

PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP (1)

<p>WG* N° C5.23</p>	<p>Name of Convenor : Adrien Ford (US) E-mail address: adrien.ford@pjm.com</p>
<p>Technical Issues # (2): 10</p>	<p>Strategic Directions # (3): 1</p>
<p>The WG applies to distribution networks (4): No</p>	
<p>Title of the Group: Wholesale Market Price Caps</p>	
<p>Scope, deliverables and proposed time schedule of the Group :</p> <p>Background :</p> <p>In most wholesale markets, prices are capped at a pre-determined level. However, the method for setting and reviewing the price cap varies by market. For the purposes of this working group, the price cap to be reviewed is the wholesale price for energy during both normal conditions and in times of shortage. The working group will use the following definitions for its collaboration:</p> <p>Wholesale market – from the day-ahead to the real-time market for electricity.</p> <p>Normal conditions – periods when the system has sufficient operating reserves</p> <p>Shortage conditions – periods when the system is short of the desired operating reserves</p> <p>Value of Lost Load (VOLL) – the theoretical amount a consumer would be willing to pay to avoid the interruption in the supply of electricity</p> <p>Purpose:</p> <p>Market signals display the price provided to resources for serving the demand for electricity. And, increasingly, the interest in consuming energy at different price levels. Often markets cap the energy price below the VOLL. The working group would investigate different approaches for limiting the price of electricity in wholesale electric markets taking into account its effect not only on the short-term market but also on the expansion of the generation system.</p> <p>Scope :</p> <p>The working group would investigate:</p> <ul style="list-style-type: none"> • The existence of energy price caps in wholesale electric markets • The intended goals by establishing price caps • How market price caps are established • If market price caps, under normal or shortage conditions, are related to the Value of Lost Load. • How a potential relationship to the Value of Lost Load is established • How frequently the market price cap is reviewed • Mechanism for adjusting the market price cap • The absolute values of the market price caps • Incremental steps used to indicate shortage before reserves are exhausted • The effect of demand response and inelasticity assumption in establishing the price 	

cap

- The “missing money” problem during shortage conditions mainly when there is a high penetration of renewable generation
- The effect of price caps on investments and expansion of the generation system
- Which is the effect of energy price caps on the price of energy to the end user under shortage conditions

The assessment will be conducted through a selection of case studies guided by the above research questions.

Deliverables :

The working group will provide a Technical Brochure and summary Electra article.

Time Schedule : start : November 2016

Final report : October 2018

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| • Approval of Terms of Reference | Q4 2016 |
| • Develop final work plan and recruit members | Q1 2017 |
| • Develop and distribute questionnaires | Q2 2017 |
| • Compile and analyze data | Q4 2017 |
| • Develop case studies | Q2 2018 |
| • Draft Report on survey results | Q3 2018 |
| • Publish report | Q4 2018 |

Comments from Chairmen of SCs concerned :

Approval by Technical Committee Chairman :

Date : 01/12/2016

Table 1: Technical Issues of the TC project “Network of the Future” (cf. Electra 256 June 2011)

1	Active Distribution Networks resulting in bidirectional flows within distribution level and to the upstream network.
2	The application of advanced metering and resulting massive need for exchange of information.
3	The growth in the application of HVDC and power electronics at all voltage levels and its impact on power quality, system control, and system security, and standardisation.
4	The need for the development and massive installation of energy storage systems, and the impact this can have on the power system development and operation.
5	New concepts for system operation and control to take account of active customer interactions and different generation types.
6	New concepts for protection to respond to the developing grid and different characteristics of generation.
7	New concepts in planning to take into account increasing environmental constraints, and new technology solutions for active and reactive power flow control.
8	New tools for system technical performance assessment, because of new Customer, Generator and Network characteristics.
9	Increase of right of way capacity and use of overhead, underground and subsea infrastructure, and its consequence on the technical performance and reliability of the network.
10	An increasing need for keeping Stakeholders aware of the technical and commercial consequences and keeping them engaged during the development of the network of the future.

Table 2: Strategic directions of the TC (cf. Electra 249 April 2010)

1	The electrical power system of the future
2	Making the best use of the existing system
3	Focus on the environment and sustainability
4	Preparation of material readable for non technical audience