

**1. How big is scope (in dollars) of Option 4-D from the matrix (DA OR with DASR net revenues)?**

[From the IMM]: *We are working on this for the SOM and some of the other options presented at the meeting. As soon as we get the impact and verify the results, we'll be happy to present them. We did an analysis only for the hot week in July. The impact of doing the offset this way on the DA OR rate for July 16 was 62.2% (decrease), from \$0.646/MWh to \$0.244/MWh. This is not an issue most of the time because the DASR market price is practically zero for most of the year, but any time that changes (when DASR has a price) then this becomes a problem. We are still working on determining if this would be a net decrease/increase in credits or if it would be a different allocation (following the current rules).*

**2. What are normal operating hours for staffing?**

There is no specific PJM-wide definition for "normal operating hours". PJM documents the process for companies to provide this information (for reimbursement) in Manual 11, Attachment C:

*If a unit uses a cost-based start-up and is manned above normal station manning levels at the direction of PJM and all units at the station do not run during the operating day, written confirmation of actual costs incurred due to such manning requirements can be submitted to PJM as cancellation fees per Section 1.10.2 of Schedule 1 of the PJM Operating Agreement and the parallel provisions of Attachment K Appendix of the PJM Tariff. Submittal should follow the "Credits for Canceled Pool-Scheduled Resources" timelines in Manual 28 (to be received within 45 days of date invoice was received by participant for the month in question). Request should include the normal station manning hours, the hours outside of normal station manning levels in which the unit was requested to be manned by PJM and the actual costs incurred for manning above normal station manning levels. The Balancing Operating Reserve credit for manning costs equals the actual costs incurred less any CT Lost Opportunity Credit in excess of day-ahead scheduled MW times the difference in real-time and day-ahead LMPs.*

**3. Can we make units marginal for reactive service (Joe Ciabattoni and Laura)?**

PJM has already started working on this. In some cases, PJM can make these units marginal using closed loop interfaces to allow them to set price. Within the closed loop the Distribution Factors (DFAX) for units would be 1 and outside the loop would be zero. In certain situations we are able to use thermal surrogates to make units marginal for reactive issues. Generally this works best for localized voltage issues.

This was discussed during Adam's presentation at a previous meeting and it can be found here:

<http://www.pjm.com/~media/committees-groups/task-forces/emustf/20131220/20131220-item-02c-price-setting-option.ashx>

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**4. Discuss process for change (notification timelines for non-filing changes)**

Whenever PJM identifies market or operational issues that may be mitigated by modified modeling or operational strategies, PJM staff will provide notification to market participants with as much lead time prior to implementation as practicable, weighing the desire of market participants for advance notice with the potential impact and benefits of the modification.

**5. Look at top 10 units to see if upgrades could alleviate reactive charges**

- B0876 (Install 75 MVAR SVC at 138<sup>th</sup> St.) → +/-75 MVAR SVC
- B1899.2 ( Install new variable reactors at Cedar Creek 230 kV) → 40 MVAR fixed reactor
- B1899.3 (Install new variable reactors at New Castle 138 kV and Easton 69 kV)
  - a. New Castle → 60 MVAR fixed reactor
  - b. Easton → 30 MVAR fixed reactors

**6. When are credits paid for aborted start-up?**

Cancellation credits are assigned to the day that the unit was scheduled to run for PJM.

*An example scenario: PJM requests a unit with a 4 day start-up to start on Monday. On Wednesday, PJM cancels the unit due to changed system conditions. If the unit had continued to come online, it would have been available to PJM on Friday. In the case of this example, the credits would have been paid on Friday.*

**7. Find status of Cedar Creek RTEP upgrade (project B1899.2)**

Upgrade ID	Description	Driver	PJM Required In Service Date	PJM Revised In Service Date	TO Projected In Service Date	Actual In Service Date	Status Code	% Comp
b0876	<ul style="list-style-type: none"> <li>• Location: 138th St.</li> <li>• Task: Install</li> <li>• Equipment: Substation</li> <li>• Desc: Install 75 MVAR SVC at the 138th Street 138 kV bus</li> <li>• Voltage: 138</li> </ul>	N-1-1 Voltage	6/1/2013	12/31/2013	3/31/2014		UC	95%
b1899.2	<ul style="list-style-type: none"> <li>• Location: Cedar Creek</li> <li>• Task: Install</li> <li>• Equipment: Reactors</li> <li>• Desc:</li> <li>• Voltage: 230</li> </ul>		12/31/2013		12/31/2013	10/10/2013	Complete	100%
b1899.3	<ul style="list-style-type: none"> <li>• Location: New Castle/Easton</li> <li>• Task: Install</li> <li>• Equipment: Reactors</li> </ul>		12/31/2014		12/31/2014		EP	

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|---|--|--|--|--|--|--|--|--|
| <ul style="list-style-type: none"><li>• Desc:</li><li>• Voltage: 138/69</li></ul> |  |  |  |  |  |  |  |  |
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**8. Uplift for emergency DR**

The uplift charges for Emergency Demand Response are spelled out in Manual 28 and the tariff.

**9. Understand dollar flow for emergency DR (include Distributed Gen that qualifies as emergency DR)**

The participants who reduce load are paid for their actual kWh relief minus an adjustment for losses. This value is then multiplied by the appropriate zonal or aggregate RT LMP. Uplift is paid to a participant if the total hourly payments are less than the value of their standing offer price for actual kWh reductions. The participant is made whole up to the value of the offer for the actual reduction.

The total hourly charge for Emergency DR is allocated to market participants in proportion to their RT deviation from their net interchange in the day-ahead market when that deviation increases their spot market purchases or decreases their spot market sales. Any RT generation MW reduction as instructed by PJM is not included in the net interchange calculation.

Distributed generation that is not identified as a capacity resource is eligible to participate in the Emergency DR program and is treated the same as a load reduction within the program.

**10. Put together chart for PJM (similar to "Figure 60" in Laura's presentation)**

There is not a one-to-one comparison of PJM's data to the chart showing ERCOT's Reliability Unit Commitments.

**11. Organize design components into 3 bucket**

The matrix was updated to reflect the three buckets.

**12. PJM to provide eLMP description**

This was discussed and closed-out during the 2/19 meeting.

**13. Education on LOC for dispatching up (Adam's proposed option)**

Feedback was provided to the requester of this item.

Current provisions in the Tariff only permit the hourly compensation for Lost Opportunity Cost when a resource is "reduced or suspended" from where it otherwise would have operated economically. If a resource is asked to increase its output for a reliability reason, no similar hourly provisions exist. The extra incurred costs in this scenario is included in the Balancing Operating Reserve segment-based make whole payment methodology. PJM feels that a resource should be made whole on an hourly basis when

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that resource is asked to increase its output for a reliability reason similar to the settlement provisions when it is reduced.

### **14. PJM to report out on Reactive Settlement on 2/13 EMUSTF meeting**

Reactive Charge adjustments totaling \$2.65 million (reduction in charges) for July and August 2013 were included in the January 2014 billing statement. Reactive Charge adjustments totaling \$26.5 million (reduction in charges) for September thru December 2013 will be included in the February 2014 billing statement.

### **15. Update presentation data with most current monthly data**

PJM provided an updated PowerPoint deck which was posted to the 02/19/14 meeting materials.

<http://www.pjm.com/~media/committees-groups/task-forces/emustf/20140213/20140213-item-02b-2012-2013-uplift.ashx>

### **16. Break 2012 / 2013 DAOR and BOR into causal factors**

This was discussed in the March 4 meeting.

### **17. Add details on design component in matrix (tab 2A)**

The matrix has been updated (see Tab 2A).

### **18. Provide feedback to the MRC on manual 33 (data confidentiality)**

Information Confidentiality design component was struck, based on feedback Mr. Anders received from the MRC. Possible future actions on this topic: create a new problem statement or request that the MRC modify the EMUSTF charter

### **19. Provide status update on non-reactive PJM changes**

- PJM is currently developing additional closed-loop interface constraints in areas where there are resources receiving a large amount of make whole payments. As part of this process PJM is also trying to balance the impacts on FTR funding for the new closed-loop interfaces as well. Non have been put into place yet but PJM is currently working to define them.
- The SENECA Interface went into production on February 1, 2014. During the time that the interface was being developed, PJM worked with the TO in the region on an alternative solution that involved changing the transmission system topology to minimize the need for reactive support in the area. This topology change went in place at the same time the interface went live which is why it has bound in a minimal number of hours. There will still be a need for reactive support in the area under certain operating conditions but it has been minimized.
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**20. What are reasons for getting rid of Synchronous Condensing?**

The reason is ambiguity and the different allocation that each reason has:

If synch condensing is for synch reserves the cost is allocated based on synch reserve obligation not met.

If synch condensing is for reactive the cost is allocated based on real-time load in the zone.

If synch condensing is for post-contingency the cost is allocated based on real-time load in the zone.

If synch condensing is for anything else the cost is allocated based on real-time load and real-time exports in the entire RTO.