

November 29, 2010

Mr. Howard Schneider  
Chair, PJM Board of Managers  
PJM Interconnection, L.L.C.  
955 Jefferson Avenue  
Norristown, PA 19403

Re: Demand Response Saturation

Dear Mr. Schneider:

PJM members recently concluded a stakeholder process to consider demand response saturation. The undersigned Demand Response Supporters are writing to bring to your attention serious flaws in the assumptions underlying the analysis of the saturation issue, and equally serious flaws in the conduct of the saturation stakeholder process. Those flaws call into question the merits of the assessment of the nature, the extent, and the urgency of the potential saturation problem. That same assessment provides the foundation upon which a proposal to address the saturation issue would be built, calling the proposal into question as well.

No stakeholder body has endorsed the analysis of the saturation issue. No stakeholder body has endorsed the assumptions underlying the analysis – and, as discussed in more detail below, one critical assumption is simply not credible. Stakeholder disagreements over those assumptions have been shelved without resolution, and without PJM analyzing how alternative assumptions would affect the assessment.

Furthermore, stakeholder requests to discuss key operational issues in the proposals under consideration have been declined - and no resolution of those operational issues has been proposed. Other fundamental issues were endorsed with virtually no discussion or supporting material.

We therefore recommend that the PJM Board of Managers approve no major changes to RPM to address the saturation concern, without first receiving:

- An analysis that provides a reasonable degree of confidence that saturation is an imminent threat to reliability; and
- A stakeholder-vetted resolution of the operational issues that result from the creation of multiple DR products in RPM.

### **Background**

PJM is proposing fundamental changes to the Reliability Pricing Model (RPM), which would expressly limit participation of certain resources in RPM. Specifically, the proposal sets a saturation level for the current DR product, which commits to curtail load at least 10 times per year for at least 6 hours per event (the “10x6” product, or “Limited DR”). The proposal would require that a minimum amount of

“unlimited” resources clear in RPM, thus potentially limiting the amount of “limited” resources that could clear.

The proposal is based on the Demand Response Saturation Analysis (“Analysis”), presented to the Markets and Reliability Committee (MRC) in May 2010. Several critical assumptions underlie the Analysis. As discussed in more detail below, reasonable changes to those assumptions can increase the projected level at which saturation of the 10x6 product occurs by 50 to 100 percent. The analysis was issued without material stakeholder input into the assumptions underlying it.<sup>1</sup> More importantly, stakeholder disagreements over those assumptions have been shelved without resolution.

### **Assumption of Inefficient Dispatch**

The results of the Analysis depend critically on an assumption at odds with reality.

Specifically, the Analysis assumes that PJM must dispatch all DR at the beginning of an event – putting all DR in play for the same six-hour period, with no demand resources left to dispatch either before or after that period. The Analysis assumes that all demand resources are called for every event, regardless of whether the reserve shortfall that triggered the event is large or small.

This assumption is not merely conservative; if it were put into practice, it would undermine PJM’s responsibility for the reliable operation of the RTO. It would deploy an excess of demand resources at the beginning of the event, likely triggering a large-scale immediate need to back down generation that had been dispatched prior to the event in order to keep generation and load in balance. Each individual generating unit has particular limitations on its ability to ramp down – and on its ability to ramp back up. The variety of these limitations would substantially complicate PJM’s effort to back down generation during the event, and substantially increase the challenges of preserving reliability during the event. Those challenges to reliability would have been created not by the event itself, but by a decision to dispatch all DR at once.

A realistic analysis cannot be based on an assumption that PJM will take imprudent action during an emergency. Neither can appropriate planning for reliability.

### **Process Concerns**

After the analysis was issued, CPower, a curtailment service provider, offered a detailed report on the implications of an inefficient dispatch assumption at the July 22, 2010 Market Implementation Committee (MIC) meeting.<sup>2</sup> CPower’s analysis showed that an assumption of more efficient dispatch of the 10x6 product would raise the saturation level significantly above the Analysis’ estimate, and could

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<sup>1</sup> In April 2010, PJM had made general presentations to the Reserve Requirements Assumptions Working Group and to the Planning Committee, but there was no significant discussion of the assumptions that later became the central points of contention in the stakeholder process.

<sup>2</sup> <http://www.pjm.com/~media/committees-groups/committees/mic/20100722/20100722-item-07-cpower-dr-saturation-report.ashx> CPower has since been purchased by Constellation Energy.

open opportunities to achieve substantial reliability benefits with relatively minor changes to the 10x6 product (such as expanding the maximum curtailment period to seven hours).

At the August 18, 2010 MIC meeting, Demand Response Supporters recommended that PJM conduct an analysis including an assumption of more efficient dispatch.<sup>3</sup> No action was taken on this recommendation. The request was repeated at an October 1, 2010 MIC meeting devoted to the saturation issue; again, no action was taken. Demand Response Supporters further recommended that the Operating Committee be directed to develop procedures and operational changes needed to dispatch DR more efficiently. No action was taken on this recommendation.

We note that there was sufficient stakeholder discomfort with the process and solutions under discussion that on October 20, 2010 a majority (2.73 of 5 in a sector vote) of the MRC supported a proposal to defer action 90 days until further discussions could take place. Our records indicate that Members representing loads (EDC and End User Sectors) were largely with the majority – an indication that those most affected by reliability concerns remain skeptical about the need to act before the next BRA.

### **Other Uncertainties**

The stakeholder process left several key issues unaddressed, and addressed others after only cursory discussion.

- Stakeholders have discussed creating as many as three distinct DR products, but have not discussed how any of these products would be dispatched, beyond suggesting that “unlimited” products could potentially be dispatched first.
- In a single Market Implementation Committee meeting, the issue of whether the Base Residual Auction would be required to clear the entire required amount of unlimited resources was introduced – and then put to a vote before stakeholders had any opportunity to assemble a response. The stakes are high on this issue; the proposal put before the MIC could raise the overall cost paid in the BRA by \$2 billion per year.
- Stakeholders have not yet discussed any details of whether and how aggregations of limited resources could be used to develop an unlimited product. Curtailment service providers should have the ability to aggregate across any multiple demand response products.
- Performance penalty provisions for proposed “Unlimited Demand Response” appear excessive relative to other capacity resources especially as they apply to non-summer events.

### **Recommendation**

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<sup>3</sup> <http://www.pjm.com/~media/committees-groups/committees/mic/20100818/20100818-item-06-efficient-dispatch-proposal.ashx>.

- We recommend that the Board request PJM stakeholders to reassess the saturation issue, including the underlying analysis, and develop a detailed recommendation in time to support a tariff change to be effective for the May 2012 BRA. We do not believe that action for the May 2011 BRA is warranted at this time.
- If the Board should choose to file the changes proposed at the October MRC or the November MC to be effective in May 2011, the Board should nonetheless endorse the first recommendation to ask stakeholders to reassess the saturation issue.

We appreciate your attention to this matter.

Sincerely,

Demand Response Supporters:

Jim Korczykowski  
President  
Energy Curtailment Specialists, Inc.

Carolyn Pengidore  
President/CEO  
Comperio Energy (dba as ClearChoice Energy)

Bruce Campbell  
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John Coughlin  
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Dr. Richard Lahey  
Dr. Jeanne Kinsey  
Bill Mayben  
Susan Riley  
Andy Ott  
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