



FINGRID

Reserve Market Day
21 May 2025

English summaries of the presentations

Presentations of the day

The role of market participants in balancing the current and future power system,
Tuomas Rauhala, Senior Vice President, Fingrid Oyj

Overview of the Past Year in the Reserve Markets

Selected highlights from the reserve markets,
Jukka Kakkonen, Expert, Fingrid Oyj

Lessons and experiences from the implementation of the 15-minute mFRR energy market,
Otso-Ville Rinne, Expert, Fingrid Oyj

A year in the aFRR energy market,
Tuomas Mattila, Expert, Fingrid Oyj

Changes in the capacity markets,
Joonas Muikku, Specialist, Fingrid Oyj

Participation in the Reserve Markets

What's new in the Reserve Market Service,
Niko Korhonen, Expert, Fingrid Oyj

Development of the Reserve Markets

Overview of the changes in the reserve market terms,
Taneli Leiskamo, Expert, Fingrid Oyj

Nordic and European market development,
Timo Halttunen, Expert, Fingrid Oyj

Reserve demand increasing,
Mikko Kuivaniemi, Unit Manager, Fingrid Oyj

Key take-aways,
Maria Joki-Pesola, Unit Manager, Fingrid Oyj

The role of market participants in balancing the current and future power system

Tuomas Rauhala, Fingrid Oyj

- A reliable power system increasingly depends on reserves and flexibility.
- Key trends influencing the need for flexibility include
 - Volatility (weather-dependent production and price-sensitivity both in consumption and production).
 - Electrification (industry and district heating).
 - Flexibility and adaptability (capacity mix is changing with new capacity entering and old capacity exiting).
- Accurate forecasting is critical as better forecasts lead to more precise balancing needs and further balancing pricing.
- Three wishes from Fingrid
 - Continuous correction of imbalances and 24/7 participation in the reserve markets.
 - Prioritizing the improvement of forecast reliability and currency.
 - Working closely together to ensure reliable power system, adequate reserve supply, and market development.
- Market participants are essential enablers of system reliability and market development.

Summary in English



A laptop screen displays a map of Europe, with various countries labeled with codes and numbers. The map is overlaid with a large white text title. The background is a blurred image of a person's hands typing on a laptop keyboard. A red diagonal shape is visible on the left side of the image.

Overview of the Past Year in the Reserve Markets

FINGRID

Selected highlights from the reserve markets

Jukka Kakkonen, Fingrid Oyj

- Several major market updates in the past year: aFRR energy market, Flow-based, Nordic mFRR capacity market (FI+SE+DK), 15 min mFRR energy market, 15 min Intraday, 15 min Imbalance price, Fingrid joined PICASSO.
 - 15 min Day-ahead market to come.
- Many new reserve units have joined the markets and the prequalified reserve capacities have increased.
- The average supply in the market has increased nicely. The biggest challenge at the moment is occasional scarcity situations.
- Imbalance price formation has changed few times over the past year. Price volatility has increased.
- Capacity procurement costs increased to nearly 200 MEUR in 2024.
- Activated reserve energy has increased since the beginning of 15 min mFRR EAM. Down direction is dominating. Energy activations offer business opportunities in addition to capacity markets.



FINGRID

Lessons and experiences from the implementation of the 15-minute mFRR energy market

Otso-Ville Rinne, Fingrid Oyj

- 15-minute mFRR energy market was implemented in March this year
 - Balancing service providers were onboarded successfully
- New Area control error-based balancing has resulted in higher amount of activated down-regulation (2x or more) and more price volatility
 - This is due to new balancing model allocating cost to the source, and the surplus in Finland is balanced more actively
- Some errors and unwanted occurrences have been encountered in the pricing of mFRR energy but they are already or will be fixed
 - Fix to illogical price spreading is underway and planned for this Autumn
 - Errors such as illogical prices and wrong marginal prices have been corrected

Summary in English



FINGRID

A year in the aFRR energy market

Tuomas Mattila, Fingrid Oyj

- aFRR energy market go-live was 12.6.2024
 - aFRR energy now has a price in Finland, and it is taken in account at Finnish imbalance price
 - Average prices for first 11 months have been -8 EUR/MWh (down), 102 EUR/MWh (up)
- PICASSO connection 26.3.2025
 - Fingrid is participating in European Balancing Platform, with standard product, as required by EB GL
- Opening of FI-EE border for aFRR exchange at PICASSO 7.5.2025
 - Free transfer capacity delivered to the platform, limited to +/-30 MW portfolio due to technical limitations of HVDC-link control systems
 - Active trading on the border, including netting of opposite demands when there is free transfer capacity on the link



FINGRID

Changes in the capacity markets

Joonas Muikku, Specialist, Fingrid Oyj

- FFR capacity is procured according to an inertia model, which was updated 28.4.2025
 - This update did not affect the procurement amount, but enables Fingrid to target the procured capacity more accurately
- FCR-N activated energy is priced at imbalance price or DA price from 12.6.2024, whichever is more favorable for the BSP
 - FCR-N energy compensation is paid to BSP instead of BRP from 10.2.2025
- aFRR energy market is introduced 12.6.2024
 - aFRR procurement is also increased for mFRR EAM in the beginning of 2025
- New trilateral (Finland, Sweden, Denmark) mFRR capacity market is introduced 19.11.2024
 - Market platform changed from Vaksi to Fifty NMMS enabling exclusively linked bids between aFRR and mFRR
 - mFRR procurement increased and dynamic dimensioning introduced for mFRR down capacity





Participation in the Reserve Markets

FINGRID

What's new in the Reserve Market Service

Niko Korhonen, Fingrid Oyj

- **Reserve Market Service** provides expert support for market entry and participation as well as reserve market development and market management systems.
- A new service channel for BSPs, **My Fingrid** (Oma Fingrid) will launch in June for managing reserve entry processes and both pre- and requalification tests as well as managing information on BSP's reserve units and contact details.
- **Fingrid Developer Portal** is now live, offering easier access to market data exchange tools and better documentation usability.
- **Updated reserve market website** improves information structure and accessibility, especially for newcomers.
- **Reserve income calculator** is available online to estimate potential earnings (currently only in Finnish).
- **Upcoming events and webinars** include, e.g., sessions on renewable energy participation and batteries participation in the reserve markets.
- **A customer satisfaction survey** to gather feedback on the Reserve Market Service.





Development of the Reserve Markets

FINGRID

Proposed changes to the contract terms of Balancing Service Providers and Balance Responsible Parties

Taneli Leiskamo, Expert, Fingrid Oyj

- Fingrid has prepared changes to BSP and BRP contracts and is having an open hearing until 12.6 on the proposed changes and rules and practices in general.
- Proposed changes consist of, for example:
 - BSP: new requirements for balancing service providers and reserve security requirements (all reserves), FFR and FCR BSP availability requirements, future of FCR annual market, flexible TSO procurement of aFRR and mFRR capacity and energy, mFRR activation requirements and mFRR energy pricing rules.
 - BRP: collaterals, small scale energy production in balances, energy storage and independent aggregator model. Also, the previously communicated updates to general terms and conditions concerning balance management are moved from 11.6.2025 to 30.9.2025 due to delays in 15min Day-ahead go-live.
- Detailed information and participation instructions for the consultation:
<https://www.fingrid.fi/en/news/news/2025/consultation-on-changes-to-the-terms-and-conditions-of-reserve-suppliers-and-balance-responsible-parties-052025/>

Summary in English



FINGRID

Nordic and European market development

Timo Halttunen, Fingrid Oyj

- Day-ahead 15min implementation delayed until 30.9.2025
- aFRR and mFRR capacity markets are planned to be optimized at the same time according to the COBRA project. The implementation of the new algorithm to the Nordic markets is expected to take place Q2/2027.
 - Read more here: [COBRA Project](#)
- Co-optimization of day ahead and aFRR and mFRR capacity market is in R&D. The first phase has been completed, and there's now a public consultation on the report.
 - Read more here: [Public Consultation of NEMOs and TSOs on the Co-optimisation R0 - European Network of Transmission System Operators for Electricity - Citizen Space](#)
- Network code for demand response has been submitted to the European Commission. This network code will ensure that demand response resources can fully participate in wholesale electricity markets



FINGRID

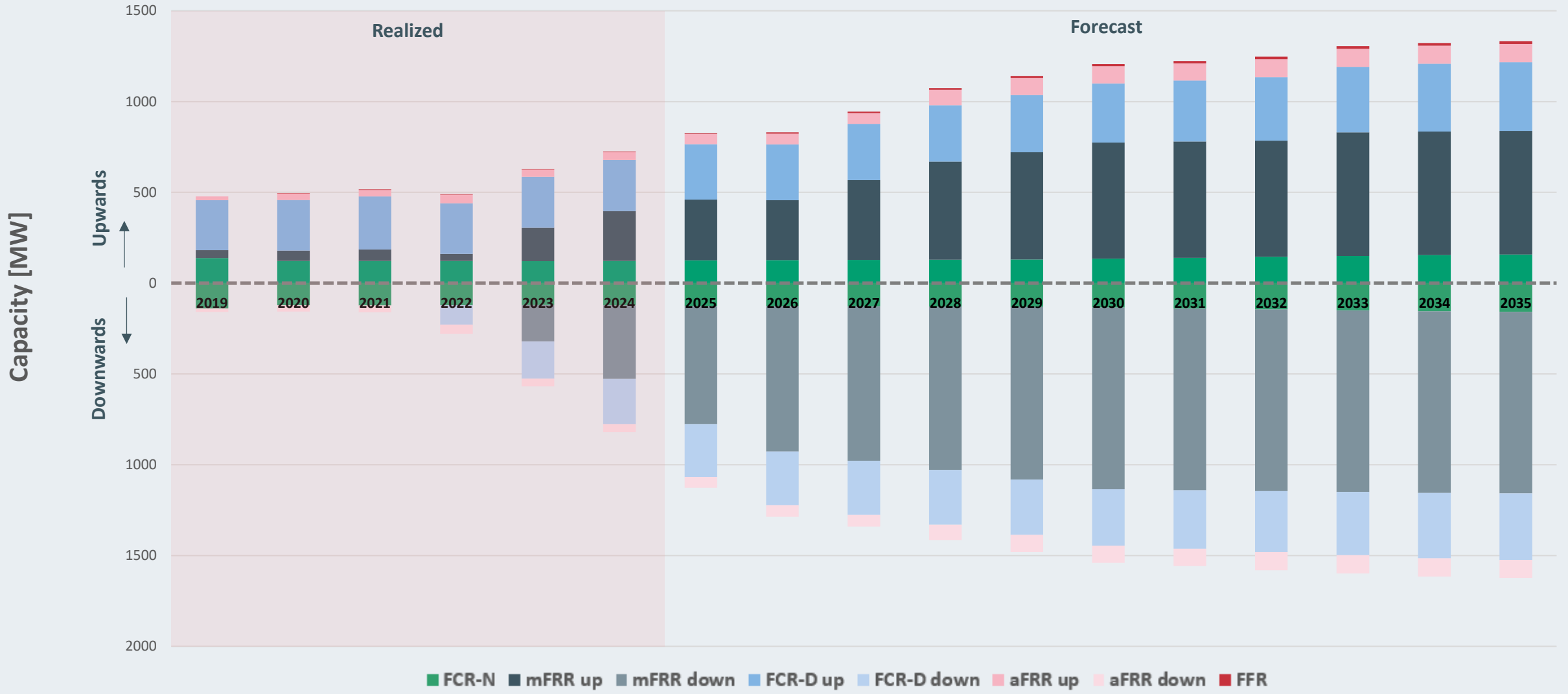
Reserve demand increasing

Mikko Kuivaniemi, Fingrid Oyj

- Actual regulation needs are at times significantly higher than the procured reserve capacity volumes
- Controllable production, consumption and storages should be available to power system balancing via the energy markets (aFRR and mFRR energy markets)
- A graph illustrating the reserve capacity procurement needs in 2019–2035 on the next page



Reserve capacity procurement need 2019-2035



Let's make the change together

- ✓ The electricity system and its balancing are changing. This requires action from all of us.
- ✓ ACE balancing model
- ✓ Increasing capacity procurement volumes
- ✓ Nordic and European development and harmonization
- ✓ Dialogue plays a crucial role in driving change.
- ✓ Have your say!
- ✓ Give us feedback and share your development ideas