MARI
Manually Activated Reserves Initiative

Project in a Nutshell and Accession Conditions

BSG Meeting
07/06/2017
Project Description

- **19 TSOs** founded an **mFRR cooperation** to design, implement and operate a platform for exchange of energy from manual frequency restoration reserves (mFRR) in 2017 according to the provisions set in the regulation guideline on electricity balancing (GLEB).

- The Manual Activated Reserve Initiative aims at designing, implementing and operating the mFRR platform, which should become the **European solution**.

- The initiative **does not foresee** to tackle the questions concerning imbalance settlement period, main principles of imbalance settlement price, balancing strategy, usage of replacement reserve and intraday gate closure times.
Involved Parties – TSOs only

- **Members – 19 TSOs from 16 countries**
  - Finland: Fingrid
  - Sweden: Svenska Kraftnät
  - Norway: Statnett
  - Denmark: ENERGINET
  - Germany: TenneT, Amprion, Transnet BW
  - Great Britain: National Grid
  - Netherlands: TenneT
  - Belgium: Elia
  - France: RTE
  - Czech Republic: Čep, Čep
  - Switzerland: Swissgrid
  - Austria: APG
  - Portugal: REN
  - Spain: Red Eléctrica de España
  - Italy: TenneT Eléctrica Italiana
  - Greece: Elia

- **Observers – 3 countries (3 TSOs)**
  - Lithuania: Lietgird
  - Hungary: MAVIR
  - Slovenia: ELES

- **4 countries (4 TSOs) in the process of becoming observers**
  - Latvia: AST
  - Estonia: Eletering
  - Romania: HOPS
  - Croatia: HOPS
## MARI project

- The goal is to create an European platform for mFRR
- New project independent from the existing initiatives
- TSOs of the cooperation started working on the principles of an mFRR platform already in 2016
- 5 April 2017 TSOs signed Memorandum of Understanding, which outlines the main design features of the project as well as the governance principles

## Other/Previous Initiatives of the involved TSOs

- Common Nordic mFRR market in operation
- Amprion/RTE – proposal for the design of an mFRR market DE/FR
- Explore – proposal for the design of an mFRR market
- AT/DE project for the implementation of an mFRR market
- mFRR discussions in the TERRE framework

## Legal Background

- Guideline on electricity balancing (“GLEB”)
- Guideline on transmission system operation (“GLSO”)
- Regulation 1222/2015, (“CACM”)
- Regulation 1227/2011 (“REMIT”)
- Regulation (EC) 714/2009
# Main Aspects of the Platform Design

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>SETTLEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ Facilitates the exchange of standard mFRR balancing energy products as defined by all TSOs in accordance with GLEB. Focuses on enhancing efficiency of balancing within the system security limits.</td>
<td>✔ The TSO-TSO settlement based on cross-border marginal pricing.</td>
</tr>
<tr>
<td>✔ Limited impact for the connecting TSOs in case of activation of a local flexibility for another TSO.</td>
<td>✔ The settlement scheme takes into consideration congestion on relevant borders.</td>
</tr>
<tr>
<td>✔ Compliant with the AC and HVDC interconnectors respecting the specific procedures for load flow control on HVDC.</td>
<td>✔ The initiative should guarantee that each country does not lose from being in the mFRR cooperation compared to being outside of it.</td>
</tr>
<tr>
<td>✔ Calculation and communication time as limited as possible in order to allow TSOs to respect time to restore frequency set forth in GLSO.</td>
<td></td>
</tr>
<tr>
<td>✔ Each TSO remains responsible for collecting mFRR balancing energy bids and issuing mFRR need for each of its area.</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>CONGESTION MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ The TSO-TSO physical exchanges based on trapezoid profiles with 10 minutes ramps.</td>
<td>✔ Respects the information about the location of the balancing energy bids and bilateral capacities or capacity profiles between locations.</td>
</tr>
<tr>
<td>✔ Allows direct as well as scheduled activation.</td>
<td></td>
</tr>
<tr>
<td>✔ Pre-contracted as well as voluntary bids allowed.</td>
<td></td>
</tr>
<tr>
<td>✔ Pre-contracted bids directly or schedule activated.</td>
<td></td>
</tr>
<tr>
<td>✔ Optimization of the schedulable products in 1 auction resulting in one marginal price per quarter of hour.</td>
<td></td>
</tr>
<tr>
<td>✔ one independent auction per 15 minutes period taking place about 10 minutes before the beginning of each 15 minutes period.</td>
<td></td>
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</table>
Project Timeline according to the GLEB

- **Preparatory Work**
  - MoU preparation and signature process
  - Press release
  - Governance structure put in place

- **DESIGN 1 – Collection of options**
  - Congestion Mng.
  - Settlement
  - Product and Process
  - Algorithm and Bid Structure

- **DESIGN 2 – Selection from available options**
  - Congestion Management
  - Settlement
  - Product and Process
  - Algorithm and Bid Structure

- **SIMULATION**

- **TIMEFRAME FOR STAKEHOLDERS FEEDBACK**

- **TIMEFRAME FOR PUBLIC CONSULTATION**
  - > 2 months

- **NRAs approval of the design**

- **IMPLEMENTATION**

- **Go-Live**

- **NRAs approval of the design**
Project Organization and Stakeholders

Project Governance
- PMO
- Steering Committee
- Technical Working Group
- Workstreams
- Task Force (IT, legal)
- Implementation Group (IG)

Stakeholders
- ENTSO-E (mFRR project team,...)
- European Commission (EC)
- ACER and NRAs
- BSPs, etc.
## Project Internal Structure

<table>
<thead>
<tr>
<th>Governance Body</th>
<th>Governance Level</th>
<th>Membership</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steering Committee</strong></td>
<td>• Decision making</td>
<td>• Each party</td>
<td>• Decision taking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 1 appointed chairman</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Members only</td>
<td></td>
</tr>
<tr>
<td><strong>Technical Working Group</strong></td>
<td>• Working and review level</td>
<td>• Each party</td>
<td>• Proposals to SC to the design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 2 appointed conveners</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Members and observers</td>
<td></td>
</tr>
<tr>
<td><strong>Workstreams</strong></td>
<td>• Working level</td>
<td>• Small concentrated groups</td>
<td>• Proposals for TWG review</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Members and observers</td>
<td></td>
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</tbody>
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## Becoming a Member – TSOs only

<table>
<thead>
<tr>
<th></th>
<th>Observer</th>
<th>Member</th>
<th>Exit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>When</strong></td>
<td>• Any time</td>
<td>• After 3 months of being the observer</td>
<td>• Any time</td>
</tr>
<tr>
<td><strong>How</strong></td>
<td>• Request to SC Chairman</td>
<td>• Request to SC Chairman</td>
<td>• Notification to SC</td>
</tr>
<tr>
<td><strong>Approval</strong></td>
<td>• Steering Committee</td>
<td>• Steering Committee</td>
<td></td>
</tr>
<tr>
<td><strong>Cost Sharing</strong></td>
<td>• None</td>
<td>• Cost sharing of the common cost</td>
<td>• Respective share until the delivery of the exit request</td>
</tr>
<tr>
<td><strong>Decision making power</strong></td>
<td>• None</td>
<td>• Full</td>
<td></td>
</tr>
<tr>
<td><strong>Access to meetings and documents</strong></td>
<td>• Access to all documents and TWG meetings</td>
<td>• All meetings and documents</td>
<td></td>
</tr>
<tr>
<td><strong>Document to be signed</strong></td>
<td>• NDA</td>
<td>• MoU</td>
<td></td>
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Summary

- 19 European TSOs decided to jointly design, implement and operate an **mFRR common platform** and integrate their balancing markets according to the agreed Guideline of Electricity Balancing and connected energy market regulation.

- The mFRR cooperation aims at becoming the **European platform for the exchange of balancing energy from frequency restoration reserves with manual activation**.

- The creation of the mFRR Common Platform is divided into **two steps – design phase** and **implementation phase**.

- The initiative is open for new entrants; ie. additional TSOs can be included at any time.
Thank you for your attention!

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