



energy authority

Finnish experience with strategic reserve

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Fair energy

Content

- Experiences from the current strategic reserve system
- New requirements from the EU regulation
- Proposed new legislation in Finland and planned implementation

Purpose of the Finnish strategic reserve system

- Legislation introduced in 2006 and amended in 2011 (and in 2021)
- **Aim is to ensure the balance between supply and demand** in peak load situations and when there are remarkable distortions in electricity generation or import
- Capacity requirements
 - Available during winter period (1 Dec – 28 Feb) within 12 hrs from request, during other time within 1 month
 - Possibility to run at least 200 hrs with full capacity during the winter period
- Peak load reserves will be activated if demand and supply are not met in Day-ahead market
 - Activation (which plants and which capacity) will be decided and requested by Fingrid
 - Activation will be done at technical maximum DA price (currently EUR 3000/MWh)
 - Last time peak load reserves were activated in Feb 2010

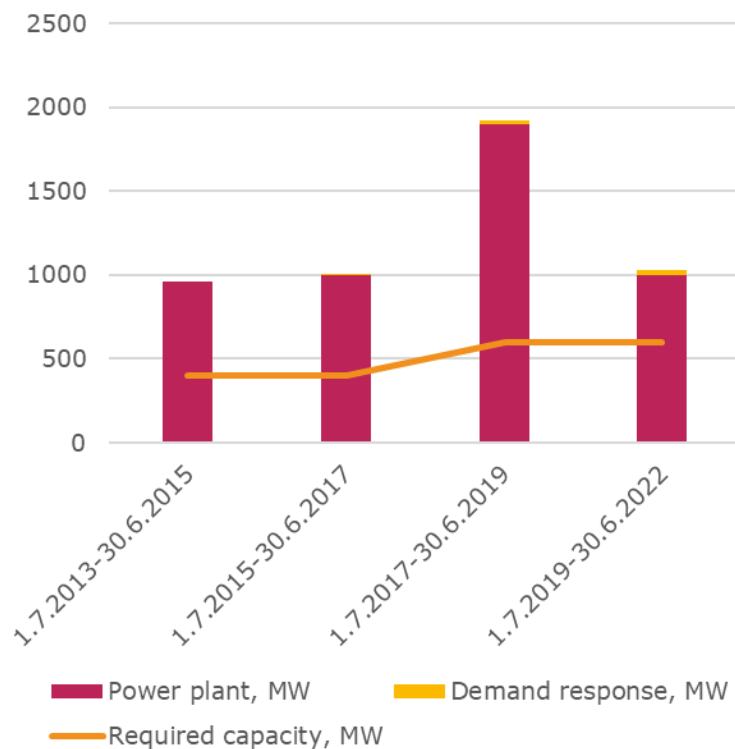
Procurement (current system)

- Energy Authority has assessed capacity needed for the peak load reserves every 2-3 years
 - Legislation requires assessment at least every 4 year
- Energy Authority organises a public tendering procedure for the needed capacity
 - Fingrid makes the agreements with the awarded resources
- Power plants and demand response facilities could be accepted as resources for the peak load reserve
- Renumeration for the resource holders
 - Fixed annual payment + during activation resource holder receives only its actual (starting + operating) costs
 - Resources are held outside the market for the duration of the contractual period -> may not receive any other renumeration from the market
- System is financed by fees collected by Fingrid based on energy consumption

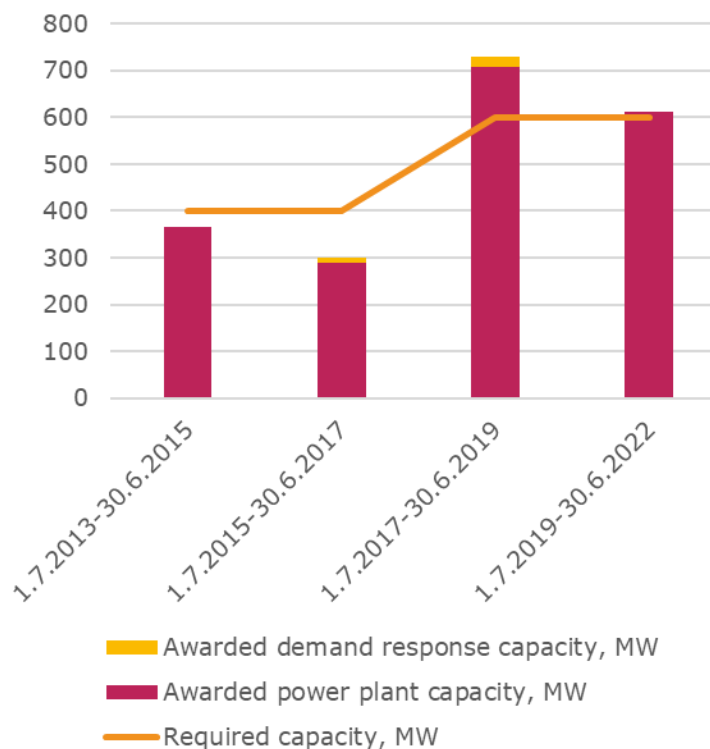


Needed, offered and awarded capacity for the peak load reserve and costs for electricity users

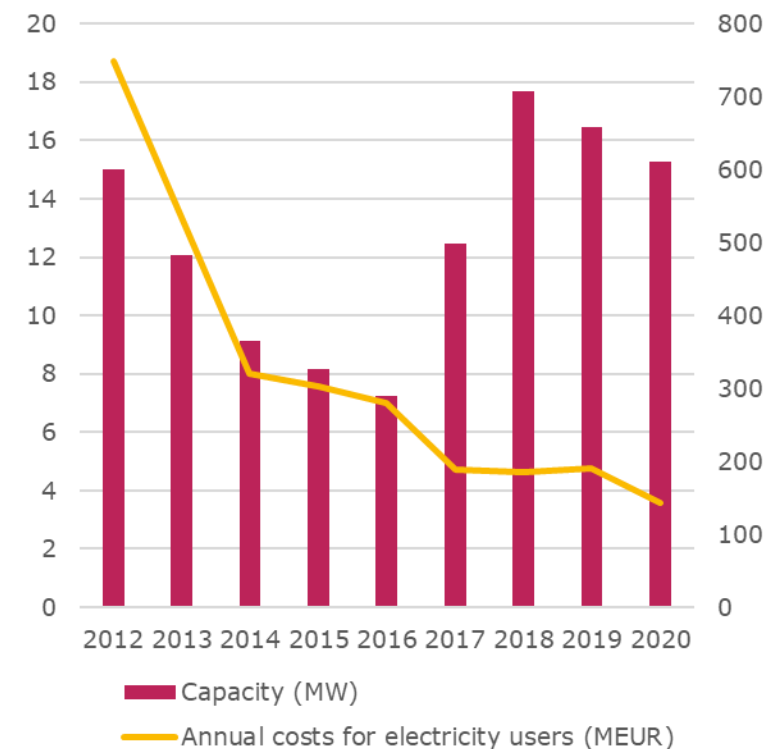
Offered and required capacity MW



Awarded and required capacity, MW



Annual costs and awarded capacity



Some new requirements for capacity mechanisms from the EU regulation (943/2019)

1. Resource adequacy concerns are identified in the ERAA and/or NRAA
2. Implementation plan for adopting measures to eliminate any identified regulatory distortions or market failures
 - Capacity mechanisms is the last resort to eliminate residual adequacy concerns
3. Regarding strategic reserves
 - Dispatched only if the TSOs are likely to exhaust their balancing resources to establish an equilibrium between demand and supply
 - When dispatched, imbalances in the market are to be settled at least at the VoLL or at a higher value than the ID technical price whichever is higher
 - Resources may not to receive remuneration from the wholesale/balancing markets
 - Resources shall be held outside the market for at least the duration of the contractual period
4. CO2 emission limits for resources
5. Open to resources providing the required technical performance, incl. energy storages and DSM
6. Cross-border participation in strategic reserves where technically feasible

Amendments to the Finnish legislation

- The Government proposal is still under the Parliament's scrutiny
 - Amended legislation is planned to come into force 1 Jan 2022
- Proposed amendments
 - Energy Authority shall conduct the NRAA at least biannually
 - Energy Authority shall provide to the Ministry a proposal for the Reliability Standard – Government will adopt it
 - Amount of needed strategic reserve capacity shall be decided at least biannually by the Energy Authority
 - Procurement of resources shall be done annually
 - Possibility to offer capacity resources from power plants, DSM and energy storages + all of them as aggregated, offered capacity shall fulfil requirements set in the EU regulation (943/2019) incl. CO2 limits
 - Minimum offered resource size will be reduced from 10 MW to 1 MW
 - Cross-border participation from Åland, SE, EE and NO, if Energy Authority assess the XB participation technically possible

Next steps after the amended legislation has come into force

- Energy Authority has already submitted a proposal for a reliability standard in June 2021
 - Finnish Government adopted it in July 2021 (LOLE=3 hours / EENS=1800 MWh/a) – update if needed
- NRAA early 2022, consultation with ACER
- Decision on needed amount of peak load reserve capacity in 2022-2024 (?)
- Approval of the operating rules for the Strategic reserves (proposed by Fingrid)
- Decision if the XB participation is possible
- Launch of a public tendering procedure
- Selection of awarded tenders and Fingrid makes agreements with them

➡ Aim is to have agreements with selected resources before the winter period 2022/2023

Any questions?

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