



PJM Solution Option: Enhanced Gas Electric Situational Awareness

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- Improve real time situational awareness during critical periods
- Increase understanding of supply and capacity constraints for all gas fired generators
- Create a mechanism through which more granular level of generator availability is achieved

- During periods of constrained pipeline operations, primarily during the winter period, gas fired generators are subject to availability limitations due to pipeline conditions, supply and transportation contracts and pipeline nomination cycle deadlines.
- Knowing the impact of those limitation on generator availability and capability are critical for PJM Dispatch, particularly those units that are solely reliant on natural gas (single fuel units) and units that have not received a day ahead award or have otherwise been committed.

- Trigger
 - Issuance of a Cold Weather Alert (CWA)
 - Issuance of other emergency declaration by PJM which involves increased risk of gas generation availability
- Action
 - Commencing at 18:00 on the day prior to CWA and every 6 hours thereafter, each gas fired generator that has not received a DA award will provide to PJM the estimated hourly output capability of each unit for 24 hour periods beginning at 00:00 of the operating day that the CWA (or other emergency declaration) goes into effect. The estimated capability will be based on the unit's known gas supply and transportation position as well as taking into account all current pipeline restrictions.

- Action (cont'd)
 - With each updated 24 hour forecast, the generation owner must also include the time of day that PJM must call them on in order to achieve the forecasted capability. This notification time would be consistent with current pipeline scheduling deadlines.
- Duration
 - Forecasts are required only during the effectiveness of the CWA (or similar emergency declaration)
- Facilitation
 - Enhancement to Markets Gateway to accommodate process



Example of Hourly Capability Estimate Requirements

Effective for all units not receiving DA award and not subsequently committed in real time

DAY	PJM Operations Status	00:00	06:00	12:00	18:00
0	Normal Operations At 07:00, PJM declares CWA effective 00:00 Day 1				Gas units not receiving DA award for Day 1 provides hourly MW capability estimate for 24 hour period commencing 00:00 Day 1 along with notification deadline
1	CWA in effect	Updated hourly MW capability estimate for 24 hour period commencing 00:00 Day 1 along with notification deadline	Hourly MW capability estimate for 24 hour period commencing 06:00 Day 1 along with notification deadline	Hourly MW capability estimate for 24 hour period commencing 12:00 Day 1 along with notification deadline	Gas units not receiving DA award for Day 2 provides hourly MW capability estimate for 24 hour period commencing 18:00 Day 1 along with notification deadline
2	CWA in effect At 13:00, PJM terminates CWA effective 00:00 Day 3	Updated hourly MW capability estimate for 24 hour period commencing 00:00 Day 2 along with notification deadline	Hourly MW capability estimate for 24 hour period commencing 06:00 Day 2 along with notification deadline	Hourly MW capability estimate for 24 hour period commencing 12:00 Day 2 along with notification deadline	
3	Normal Operations				