Market RES

WP2 Expert Workshop

Working document for the Group Work

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16th October 2014, Brussels

Co-funded by the Intelligent Energy Europe Programme of the European Union

Overview

3 Market Segments:

- Long-term electricity market
- Day-ahead electricity market
- Very short-term electricity market

To do‘s:

- Tables of examples of important/relevant questions to be completed
- Tables to be extended by further questions & answers

Long-term electricity market

Examples of important/relevant questions:

- Is it reasonable to think that the implementation of the 'Target Model (TM)', as now devised, will result in strong enough incentives for investing in the new generation that the system will require?
- If this is not the case, how the TM should be complemented to achieve this?
- Do you think Capacity Remuneration Mechanisms are necessary?
  - What type of CRM is more suitable (capacity payments, mechanisms involving very long term contracts for RES generation and/or conventional generation, etc.)
  - Do you think it is reasonable that demand response participates in CRMs?
  - Is it necessary to regulate/coordinate national CRMs at a regional level?
  - Can "neighbours" provide long-term security of supply? How?
- …
- …

Long-term electricity market – Work Group

		Justification	Example
Target Model (TM): enough incentives for generation adequacy?	Yes? Why?	Let's talk about SA; TA does not address this question; TM assumes that given infrastructure is sufficient; Scope of TM is narrow (existing assets); Overcapacity in some regions (no need to think about additional capacities); No risk (price) signals towards customers	Some European Countries Spain (but profitability problem)
	No? Why not?	It relies on the energy—only market Priority dispatch of RES-E Negative prices	Some European countries
Capacity Remuneration Mechanisms (CRM)	Types: o Capacity payments o Long-term contracts • for Conv. generation • for RES generation o Decentralized approach o Others	Reluctance in terms of centralised planning approach Rather decentralised: Balancing responsible party has to take care and the risk (correct price signals). DSM very important (see below) See also Forward-Market dicussion	
	CRM implementation details for the different (preferable) types above: • Involved actors/market participants • Who shall do what? • …	No centralised planning in a country of a few national experts only	
Participation of demand response in CRMs reasonable?	Yes? Why? How? Barriers?	Yes., definitely! Long-term contracts could impose it (but market intervention).	
	No? Why not? Barriers?		

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Long-term electricity market – Work Group

		Justification	Example
Regulation/Coordination of national CRMs at …	…regional, national or international level? What are the dependent factors?	At least national	
Can „neighbours“ provide long-term security of supply?	Neighbouring generation adequacy? How? Cross-border transmission adequacy? How?	Yes, although it is expected that each country wants to maintain a certain share of self-generation Cross-Border Transmission Capacity scarce good	
	Others? How?		
Alternative solutions: Forward market	How to design it? Contract for Differences (long-term contracts; financial products)? You can offer what you want!	Generators and Demand to participate!	
Security of Supply	100,00% security of supply?	Also national issue. Degree of freedom that customers decide security of supply. How to announce this (no mainstream opinion)	

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Day-ahead electricity market

Examples of important/relevant questions:

- Do you think the day-ahead market (Price Coupling of Regions (PCR)), as now devised, is flexible enough for market agents to reflect in their bids their real operation costs and constraints?
- Should all physical cross-border capacity be allocated by the PCR? i.e. can transmission rights allocated before the day-ahead be physical?
- Which is the appropriate timing-sequence of markets?
- Are price areas considered in the Integrated European Market (IEM) of the EU reflecting accurately enough congestion in the European grid? If not, how these areas could be modified?
- ...
- ...

Day-ahead electricity market – Work Group

		Justification	Example
Price Coupling of Regions (PCR)	Product design of bids flexible enough for market participants to reflect in their bids their real cost and constraint? Yes? Why? No? Why not?	The re is a trade-off between the inclusion of constraints of all types (flexibility) and liquidity. A limited set of products should probably be defined in order to achieve a high enough level of flexibility.	
How many cross-border transmission capacity should be allocated by PCR?	100% or <100% or 0%? Why? Please explain….		
	Physical rights possible? Yes or No? Why? Please explain… In case yes, do you see any concerns/ implications with the existing policy documents of ACER? In case of no, how can long-term cross-border supply contracts be implemented?	Physical products may result in an exacerbation of the level of market power exercised. Financial products could solve problems in the long term, included the cross-border provision of term.	
	What are the implications for cross-border balancing market opening in case of 0-100% transmission capacity allocation by PCR?	Balancing markets could be celebrated after the outcome of the energy market has been computed.	
	(When) is flow-based capacity allocation supposed to be ready for implementation? Experience so far in the CWE-region test sites?	Not foreseeable	

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Day-ahead electricity market – Work Group

		Justification	Example
Timing of electricity markets	Appropriate sequence of markets (with versus without physical rights)?	Some argue that providing as many markets in as many time frames as possible would allow agents more freely to choose where to trade their energy. Others are worried about liquidity problems in some close to real time markets if markets in all time-frames are open. One option would be to get day-ahead closer to real time. The TSO should provide information on their best forecast of system conditions (RES output, demand).	
Integrated European Market (IEM)	Do wholesale market price areas in Europe reflect grid congestion adequate enough (please refer also to the bidding zone review of ACER and ENTSO-E)? If yes, why? If no, why not and how to modify?	There may be some losses of efficiency related to the use of current market price areas, since they are quite big and may not reflect network congestion. However, price areas defined should not be small (nodal or similar), because this would negatively affect the liquidity of the market. The relevant market area may get very much reduced.	
Demand response	How to integrate demand response?	No answer yet	

Very short-term electricity market

Examples of important/relevant questions:

- Do you think a continuous short-term market is preferable over a series of intra-day ones?
- Do you think it is possible to achieve in the 2020 time frame the integration of balancing markets? Which obstacles are there to achieve this?
  - How responsibilities for power imbalances should be settled?
  - Do you believe demand could participate in very-short term markets?
  - Could RES generation provide regulation reserves?
  - Can “neighbours” provide real time operation services?
  - How could this be articulated?
- …
- …

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Very short-term electricity market – Work Group

		Justification	Example
Continuous short-term market?	Preferable over a series of intra-day markets? If yes, why? If no, why not?	TSO's intraday market and tertiary market can be combined in one single platform. Hydropower as very flexible asset flexible. **Why yes:** Continuous short term market gives an opportunity to correct their imbalances it can be relevant in some countries. (This is a trade-off) It is preferable option in sense of encouraging the trade. Gate closure 30 minutes. **Why not:** considering liquidity as an important issue on a market.	Switzerland Spain
Integration of balancing markets until 2020 possible?	Which obstacles exist to achieve this?	Potential conflict of interests, conflict of different products among countries and transmission capacity allocation.	One integrated platform in Germany, Switzerland and Austria.
	How to settle responsibilities for power imbalances?	Two views: • TSO cannot guarantee the system stability along and prefer to delegate balancing of parts of the system, which might be a suboptimal system solution. • One actor balancing the system may have an advantage.	
	Can demand participate? Are currently existing prequalification criteria discriminatory? If yes, why?	Yes, provided that the participants meet the prerequisites: for example activation time and min capacity, allowing aggregation and design of products should be adapted. Not discriminatory	Predictability of the reserves, depending on the type of consumers. Necessary to have mechanisms for resolution of potential conflicts between transmission and distribution.

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Very short-term electricity market – Work Group

		Justification	Example
Integration of balancing markets until 2020 possible?	What about barriers for RES participation? Are currently existing prequalification criteria discriminatory? If yes, why?	• The whole costs for introduction of RES and imbalances is distributed in the system. • "Must run" power plants (Wind and PV), Difficult to have customers, increasing demand. • Symmetry of the balancing up- and downward regulation is required: asymmetry should be allowed. • Reliability demands for participation: decreasing with few percent (confidence interval) would increase the availability of bids significantly. • Pricing of imbalance: if the service is not delivered, what price to be used? • Potential possibility for gambling on the balancing market.	Switzerland
	How can cross-border balancing markets work and how can „neighbours“ provide real-time operation services? • How to allocate necessary cross-border transmission capacity? • How to handle the different merit-order list and guarantee redundancy in case of cross-border transmission congestion? • Imbalance netting implementation between control zones: voluntary or mandatory?	Understanding that this is related to primary regulation. How to allocate interconnectors' capacity? - Fixed share according to season - Use it or lose it principle (UIOLI) Understanding preparation to possible technical downfalls in the transmission capacity. Having a safety margin is a solution, but how big should it be? Enough but not blocking the transmission. Monitoring and probability-based calculations (historical perspective/temperature and empirical data). Voluntary	

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Suggestions for allocation of participants

Long-term Group (?)	Day-ahead Group (5)	Very short-term Group (6)
Paul Wilczek	Papakonstantinou Athanasios	Andrei Morch
Hans Auer	Sophie Dourlens	Pieter Joseph
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Results, event calendar and all related news can be found on: www.market4RES.eu

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Co-funded by the Intelligent Energy Europe
Programme of the European Union

Thank you very much for your participation, discussion and inputs

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