FAQ’s on Curtailments of Non-Dispatchable Resources

1. Why are curtailments necessary?

Curtailments on the outputs of non-dispatchable resources are necessary to maintain the Bulk Electric System (BES) reliability. We are required to operate the BES such that at all times we can handle a disturbance or event without causing an exceedance of the transmission system component facility rating.

2. How does the Reliability Coordinator (RC) manage ongoing curtailments?

The RC reviews the need for continued curtailments on an hourly basis similar in nature to the hourly review of Transmission Loading Relief (TLR) status. These reviews take into consideration wind forecasts, transmission and generation topology changes, RC workload available for curtailment activity and actual and anticipated flowgate loading. The RC will reduce or terminate the curtailment(s) when it is determined to be reliably feasible. If not, the RC will continue the curtailment each hour until that determination can be made.

During the curtailments, the RC will continue to manage the associated Congestion Management Event (CME) in order to ensure market resources are continuing to provide relief to the degree feasible by the topology. This also includes Curtailment Adjustment Tool (CAT) for PRR242, and curtailments for infeasible Market schedules.

3. How do I know curtailments exist on the Bulk Electric System and where can I find information about the event?

A Non-Dispatchable Curtailment Event report was created to inform of manual curtailments taking place due to congestion on the Bulk Electric System. This report is posted on the SPP OASIS site. Also on the SPP OASIS site there is information regarding curtailments being implemented by the North American Electric Reliability Corporation (NERC) TLR process, flowgate definitions and transmission outage information among other useful information. On the SPP.org website there is a display titled Locational Imbalance Price (LIP) Contour Map. This display gives an indication of congestion on the SPP system but does not necessarily mean there are associated curtailments with every congestion management event that is taking place.
4. Am I the only Non-Dispatchable resource curtailed?
   A document called Event Report has been established to help with transparency which will also reflect the number of resources that were curtailed during an event. This report is posted on the SPP OASIS site.

5. What is PRR 242 and how does it impact curtailments?
   PRR 242 is a protocol change that allows the RC to curtail as needed, unscheduled energy from a Non-Dispatchable Resource (NDVER) by converting that unscheduled energy into a virtual schedule with matching transmission priority (or assigned non-firm hourly priority if no transmission service exists), and then making that virtual schedule available for curtailments as needed for reliability purposes.

6. Why are there not consistent negative or low LIP prices during curtailments?
   LIP price separation will only happen if the EIS Market System is “binding” a constraint, meaning economic dispatchable generation is being dispatched through the Security Constrained Economic Dispatch (SCED) solution to maintain the limit of the flowgate to the effective limit. If there is no or insufficient dispatchable generation to control a flowgate (the market has no ability to provide relief), and the curtailment of NDVERs has provided sufficient relief for the constraint, the LIP prices will not separate simply because the market available resources are not binding on the constraint. The RC will attempt to manage the Effective Limit to a value which may violate the flowgate in the market solution periodically in order to ensure a congestion signal is provided to the market in times in which the market is unable to solve for the constraint while manual curtailments are in effect.

7. What curtailment threshold is used?
   All congestion management tools (NERC IDC, TLR, SPP CAT, and Manual Reliability Directives) are using a 5% threshold, consistent with all other
curtailment processes used by Eastern Interconnect. NDVERs with a 5% or greater impact on the congested flowgate will be considered in the calculation and implementation of curtailments. This impact is the Generator to Load Distribution Factor (GLDF) from that resource into the load of the host Balancing Authority (BA) (or pseudo-tied BA).

8. The SPP wind tool creates a forecast at the windfarm level; therefore is a forecast produced for each individual windfarm?
The forecast system will have 5 forecast levels:

i. System Wide
ii. Regional
iii. Balancing Authority (BA)
iv. Physical Windfarm-Physical represents a physical windfarm in the field. Once the EIS Market system integrates with the forecast, the EIS Market will use the registered windfarm level forecast. The operator will still be able to see the physical level forecast via displays.
v. Registered Windfarm- A Market participant may register a windfarm as two separate resources even though there is technically one windfarm out in the field. In the case of our current EIS Market, the operators use the physical level forecast.

9. What is the RTCA and how does it impact me?
Real Time Contingency Analysis (RTCA) tool is used by the Reliability Coordinator to monitor N-1 contingencies on the Bulk Electric System. The RTCA tool runs every 6 minutes to determine congestion on the system. This tool is primarily looking at what impact does losing a BES element have on other BES equipment. The Reliability Coordinator uses this tool to identify congestion and implements the proper congestion management procedures which could include manual curtailments to Non-Dispatchable Resources (NDRs). The RTCA identified constraints may result in curtailment of NDVERs, without an associated flowgate until such time that a flowgate is created specifically for that RTCA constraint (it takes typically and hour or two for this to be accomplished). Thus, at times, the first hour or two of a curtailment may not yet be linked to a specific “flowgate”.

10. Can I change my Non-Dispatchable Resource to “Available” status? If so, how do I do that?
The resource may change their Market Status to “Available” at any time (provided the proper timeline is followed). The Market Participant (MP) may do this at any time prior to 15 minutes past the hour, for the next hour, after this point in time; the MP will be required to contact the SPP Market Operator for Resource Plan changes such as this. Changing the NDVER to Available status means this resource will need an appropriate offer curve in order for this status to provide the maximum benefit to the MP.
11. **What can I do to find out the status of my curtailment?**

   If you are unsure of the current status of curtailment on your resource you can call the Reliability Coordinator (RC) directly to discuss.