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1. How big is scope (in dollars) of 4-D?

[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 DADR market price is practically zero for most of the year, but any time that changes (when DADR 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 Ciabattone 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.

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>

4. 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

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have been available to PJM on Friday. In the case of this example, the credits would have been paid on Friday.

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

- B0876 (Install 75 MVAR SVC at 138th 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)
 - New Castle → 60 MVAR fixed reactor
 - Easton → 30 MVAR fixed reactors

6. 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"> • Location: 138th St. • Task: Install • Equipment: Substation • Desc: Install 75 MVAR SVC at the 138th Street 138 kV bus • Voltage: 138 	N-1-1 Voltage	6/1/2013	12/31/2013	3/31/2014		UC	95%
b1899.2	<ul style="list-style-type: none"> • Location: Cedar Creek • Task: Install • Equipment: Reactors • Desc: • Voltage: 230 		12/31/2013		12/31/2013	10/10/2013	Complete	100%
b1899.3	<ul style="list-style-type: none"> • Location: New Castle/Easton • Task: Install • Equipment: Reactors • Desc: • Voltage: 138/69 		12/31/2014		12/31/2014		EP	

7. Break 2012 / 2013 DAOR and BOR into causal factors

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8. 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.

9. Uplift for emergency DR

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

10. 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.