

## **WP2 Consultation Event**

## TM assessment

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## **The Target Model**







## Main components of TM and assessment framework

#### Market Network Codes:

- Capacity Allocation and Congestion Management
- Forward Capacity Allocation
- Electricity Balancing
- Assessment framework
  - Long term markets
  - Short term markets
  - Very-short term markets



## Long term markets: Capacity Remuneration Mechanisms

- The TM does not consider the creation of a capacity market or CRMs
- However, energy-only markets seem to provide strong-enough incentives for generation investment if stringent conditions apply:
  - Including well functioning long term markets and appropriate scarcity pricing
- Then, several systems are implementing CRMs



## Long term markets: Capacity Remuneration Mechanisms

Implementing CRMs may make sense, but several conditions should be fulfilled

- They should address the missing capacity problem, not the missing money one
- CRMs should not interfere with efficient short term prices
- CRMs applied in the several systems should be coordinated to increase efficiency



## Long term markets: Capacity Remuneration Mechanisms

- Explicit consideration of external capacity bids should be made
- This increases the level of complexity:
  - Development of long term cross-border products
  - Need to ensure that external provider will fulfil its commitments if needed
    - Countries should always allow export of power by local generators providing firm capacity in other markets
      - Even under scarcity conditions in the former
    - Flows into systems having contracted part of their firm capacity externally could, even under scarcity conditions, be in the exporting direction
      - This may occur if neighboring regions are in scarcity conditions as well





## Long term markets: Low emission energy

- Low emission energy is a different product from conventional energy
- Given that certain amounts of it are needed to comply with climate policy objectives, specific markets may need to be organized for it
  - Clean generation may not be competitive against conventional one even in the long term
    - When considering together costs and revenues from all other markets than a clean energy one (energy, flexibility and firm capacity ones)
- The TM does not consider the creation of clean energy markets



## Long term markets: Low emission energy

- Markets for clean energy should, nevertheless, comply with certain requirements
  - They should be adapted to the features of clean energy provision: long term markets may be more suitable (or short term complemented by long term ones)
  - They should not distort efficient signals in other markets
  - They should make achieving several objectives compatible:
    - Competition among mature technologies
    - Development of inmature ones



## Short term markets

Model for day-ahead and intraday transmission capacity allocation Basic diagnosis:

- General priciples applied are right, efficient
- However, the question is whether they can be adjusted to make the allocation more efficient





## Short term markets: adjustments

#### Flow-based vs. Coordinated NTC

- Flow-based is more efficient
  - It allocates capacity on each interface to transactions among the several pairs of bidding zones in a coordinated way
- However, it is also more complex
- Generally, a flow-based scheme should be used
  - Though coordinated NTC can be used when interactions among the use of TC by bids among several pairs of bidding zones is limited: radial networks



## Short term markets: adjustments

#### **Bidding zone configuration**

- Probably, defining bidding (and pricing) zones is sensible
  - Going to nodal pricing could be unneessarily complex

#### • However, several aspects that should be assessed about this

#### • Borders of bidding zones

- They should be defined to reflect systematic congestion in the grid...
- ... While currently, this is probably not the case

#### • Updating of bidding zones

• This may be necessary

• But it is already considered in the TM with an adequate frequency: every three years or when a relevant party requests it





## Short term markets: adjustments

### Timing of short term markets

- Probably, timing of day-ahead is appropriate
  - There is a large consense among systems on this
  - Reasonable compromise between:
    - Having an accurate enough estimate of real time conditions for market agents to design bids
    - and provide the TSO with enough time to validate the market outcome

#### • Regarding the timing and organization of intra-day markets

- Moving the intra-day gate closure time closer to real time could be considered
- Combining centralized with continuous intraday trading seems also sensible...
  - When liquidity problems exist, use centralized auctions
- But should any capacity be reserved for the intra-day?
  - Failing to do so may result in unfair discrimination against those agents that need to contract in the shorter term because of their features



## Very-short term markets

Main purpose: achieving a well functioning, integrated, balancing market in the IEM

Basic diagnosis:

- General principles in the TM are sensible
- However, the design of balancing markets is largely left open
  - Several alternatives are provided for many aspects of banalcing market functioning...
  - While, more specific indications should be made in order to guide the development of markets in the several regions
- General guidelines for pending developments are provided next

•These are further detailed in WP3 of the project



## Very-short term markets: requirements

#### Model for balancing market integration

- Purpose is making smooth progress in the integration process
  - From integration of control areas for imbalance netting...
  - To the creation of common merit order lists
- However, in order for the integration to be efficient, harmonization must take place in a number of issues
  - From settlement periods, to imbalance pricing, going through balancing products and their remuneration



## Very-short term markets: requirements

#### **Procurement of balancing services**

- A number of issues remains to be further defined
  - Minimum requirements for pre-qualification as a BSP
  - Sales of balancing capacity and pricing should not hinder the participation of some market agents
  - Maximum levels of unshared bids should be set and these should be transitional
  - Harmonization should take place in balancing gate closure time and this should be close to real time
    - To limit balancing needs and provide more flexibility



## Very-short term markets: requirements

#### Access to cross-zonal capacity

- Cross-zonal capacity should be used in the time-frame where it is more valuable
  - Purpose is maximizing overal social welfare
  - Its allocation in each time frame should take into account others
  - Mechanisms for capacity reservation should be more elaborated on

### Imbalance settlement and pricing

• Purpose should be providing incentives for BRPs to balance themselves and reduce the system imbalance

- Imbalance settlement period should be harmonized
- Publication of volumes and prices of balancing energy bids and the activated ones in previous periods
- Application of single imbalance pricing based on marginal price of activated balancing energy



COORDINATOR



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#### CONTACT

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# Thank you very much for your participation, discussion and inputs

