

Electric Gas Coordination Senior Task Force

Review of Modified Joint PJM/Dominion Energy/Gabel Associates Package

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Joint PJM/Dominion Energy/Gabel Associates* Solution Option Package

| Component | High Level Summary of Proposed Solutions | | | | |
|--|---|--|--|--|--|
| Intraday Reliability Commitment Runs | PJM will run multiple intraday RTC (Real Time Commitment) runs that are timed to complete in advance of the three intraday gas nomination cycle deadlines. Gas units receiving commitments during these runs will be notified with adequate time to procure and scheduled needed supply prior to the nomination deadlines. This includes the "RTC1" run prior to the ID1 nomination cycle deadline as identified in the Calpine proposal. | | | | |
| Gas Procurement Notification | Gas generators receiving a DA award to provide notification to PJM that gas either has been procured or is expected to be available to meet their Day Ahead commitment. | | | | |
| Unit Parameter Exception Updates | Short Term: Reflect nomination deadlines, ratable takes in operating parameters when enforced by pipelines. (9/8/23-temporary exception guideline document posted on PJM and IMM websites) Document in PJM manuals Mid Term: Remove RTVs. Allow for real time temporary exceptions. (9/11/23 Joint PJM/IMM FERC filing approved by FERC on 11/30/23) Long Term: Introduce new operating parameter for extending unit runs. NOTE: Short Term and Mid Term items have been addressed | | | | |
| CT's Dispatched in the DA Market are treated the same as Steam Units in terms of firm commitment | This is the current process however PJM to update manual language to ensure that this is clearly indicated. | | | | |
| Training | Status Quo but PJM agrees to make non-confidential training material and tabletop exercise information available to stakeholders | | | | |
| | *Gabel Associates represents Red Oak, Rockland and J-Power | | | | |

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Notification of Gas Supply Procurement and Availability

For each operating day during the period December 1 through and including the last day of February, AND for the duration of a PJM-declared Hot Weather Alert or Conservative Operations that occurs between the period March 1 through November 30, gas fired generators receiving a Day Ahead commitment should make every reasonable effort to confirm to PJM Dispatch that adequate gas supply either has been procured or is expected to be available to meet their Day Ahead commitment. For each operating day that the aforementioned operating conditions exist, during the period 15:00 Eastern Prevailing Time and continuing through 24:00 Eastern Prevailing Time, gas generators receiving a DA commitment for the next Operating Day should make every reasonable effort to acknowledge supply availability by checking a box in Markets Gateway that will be developed for this purpose. This request is in no way meant to be punitive nor will it alter any previous dispatch instructions. It is solely intended to improve the situational awareness for PJM Dispatch during highly constrained periods. As is current practice, to the extent that gas supply is unavailable or partially available to meet the Day Ahead commitment, generators are expected to address that through entry of an appropriate eDART ticket.

NOTE: During a Hot Weather Alert or Conservative Operations declaration, all gas generators within the PJM system are being requested to make this confirmation of supply, even if the alert only covers a limited subset of the PJM system footprint.

This will require modification to Markets Gateway with target implementation to be completed in time for Winter 24/25 operations.



Intraday Reliability Commitment Runs

| NAESB Gas | RTC Run | | Gas Nomination | Nomination Confirmed | Gas Scheduled by | Gas Flow | Gas Flow |
|------------|--------------------------------|--|----------------|----------------------|------------------|----------|----------|
| Cycle | Commitment * | Target Dispatch Period | Deadline | by Pipeline | Pipeline | Starts | Duration |
| Timely | N/A | N/A | 2:00 pm | 5:30 pm | 6:00 pm | 10:00 am | 24 hours |
| Evening | N/A | N/A | 7:00 pm | 9:30 pm | 10:00 pm | 10:00 am | 24 hours |
| Intraday 1 | 9:00am (RTC 1- CTO) | Same Day Evening Peak | 11:00 am | 1:30 pm | 2:00 pm | 3:00 pm | 19 hours |
| Intraday 2 | 2:15pm (RTC2-CTO** and RAC) | Same Day Evening Peak (CTO) and/or Next Day Morning Peak (RAC) | 3:30 pm | 6:00 pm | 6:30 pm | 7:00 pm | 15 hours |
| Intraday 3 | 6:00pm (RTC3-RAC) | Next Day Morning Peak | 8:00 pm | 10:30 pm | 11:00 pm | 11:00 pm | 11 hours |

^{*}PJM currently has the ability to initiate a reliability run throughout the operating day when deemed necessary. For the purpose of this effort, PJM will initiate three "RTC" runs each day Targeting the times noted above in order to ensure that committed units have time to procure and schedule gas. **During a PJM-declared Cold or Hot Weather Alert, or Conservative Operations, should operating conditions warrant, PJM will also target a CTO run coincident with the ID2 gas cycle to determine the need for any incremental resources needed for the balance of the current operating day.



Notification of Gas Supply Availability

Triggering Action

- Each operating day during the period December 1 through and including the last day of February
- Each operating day that a PJM-issued Hot Weather Alert is in effect between March 1 and November 30
- Each operating day that a PJM-declared Conservative Operations is in effect between March 1 and November 30

Daily Action

Between the hours of 15:00 and 24:00 each day, units receiving a Day Ahead commitment for the next operating
day, confirm to PJM Dispatch that adequate gas supply <u>either has been procured or is expected to be available</u>
to meet their Day Ahead commitment

Communication

• Generator will make confirmation via Markets Gateway (checkbox mechanism to be developed)

Disclaimers

- This request is to improve situational awareness for PJM Dispatch and is NOT intended to be punitive in nature nor will it change prior unit commitments
- This is not creating an artificial deadline for which to procure gas
- During either a Hot Weather Alert or Conservative Operations, regardless of the system coverage, all units in the RTO would be asked to respond



Unit Parameter Exception Updates

Short Term: Gas resources need to properly reflect nomination deadlines, ratable takes in operating parameters when enforced by pipelines.

9/8/23 Temporary exception guideline document posted on PJM and IMM websites

Mid Term: Remove Real Time Values (RTV). Allow for real time temporary exceptions.

- 9/11/23 Joint PJM/IMM FERC filing
- Approved by FERC on 11/30/23
- PJM Compliance filing 12/6/23
- Updated process is in use today

Long Term: Introduce new operating parameter for extending unit runs beyond their original commitment.

- This effort requires programming and procedural updates in order to effectuate.
- Targeting completion prior to Winter 24/25



Training and Operating Drill Information

Status Quo but PJM will make non-confidential training material and exercise/drill information available to stakeholders.



Treating Day Ahead CT's Same as Steam Units

<u>Status Quo</u>: Gas units that do not meet the Flexible Resource definition that clear DA are treated the same as STs/CCs in real time. OA Definition. "Flexible Resource" shall mean a generating resource that must have a combined Start-up Time and Notification Time of less than or equal to two hours; and a Minimum Run Time of less than or equal to two hours.

<u>Next Steps</u>: Status Quo (meaning that this is the case today) but make clear in PJM Operating Manuals (M11) that when combustion turbines (CT's) are dispatched in the Day Ahead market that they are treated the same as steam units.





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