

## SECOND PERFORMANCE ASSESSMENT AND CONE STUDY

Response to Stakeholder Feedback from August 30, 2011

*The Brattle Group*

September 2, 2011

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On August 30, 2011, PJM hosted a conference call for Markets and Reliability Committee to allow stakeholders an opportunity to provide feedback and comment on our two recent reports:

Pfeifenberger, Johannes, Samuel Newell, Kathleen Spees, Attila Hajos, and Kamen Madjarov. *Second Performance Assessment of PJM's Reliability Pricing Model: Market Results 2007/08 through 2014/15*, August 26, 2011. Available:

[http://www.brattle.com/\\_documents/UploadLibrary/Upload972.pdf](http://www.brattle.com/_documents/UploadLibrary/Upload972.pdf)

Spees, Kathleen, Samuel Newell, Robert Carlton, Bin Zhou, and Johannes Pfeifenberger. *Cost of New Entry Estimates for Combustion Turbine and Combined-Cycle Plants in PJM*. August 24, 2011. Available:

[http://www.brattle.com/\\_documents/UploadLibrary/Upload971.pdf](http://www.brattle.com/_documents/UploadLibrary/Upload971.pdf)

PJM Interconnection, LLC has asked us to respond to several of the comments raised at that meeting, which we do here.

## RESPONSES TO STAKEHOLDER FEEDBACK

### 3) Stakeholder Feedback:

“Consider using a longer or different historic period” in the E&AS Offset calculation.

#### **Brattle Response:**

Although not summarized in our RPM Report, we analyzed the benefits of longer historical averaging periods with probabilistic Hobbs model simulations. This analysis showed that while longer averaging periods had the benefit of smoothing out year-to-year fluctuations, it also increased the average discrepancy between the averaging period and delivery period. As a consequence, increasing the averaging period to 6 years or even 10 offered no meaningful mitigation of the identified performance risk. This is the reason we did not recommend such an option.

### 33) Stakeholder Feedback:

“request *Brattle* to comment on whether RPM is able to send a signal to build generation in a particular area to compete with transmission in the RTEP process – does it tell the market to build at all or to build in a particular area”

#### **Brattle Response:**

We believe RPM is able to send signals to build generation in the locations with the greatest need. However, we have developed several recommendations for improving the efficiency and effectiveness of these signals as discussed on pages 112-127 of our RPM report. As we discuss further on pages 126-127, the question of whether generation can compete with transmission is a complex and difficult one. We offer recommendations for more efficiently coordinating between RPM and RTEP.

### 39) Stakeholder Feedback:

“would like to better understand what *Brattle* meant by DR performance”

#### **Brattle Response:**

Depending on the context within the report this may have referred to one of several concepts: (1) whether planned DR resources that are offered and cleared in RPM on a forward basis are actually developed and committed for the delivery year; (2) the difference in availability or MW provided compared to commitments (and compared to other resources), which it may be appropriate to reflect with a commitment-specific availability factor similar to the EFORD parameter for generators; (3) the ability of DR resources to respond as frequently as requested by PJM (subject to the limitations specified for each product type), including under challenging system conditions and at high DR-penetration levels when the number of calls can be expected to increase; (4) whether DR resources committed as Annual can actually provide load reductions throughout the committed portion of the delivery year.

**44) Stakeholder Feedback:**

“UCAP value of DR – what is the view of performance that leads to the conclusion that GLD and FSL should be treated differently”

***Brattle Response:***

The difference is explained on page 139. We begin with the premise that one MW of UCAP from all generation and DR resources should ideally have the same effective load carrying capability (ELCC). That is, UCAP from all types of resources should be able to contribute the same absolute quantity to the reliability requirement. However, 1 MW of ICAP Firm Service Level (FSL) will generally have greater ELCC than one ICAP MW of Guaranteed Load Drop (GLD). The reason for this is that GLD resources will always contribute approximately the same load reduction no matter the system conditions. On the other hand FSL resources are supplied from customers that will often have load profiles correlated with the system load profile. In a mild summer with a relatively low system peak, an FSL customer will likely also have low peak load and will supply less ICAP reduction than the 50/50 expectation. In an extreme summer with a high system peak, the FSL customer would also have a relatively high peak demand and need to contribute *greater* ICAP reduction than the 50/50 expectation. Overall, FSL resources are likely to provide somewhat greater ELCC than GLD because it will on average contribute greater load reductions during peak conditions when the supply is most needed.

**46) Stakeholder Feedback:**

“short-term resource procurement target – report discounts expected growth in annual and seasonal products – if more DR appears in those, would *Brattle* change the treatment?”

***Brattle Response:***

We are not prepared to respond to this hypothetical at this time, without having had an opportunity to examine how demand resources bid and behave with multiple products over time, including in incremental auctions. If such a situation were to occur, with a substantial fraction of DR consistently clearing as Annual or Extended Summer, it may be worth reconsidering our recommendation and apply a fraction of the holdback to the Minimum Annual or Extended Summer Requirements as well as the system Reliability Requirement. However, we would caution against considering this option at the present time when almost all committed Annual and Extended Summer resources are generation.

Further, it is important to keep in mind that even if Annual or Extended Summer resources were ultimately not needed for Annual or Extended Summer commitments (e.g., in the case of a decreased load forecast), these resources would still be needed to meet the overall system requirement. For this reason, the STRPT benefit of preventing over-procurement is achieved entirely through the holdback on the system requirement. The benefits would not be materially expanded by extending the holdback to the Minimum Extended Summer and Annual Requirements.

**54) Stakeholder Feedback:**

“The Brattle report compares the E&AS offsets to ‘margins actually earned’ (p. 87, and Figure 15). But the source of the data on the actual margins is not identified. Could we have further detail about the source of the actual margins, and further discussion of what the data is: how exactly the actual margin was defined, calculated, etc.”

***Brattle Response:***

For RPM market monitoring purposes, the IMM had already calculated actual revenues, actual costs, and resulting margins for each unit for each year of actual operation. Actual revenues are total revenues from energy and ancillary services settlement data. Estimated costs are the total energy produced from settlement data, multiplied by the cost-based offer bids submitted by each generator in the energy markets.