PICASSO: update
BSG meeting

7 December 2017
Update on the project

Status

- PICASSO project has been endorsed as reference project for the aFRR platform by ENTSO-E

- Project now includes 23 TSOs:
  - 8 members: 50Hz, Amprion, APG, Elia, RTE, Tennet DE, Tennet NL, Transnet BW
  - 15 observers: CEPS, Eles, Fingrid, Statnett, Energinet.dk, PSE, SvK, MAVIR, ESO, REE, HOPS, REN, Swissgrid, ADMIE/IPTO and Transelectrica
    - Observers can join as member without waiting period
    - 6+ TSOs are expected to join as member in early January
  - Only 2 TSOs having to implement the aFRR platform are missing: SEPS and TERNA

- First consultation (call for input) is running until December 20th, 2017
  - Informal consultation
  - Many open design points where the views of the stakeholders are requested to help coming to a proposal
  - Please invite all stakeholders to participate

- Further stakeholder involvement:
  - End of March: stakeholders’ workshop to present results of consultation
  - 2nd consultation:
    - Formal consultation on the implementation framework of the aFRR platform, in accordance with Article 21 of GLEB
    - Timing: 2 months around May – June (– July)
  - Consultation on pricing (Article 30) to follow up later on
Harmonising and integrating aFRR balancing markets: Key challenges
Harmonising aFRR market: some key challenges
Pro-rata vs. Merit order

- Many TSOs are currently using a pro-rata activation for aFRR
- Evolving towards merit-order activation will require adaptation of the SCADA system/EMS
  - Likely a multi-year project for many TSOs!

⇒ This change is a basic enabler for even considering an integrated European aFRR market compliant with GLEB
Harmonising aFRR market: some key challenges

Heterogeneous market designs

- Very heterogeneous market arrangements in all countries
- Only one country has already reached the GLEB requirement of having contracted bids and non-contracted bids: The Netherlands

➔ Many changes at national level on top of the developments at European level
Harmonising aFRR market: some key challenges
Challenges in the harmonisation of Full Activation Time

- Value of FAT in Europe currently ranges from 2 to 15 minutes
- This is a result of historical choices when the need for harmonisation of the products was limited to an agreement on some minimal requirements
  - Basically: different generation structures have led to different choices taking into account the local technical capabilities
- Now we have to define a single harmonised value for the FAT to create a level playing field, while the generation structure and the type of providers are only slowly evolving
- The frequency quality is also of concern when defining the FAT

➤ Harmonisation might have adverse effects, the right balance has to be sought
Harmonising aFRR market: some key challenges
Pricing for aFRR: different options

- aFRR demand is constantly evolving (every 4s), implying the need to activate different bids at different time
- Different ways to determine the marginal pricing may be defined ➔ Balancing Energy Pricing Period (BEPP)
- The 2 extreme options are control-cycle BEPP and 15-min BEPP
- The 2 options are conveying different incentives towards BSPs and BRPs, lead to different ways to determine the uncongested areas, and have different impacts in terms of implementation

➔ Fundamental market design questions are still open and need to be solved in the coming year
Integrating aFRR markets: some key challenges

Specific considerations for the aFRR platform

- Platform is similar in its structure to TERRE & MARI but signals have to be exchanged and algorithm has to run every 4 seconds (vs. every 15 min or every minute)

- Platform will link control loops of all European controllers ➔ presence of dynamic effects to be identified by simulations and mitigated where needed

⇒ Specific technical challenges beyond the market challenges
PICASSO in a nutshell

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