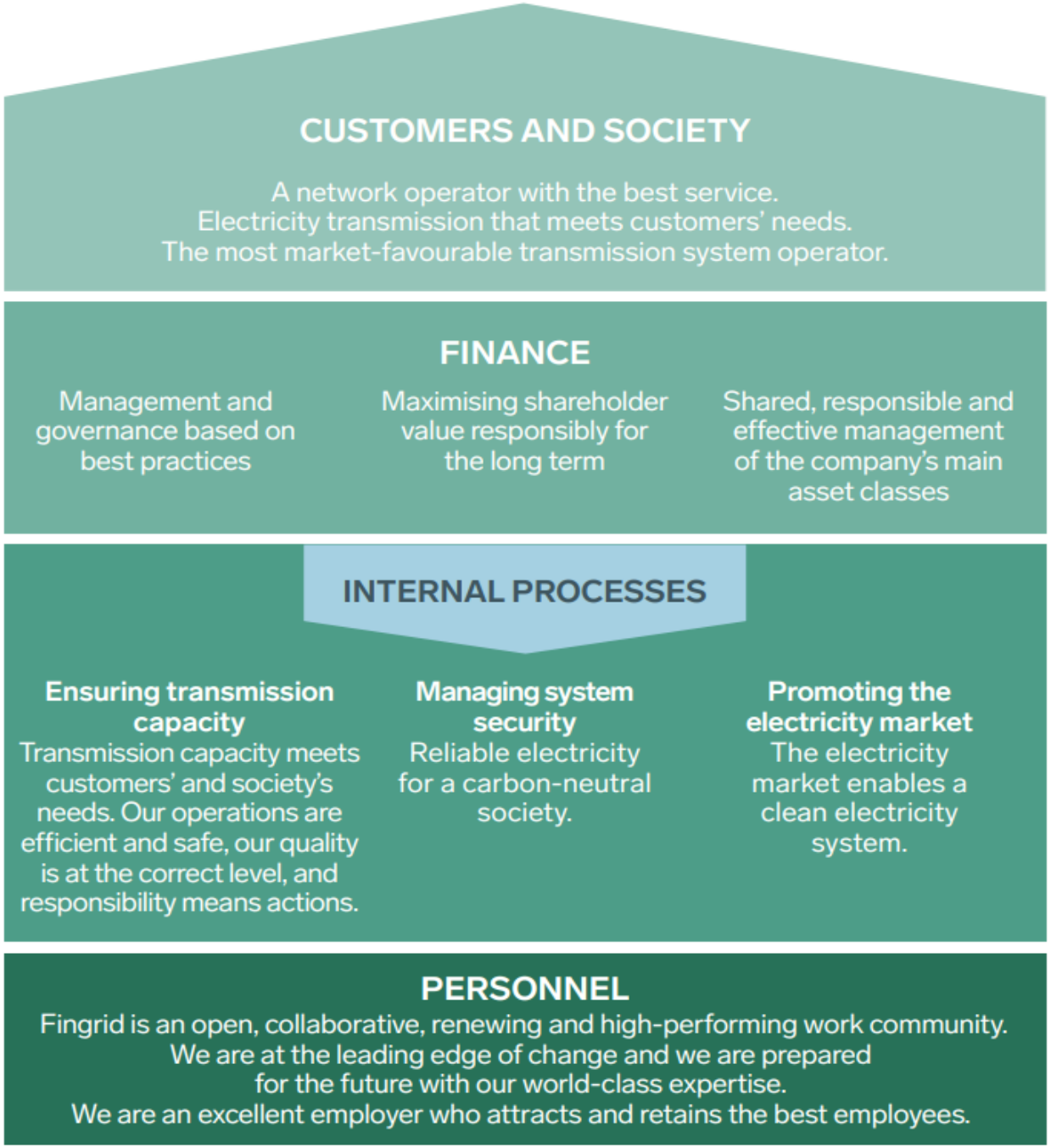
Fingrid provides a solid long-term investment in the power system in Finland

# 02

# Company overview


MEGATRENDS
Climate change and trans-formation of the energy system
Security of energy supply and dependency on electricity
Globalisation and responsibility
Digitalisation
OUR PROMISES
We will promote Finland's competitiveness by supporting the investments needed for electrification
• We will build and maintain a reliable power grid
• We will develop the established operating standards in the market and ensure a single price area in Finland
OUR VISION
We are a forerunner for electricity network operations and we are respected and influential in energy matters.
TOWARDS A CARBON-NEUTRAL FINLAND IN 2035
OUR MISSION
We will cost-effectively secure reliable electricity for our customers and society, and we will shape the clean, market-oriented energy system of the future
OUR VALUES
• Transparent • Efficient
• Fair • Responsible

# Fingrid's strategic framework



# Implementation of the strategy: perspectives

## Focusing on the core mission

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

## Market focus

We apply a market-oriented approach in all areas because we believe that an effective market will produce the best and most effective solutions. We actively foster the integration of the electricity markets in Europe and the Baltic Sea region while also taking into account Finland's best interests.

## For the customer

We develop our business operations and operating models actively, together with the customer and with society's interests at heart.

## Efficiency of operations

We keep our operations cost-effective as a whole and make sure to work productively. We anticipate changes using joint situational awareness; we share clear goals, prioritise and measure our operations, and we thus ensure concrete results as well as high-quality and efficient operations.

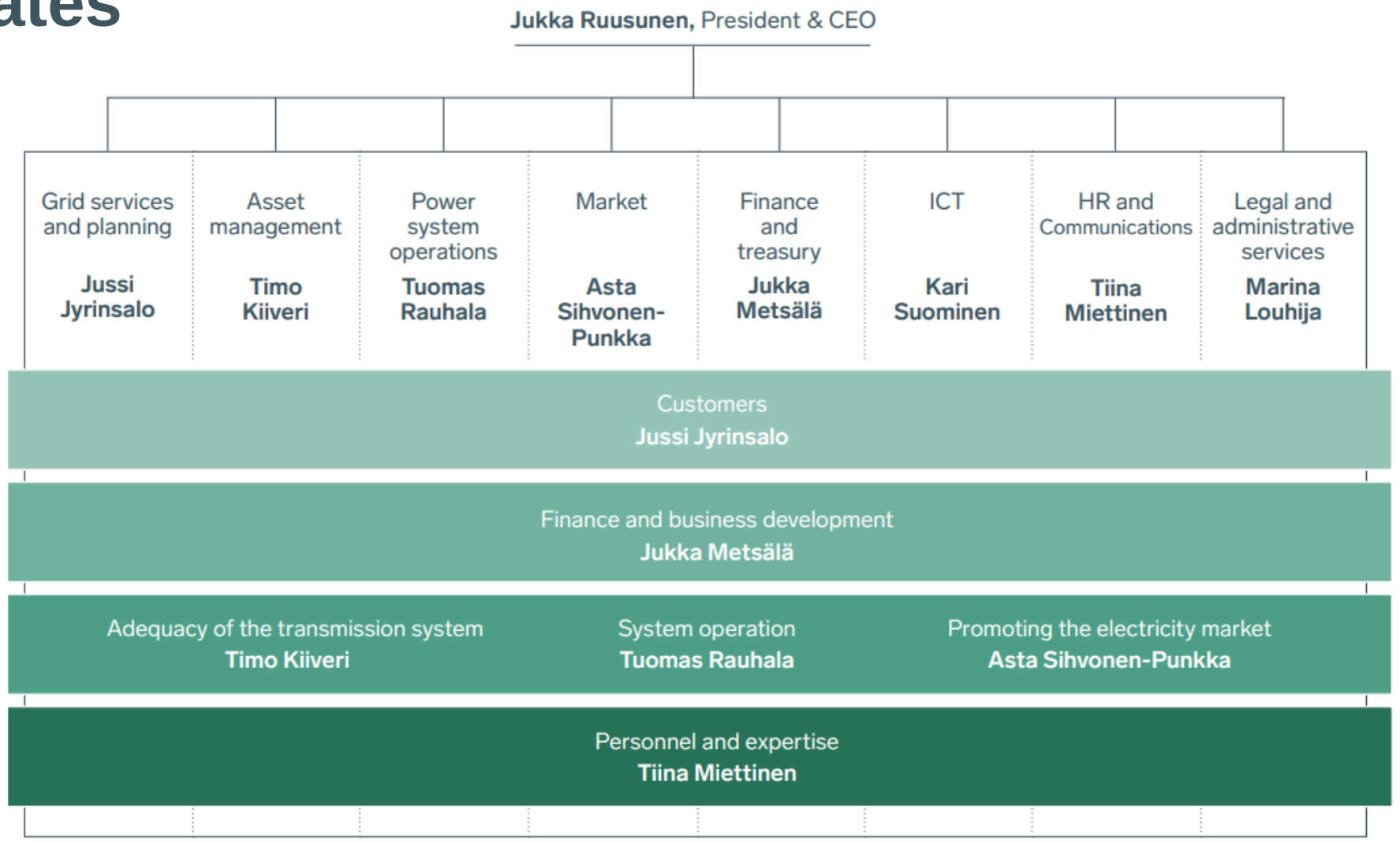
## World-class expertise

We ensure the necessary core competence. We cooperate with the best partners. We actively develop our competence through a coaching style of management. We innovatively utilise the best technologies.

## Security and responsibility

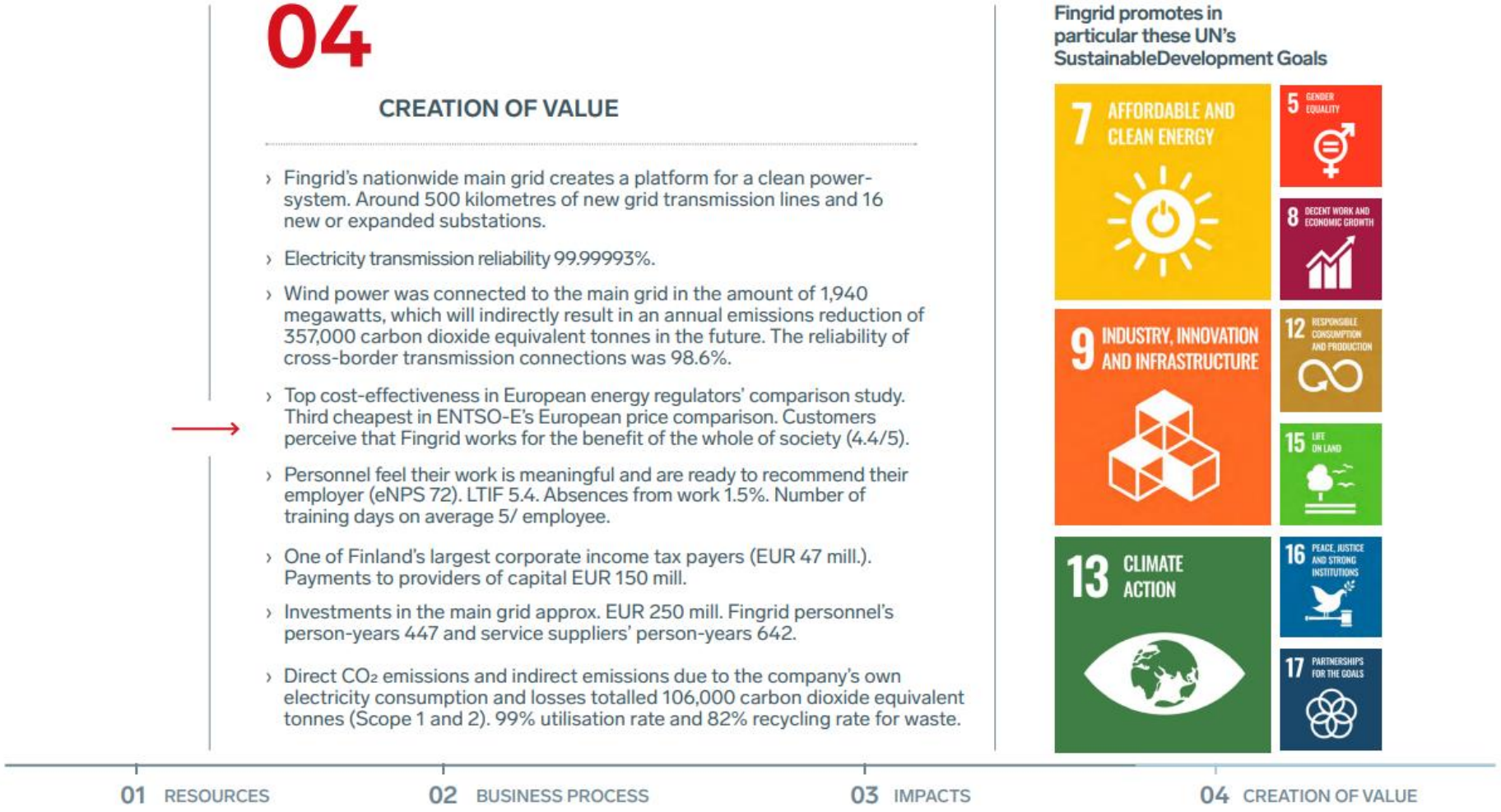
During the energy sector transformation, we will maintain the current good level of system security. Our investments are aimed at achieving climate targets. Corporate responsibility and safety are highlighted in everything we do.

# Fingrid operates in a matrix organisation structure



# Fingrid's business model

# Value created by Fingrid in 2022



# Fingrid’s ESG Governance

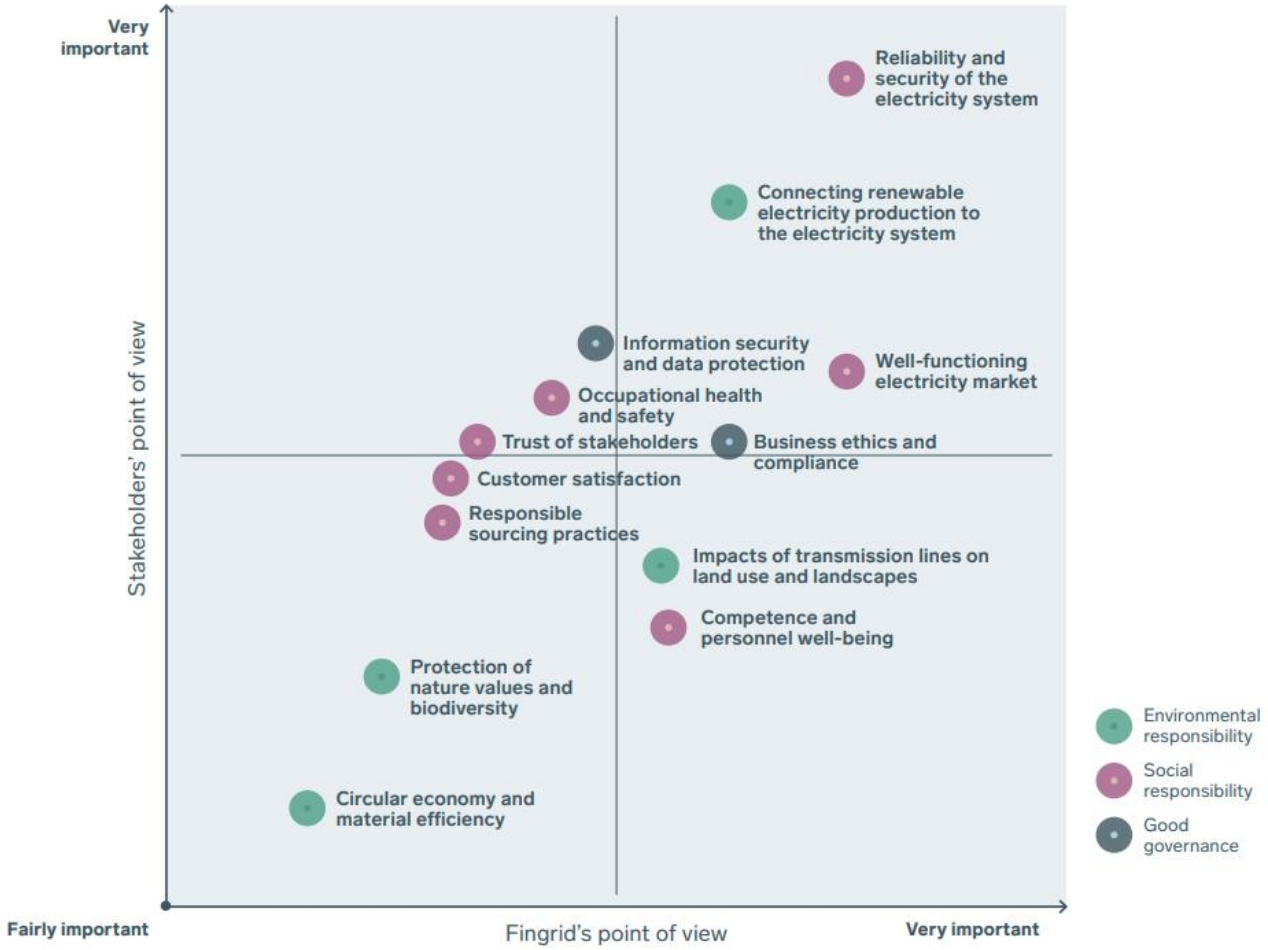
| | |
|---|---|
| **CORPORATE LEVEL RESPONSIBILITY** | › Board of Directors |
| **RESPONSIBILITY FOR CORPORATE ESG TARGETS** | › A director nominated by the CEO responsible for each individual corporate ESG target |
| **RESPONSIBILITY FOR EXECUTION OF EACH CORPORATE ESG TARGET** | › Nominated director |
| **RESPONSIBILITY FOR DEVELOPMENT AND MONITORING** | › Nominated director together with the director responsible for corporate responsibility at Fingrid |

# Corporate responsibility and the UN Sustainable Development Goals

| UN Sustainable Development Goal | SDG-linked indicator or target monitored by Fingrid |
|---|---|
| 7 AFFORDABLE AND CLEAN ENERGY | Transmission reliability in the grid, %<br>Maintaining Finland as a single price area<br>Connection of wind power to the grid, MW<br>Development of costs in relation to the general price level |
| 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | Grid projects' degree of completion, %<br>Customer satisfaction, cNPS<br>Affordable grid service fees, ENTSO-E price comparison |
| 13 CLIMATE ACTION | SF6 emissions, %<br>Carbon dioxide emissions of transmission losses, $tCO_2e$<br>Energy efficiency, energy savings, MWh |

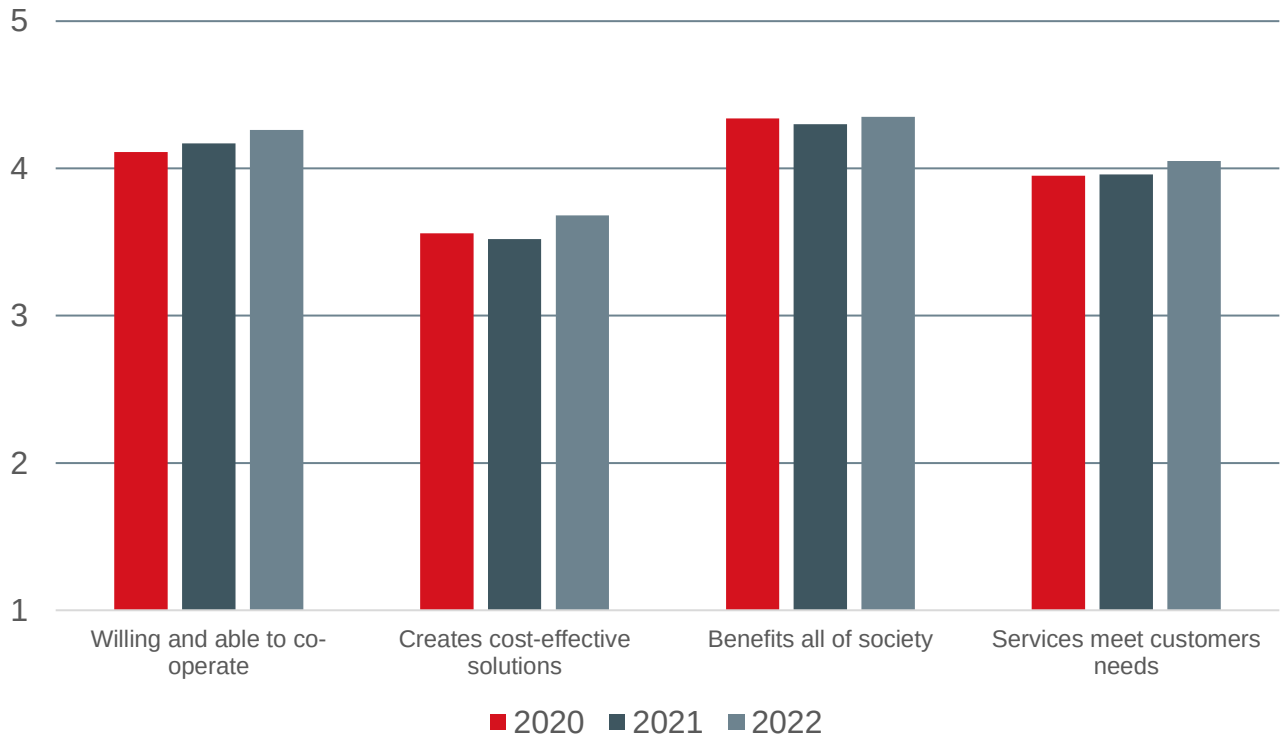

UN Sustainable Development Goals (SDGs) pertaining to energy, infrastructure and climate actions are the most important for Fingrid

# Material impacts of Fingrid's operations




Fingrid has identified the material corporate responsibility topics in its strategy and core operations

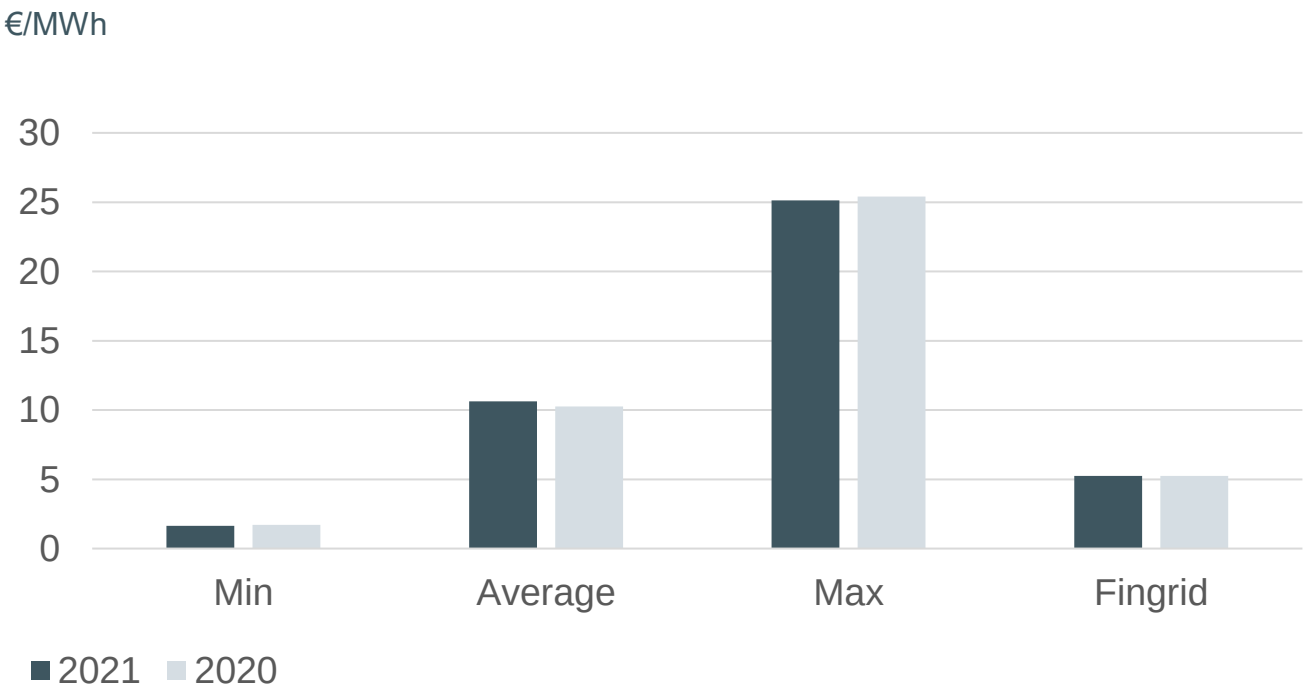
# Customer satisfaction: High quality services




Net Promoter Score from customers (cNPS) increased to +50 in 2022 (+41 in 2021)

# ENTSO-E transmission tariff comparison

European system operators




* Source: ENTSO-E

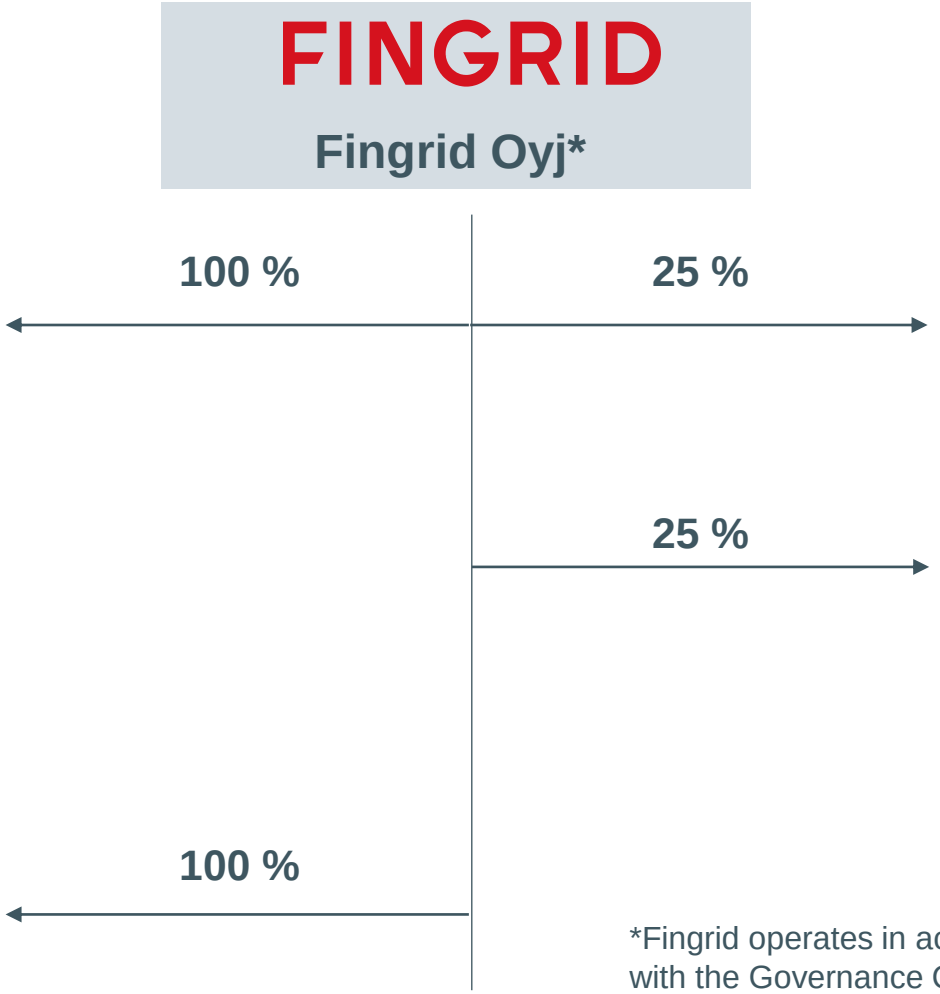
Transmission tariffs for electricity in the Finnish transmission system are the second lowest in Europe

# Legal structure

## Subsidiaries

**Finextra Oy**
Peak load capacity and guarantee of origin service

**Fingrid Datahub Oy**
Centralized information exchange in the Finnish power market. Datahub's operations began in February 2022



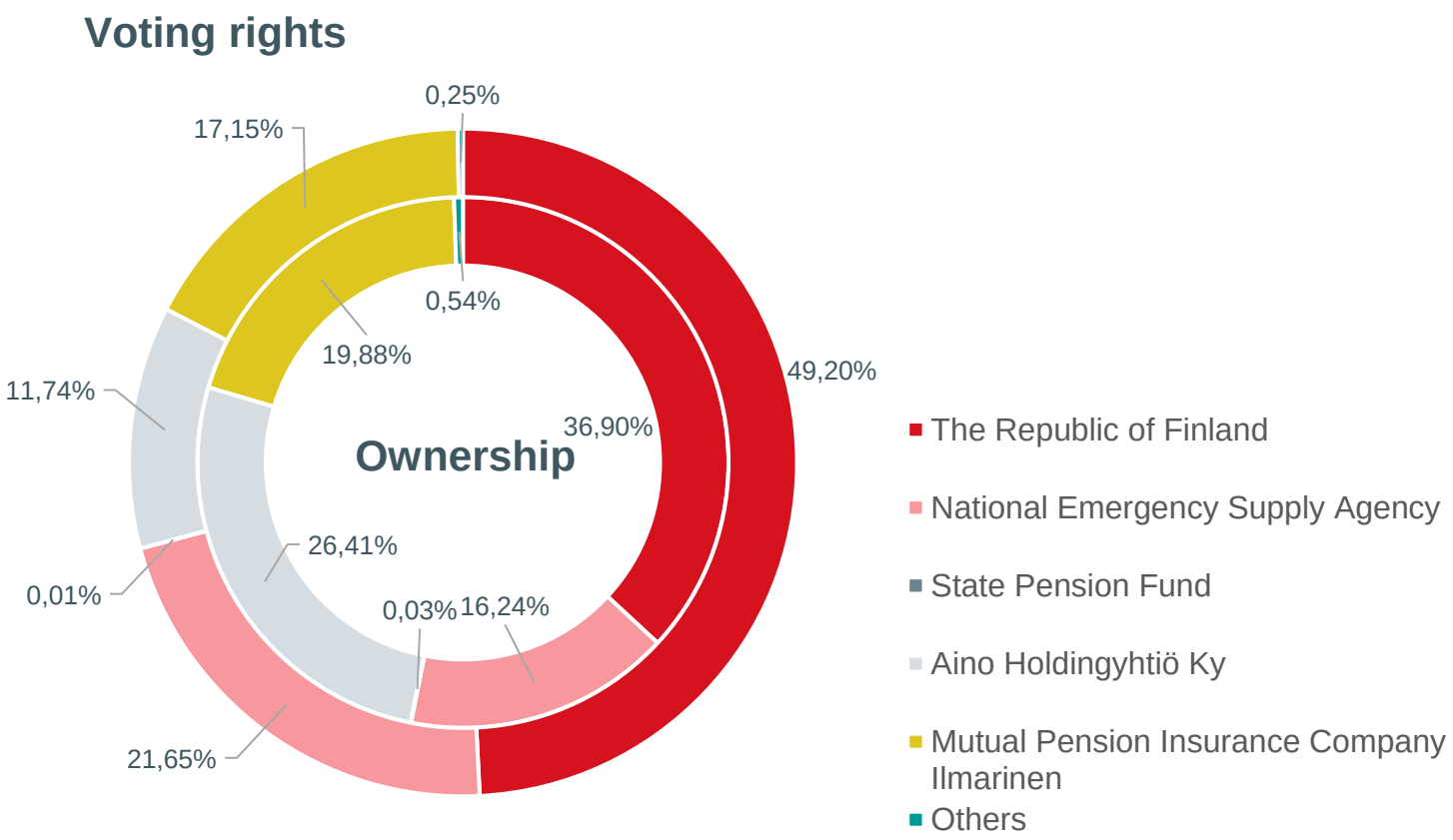

## Associated companies

**eSett Oy**
Balance settlement process on behalf of Nordic TSOs

**Nordic RCC A/S**
Company established in January 2022 for the incorporation of the operational planning office of the four Nordic TSOs. The company started its operations in July 2022 assuming the tasks of RSC

*Fingrid operates in accordance with good governance and complies with the Governance Code for listed companies in Finland

# Ownership and voting rights




The State's minimum shareholding requirement in Fingrid is 50.1%.

The State has 70.9% of the voting rights.

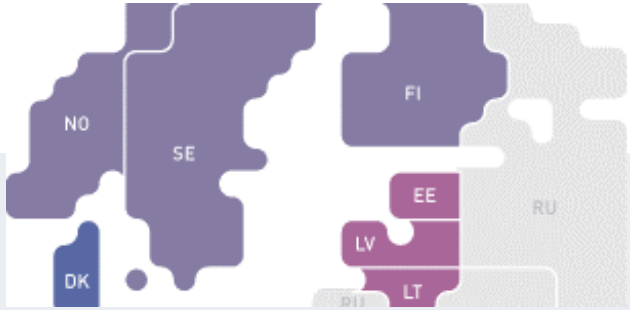
# 03

# Operating environment

# Fingrid's operating environment on three geographical levels

## Europe

- Vision: integrated electricity market working on one European grid
- Europe is replacing Russian energy with LNG and renewables, in the future hydrogen economy will have an important role
- Big changes in the generation fleet (increase in renewables and electrification, reduction of fossil fuel use)
- Structural bottlenecks will remain in the grid – investments proceeding slowly




## Baltic Sea region

- Strong connection between the Nordic region, Baltic states, Germany and Poland.
- The transmission capacity between Nordic region and Central Europe has been increased substantially in recent years

## Finland

- Finland's target is to be carbon neutral by 2035
- Share of renewable wind power increases without subsidies
- Decarbonization efforts increase electricity demand when clean electricity replaces fossil fuels
- Role of cross-border connections increases

# Towards a highly developed electricity market in Europe

## Electricity market from Helsinki to Lisbon since 2014

- Improving efficiency and competitiveness of the power sector
  - efficient market price
  - cross-border trade
  - efficient dispatching via "the invisible hand" of the markets
- Delivering benefits for end-users and trust to market players
- Contributing to the security of supply
- Supporting Green Deal and reaching the climate targets of the EU

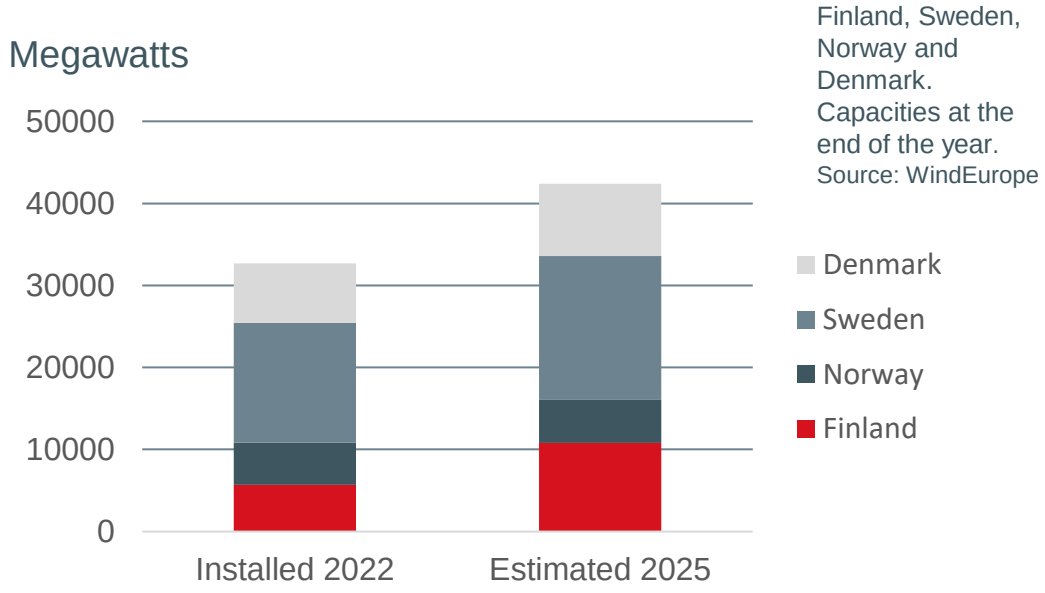
Market coupling

# Significant wind power capacity currently under planning and construction

- Installed wind power capacity in Finland was ca. 5200 MW at the end of 2022
- By the end of 2025, Finnish wind power generation capacity is expected to reach 10-11 GW. Capacity expansion is estimated to be almost entirely market-based
- Nordic wind capacity is expected to reach 42 GW by the end of 2025, compared to 32 GW end of 2022, with most of the growth based on investment decisions already taken
- Integration of wind power is one of the key drivers for Fingrid's grid development, with significant investments already completed and more in the pipeline to enable transition towards a climate neutral society

## Fingrid promotes the development of market based wind power generation in Finland

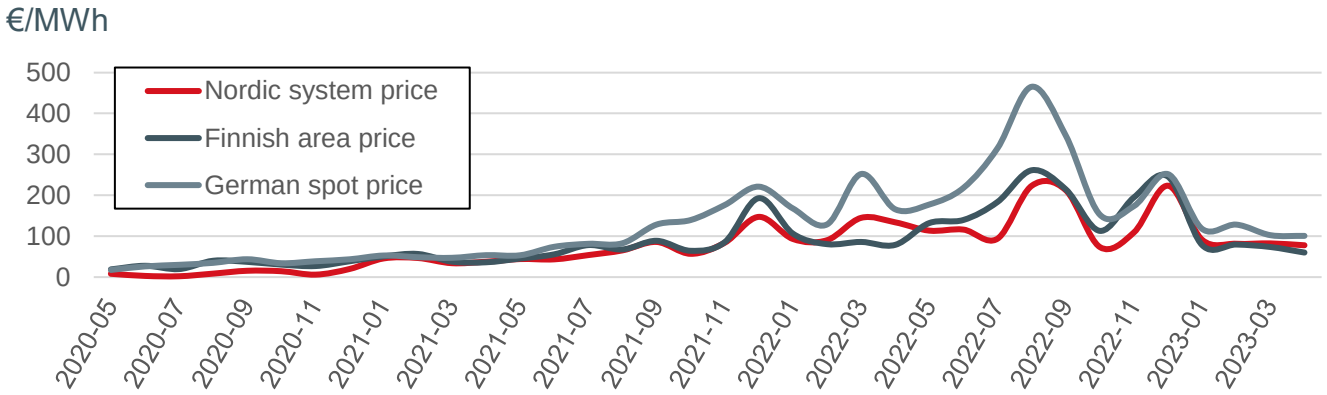
**Nordic wind capacity is expected to reach 42 GW by the end of 2025, compared to 32 GW at the end of 2022**




Finland, Sweden, Norway and Denmark. Capacities at the end of the year. Source: WindEurope

# Development of Nordic electricity spot prices

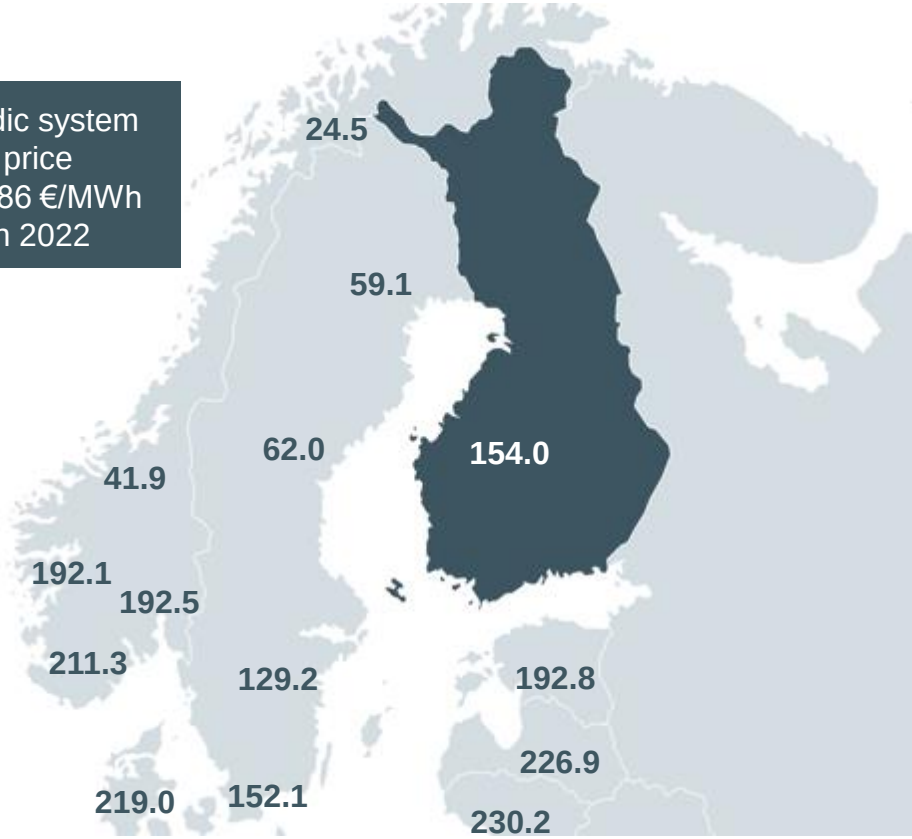
**Monthly average prices in Day-ahead market**




- In 2022, Nordic electricity prices increased clearly compared to the level of earlier years
  - The main reason behind the increased prices were rapidly and strongly increased commodity prices (especially natural gas) as a result of Russian attack to Ukraine
  - For the beginning of the year 2023, the average price has been clearly lower as relatively mild winter combined with significant energy savings has balanced the energy markets to more normal level
  - Electricity consumption in Finland decreased around 6 % due to very high prices and general concern on the adequacy of electricity supply as Russian attack to Ukraine disturbed traditional energy supply chains

**Nordic 2022 average Day-ahead prices**

Nordic system price 135.86 €/MWh in 2022

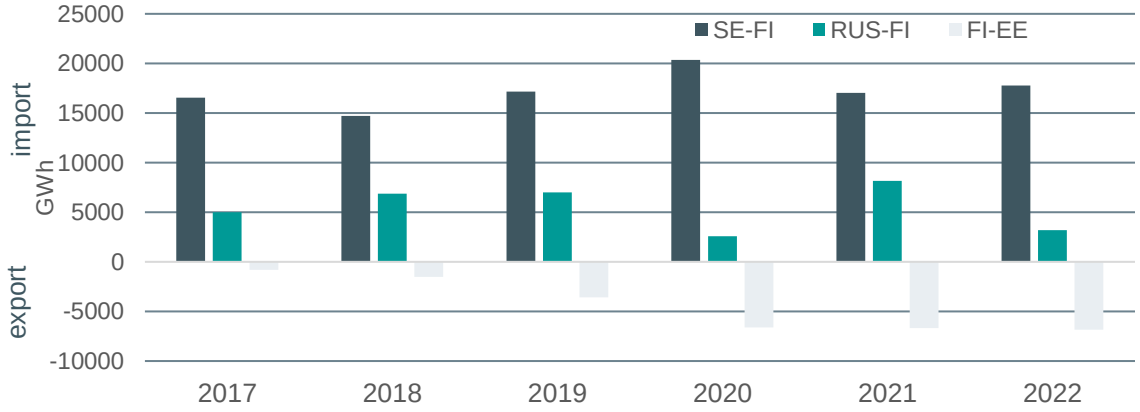


# Finland is well-connected in Baltic Sea power market

- Finland has been a net importer of electricity mainly from Scandinavia
- Rapid increase of wind power and commissioning of Olkiluoto 3 nuclear power plant are set to balance the net exchange in the next few years
  - Olkiluoto 3 will cover ~10 % of the cold winter peak load and ~15 % of annual energy demand in Finland
  - Olkiluoto 3 has started its commercial electricity production in April 2023
- Cross-border lines between Finland and Sweden have a crucial role of limiting price differentials between the markets
- Electricity imports from Russia ended in May 2022
- Fingrid has a 24/7 service to ensure continuous specialist availability to solve issues in cross-border connections, and is investing in new transmission capacity between the countries

Finland is expected to become self-sufficient in terms of energy production in 2023 thanks to new production capacity


**Cross-border net trade for last six years**



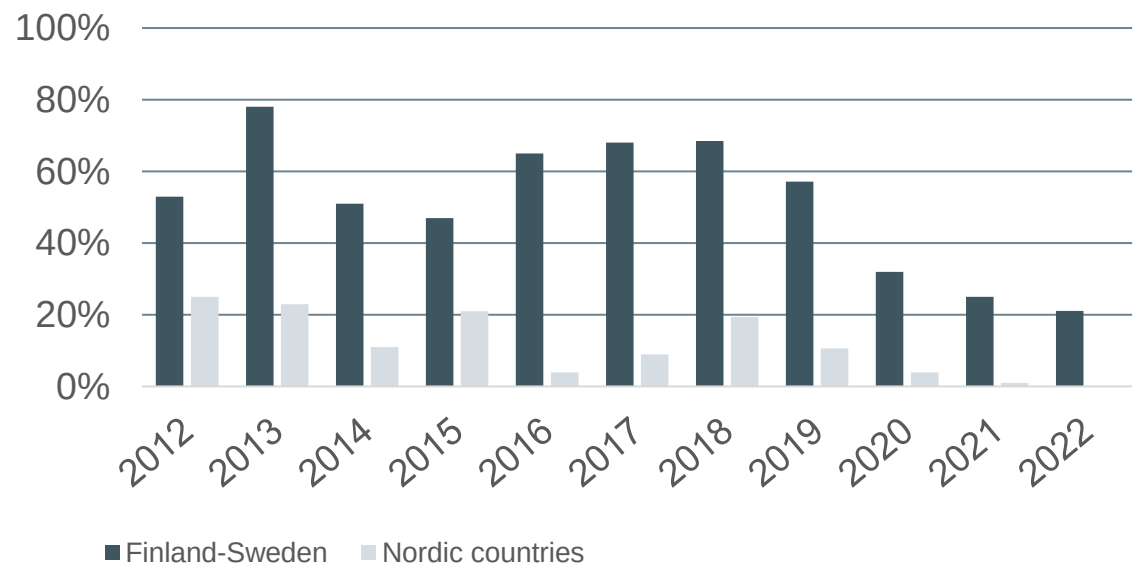
# The Baltic Sea region* forms a well-developed regional market

- In 2022 a single price area between Finland and Sweden existed 21 percent of the time and 0 percent of the time between all the Nordic countries
- Price uniformity is impacted by hydrological situation, in addition to interconnector availability
- Price differences between countries result in congestion income, which is split evenly between the countries in which the congestion has occurred
  - The formula to calculate Fingrid's share of congestion income is *Price Difference (€/MWh) * Cross-Border Transmission (MW) * 50%*

* Finland, Sweden, Norway, Denmark, Poland, Estonia, Latvia, Lithuania

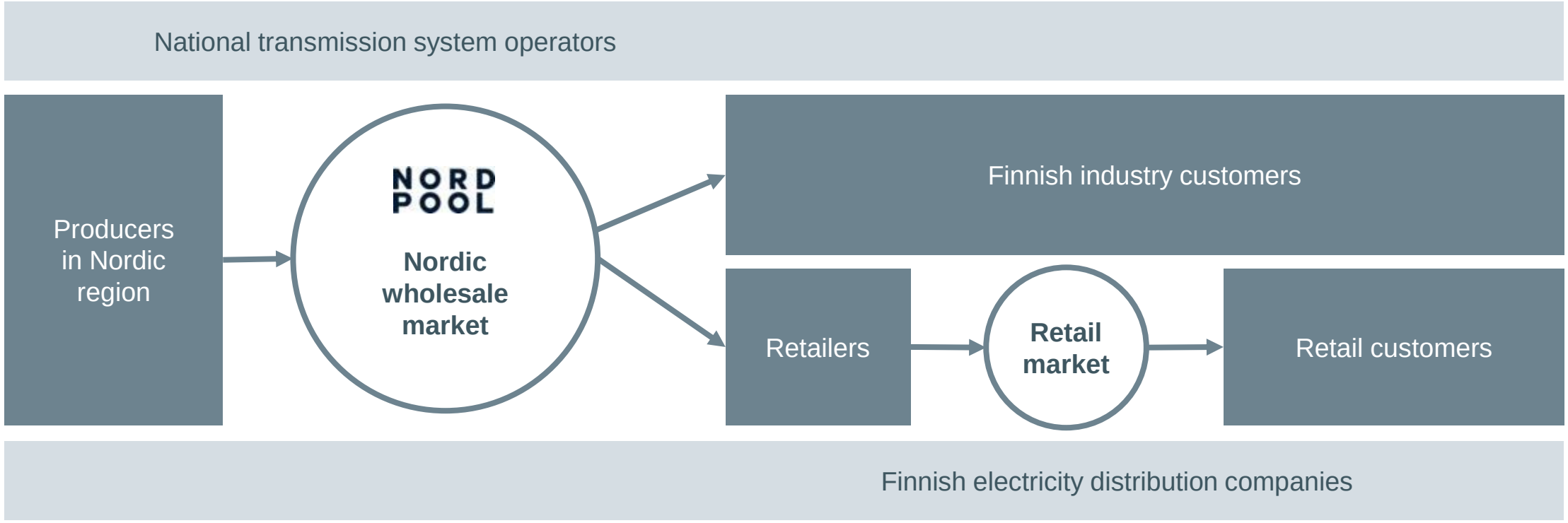
**Uniformity of spot prices in the Nordic region**

% of time



# Physical electricity market structure and business areas in the Baltic Sea area

Power generation is unregulated whereas transmission and distribution are regulated by national authorities



# 04

# Operations

## Description of operations

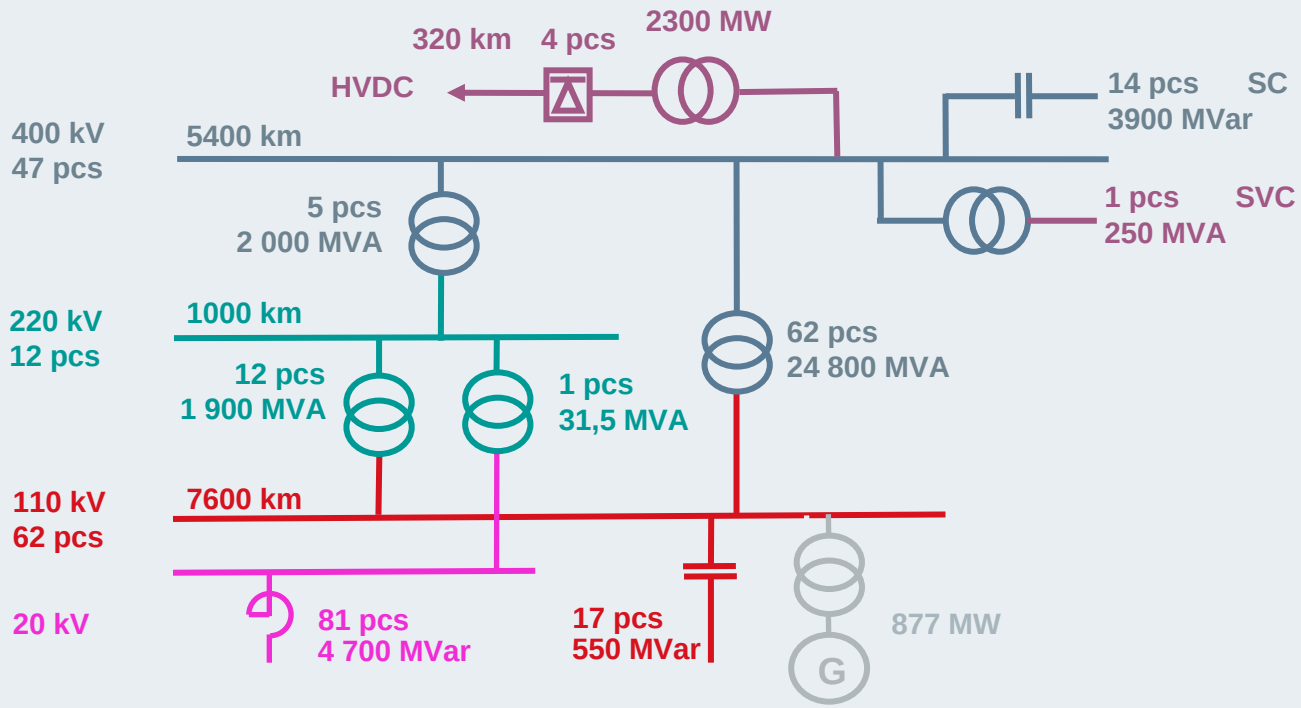
# Fingrid owns and operates the transmission network in Finland

Fingrid's 400 kV power lines form the backbone of the electricity transmission network in Finland.

Fingrid also owns and operates 220 kV and 110 kV power lines.

Fingrid transmits in its own network approximately **78 %** of electricity transmitted in Finland

Fingrid is a part of ENTSO-E, European Network of Transmission System Operators for Electricity.

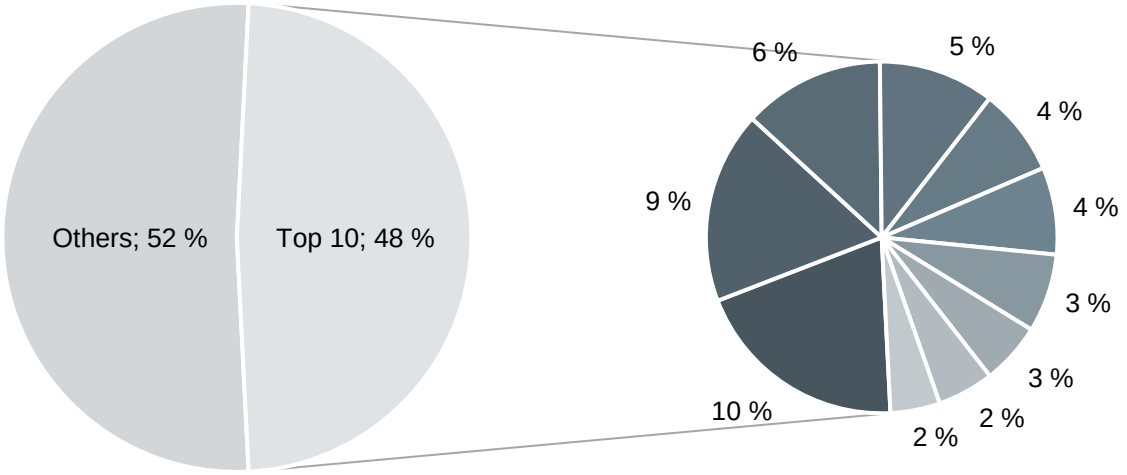


# Grid service customer base consists of around 145 entities

## Credit quality of customer base is solid

### Top 10 customers 2022*

* based on grid service income




- Customers comprise mainly of electricity producers, process industry and electricity distribution companies
- Fingrid is obligated to provide its customers a network connection point
- Ten largest customers account for 48 percent of grid service income

# Fingrid continuously maintains the production and consumption balance

Fingrid fulfils its responsibility to maintain real-time balance in all market conditions

Holders of electricity production and loads can submit bids to the balancing market concerning their capacity

Fingrid has created a common Nordic balancing market together with other TSOs in the region

Fingrid's core task is to ensure network functionality with automatic and manual reserves in imbalance situations

Fingrid procures the needed amount of reserve capacity to maintain the balance of the power system

# State of the power system – *illustrative example*

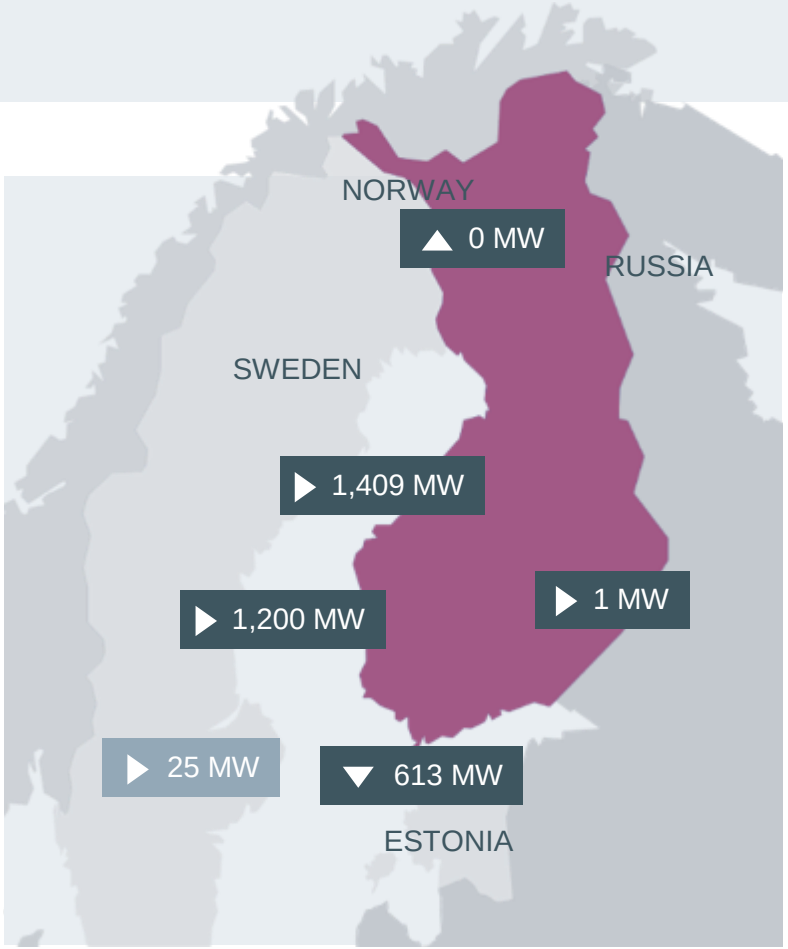
Fingrid procures the needed amount of reserve capacity to maintain the balance of the power system

| Consumption and production in Finland | Info |
|---|---|
| Consumption | 11,172 MW |
| Production | 9,210 MW |
| • Hydro power | 2,382 MW |
| • Nuclear Power | 2,774 MW |
| • Condensing power | 10 MW |
| • Cogeneration district heating | 2,113 MW |
| • Cogeneration industry | 1,455 MW |
| • Wind power (partly estimated) | 406 MW |
| • Other production (estimate) | 70 MW |
| • Peak load power | 0 MW |
| **Net import/export** | **1,962 MW** |

| Power balance | Info |
|---|---|
| Production surplus/deficit in Finland | 91 MW |
| Surplus/deficit, cumulative | 153 MWh |
| Instantaneous freq. measurement | 49,89 Hz |
| Time deviation | 11,60 s |

| Electricity price in Finland | Info |
|---|---|
| Elspot area price | 31,48 EUR/MWh |

| Normal power balance | Info |
|---|---|



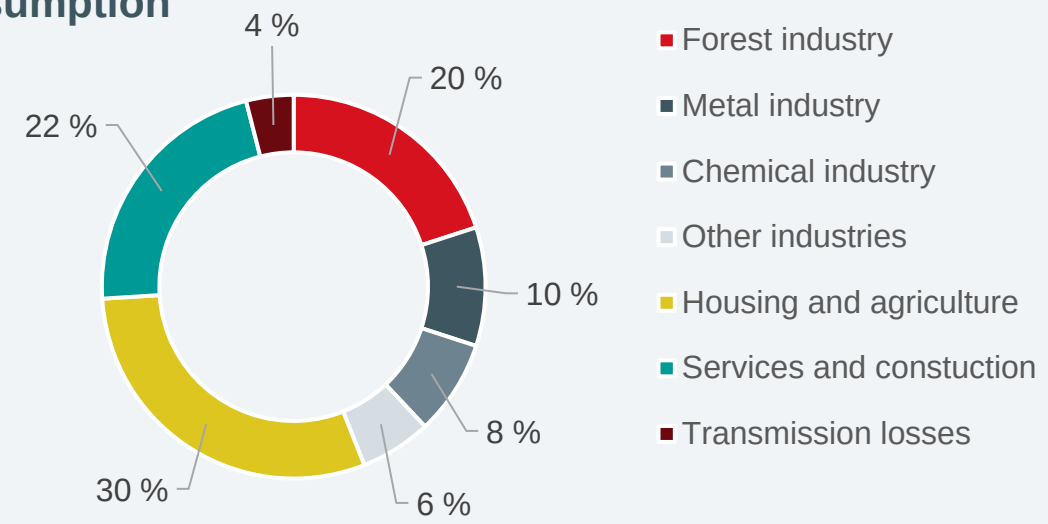
# Electricity consumption in Finland

Energy-intensive industry is a major consumer in Finland accounting for 44 % of consumption in 2022

Fingrid continuously maintains production and consumption balance

Electricity consumption was 82 TWh in Finland in 2022. Electricity net imports accounted for 12.5 TWh or 15 % of total consumption

**Consumption**

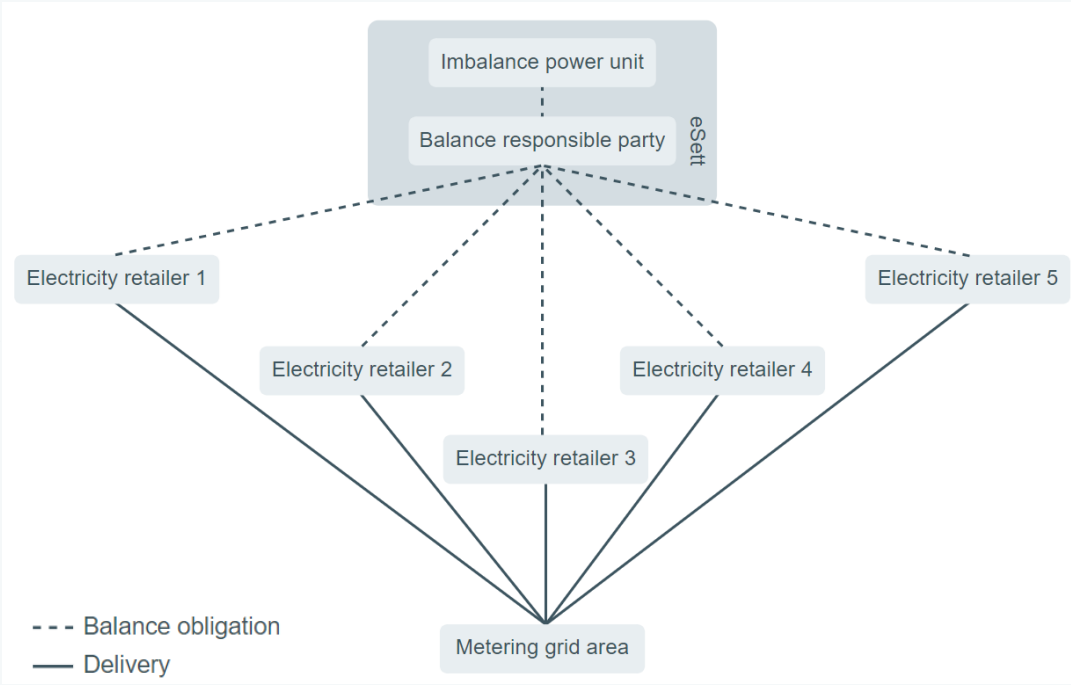


# Advanced markets for all time frames

| Financial market exchange | Nominated electricity market operator | | FINGRID Statnett SVENSKA KRAFTNÄT ENERGINET eSett | | |
|---|---|---|---|---|---|
| Financial market | Day-ahead market | Intra-day market | Regulating power market | Delivery | Imbalance power |
| | | | Reserve markets | | |
| **TRADING** | | | | | |
| 10 years- one day ahead | Auction: Tomorrow | Continuous trading: Tomorrow and present day | Real-time | | Past−time |
| **PRODUCTS** | | | | | |
| Futures, DS futures, options Annual, quarterly, monthly and weekly | Hour | Hour | 1-60 min | | Imbalance settlement |

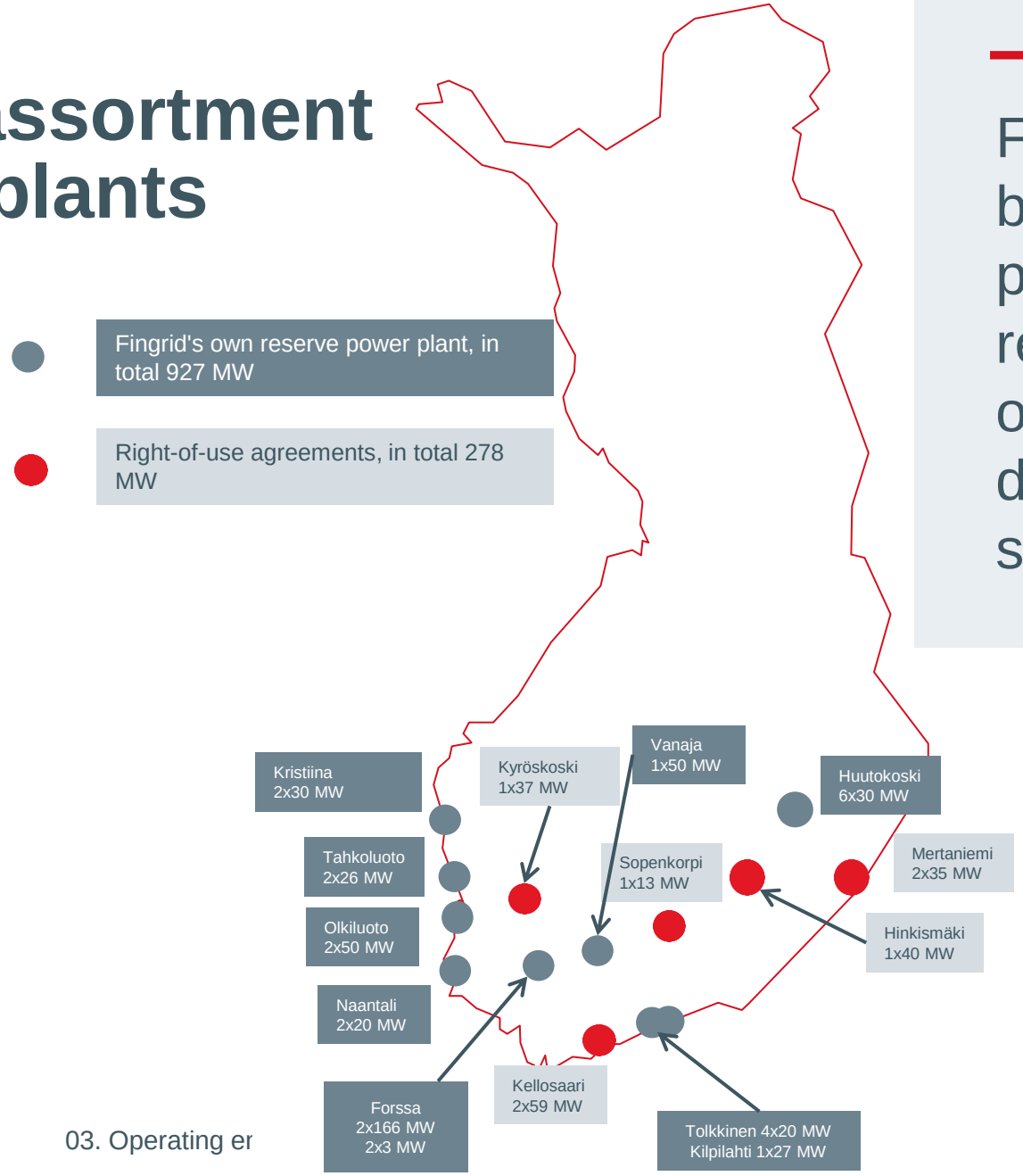
# Fingrid is responsible for the imbalance settlement after delivery

- Each party operating in the electricity market is financially responsible for an hourly imbalance between its electricity production and consumption
- Fingrid acts as an open supplier, which balances the imbalances of these parties after the actual production and consumption has taken place
- A service company, eSett, is responsible for the financial settlement of imbalances on behalf of Fingrid
- eSett is equally owned by TSOs in Finland, Sweden, Norway and Denmark




# Fingrid owns an assortment of backup power plants

- Fingrid owns and operates 927 MW of backup power plants and has right-of-use agreements for further 278 MW. All plants can be activated within minutes
- Backup power plants are not used to sell energy to market but solely as a reserve for imbalances and disturbances in power system
- Fingrid's own power plants are included in the regulatory asset base

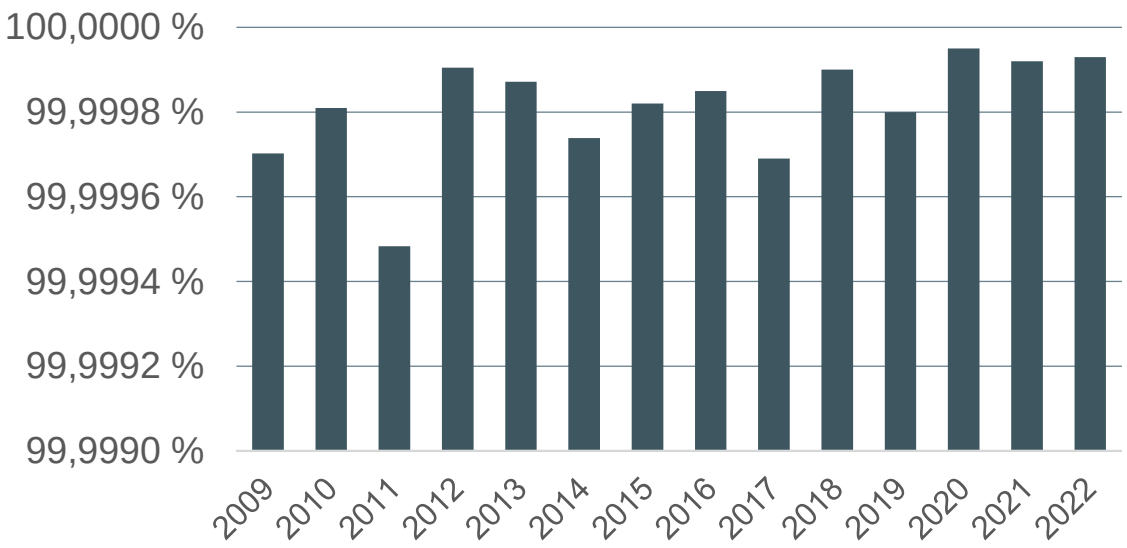



Fingrid's own backup power plants ensure reliable activation of reserves in disturbance situations

# The reliability of the Finnish power system is top class

Transmission network reliability rate of 99.99993% in 2022

## Transmission network reliability




- The power system generally withstands a fault in any individual component (N-1)
- The main reasons for disturbances have been lightning and other weather related incidents (storms)
- Major part of the disturbances are cleared with automatic reclosure schemes without any manual switching operations
- The average duration of the connection point outages is usually a couple of minutes per year

# 04

# Operations

## Efficiency of operations

# Fingrid’s world-class efficiency


Fingrid's excellence in ITAMS and ITOMS benchmark studies reflect highly efficient operating model

# Outsourced grid construction and maintenance

- Core feature of Fingrid's operating model is outsourcing e.g. grid construction and maintenance are outsourced
- Regional maintenance is tendered among external service providers
- Fingrid has around 80 core suppliers, of which 20 account for around 84 percent of total financial value of procurements
- Grid construction projects are tendered among prequalified contractors (system of qualification of contractors)

High operational efficiency and flexibility are achieved through timely competitive tendering of works

Grid maintenance is outsourced

# Fingrid uses qualified suppliers only

- A defined qualification process* for equipment suppliers, service providers and contractors
- An evaluation process for qualified suppliers is done annually
- Only qualified suppliers in Fingrid's supplier register are invited to bid for outsourced works
- Sustainability audits are conducted among suppliers
- Suppliers must comply with Fingrid's Supplier Code of Conduct

* In accordance with the EU based public procurement legislation for the sector

High operational efficiency and flexibility are achieved through comprehensive outsourcing arrangements

Hyvinkää – Hikiä transmission line construction site

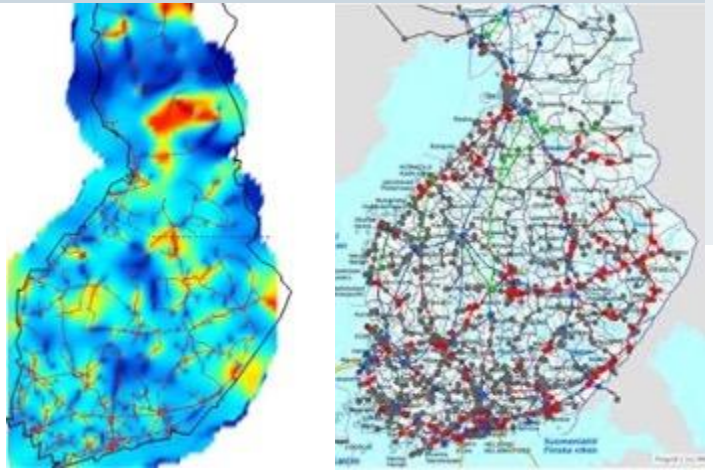
# Investing in efficient management of information through digitalisation

- Increasing proactivity in calculations, monitoring and maintenance
- Single source for power system information
  - Improving information access and usability within stakeholders
- Adding cost aspect to operation and power system components
  - Enhanced business planning through cost operational analytics
- System utilisation and further development

For a quick overview of the ELVIS asset management solution see video at: www.youtube.com key in BMM99tIYFBw

A single asset management system strengthens Fingrid's operational excellence

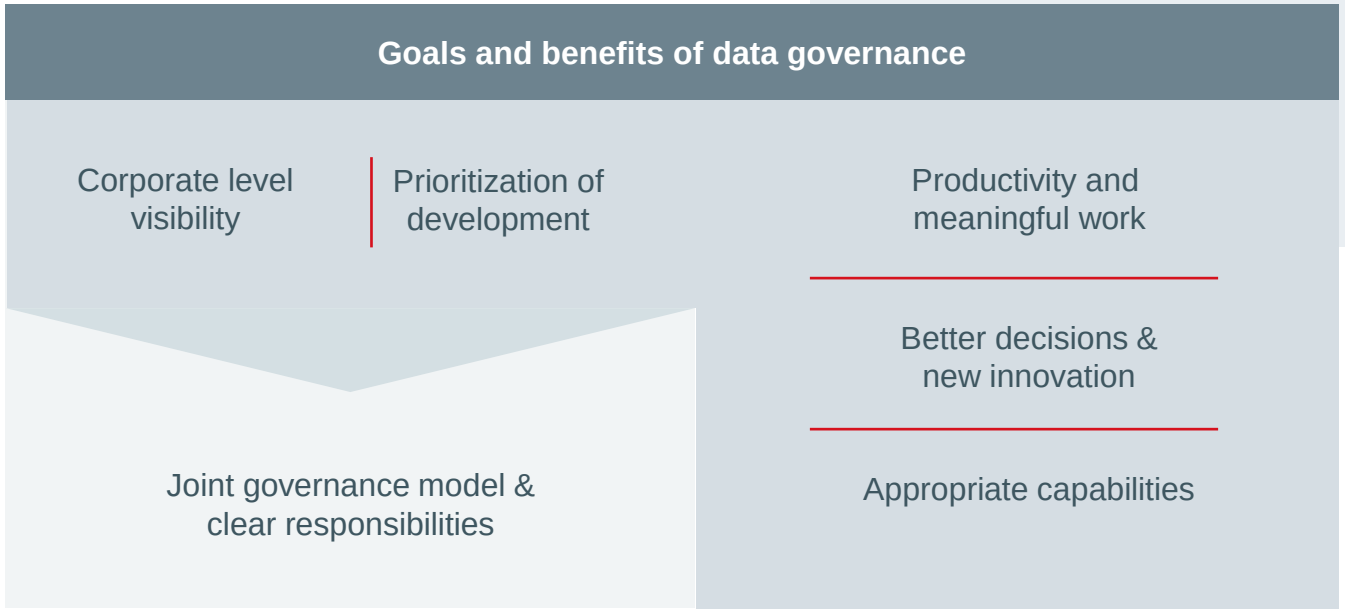
Fingrid’s ERP provides real-time network condition on map



# Data governance model improves productivity, enables better decision-making and innovations

Fingrid manages data as one of its core assets

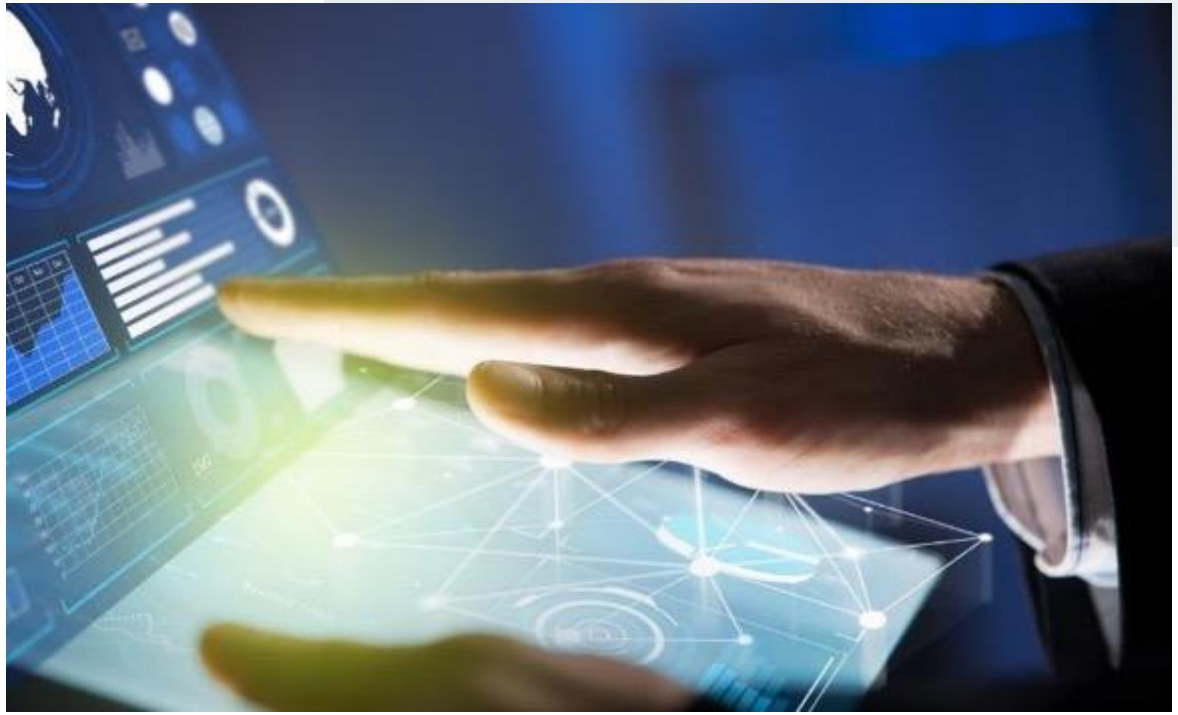
- The importance of data-based management is growing constantly. Properly maintained data is essential for decision-making
- The importance of data to Fingrid's customers and other stakeholders is significant
- Being in a monopoly position imposes a certain responsibility and data transparency is important in order to gain trust from stakeholders
- A well-managed cybersecurity and network security also require good data management



# Digital technology helps in grid maintenance

Digitalization of grid maintenance results in improved system security and cost savings

- Grid operations have become increasingly digitalized over the years
- The installation of sensors necessary for data acquisition at substations started in 2016 and has continued ever since
- Digital condition monitoring helps in allocating resources and forecasting maintenance needs as efficiently as possible
- Fingrid's vision is an autonomous maintenance system that communicates, with the help of artificial intelligence, when any preventive maintenance should be started



# Fingrid's efficient operations are highly recognized

## Excellent results from international benchmark studies

* 25 TSOs from around the world participated in the 2021 study

- Fingrid's Asset Management maintains an **ISO55001** Certificate
- Fingrid has continuously ranked among the best TSOs in the International Transmission Operations and Maintenance Study (**ITOMS**)*
- Fingrid took second place in an International Asset Management Study (**ITAMS)** in 2022

**ISO55001**
ISO 55001 is a framework for an asset management system that will help your business to pro-actively manage the lifecycle of your assets, from acquisition to decommission. This system helps you to manage the risks and costs associated with owning assets, in a structured, efficient manner that supports continual improvement and on-going value creation.

**Benefits of ISO 55001**
An asset management system provides a structured, best practice approach to managing the lifecycle of assets.

- Reduced risks associated with ownership of assets – anything from unnecessary maintenance costs and inefficiency to accident prevention
- Improved quality assurance for customers/regulators – where assets play a key role in the provision and quality of products and services
- New business acquisition - stakeholders gain confidence from the knowledge that a strategy is in place to ensure assets meet the necessary safety and performance requirements

Source: https://www.bsigroup.com/en-GB/Asset-Management/Getting-started-with-ISO-55001/

# Fingrid's overall efficiency is confirmed also by the regulators

- Study conducted for the Council of European Energy Regulators (CEER) in 2019
- Comparison of total efficiency: costs of grid construction, maintenance, planning and administration
- Fingrid was ranked a top performer among the 17 European TSOs included in the study
- Fingrid performed well in a similar study prepared for CEER already in 2013


**Project CEER-TCB18 – Pan-European cost-efficiency benchmark for electricity transmission system operators**
July 2019

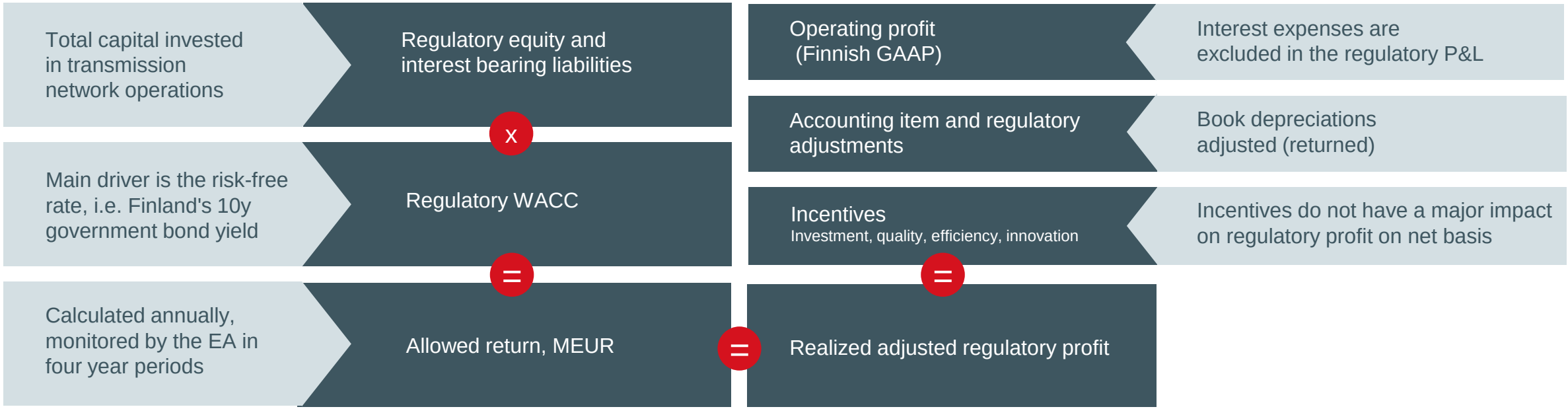
# 04

# Operations

## Earnings model

# Regulatory capital and WACC defined by the Energy Authority set the allowed return

Fingrid aims to match realized regulatory profit and allowed return over the regulatory period



# Calculation of WACC in the regulatory model 2016-2023

The core parameter defining yearly WACC is the yield of the Republic of Finland's 10-year bond

## Cost of equity

$C_E = R_r + \beta_{debt\ free} \times (1 + (1 - t) \times D/E) \times (R_m - R_f) + LP$

$C_E$ = Finnish 10y bond + 0,4 x (1 + (1-20%) x 50/50) x 5% + 0,6%

**$C_E$ = Finnish 10y bond + 4,2%**

## Cost of debt

$C_D = R_r + DP$

**$C_D$ = Finnish 10y bond + 1,26%**

## WACC (pre tax)

$WACC_{post\text{-}tax} = C_E \times 50/100 + C_D \times (1 - t) \times 50/100$

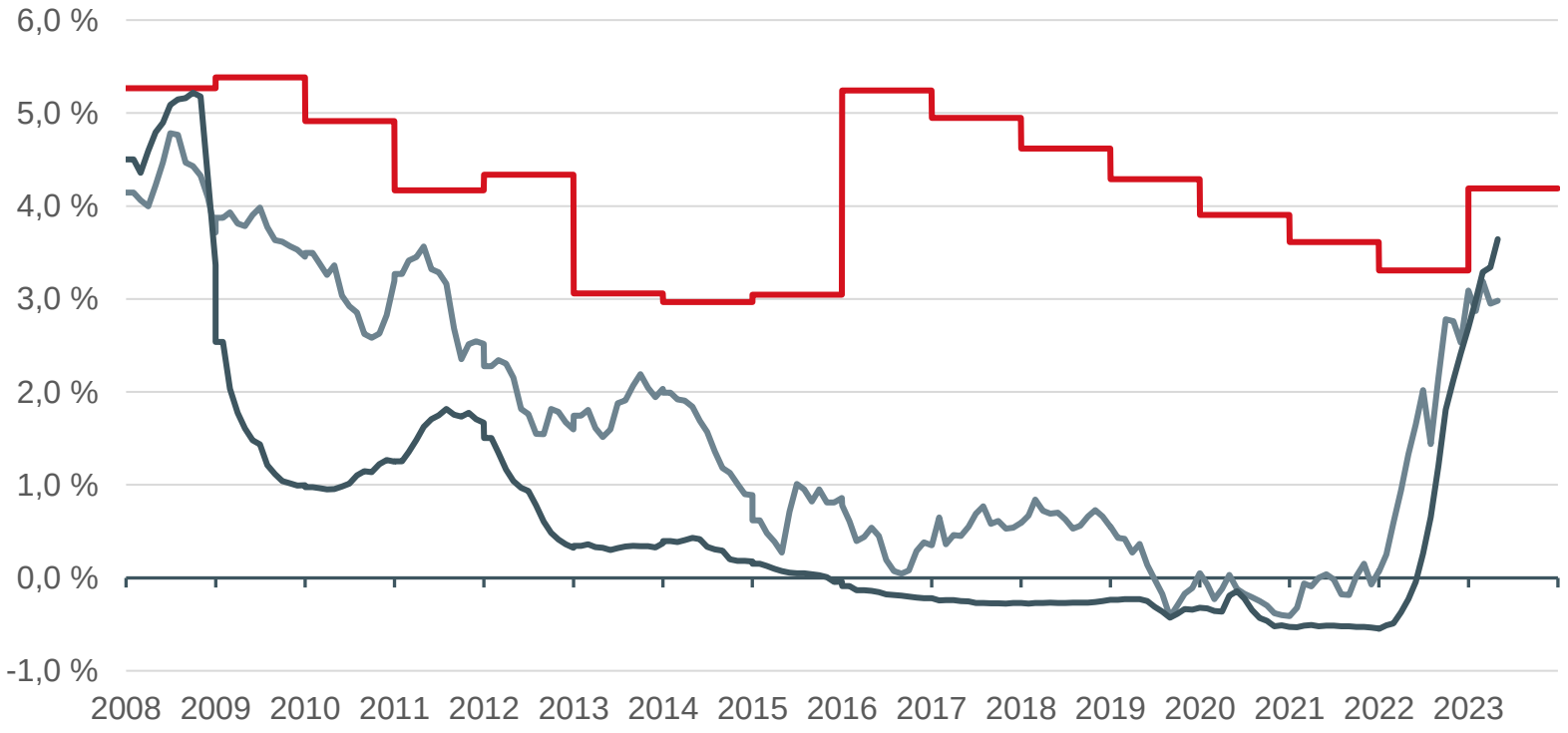
**$WACC_{post\text{-}tax}$ = Finnish 10y bond x 0,9 + 2,60%**

$WACC_{pre\text{-}tax}$ = Finnish 10y bond x 1,125 + 3,26%

| Parameter | Value to be applied |
|---|---|
| *Risk-free rate ($R_r$)* | Greater of:<br>a) 10-year average of 10-year Finnish government bond rate<br>b) Average of previous year April-September government bond rate |
| *Asset beta ($\beta_{debt\ free}$)* | 0,4 |
| *Market risk premium ($R_m - R_f$)* | 5,0% |
| *Liquidity premium (LP)* | 0,6% |
| *Capital structure (D/E)* | 50/50 |
| *Risk premium of debt (DP)* | 1,26% |
| *Tax rate (t)* | 20% |

# The current regulatory model benefits from relatively stable WACC* without capping upside

Pre-tax WACC for 2023 calendar year 5,24% (4,13% in 2022)




The regulatory model applies the higher of
**i)** 10y average of Finnish Government (FinGov)
10y bond yield or
**ii)** April–September average of 10y FinGov as risk free rate in WACC

* Regulatory WACC 2007 – 2015 calculated as post-tax basis. From 2016 regulatory model applies pre-tax WACC.

# Calculating the allowed return in euros: WACC x Regulatory capital

- Allowed return in euros is calculated as follows:

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

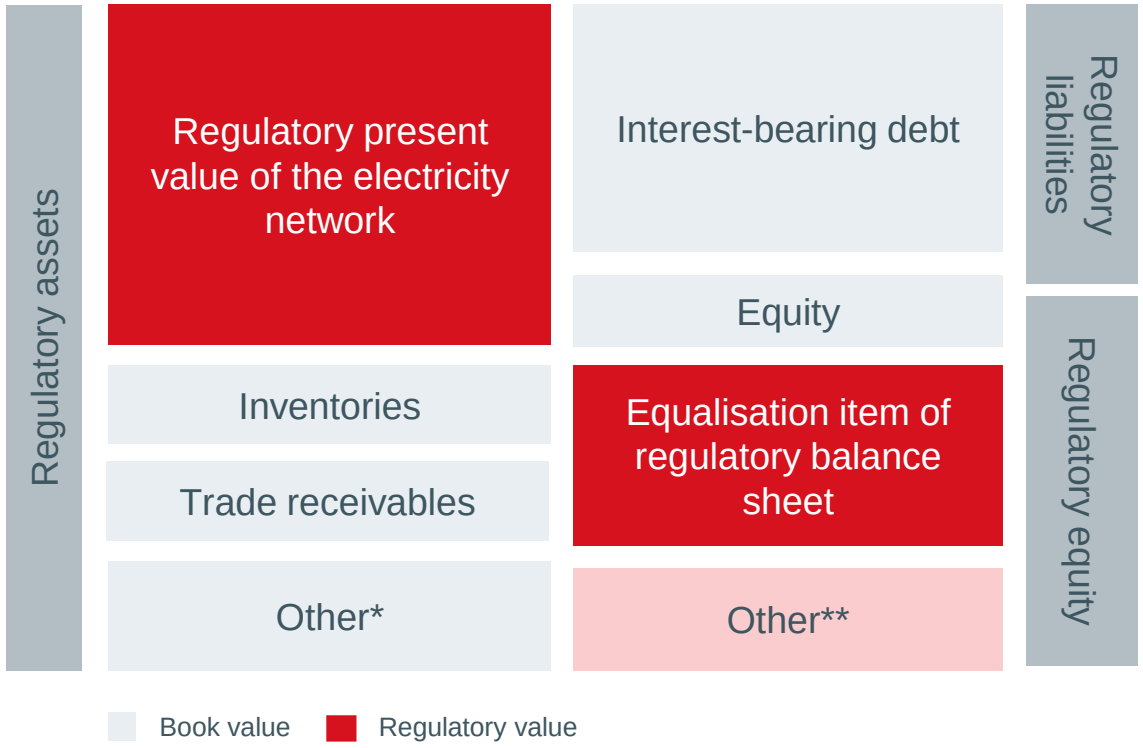
E = regulatory amount of equity
D = regulatory amount of interest-bearing debt

$$R_{pre\text{-}tax\ 2022} = 4{,}13\% \times \sim 3{,}100\ M€ = \sim 125\ M€$$

- **Regulatory capital is equal to the sum of regulatory equity and liabilities**
- The equalisation item in the equity section of balance sheet balances regulatory equity and liabilities with regulatory assets

*Including regulatory cash
**Other is excluded from regulatory capital. Other includes deferred tax liabilities, non-interest bearing debt, provisions for liabilities and charges

**Calculating regulatory balance sheet**



# Calculating regulatory capital

- Regulatory capital (equity and liabilities) of the electricity network is derived from the adjusted replacement value of the electricity network assets
- The adjusted replacement value is calculated by valuing all components with list values provided by the Energy Authority
- All components have expected lifetimes, which are used to adjust the replacement values of the components to come up with the regulatory present value of the electricity network
- An equalisation item of equity is used to match regulatory equity and liabilities with regulatory assets

**ADJUSTED REPLACEMENT VALUE OF THE ELECTRICITY NETWORK**

$= list\ price\ of\ component\ x\ quantity$ (for all grid components)*

** Price list is updated together with regulation methods (once in 8 years)*

adjustment by using expected lifetimes of grid components

**REGULATORY PRESENT VALUE OF THE ELECTRICITY NETWORK**

$$= \sum \left( \left(1 - \frac{average\ age}{lifetime}\right) x \; adjusted\ replacement\ value\ of\ all\ electricity\ network\ assets \right)$$

other adjusted current and non-current assets are added

**REGULATORY ASSETS**

$$= adjusted\ other\ noncurrent\ assets + adjusted\ other\ current\ assets + regulatory\ present\ value\ of\ the\ electricity\ network$$

regulatory equity is adjusted to match regulatory equity and liabilities with regulatory assets

**REGULATORY ASSETS**

$$= adjusted\ other\ noncurrent\ assets + adjusted\ other\ current\ assets + regulatory\ present\ value\ of\ the\ electricity\ network$$

# Regulatory assets are mainly based on regulatory present value of the electricity network

| Components in calculation of regulatory assets in regulatory model 2016-2023 | |
|---|---|
| **Regulatory present value of the electricity network** | Based on the unit prices of components in the beginning of the regulatory period and component age / maximum age in regulation |
| **Unit prices of components** | Prices were updated to replacement value in 2016 based on the unit prices (5Y historical project data) |
| **Investments under construction** | Investments under construction are included in the RAB in book value |
| **IT systems** | Value in RAB and regulatory depreciation is the book value |
| **Regulatory allowed cash** | 10 % of regulated turnover |

# Limited contribution from incentives and adjustments to allowed return 1/2

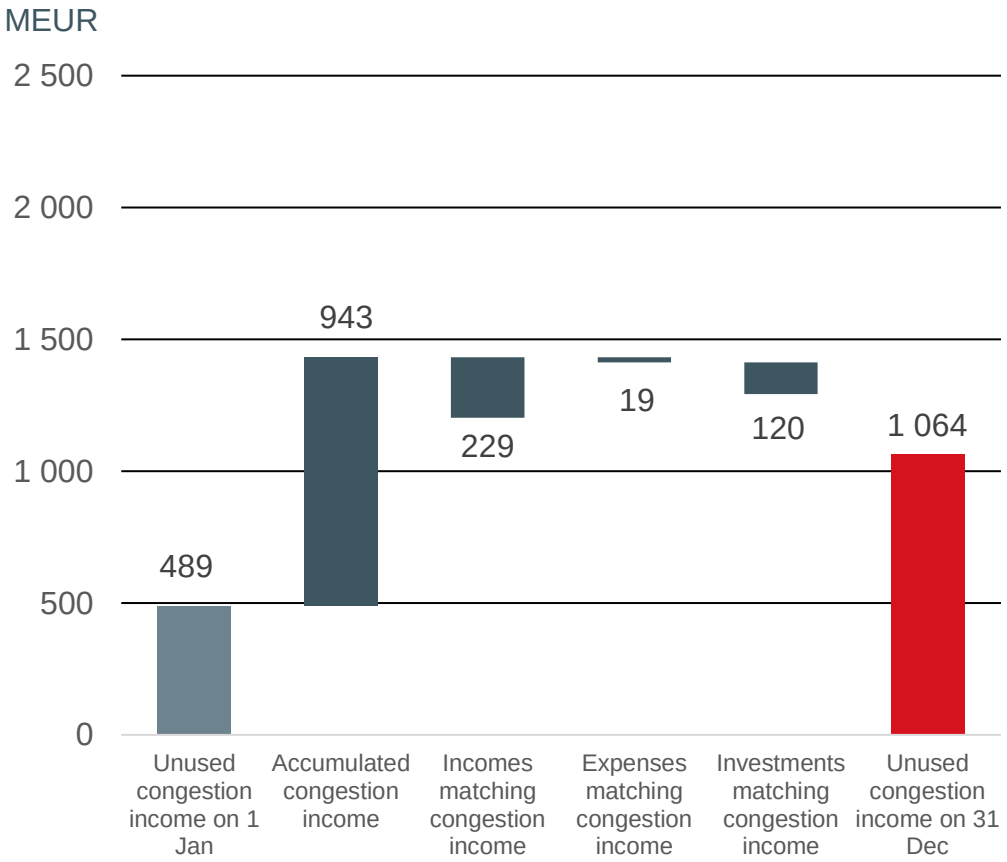
| Incentives in calculation of realized regulatory profit in regulatory model 2016-2023 | |
|---|---|
| **Investment incentive** | Promotes reasonable and cost-efficient investments by allowing straight-line depreciations based on the replacement value of the transmission network assets. Components are included in depreciation in replacement value as long as they are utilized |
| **Quality incentive** | Cost for the society from non-delivered electricity caused by disturbances and fast reclosing operation, max +/- 3 % of allowed return, benchmarked against 8-year historical average |
| **Effiency improvement** | Target: 0%, max +/- 5 % of allowed return, benchmarked against 4-year historical average |
| **Innovation incentive** | Maximum 1,0 % of turnover is reimbursed in allowed return |

# Limited contribution from incentives and adjustments to allowed return 2/2

| Adjustments in calculation of realized regulatory profit in regulatory model 2016-2023 | |
|---|---|
| **Congestion income** | Treated separately from the regulatory allowed return but congestion income booked through profit and loss to cover costs or to reduce tariffs affect realized regulatory profit. Investments financed with congestion income affect realized regulatory profit through regulatory depreciations |
| **Inflation adjustment to regulatory depreciation** | Indexed annually with CPI to match current replacement value |

# Congestion income

## Congestion income 2022




Congestion income is used to remove bottlenecks between the bidding zones of an electricity exchange

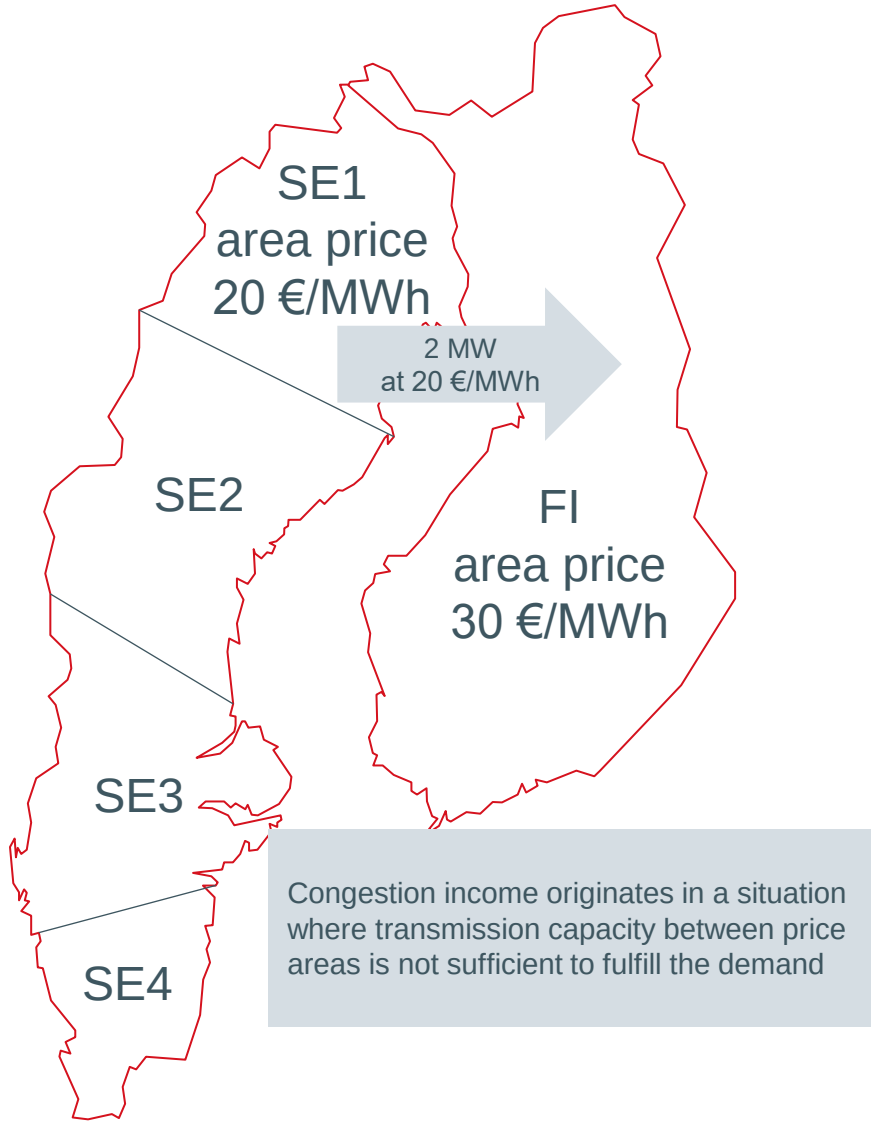
- In 2022, the congestion income received by Fingrid increased significantly and MEUR 943 of congestion income was accumulated. MEUR 1 064 in congestion income was left unused and will be used in accordance with EU regulation and the decisions by the Energy Authority
- In 2022, a total of MEUR 229 in congestion income was recognized in turnover, MEUR 19 in other operating income and MEUR 120 was used for completed investments
- Congestion income booked through profit and loss to cover costs or to reduce tariffs affect realized regulatory profit. Investments financed with congestion income affect realized regulatory profit through regulatory depreciations

# Congestion income generation – *illustrative example*

**Illustrative example on how congestion income is generated**

- Nord Pool determines for the hour 19.00 – 20.00 (a day ahead) area price in Finland at 30 €/MWh and in Sweden SE1 bidding area at 20 €/MWh
- Cross-border transmission capacity between Finland and Sweden is illustratively limited to 2 MW but the consumption in Finland is greater than that, i.e. there is not enough transmission capacity to fulfill all the demand in Finland with the lower prices in Sweden (congestion)
- 2 MWh is transmitted from Sweden to Finland
  - A producer in Sweden SE1 receives 2MW * 20 €/MWh, i.e. 40 €
  - A consumer in Finland pays 2MW * 30 €/MWh, i.e. 60 €
- There is extra cash (congestion income) generated at the Nord Pool i.e. the difference between paid and received funds, 20 €
  - Fingrid receives 10 € and the Swedish TSO receives 10 €
- All congestion income is used for investments reducing congestions according to EU regulation

| MEUR | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| CONGESTION INCOME | 39,9 | 25,8 | 29,7 | 73,0 | 146,7 |

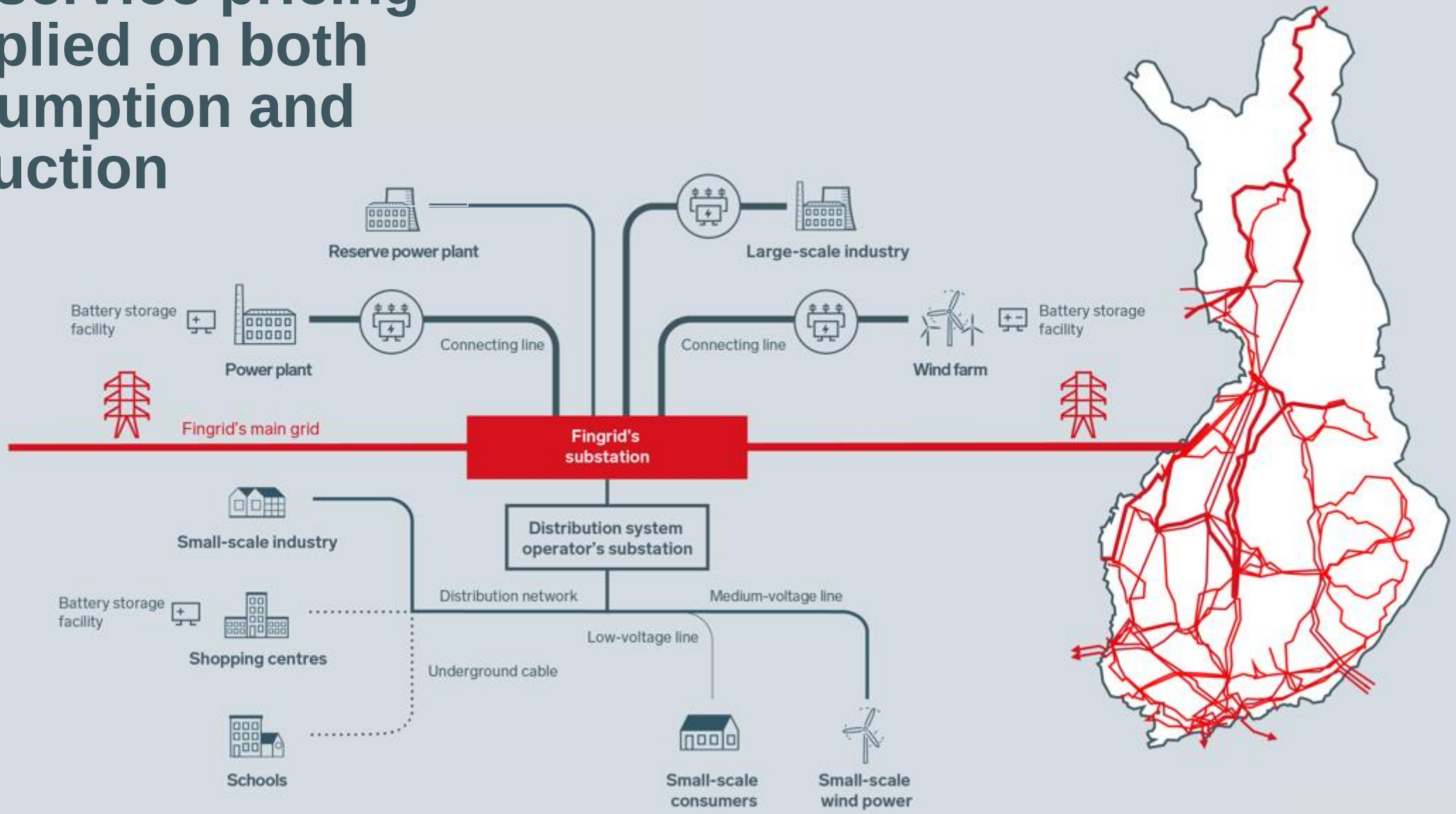


# 04

# Operations

## Pricing

# Grid service pricing is applied on both consumption and production



# Grid service pricing is applied on both consumption and production

Transmission prices are seasonally adjusted and charged on consumption and use of grid

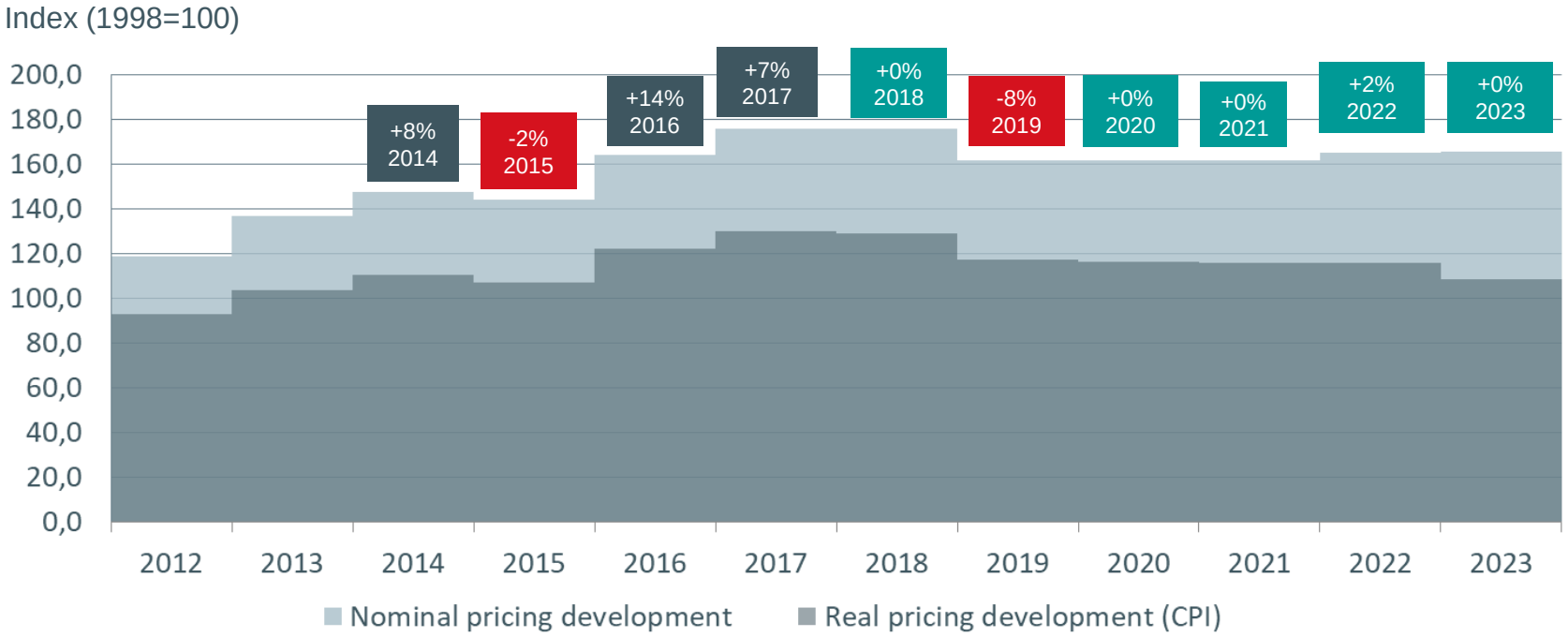
Fingrid defines the grid service pricing structure (in co-operation with its customers), which is approved by the Energy Authority

| Pricing EUR/MWh | 2023 |
|---|---|
| Consumption, winter weekday* | 8.96 |
| Consumption, other times | 2.55 |
| Output from the grid | 0.92 |
| Input into the grid | 0.61 |
| Power plant capacity fee | 1,944 €/MW/a |
| Reactive power fee | 1,000 €/Mvar/m |
| Reactive energy fee | 5 €/Mvarh |

* Winter weekday December – February 7 am – 9 pm

# Development of announced grid service pricing

## Record-breaking congestion revenue is also used to waive grid service fees in 2022 and 2023



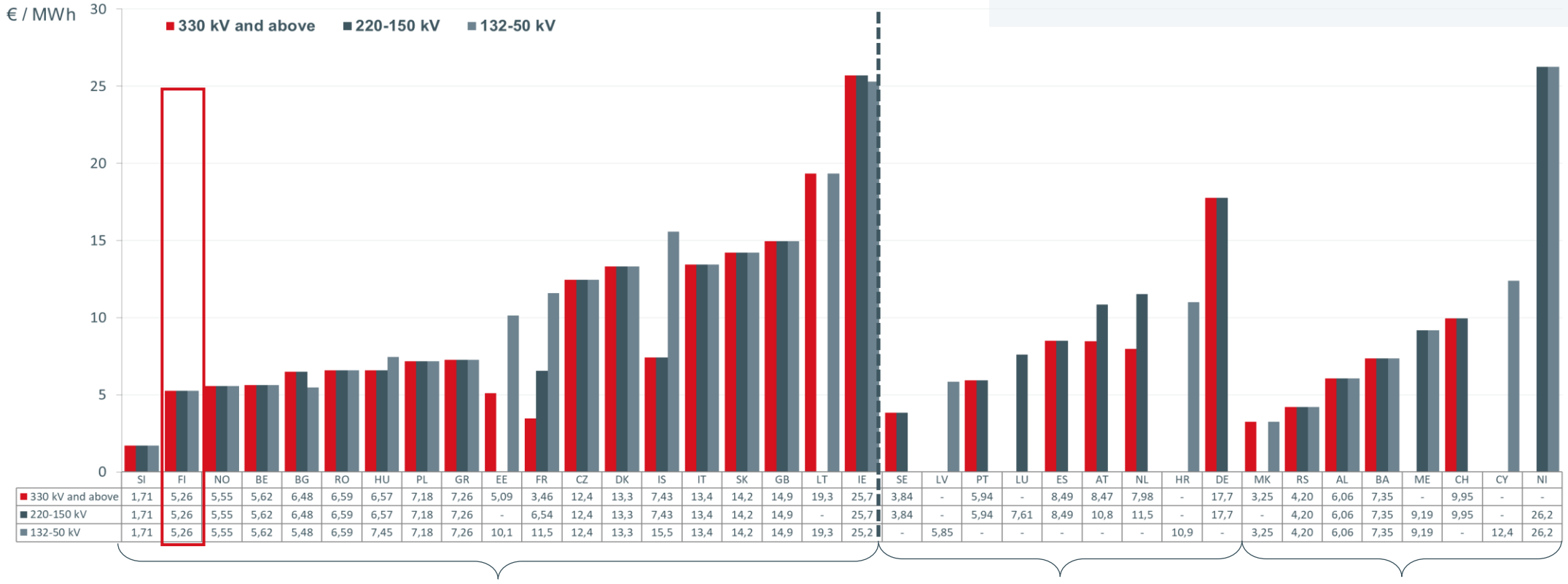

Fingrid has made plans to give its customers six months with no grid service fees in 2023. If this comes to fruition, it will reduce the current fees for main grid customers by approximately EUR 300 million. The decision has already been taken to waive the grid service fees for December 2022 and January, February and June 2023.

Source: https://www.fingrid.fi/en/news/news/2022/fingrid-to-use-congestion-revenue-to-cover-higher-costs-and-waive-grid-service-fees/

# Transmission charges from generation to consumption

Fingrid's effectiveness and efficiency enable low charges – second lowest transmission tariffs in Europe

**Transmission charges from generation to consumption in Europe 2021 – including EU and ETA countries** Source: Entso-e



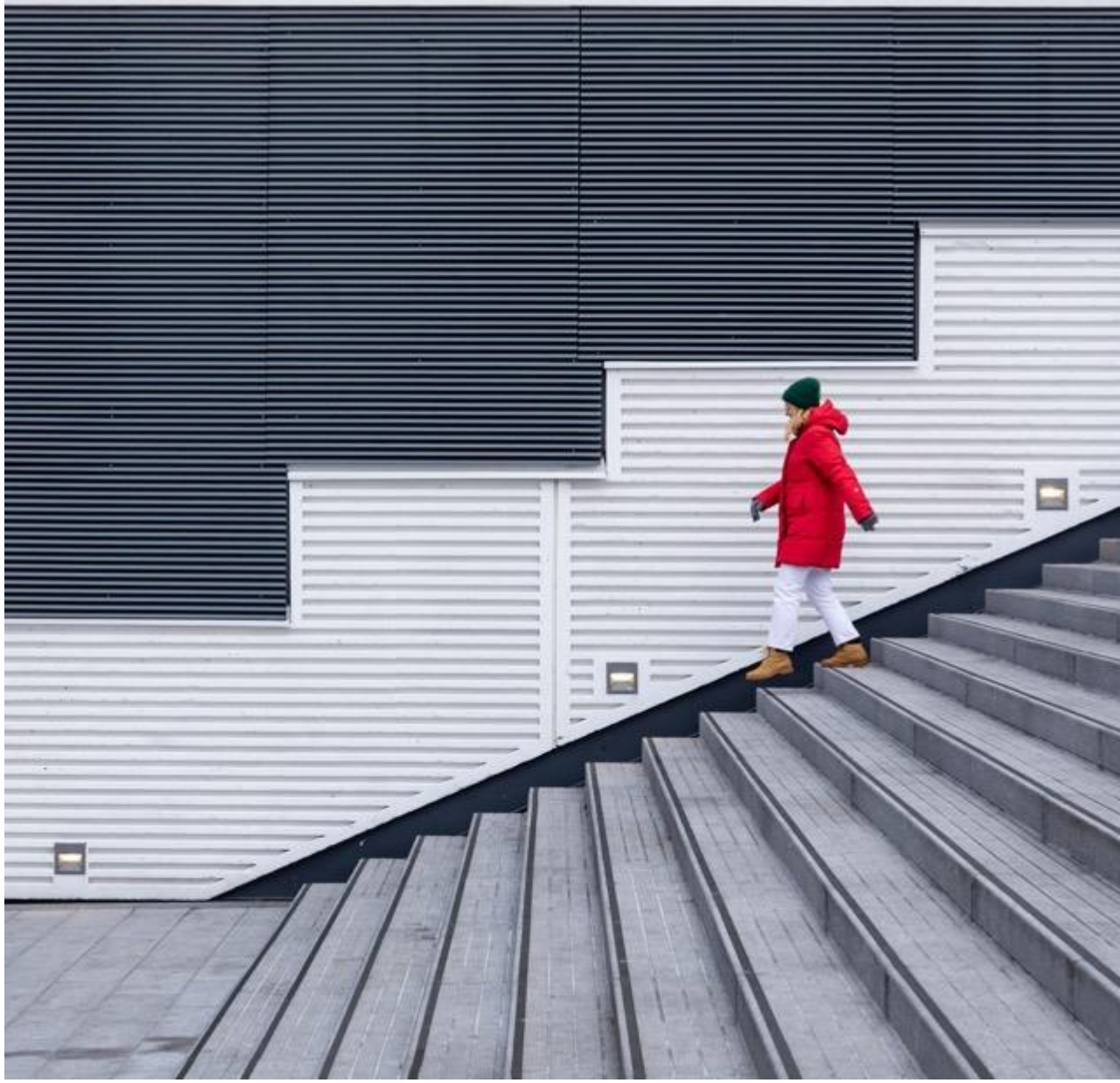

| | SI | FI | NO | BE | BG | RO | HU | PL | GR | EE | FR | CZ | DK | IS | IT | SK | GB | LT | IE | SE | LV | PT | LU | ES | AT | NL | HR | DE | MK | RS | AL | BA | ME | CH | CY | NI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 330 kV and above | 1,71 | 5,26 | 5,55 | 5,62 | 6,48 | 6,59 | 6,57 | 7,18 | 7,26 | 5,09 | 3,46 | 12,4 | 13,3 | 7,43 | 13,4 | 14,2 | 14,9 | 19,3 | 25,7 | 3,84 | - | 5,94 | - | 8,49 | 8,47 | 7,98 | - | 17,7 | 3,25 | 4,20 | 6,06 | 7,35 | - | 9,95 | - | - |
| 220-150 kV | 1,71 | 5,26 | 5,55 | 5,62 | 6,48 | 6,59 | 6,57 | 7,18 | 7,26 | - | 6,54 | 12,4 | 13,3 | 7,43 | 13,4 | 14,2 | 14,9 | - | 25,7 | 3,84 | - | 5,94 | 7,61 | 8,49 | 10,8 | 11,5 | - | 17,7 | - | 4,20 | 6,06 | 7,35 | 9,19 | 9,95 | - | 26,2 |
| 132-50 kV | 1,71 | 5,26 | 5,55 | 5,62 | 5,48 | 6,59 | 7,45 | 7,18 | 7,26 | 10,1 | 11,5 | 12,4 | 13,3 | 15,5 | 13,4 | 14,2 | 14,9 | 19,3 | 25,2 | - | 5,85 | - | - | - | - | - | 10,9 | - | 3,25 | 4,20 | 6,06 | 7,35 | 9,19 | - | 12,4 | 26,2 |

*Peers with comparable infrastructure to Fingrid* *Peers with non-comparable infrastructure to Fingrid* *Non EU / ETA*

# 04

# Operations

## Investments



# Investments are based on 5–25-year grid development plans

All Fingrid's investment projects have been done in schedule and budget

- Grid development plans are prepared at three levels, i.e. European, regional and national
- Fingrid decides on investments based on customers' needs, transmission system security and network capacity
- Fingrid's network construction is contracted with fixed price contracts
- Before network construction commences all environmental and planning permits are in place

# Electricity system vision 2023

## Four scenarios for electricity generation and demand developments in Finland by 2035





**In all scenarios, transport, heating and industry will become electrified, and carbon neutrality targets will be met**

### Power to products

- Finland becomes significant exporter of P2X products.
- Wind and solar power grow significantly.
- The hydrogen needed for P2X processes is produced close to demand facilities, and there is no centralised hydrogen storage or network. This increases the strengthening needs of the electricity network and the need for flexibility in the electricity system.

### Hydrogen from wind

- Hydrogen production grows in Finland and Finland becomes exporter of hydrogen.
- The hydrogen system acts as an energy storage facility, enabling very large-scale onshore wind power production. At the same time, the volume of conventional electricity production shrinks sharply.
- The change in production and consumption structure challenges technical functioning of electricity system and is reflected as a very high north-south energy transmission need.

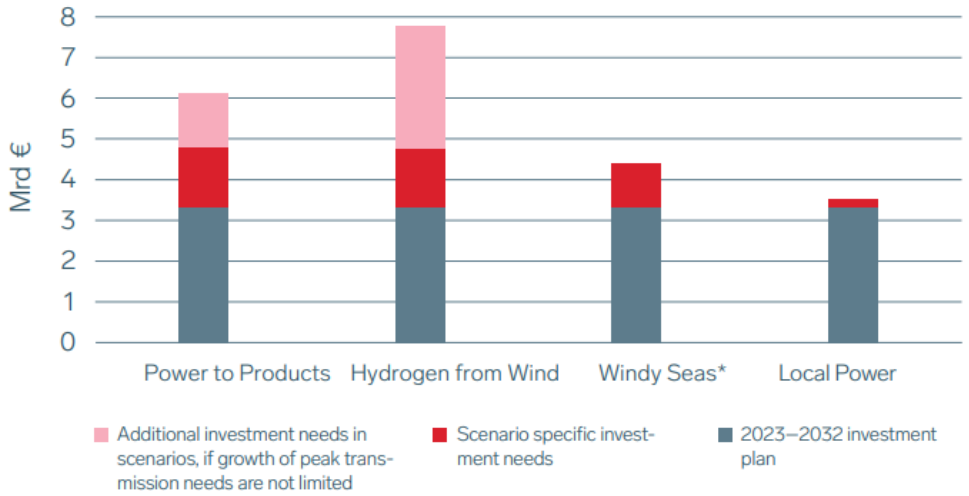
### Windy seas

- Electricity consumption grows when fossil-fueled energy is replaced by electricity and e-fuels.
- Offshore becomes the dominant form of production.
- The production of electricity is increasingly focused on the west coast, which challenges the transmission of electricity from the west coast to consumption concentrations.

### Local power

- Electricity consumption increases, but more moderately than in the other scenarios.
- The growth in electricity production consists of several different technologies, including wind and solar and SMR nuclear power.
- The relatively higher share of production is located in southern Finland, close to consumption concentrations.

Order-of-magnitude estimate of the electricity network investment costs required by the scenarios in 2035




* Windy Seas scenario does not include investment costs required by the network connections built on the sea nor the submarine cable link to Germany assumed in the scenario.

Source: https://www.fingrid.fi/globalassets/dokumentit/en/news/electricity-market/2023/fingrid_electricity_system_vision_2023.pdf

# Flexible and long-term investment strategy

| | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Huittinen - Forssa 400+110 kV overhead line | | | | | | | | | | | | |
| 2 | Aurora Line | | | | | | | | | | | | |
| 3 | 400 kV cable connection to Helsinki | | | | | | | | | | | | |
| 4 | Reinforcement of Lake Line | | | | | | | | | | | | |
| 5 | Svartby-Keminmaa 400 kV reinforcement | | | | | | | | | | | | |
| 6 | 2 x Jylkkä - Alajärvi 400+110 kV overhead line | | | | | | | | | | | | |
| 7 | Petäjäskoski - Nuojuankangas 400+110 kV overhead line | | | | | | | | | | | | |
| 8 | Kristiinankaupunki - Nokia 400+110 kV overhead line | | | | | | | | | | | | |
| 9 | Alajärvi -Toivila 400+110 kV overehead line | | | | | | | | | | | | |
| 10 | Extension of Forest Line | | | | | | | | | | | | |
| 11 | Reinforcement of Forest Line | | | | | | | | | | | | |
| 12 | Nuojuankangas - Seitenoikea 400 + 110 kV overhead line | | | | | | | | | | | | |
| 13 | Aurora Line 2 | | | | | | | | | | | | |
| 14 | Hausjärvi - Anttila 400 kV overhead line | | | | | | | | | | | | |
| 15 | Länsisalmi - Anttila 400 kV overhead line | | | | | | | | | | | | |
| 16 | Hikiä - Kynnar - Inkoo 400 kV overhead line | | | | | | | | | | | | |
| 17 | Ridge Line | | | | | | | | | | | | |
| 18 | Estlink 3 | | | | | | | | | | | | |

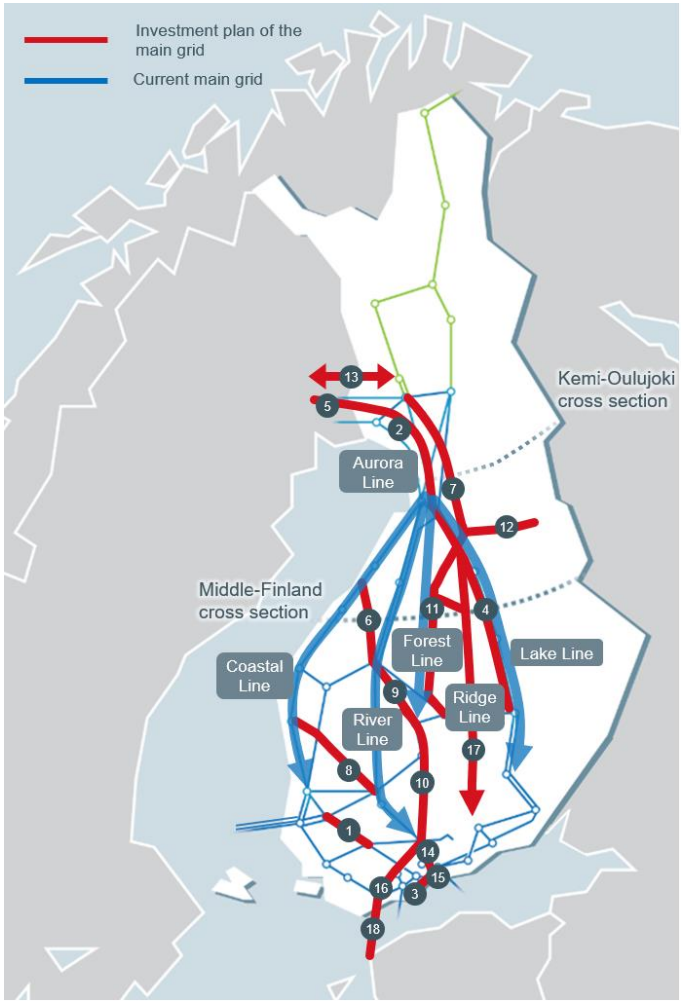
EIA / Preliminary design

Detailed planning and permits

Implementation

**2023– 2032:**
3200 km of 400 kV transmission lines
2100 km of 110 kV transmission lines
50 km of HVDC cable

## Main grid investment plan

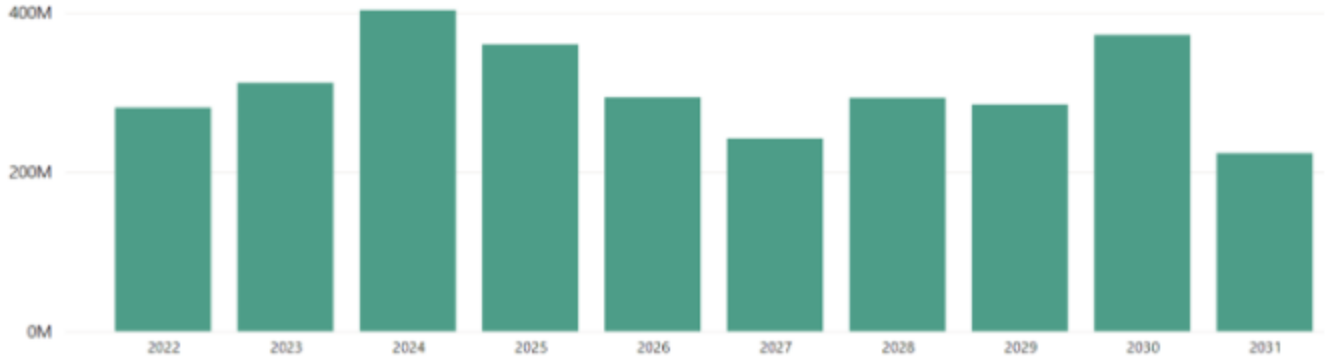



About 200 substation projects (includes new substation projects, expansion projects and maintenance projects)

# Investments in the main grid approximately EUR 3 billion in 2022 – 2031

Over the next ten years, Fingrid will invest a record EUR 3 billion in the main grid. The investments will enable electrification and the increasing pace of construction of renewable electricity generation, as demanded by the energy revolution. As part of this investment programme, Fingrid is planning to build new cross-border connections to Sweden and Estonia.

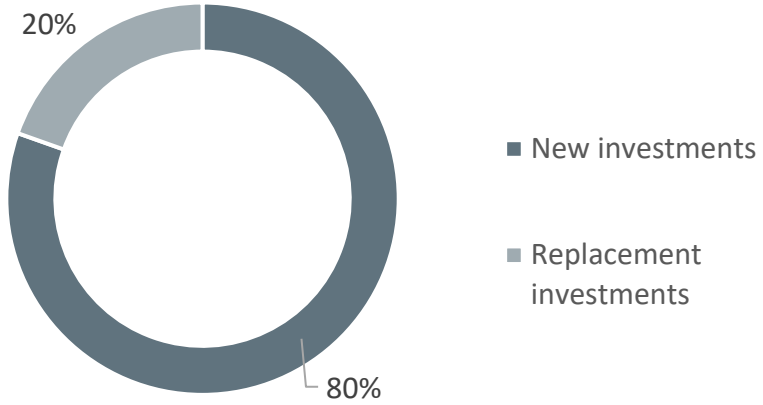
Source: https://www.fingrid.fi/en/pages/news/news/2022/investments-in-the-main-grid-rise-to-eur-3-billion/




Investments are driven by network aging, market development and connecting new production capacity

**Investments in 2022–2031**

EUR 3.0 bn

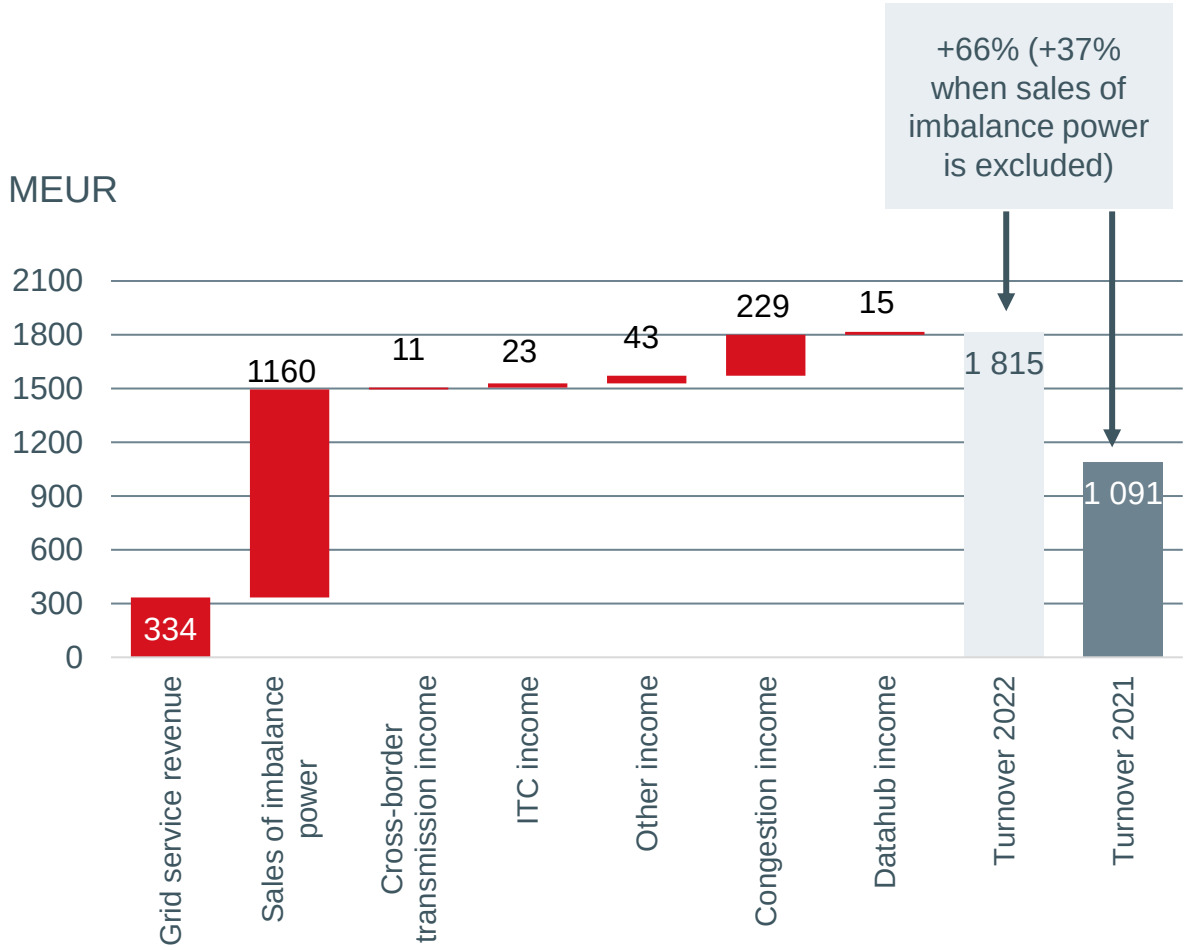


# 05

# Financials

## Financial performance

# IFRS turnover breakdown in 2022




## Breakdown of main sources of turnover

**Grid service revenue**

- Grid service revenue consists mainly of the unit price for electricity transmission multiplied by electricity consumption and production

**Sales of imbalance power**

- Fingrid sells and purchases imbalance power in order to stabilise the hourly power balance of the balance responsible parties
- Sales of imbalance power is driven by market prices
- The net of imbalance power sales and purchases is slightly positive and used to cover reserve costs
- Imbalance power boosts turnover as well as costs
- Growth of sales of imbalance power was increased because of high electricity prices in Europe in 2022

**Cross-border transmission income**

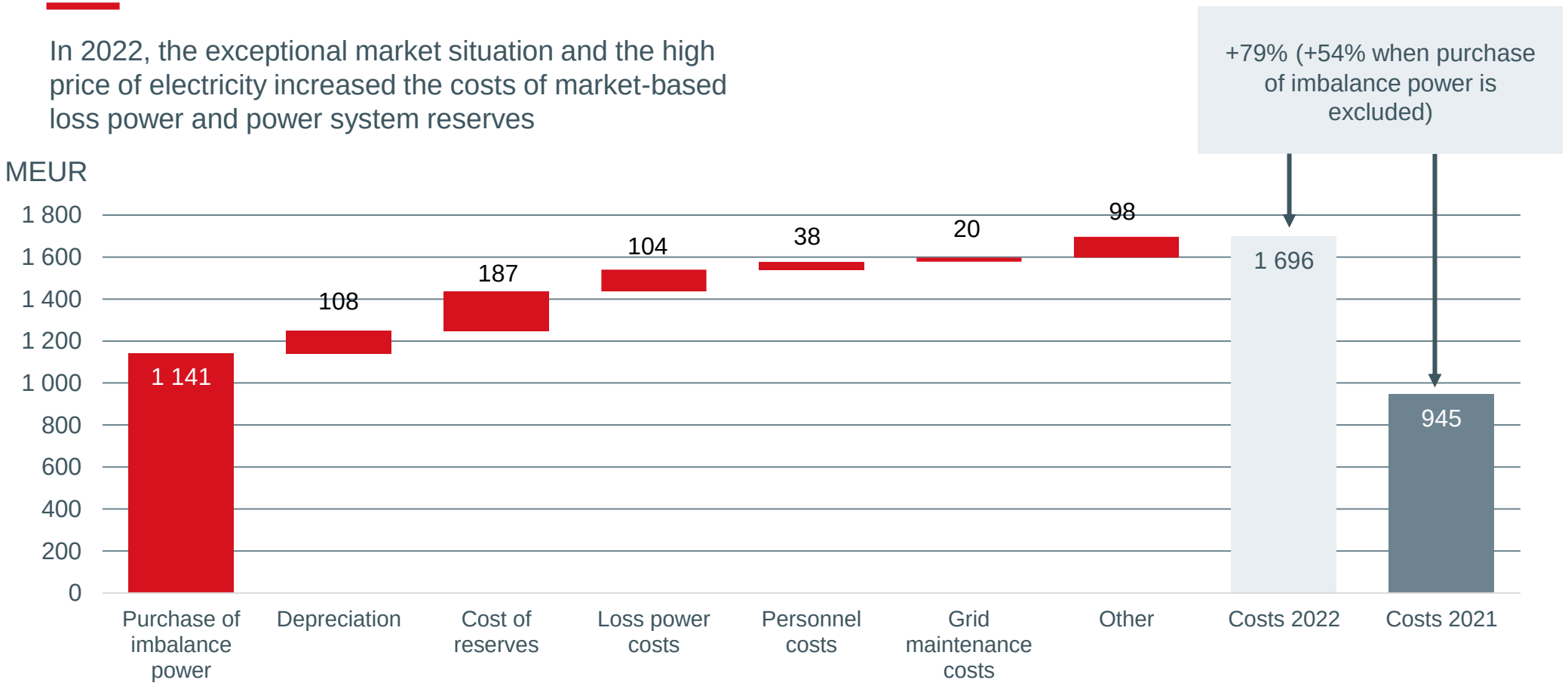
- Imports from Russia ended in May 2022

**ITC income (Inter TSO Compensation)**

- Income received for the use of Fingrid's grid by other European TSOs

# IFRS cost breakdown 2022

In 2022, the exceptional market situation and the high price of electricity increased the costs of market-based loss power and power system reserves



# Breakdown of main costs

**Purchase of imbalance power**

- Fingrid sells and purchases imbalance power in order to stabilise the hourly power balance of the balance responsible parties
- Imbalance power boosts turnover as well as costs

**Depreciation**

- The level of yearly depreciations are stable thanks to continuous and stable investments

**Cost of reserves**

- Fingrid maintains reserve power to balance the frequency of the electricity grid
- The cost of reserves is recovered in grid network tariff and payments collected in balance services

**Cost of loss power**

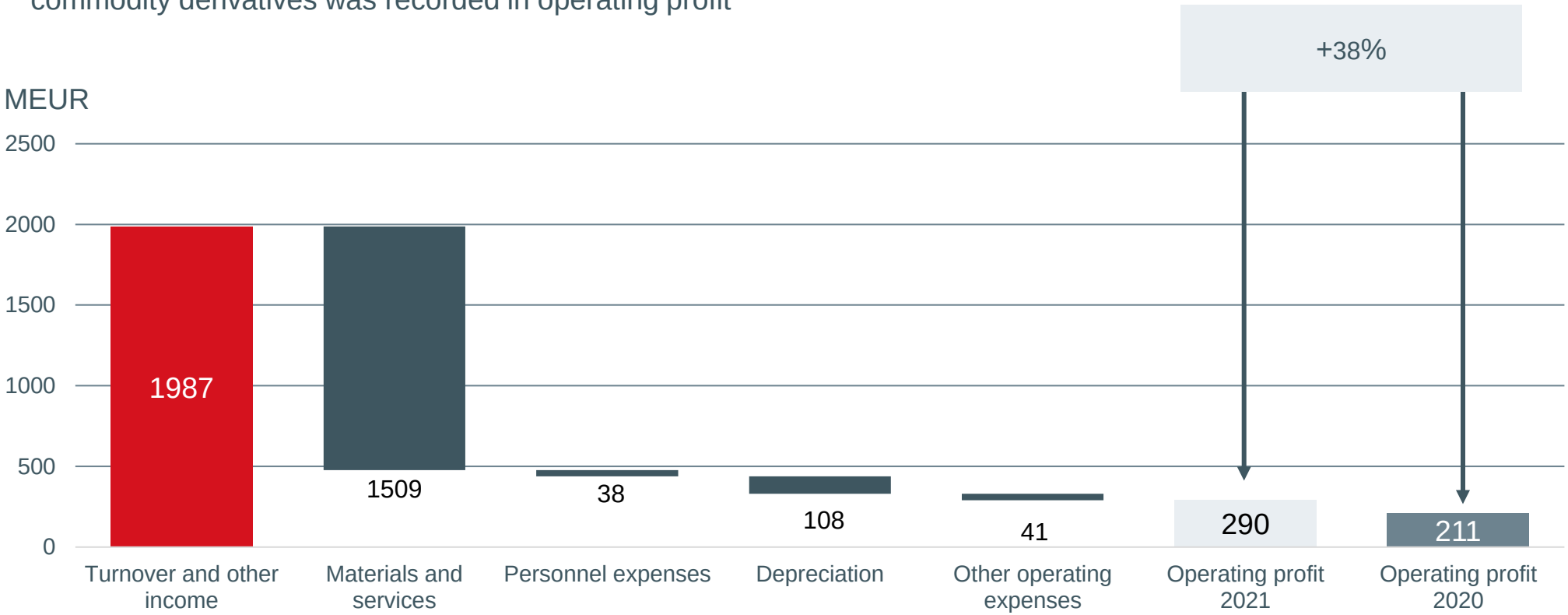
- Loss power is hedged up to four years in advance to stabilize loss power procurement costs

**Personnel costs**

- Fingrid's personnel costs are moderate thanks to outsourcing model used in most operations

# IFRS operating profit in 2022

In 2022, a change of EUR 141 million in the fair value of commodity derivatives was recorded in operating profit



# Fingrid Oyj consolidated profit and loss (IFRS)

## IFRS profit and loss 2018–2022 in MEUR

| | 2022 | 2021 | 2020 | 2019 | 2018 |
|---|---|---|---|---|---|
| **TURNOVER AND OTHER INCOME** | **1987** | **1156** | **685** | **794** | **864** |
| Materials and services | -1509 | -774 | -404 | -491 | -483 |
| Personnel expenses | -38 | -34 | -31 | -26 | -32 |
| Depreciation | -108 | -100 | -98 | -98 | -100 |
| Other operating expenses | -41 | -38 | -32 | -63 | -7 |
| **OPERATING PROFIT (EBIT)** | **290** | **211** | **118** | **116** | **242** |
| *EBIT-%* | *16 %* | *18 %* | *17 %* | *14 %* | *28 %* |
| Finance income and costs | -33 | -23 | -4 | -11 | -15 |
| **PROFIT BEFORE TAXES*** | **257** | **188** | **113** | **106** | **229** |
| Income taxes | -52 | -38 | -19 | -21 | -46 |
| **PROFIT FOR THE PERIOD** | **206** | **150** | **94** | **85** | **183** |
| Other comprehensive income** | 0 | 0 | 1 | 0 | 0 |
| **TOTAL COMPREHENSIVE INCOME** | **206** | **150** | **95** | **85** | **183** |

* Includes share of profit of associated companies
** Other comprehensive income consists of cash flow hedges, translation reserves and available-for-sale financial assets.

- In 2022, turnover from balance services increased year-on-year, to EUR 1 160 million, due to the high price of balancing power
- In 2022, a total of EUR 229 million in congestion income was recognized in turnover
- Employee expenses remain at notably low level due to outsourced operating model

# Fingrid Oyj consolidated assets (IFRS)

Fingrid will invest EUR 3 billion in the grid during 2022 - 2031

## IFRS assets 2018–2022 in MEUR

| | 2022 | 2021 | 2020 | 2019 | 2018 |
|---|---|---|---|---|---|
| Intangible assets | 252 | 244 | 225 | 212 | 190 |
| Tangible assets | 1798 | 1784 | 1703 | 1643 | 1 634 |
| Right-of-use-assets | 29 | 30 | 31 | 33 | |
| Investments (associated companies and available for sale) | 13 | 9 | 12 | 11 | 12 |
| Receivables | 118 | 61 | 72 | 52 | 58 |
| **NON-CURRENT ASSETS** | **2210** | **2128** | **2042** | **1951** | **1894** |
| Inventories | 19 | 14 | 14 | 12 | 12 |
| Derivative instruments | 166 | 64 | 16 | 4 | 19 |
| Trade receivables and other receivables | 88 | 134 | 110 | 95 | 100 |
| Financial assets recognised in income statement at fair value | 350 | 120 | 80 | 67 | 71 |
| Cash and cash equivalents | 383 | 99 | 46 | 16 | 14 |
| **CURRENT ASSETS** | **1007** | **432** | **265** | **193** | **216** |
| **TOTAL ASSETS** | **3217** | **2559** | **2307** | **2145** | **2 110** |

- Tangible assets are expected to increase due to higher investments in coming years
- Tangible assets were on average 71 % of total assets
- Current assets on average 16 % of total assets
- Total assets increased because congestion income increased cash and financial assets

# Fingrid Oyj consolidated liabilities (IFRS)

## Accrued congestion income liability increases the balance sheet

### IFRS liabilities 2018–2022 in MEUR

| | 2022 | 2021 | 2020 | 2019 | 2018 |
|---|---|---|---|---|---|
| Share capital and premium | 112 | 112 | 112 | 112 | 112 |
| Retained earnings | 608 | 535 | 521 | 575 | 662 |
| Other equity | 0 | 0 | 0 | -1 | -1 |
| **EQUITY** | **720** | **647** | **632** | **686** | **772** |
| | | | | | |
| Borrowings | 963 | 994 | 1004 | 854 | 772 |
| Other non-current liabilities | 866 | 510 | 366 | 147 | 131 |
| **NON-CURRENT LIABILITIES** | **1829** | **1504** | **1370** | **1001** | **903** |
| Borrowings | 63 | 133 | 140 | 235 | 288 |
| Derivative instruments | 0 | 3 | 4 | 0 | 4 |
| Trade payables and other liabilities | 604 | 273 | 161 | 222 | 142 |
| **CURRENT LIABILITIES** | **667** | **408** | **305** | **458** | **434** |
| **TOTAL EQUITY AND LIABILITIES** | **3217** | **2559** | **2307** | **2145** | **2 110** |

- Current liabilities on average total 18 % of total equity and liabilities
- Trade payables on average 56 % of current liabilities
- Borrowings (current and non-current) totalled on average 45 % of total equity and liabilities
- Unused congestion liability is booked in accruals in other current and non-current liabilities

# Fingrid Oyj consolidated cash flow (IFRS)

Record high congestion income boosted cash flow from operations

## IFRS cash flow 2018–2022 in MEUR

| | 2022 | 2021 | 2020 | 2019 | 2018 |
|---|---|---|---|---|---|
| Cash flow from operations | 910 | 494 | 310 | 240 | 303 |
| Change in working capital | 84 | -33 | -21 | 25 | -18 |
| **Net cash flow from operations** | **994** | **461** | **289** | **265** | **285** |
| Net cash flow from investments | -247 | -210 | -149 | -117 | -82 |
| **Net cash flow after investments** | **747** | **251** | **140** | **148** | **204** |
| Net borrowings | -101 | -22 | 51 | 21 | -29 |
| Dividends paid | -133 | -136 | -148 | -171 | -174 |
| **Net cash flow from financing activities** | **-234** | **-158** | **-97** | **-150** | **-202** |
| **Net change in cash and cash eqv.** | **514** | **94** | **43** | **-2** | **2** |
| Cash and cash equivalents 1 Jan | 220 | 126 | 83 | 85 | 84 |
| Cash and cash equivalents at the end of period | 733 | 220 | 126 | 83 | 85 |

- Strong operating cash flow
- Peak investment years still ahead to enable climate-neutral Finland by 2035
- Investments continuously increasing

# 05

# Financials

## Financing

# Financial risk management principles

## Fingrid applies a conservative financial policy

### Liquidity risk

- Cash, cash equivalents and committed credit facilities cover at least 110 percent of short-term debt
- Undrawn MEUR 300 revolving credit facility (RCF)
- MEUR 90 overdraft facilities
- Continuous cash flow forecasting

### Credit and counterparty risk

- Prequalification of suppliers based on predetermined financial criteria
- Continuous credit risk analysis and monitoring
- Counterparty credit rating requirements and limits
- ISDAs or equivalent agreements in force for derivatives

### Refinancing risk

- Refinancing in any given year less than 30 % of total debt
- Even maturity profile
- Diversified funding sources
- Strong credit rating from at least two major rating agencies

### Market price risk

- Derivatives only for hedging purposes
- Interest rate risk hedging of debt; convergence towards 12 months' average interest re-fixing time
- Material currency and commodity risk fully hedged
- Loss power hedging horizon up to 4 years, target to fully hedge the delivery year

# Fingrid debt programme overview

Fingrid is a well-established issuer on international private and public debt capital markets

- Long presence in the capital and money markets since 1998 with debt programmes:
  - EMTN Programme, MEUR 1,500 since 1998
  - ECP Programme, MEUR 600 since 1998
  - CP Programme, MEUR 150 since 1998
- MEUR 300 sustainability KPI linked Revolving Credit Facility (RCF) until 2027 (+ one-year extension option) is provided by the company's relationship banks. The facility supports the company's liquidity reserve and is undrawn
- In addition, Fingrid has bilateral facility agreements with banks to support liquidity
- Long-term bilateral loans provided by the European Investment Bank (EIB) and Nordic Investment Bank (NIB)

**Fingrid's core relationship banks are the dealers of the EMTN Programme**

BNP PARIBAS
Danske Bank
ING
Nordea
OP
Swedbank

# MEUR 300 RCF (5+1+1yrs) linked to 3 KPIs focused on Fingrid's ESG priorities

- It is important that the KPIs selected for the sustainability linked loan facility are core to Fingrid's sustainability strategy
- As such they are ambitious, transparent and reported as part of the Group's annual sustainability reporting
- These 3 KPIs reflect the key elements of Fingrid's sustainability strategy as presented in our materiality matrix and are reliably measured

**KPI #1: Connection of wind power**

New connection agreements per annum in megawatt (MW)

**KPI #2: GHG emissions from transmission losses**

Reduction of GHG emissions from transmission losses measured in tons of $CO_2$ equivalent (t $CO_2$ e)

**KPI #3: Lost time injury frequency (LTIF)**

Reduction of Combined LTIF (own personnel and service providers)

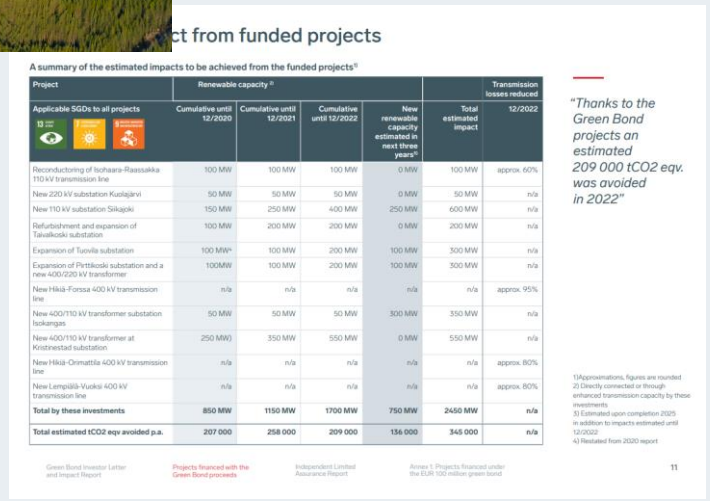
# Fingrid to increase use of Green Financing

- In 2017 Fingrid established a framework enabling green financing for eligible investment projects and issued inaugural EUR 100 million Green Bond
- Fingrid's investor base grew thanks to the Green Bond because new, long-term and specifically green finance focused debt investors participated in the issue
- In 2021 Fingrid signed a MEUR 300 revolving credit facility tied to responsibility targets and a MEUR 70 green investment loan
- Fingrid's capex program covers next 10 years on a rolling basis. Green financing eligible investments are regularly screened from the capex program. In the 2020 screening, around MEUR 180 of Green Bond eligible investments were identified
- One of Fingrid's corporate ESG targets is to increase the share of green financing in the company's total funding portfolio
- Fingrid's corporate responsibility and sustainable development report is available at *https://www.fingrid.fi/globalassets/dokumentit/en/annual-report/2022/fingrid_oyj_corporate_responsibility_and_sustainable_development_2022.pdf*


https://www.fingrid.fi/en/pages/investors/financing/green-financing/

*Since 2019 Fingrid reports as Green Bond impacts also the amount of estimated CO2 emissions avoided on investments related to renewable power generation*

*These impacts are estimated at around 209 000 tCO2 equivalent in 2022. The impacts have been verified by an independent external verifier Mitopro Oy.*

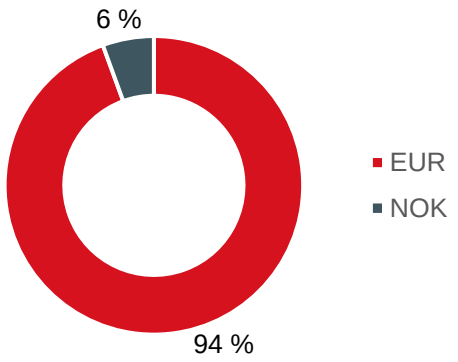


# Weighted average debt maturity was 5,6 years at the end of December 2022

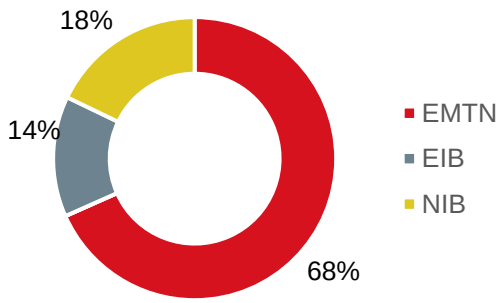
Debt maturity profile is well-distributed

- Fingrid aims to maintain a well-distributed debt maturity profile
- Debt portfolio consists mostly of private placements and a couple of public bonds

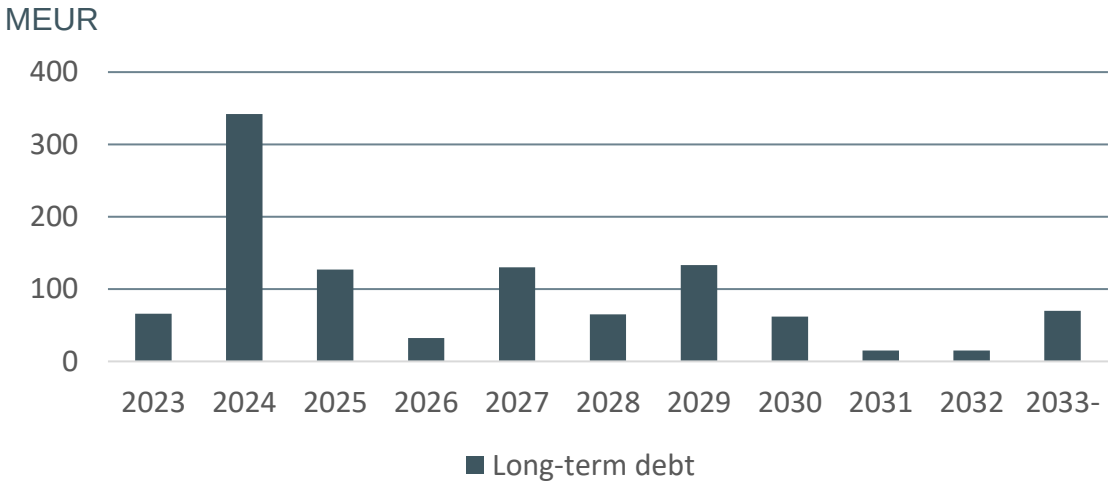
**Total debt by currency**
12/2022




**Total debt by source**
12/2022




**Debt maturity profile as of 31 December 2022**




| | | |
|---|---|---|
| **Short-term debt*** | **6% of total** | **MEUR 63**** |
| Long-term debt | 94% of total | MEUR 963** |
| **Total gross debt** | | **MEUR 1 026**** |

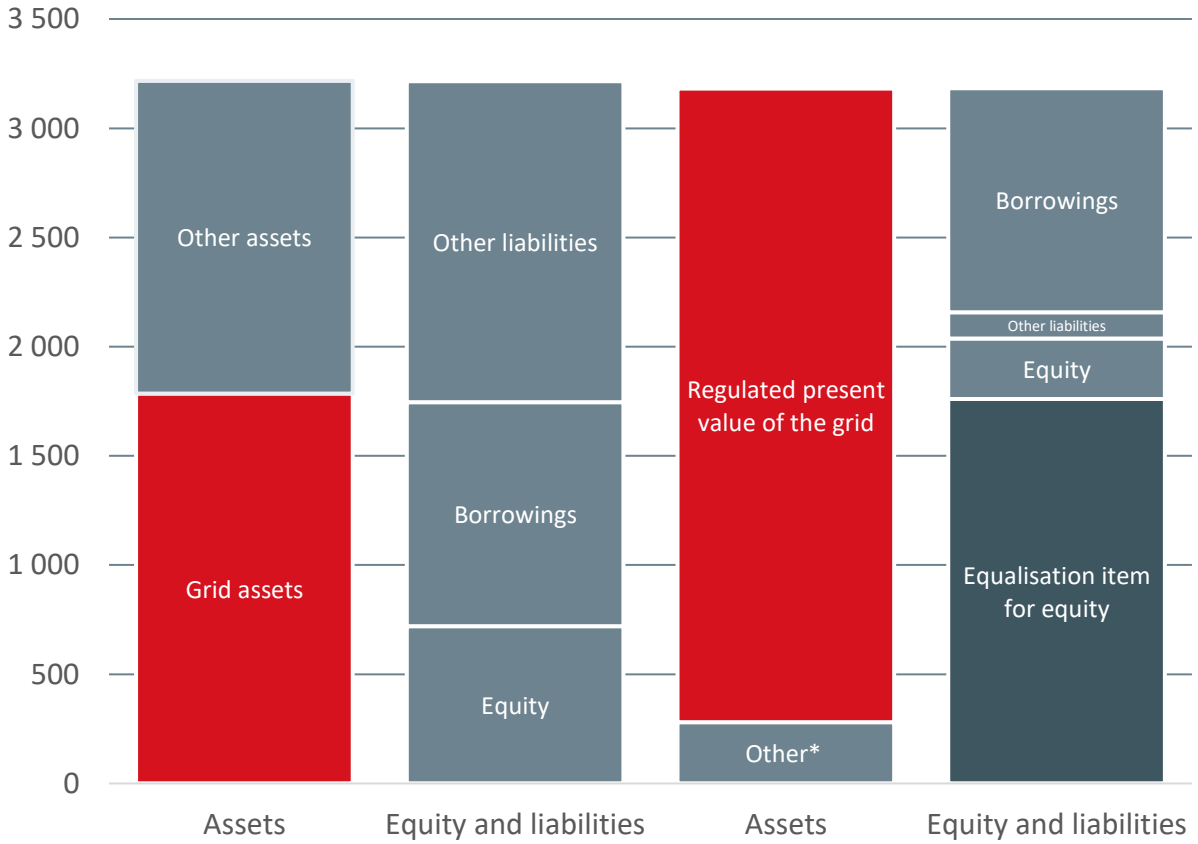
* Debt maturing in next 12 months
** Balance sheet values, lease liabilities according to IFRS 16 not included

# Strong capital structure

- Total shareholders' equity and liabilities amount to MEUR 3,217
- Regulatory balance sheet amounts to around MEUR 3,100 which is used as adjusted capital in calculation of allowed financial result
- Grid assets are recognised at fair value for the purposes of the company's regulatory balance sheet

Equity to total assets ratio is 22% (IFRS) and 64% (regulatory)

## IFRS and regulatory capital structure as of 31 December 2022, MEUR



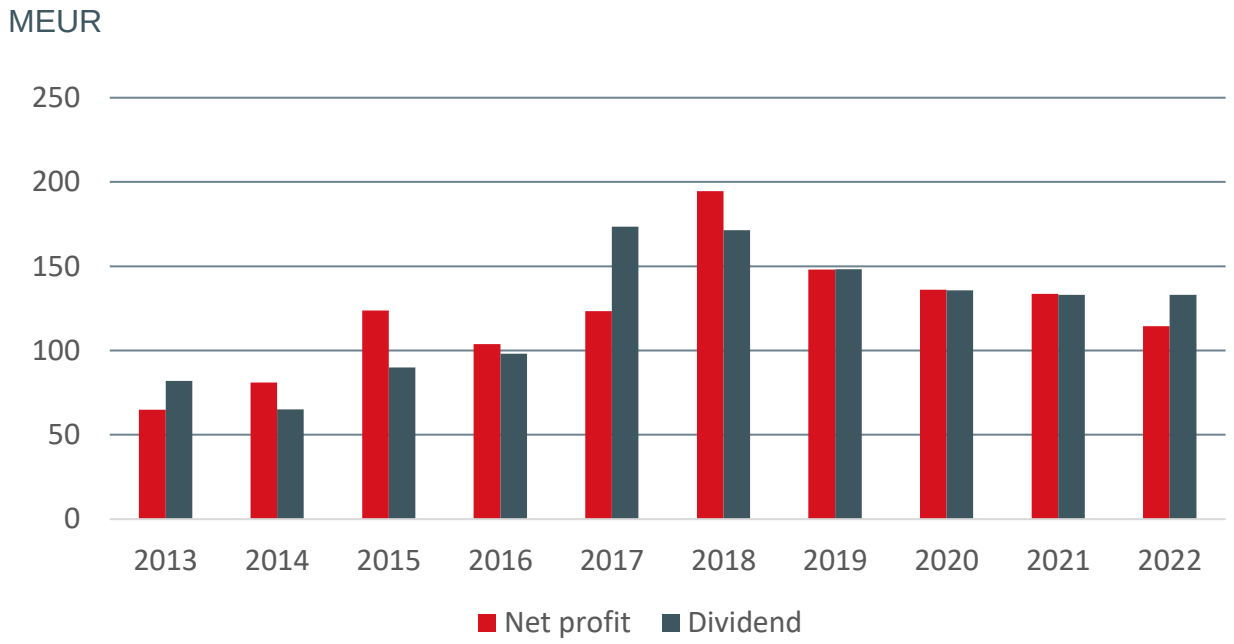

*Other capital committed to grid operations

# Fingrid targets to distribute substantially all of the parent company profit as dividend

Dividend policy aims to ensure reasonable return and take company's financial targets into account

- The guiding principle is to distribute substantially all of the parent company profit as dividend
- MEUR 133 dividend i.e. 116% of 2022 parent company FAS net profit
- Prevailing conditions and investment needs are always considered before taking decision on dividend to be paid
- This will enable long-term implementation of the strategy while allowing operative flexibility

**FAS net profit and paid dividends in 2013-2022**



# 06

# Ratings

# Key rating factors according to the rating agencies

Fingrid's low business risk profile and supportive regulatory framework are key credit strengths

### S&P Global

S&P Global Ratings expects stable and gradually increasing regulated earnings thanks to the very supportive regulatory framework in Finland. Fingrid's operations comprise solely regulated activities, and it is therefore highly dependent on the underlying transmission system operator (TSO) regulation in Finland. We view the country's regulatory framework for the fifth regulatory period (2020-2023) as stable and predictable.

### Fitch

Supportive Regulatory Framework: The Finnish regulatory framework is among the most supportive in EMEA, with a long record of ex-ante regulation and consistent regulatory models for long periods. Moreover, Fingrid's business is supported by good collaboration with the regulator and the company can set its own tariffs up to the maximum allowed profit defined by the authority for each regulatory period, which is unique for a European network.

# Fingrid aims to maintain high credit ratings

Fingrid is committed to maintain credit rating at least at 'A-' level in all circumstances

**S&P**
**A-1+/AA- Stable**

Short-term/Issuer Rating

"The stable outlook reflects the company's ample cash position, our expectations that accrued congestion income gradually will be balanced, regulated asset base (RAB) growth will be healthy, and the terms for the upcoming regulatory period will not materially have a negative impact on remuneration."

*S&P Global, 4 November 2022*

**Fitch**
**F1/AA-**
**Stable**

Short-term/Senior Unsecured

"Fitch Ratings has upgraded Fingrid Oyj's Long-Term Issuer Default Rating (IDR) to 'A+' from 'A.'"

"The upgrade mainly reflects our expectation of sustainably improved leverage, consistently below the positive sensitivities for an 'A' rating. The improvement is on the back of higher expected allowed weighted average cost of capital (WACC) as risk-free interest rates rise, and a material increase of its regulated asset base (RAB) by end-2023."

*Fitch Ratings, 9 November 2022*

# Thank you!

**Fingrid Oyj**
Läkkisepäntie 21
FI-00620 Helsinki
P.O. Box 530
FI-00101 Helsinki, Finland
Tel. +358 30 395 5000
Fax +358 30 395 5196

FINGRID