Working Group Balancing

May 15th 2017

Agenda

Venue: Elia Emperor, Keizerslaan 20, 1000 Brussels, Belgium

Date: Monday May 15th 2017

Time: 10:00-12:00

Agenda:

1. Approval of the minutes of the meeting on 30/03/2017
2. Start iCAROS-project: Towards a new EU Network Code compliant approach for the coordination of assets for system operations & market procedures
3. Bid ladder implementation: status
4. Merit order activation between contracted and non-contracted mFRR: business rationale, legal barrier and proposal for next steps
5. Modification Balancing rules: access to balancing market by assets delivering strategic reserves
6. AOB

1) Approval of the minutes of the meeting on 30/03/2017

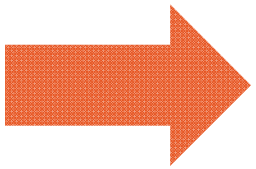
No comments received

2) Start iCAROS-project

Towards a new EU Network Code compliant approach for the coordination of assets for system operations & market procedures

Agenda

1. Introduction: The Purpose of Asset Coordination
2. Today coordination is managed via the CIPU contract
3. Drivers for a new contractual framework & product design
   - GL SO on Operational Information Exchange
   - EU Guidelines on Roles & Responsibilities
   - Estimated impact on the contractual framework
   - Key questions for a redesign
4. Project Timeline 2017



iCAROS Project

Integrated **C**oordination of **A**ssets for **R**edispatching and **O**perational **S**ecurity

List with abbreviations

BRP	Balancing Responsible Party
BSP	Balancing Service Provider
CDS	Closed Distribution Systems
DA	Day Ahead
DCC	Demand Connection Code
GFA	General Framework Agreement
GL SO	Guideline on System Operation
ID	Intraday
OPA	GFA Outage Planning
OPAgent	Outage Planning Agent
PGM	Power Generating Module
RD	Redispatching
RfG	Requirements for Grid Connection of Generators
RSP	Redispatching Service Provider
SA	GFA Scheduling
SAgent	Scheduling Agent
SGU	Significant Grid User
T & C	Terms & Conditions

The Purpose of Asset Coordination

The coordination of assets and related information exchange is the cornerstone for dispatching operations.

The coordination of assets and related information exchange is an activity enabling Elia to provide grid security:

- by avoiding congestions on the grid
- by ensuring the availability of ancillary services
- by monitoring the availability of production to satisfy demand

throughout different time horizons

Proactively

From year ahead onwards - Outage/maintenance planning

- to ensure the availability of sufficient flexibility for congestion management in a zone
- to facilitate the planning for maintenance works on the grid
- to ensure the availability of sufficient means of production to satisfy the demand for electricity throughout the year (adequacy)
- to ensure the sufficient availability of assets delivering ancillary services

Day ahead - security analysis based on active power schedules

- to estimate congestion risks per zone
- to prepare remedial actions: possible topological modifications and/or redispatching

Intraday - integration of asset coordination and balancing products

- to update risk assessment and the need for action depending on intraday modifications
- to inform balancing service providers of estimated congestion risks in order to stimulate the offering of balancing flexibility in non-congestion sensitive zones

Real-time monitoring

Redispatching activations to respond to critical situations occurring in real-time

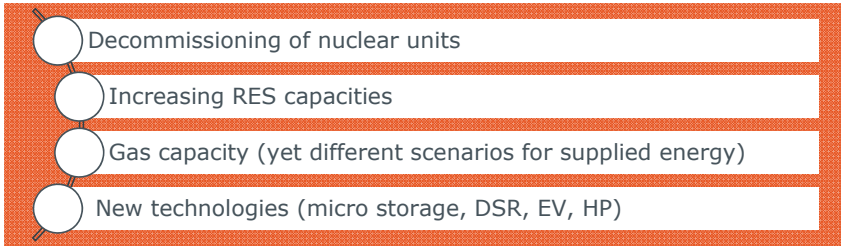
Today coordination is managed via the CIPU contract

Coordination of **I**njection of **P**roduction **U**nits

- The need for coordination and the overview of procedures are prescribed in the **Federal Grid Code**.
- CIPU is a **non-regulated 1-year contract**

Drivers for a new contractual framework & product design (1)

Changing energy landscape



⇒ **Drive to look beyond traditional large thermal units:**

- Focus of AS roadmap (technology neutral Rx product design)
- Equally for coordination and redispatching

Market concerns

Red Zones vs freedom of dispatch in Intraday Markets	**Cost-based remuneration vs opportunity losses**	**Level Playing Field CIPU vs nonCIPU - 1 generic framework & 1 set of rules**

Regulatory compliance & opportunities

Implementation EU Guidelines

- Requirements for data exchange proposed or imposed on new asset types (incl. small generation, demand facilities)
- New roles in the market in addition to BRP (e.g., Scheduling Agent, BSP, Outage Planning Agent)
- New Terms & Conditions (e.g., T&C BSP/BRP) to be established by TSO for regulatory approval
  - ⇒ **Expand coordination to other asset types**
  - ⇒ **Expand involvement of other market parties due to a revision of roles and responsibilities in the market**

New Belgian Grid Code

Elia dispatching needs

Integration of decentralized production increases operational challenges	Minimum level of information required for risk assessment	Request for more means of flexibility available for redispatching

GL SO on Operational Information Exchange

	TSO-connected			DSO-connected (incl. CDS)			
Asset type	**PGM B/C/D**	**PGM A**	**Demand facility**	**PGM B/C/D**	**PGM A**	**DSR provider**	**Production aggregations**
SGU or not?	SGU	/	SGU	SGU	/	/	(SGU)**
Scheduled unavailability	Obliged	/	Proposed*	Proposed*	/	/	Proposed*
MW capability restrictions	Obliged	/	/	Proposed*	/	/	Proposed*
Structural min/max curtailment	/	/	Proposed*	/	/	Proposed*	/
Active power output in DA	Obliged	/	Proposed*	Proposed*	/	/	Proposed*
Active power output in ID	Obliged	/	Proposed*	Proposed*	/	/	Proposed*

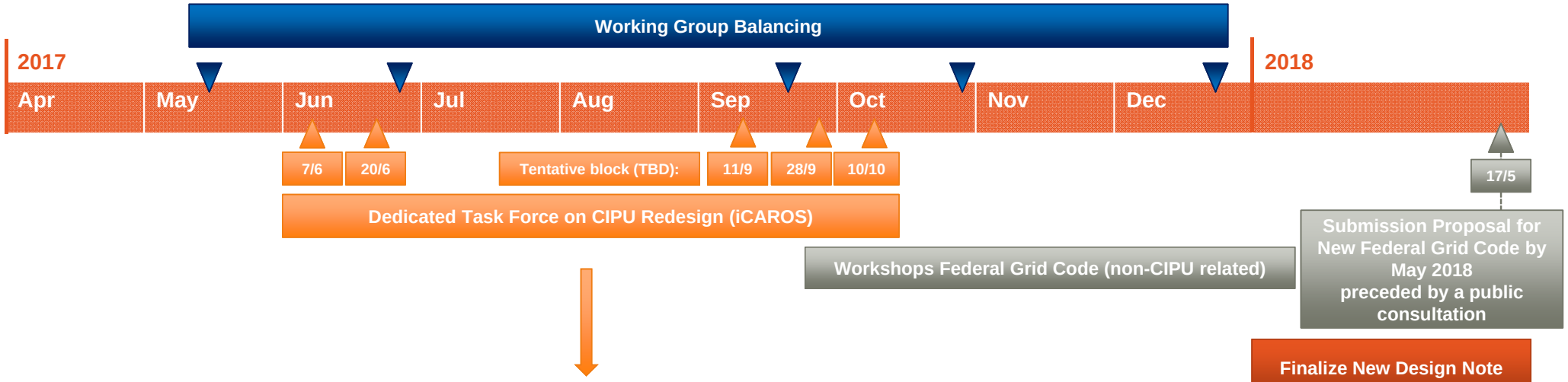
** Obliged unless otherwise provided by TSO*
*** If providing redispatching or active power reserves*

EU Guidelines on Roles & Responsibilities

GL SO & EB

Which data do we need?	Role	Signatory
1 Outage Plans	Outage Planning Agent	Appointed by Grid User
	The Grid User acts himself as Outage Planning Agent or appoints another party to which he fully transfers the rights & obligations of the Outage Planning Agent (see art. 89 of the GL SO)	
2 MW schedules	Scheduling Agent	Appointed by Grid User
	The Grid User acts himself as Scheduling Agent or appoints another party to which he fully transfers the rights & obligations of the Scheduling Agent. (see art. 110 of the GL SO)	
3 Balancing Bids	Balancing Service Provider	Balancing Service Provider
	The GL on Electricity Balancing (art. 16) assigns the role for the bidding of balancing flexibility to the Balancing Service Provider.	
4 Redispatching Bids	/	/
	The guidelines do not appoint a role for bidding flexibility for redispatching purposes as such.	

Project Timeline 2017



Invitations will be sent to WG Balancing members

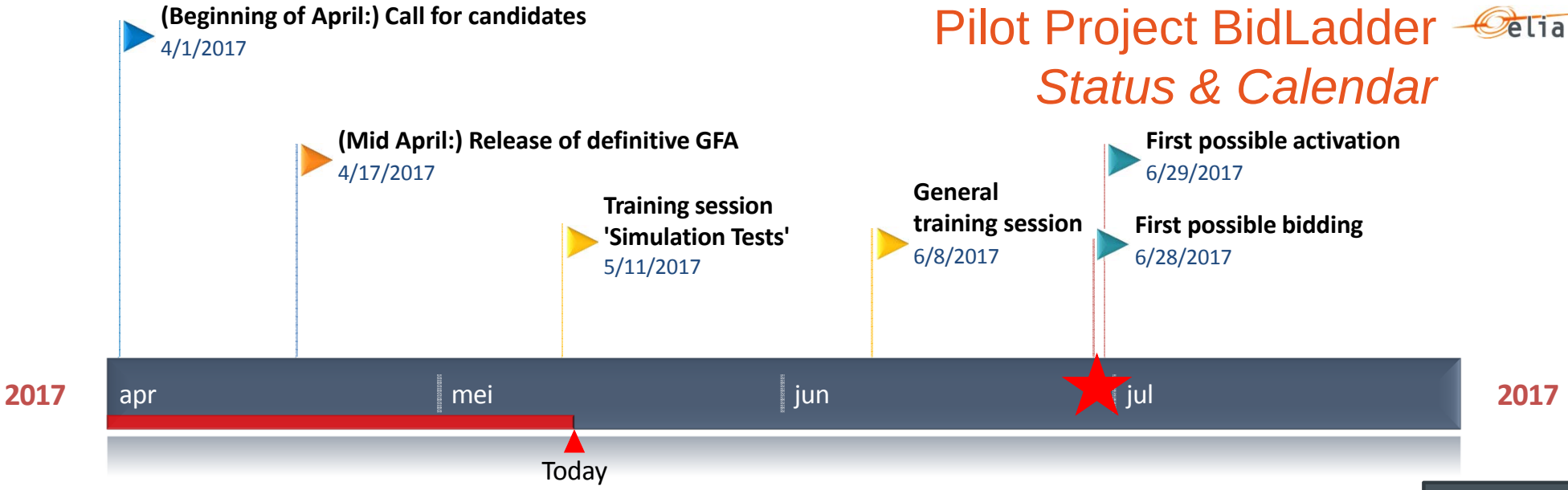
High-level planning:

Presentations of:

7/6	AM	CIPU summary, Overview of relevant EU Network Codes	Elia	Members invited to present positon on current CIPU
20/6	AM	EU NC impact on contractual framework	Elia	Members invited to present view on EU NC implementation
Later		To be determined with Customer Relations & stakeholders	Elia	Members invited to present

3) Bid ladder implementation: status

Pilot Project BidLadder
Status & Calendar



GFA signature

IT testing

BSP simulation test

Of course, also later BSPs can still sign a contract , do tests and participate on the BidLadder.

Note:
- BSP + DP acceptance: minimum 20 WD
- IT testing: until D-20 & BSP Simulation test: until D-10

Note:
According to dispositions of the GFA R3 non-CIPU, Suppliers with signed GFA R3 (non-CIPU) are consulted for the moment on updates for taking into account “Combo R3-BidLadder.

3) Bid ladder implementation: status

Demo of bidding procedure using BMAP

Agenda

1. BMAP Objective
2. BMAP Main Principles
3. User Manual
   (live demo during meeting)

BMAP Objectives

1) BMAP Objectives

BMAP aims at collecting and managing the Nominations and Energy Bids of Ancillary Services

- Currently
  - FCR (Under Construction)
  - R3E (Bidladder)

Update possible close to realtime in order to ensure a high precision

Make all these bids available for processing in ELIA other AS processes & applications

BMAP Main Principles

2) BMAP Main Principles (Functionalities

- Interface of BMAP: Web application
- Vizualize and Manage your Bids
  - Bids can be modified only for current day and the next day
- Create and export bidding reports

Bid Submission

R3E Bid

- Direction: D or I
- Power (MW)
- Price (€/MWh)
- Delivery Points
- Maximum number of QH of activation (1 to 4)

Data Granularity: QH

https://bmap.elia.be

BMAP

Bid Submission Confirmation eMail

Timings

- Gate opens in day ahead at 00:00 → The nominations can be entered for current day and the following day,
- Gate closes at (Realtime - Neutralization Delay)
  - Neutralisation delay = 45 minutes

Automated Validations

For each QH,

- For each Bid
  Power per QH ≤ Sum of Rref of included DP

- For each Bid
  - Validation of the prices: comparison with min and max price parameter

- DP Validation
  - 2 bids can contain the same DP, but,
  - For these 2 bids no volume shall be entered on the same QH

Simulation Test Bids

- Bid creation process is the same as normal bids
- Same validation rules apply

But

- Prices cannot be modified and are set to 0€/MWh

User Manual

General Flow to create a new bid (1)

1. Login to BMAP web application: https://bmap.elia.be
2. Select « Bid Overview » in the menu
3. Click on « Create » button
   - Select the Delivery date of the Bid
   - Select the contract reference
   - Select the bid direction
   - Click on « Create » button

General Flow to create a new bid (2)

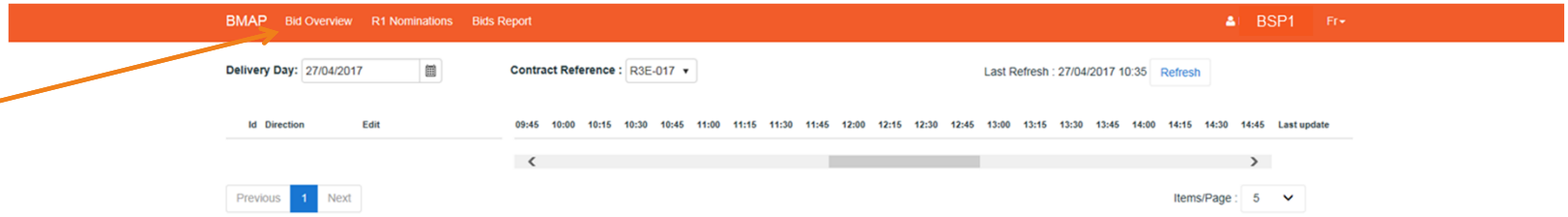
4. Click on Delivery Point edit button
5. Select the Delivery Points to be linked to the Bid
6. Click on Volume edit button and enter the offered volumes per QH

And/Or

4. Use the mass update panel to update the volumes of the selected Bid
5. Click on Save button
6. You receive a confirmation email

Bid Overview

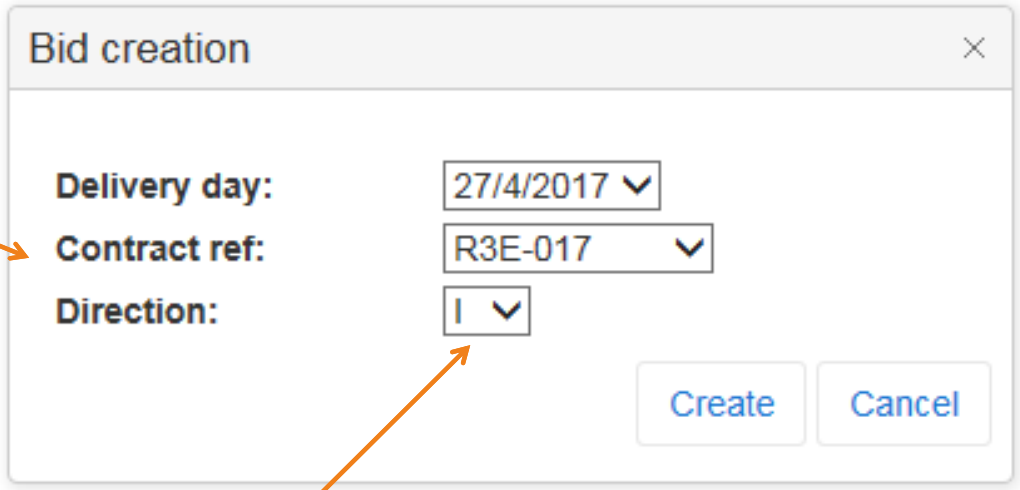
Access to Bid Overview



Create a new Bid

Bid Creation Popup

Select the Bid Parameters



Bid Direction:
- Incremental (I)
- Decremental (D)

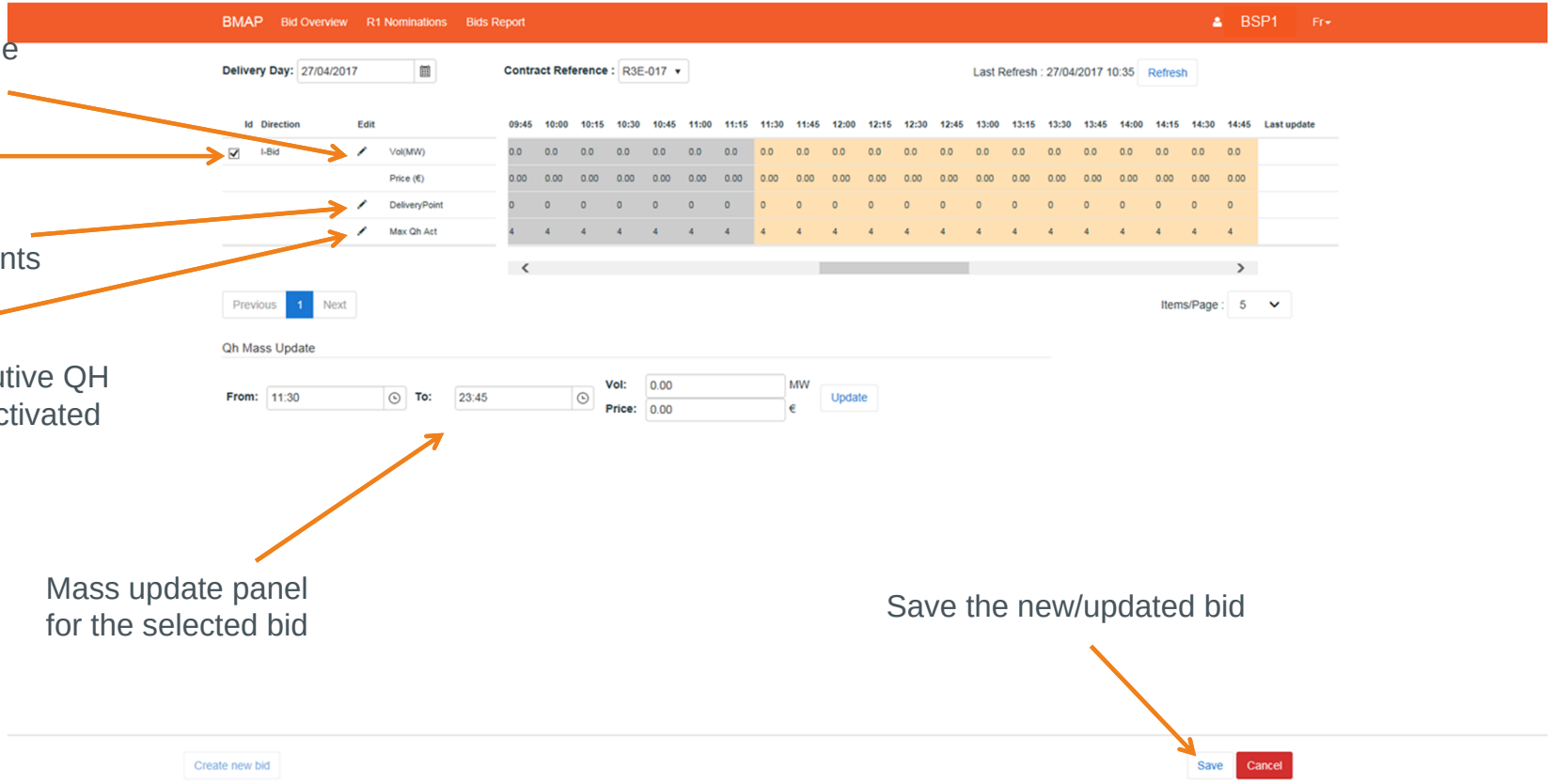
Bid Configuration

Edit Volume per QH

Select the bid for mass update

Select the Delivery Points

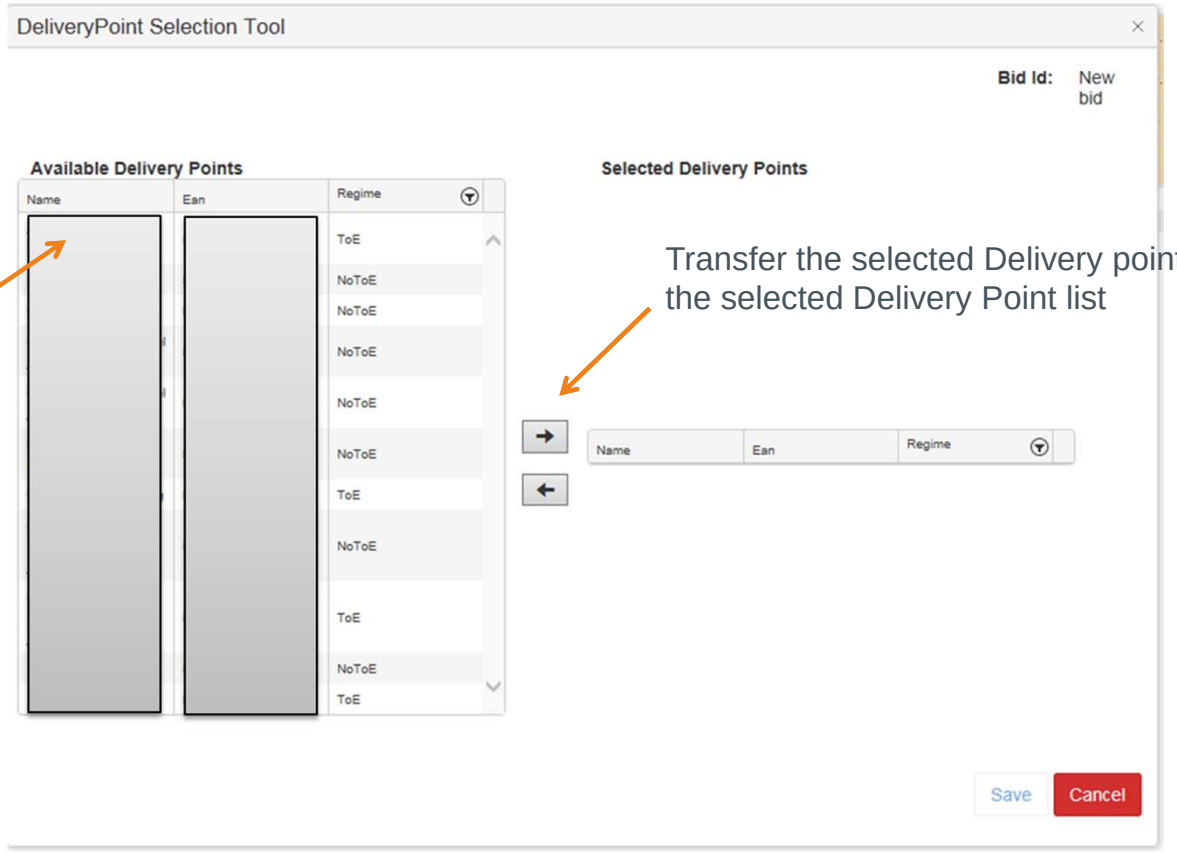
Configure the maximum of consecutive QH that the bid can be activated



Mass update panel for the selected bid

Save the new/updated bid

Delivery Point Selection



Select the Delivery Points
To be linked to the Bid

Transfer the selected Delivery point to the selected Delivery Point list

4) Merit order activation between contracted and non-contracted mFRR: business rationale, legal barrier and proposal for next steps

Proposal for fast track Federal Grid Code

What: Current vs Future order of activation

Non- contracted mFRR

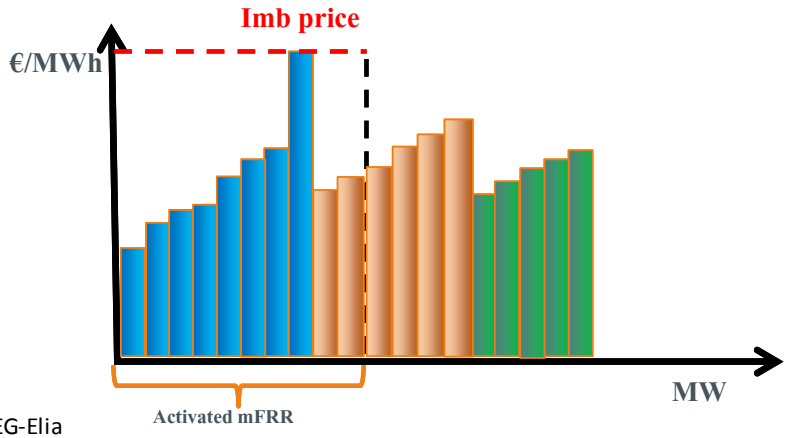
Contracted mFRR
Unlimited # activations

Contracted mFRR
Limited # activations

1. Free bids

2. R3 standard

2. R3 Flex



CREG-Elia

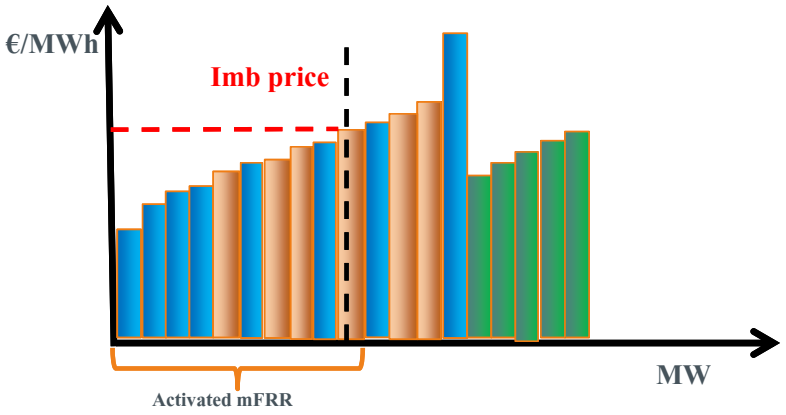
Modification BE grid code

(Non)Contracted mFRR
Unlimited # activations

Contracted mFRR
Limited # activations

1. Free bids & Standard

2. R3 Flex



What: Example on 10/01/17

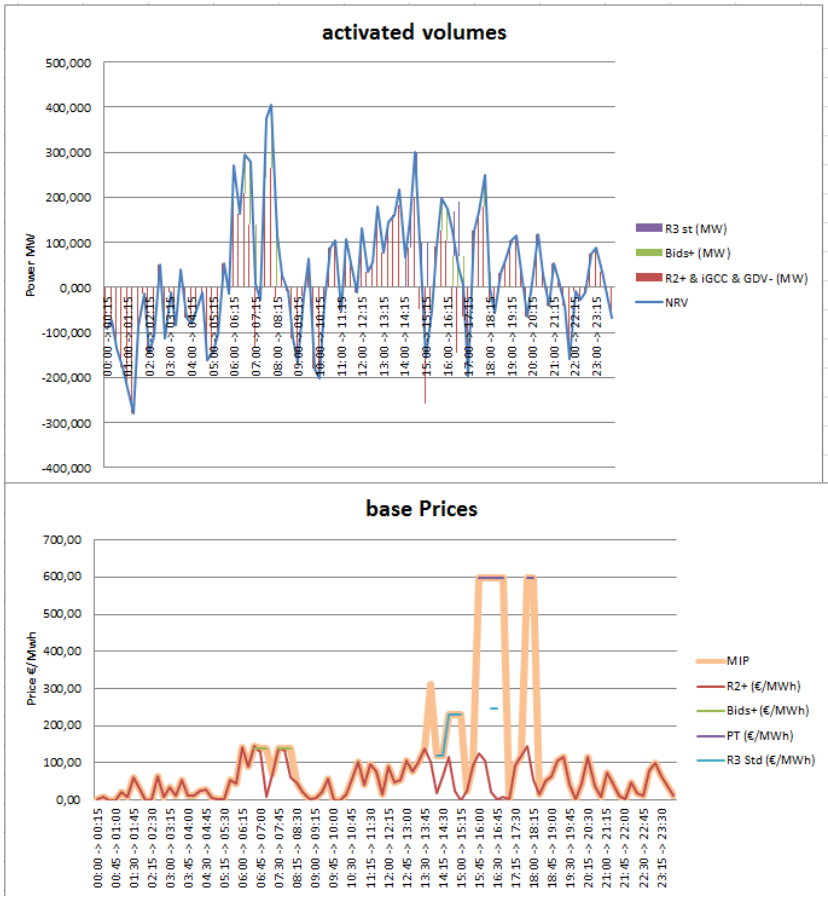
Observations

- Small volumes of non-contracted bids available at an expensive price…..
- …..activated before cheaper contracted bids

Result

- Imbalance price spikes although relatively small imbalances
- High imbalance bill for short imbalances

Based on this event (& others) stakeholders start asking for MO activation



Why

- **Market efficiency**: avoid occurrence of non-market reflective price spikes
- **Market liquidity**: facilitate market parties to bid in all available flex on balancing energy and balancing reserve markets (no flex withholding for hedging against price spikes)
- **XB integration**: pre-condition for establishing a XB balancing market

How? Text proposal FRT art 157

FTR - Art 157, § 2. De netbeheerder bewaakt, handhaaft dan wel herstelt op elk moment het evenwicht tussen aanbod en vraag van elektrisch vermogen in de regelzone, onder meer veroorzaakt door de eventuele individuele onevenwichten van de verschillende toegangsverantwoordelijken. Ten dien einde schakelt de netbeheerder tijdens de uitbating van het net, ~~in volgorde~~ de hem ter beschikking zijnde middelen in, met name:

1° activering van de primaire regeling van de frequentie overeenkomstig de bepalingen bedoeld in Hoofdstuk XIII van Titel IV;

2° de secundaire regeling van het evenwicht in de regelzone overeenkomstig de bepalingen bedoeld in Hoofdstuk XIII van Titel IV;

3° De middelen die door derden ter beschikking worden gesteld waaronder het vermogen ter beschikking gesteld door de producenten conform art. 159, § 2, het tertiaire reservevermogen overeenkomstig de bepalingen bedoeld in Hoofdstuk XIII van Titel IV, de aanpassingen aan de dagelijkse toegangsprogramma's van belastingen die door de toegangsverantwoordelijken aan de netbeheerder worden aangeboden.

Deze middelen worden geactiveerd volgens de werkingsregels van de markt bestemd voor de compensatie van de kwartuuronevenwichten conform artikel 159 §1.

~~3° het vermogen ter beschikking gesteld door de producenten conform art. 159, § 2; en~~

~~4° de aanpassingen aan de dagelijkse toegangsprogramma's van belastingen die door de toegangsverantwoordelijken aan de netbeheerder worden aangeboden.~~

~~§ 3. Indien de modaliteiten, bedoeld in § 2, niet volstaan om tot het herstel te leiden van het evenwicht tussen de vraag en het aanbod van actief vermogen in de regelzone, draagt de netbeheerder op om het tertiaire reservevermogen dat door derden ter beschikking wordt gesteld overeenkomstig de bepalingen bedoeld in Hoofdstuk XIII van Titel IV, te activeren."~~

Proposed next steps

- **15/05** proposal WG Balancing: scope fast track FTR- modification & next steps
- **17/05** sent (mail) draft “position by Users’Group” (ENG) to members WG Balancing (deadline feedback 31/05)
    - Proposal modification federal grid code (incl. scope limited to one topic)
    - Justification: why modification request & need for fast track
- **02/06** sent (mail) adapted “position by Users’Group” (FR/NL) to members Users’Group (deadline feedback 16/06)
- **20/06** sent final “position by Users’group” to members Users’Group
- **22/06** validation final “position by Users’group” at plenary meeting Users’group

5) Modification Balancing rules: access to balancing market by assets delivering strategic reserves

New proposal balancing rules

Proposal sent by Elia early May to CREG with limited scope:

- Access balancing markets by assets delivering strategic reserves

  As of November 1st 2017, delivery points taking part in a contract for strategic reserves cannot participate into the delivery of primary, secondary and tertiary control services (contracted and non-contracted) , starting from the beginning of the contract until 31st of October following the end of the contract. These conditions are applicable for CIPU/Non CIPU assets.

- Comments received during consultation previous BR - already considered in GFA R1
  - Insertion transition periods for new design R1 (prequalification/ automatic test signal)
  - Clarification activation control R1 (all nominated FCR providing groups for concerned freq. deviation)

- Next steps
  - Public consultation by CREG end May/early June
  - Decision end of June

6) AOB

Many thanks for your attention!

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