Manual Changes Clarifying Impacts of Operationalizing Gas Contingencies on Reserves

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### Manual Changes Clarifying Impacts of Operationalizing Gas Contingencies on Reserves

<table>
<thead>
<tr>
<th>Action Required</th>
<th>Deadline</th>
<th>Who May Be Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notify staff about updates to M11, M13 and M28 for clarifying of impacts of gas contingencies on reserves</td>
<td>4.10.2019</td>
<td>Market Buyers, Market Sellers</td>
</tr>
</tbody>
</table>
Manual Changes to Address Operationalizing Gas Contingencies

Process to account for gas contingency impact on electric system. Changes made to M3 and M13.

Endorsed at Dec. 2017 MRC

Recovery of “Gas Contingency Switching Costs” associated with PJM Operating Instruction

Update last presented at 3.21.2019 MRC

Manual changes to provide clarification to existing gas contingency process

In Progress
## Day-Ahead Scheduling Reserve (DASR) Requirement

<table>
<thead>
<tr>
<th>Current</th>
<th>Changes</th>
<th>Manual Sections Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following issuance of Hot/Cold Weather Alert or escalating emergency procedures PJM will increase the Day-ahead Scheduling Reserve requirement to reflect the additional reserves typically carried under such conditions and to ensure that adequate resources are procured to meet real-time load and reserve requirements.</td>
<td>Language to address a credible gas contingency(s) in the calculation for increasing the Day-Ahead Scheduling Reserve Requirement</td>
<td>• Manual 13, Section 2.2 Reserve Requirements&lt;br&gt;• Manual 11, Section 11.2.1 Day-Ahead Scheduling Reserve Market Reserve Requirement</td>
</tr>
</tbody>
</table>

In the event PJM forecasts a credible natural gas contingency(s):

DASR Requirement = **Greater of** [(Base DASR Requirement + increase for Hot/Cold Weather Alert or escalating emergency procedures) **OR** ∑ *(EcoMax of units part of largest credible gas contingency)*]
## Settlement of Additional DASR Requirement

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| If PJM issues Hot/Cold Weather Alert or escalating emergency procedures resulting in increase in DASR Requirement, charges for additional requirement resulting from difference between fixed demand and forecasted load is allocated to differences in Day-ahead demand and Real-time load | Language clarifying that a gas contingency(s) is included in the universe of events settled when DASR Requirement is increased. | • Manual 11, Section 11.2.8 Day-Ahead Scheduling Reserve Market Obligation Fulfillment  
• Manual 28, Section 19.3 Charges for Day Ahead Scheduling Reserve                                                                 |

In the event PJM increases the DASR Requirement due to a credible natural gas contingency(s):

Additional DASR Requirement = \[ \sum (\text{EcoMax of units part of largest credible gas contingency}) - (\text{Base DASR Requirement}) \]

*Allocation of charges for Additional DASR Requirement is status quo*
# Reserve Eligibility for Units Impacted by Credible Gas Contingency(s)

In the event PJM forecasts a credible gas pipeline contingency(s), resources that are part of the credible gas pipeline contingency(s):

- Are not eligible to be a Day-Ahead Scheduling Reserve Resource
- May be ineligible to provide Synchronized and Non-Synchronized Reserve, as determined by PJM Dispatch, depending on the severity of the contingency and other system conditions in order to ensure system reliability is maintained

### Current

If a credible gas contingency is triggered, units impacted are still eligible to provide reserves

### Changes

Language added to clarify the reserve market eligibility of resources impacted by a credible gas pipeline contingency(s)

### Manual Sections Impacted

- Manual 13, Section 3.9 Assessing Gas Infrastructure Contingency Impacts on the Electric System
- Manual 11, Section 4.2.1 Synchronized Reserve Market Eligibility
- Manual 11, Section 4b.2.1 Non-Synchronized Reserve Resource Eligibility
- Manual 11, Section 11.2.2 Day-Ahead Scheduling Reserve Market Eligibility
Committee Approval Path

- **First Reads**
  - SOS: 4.4.2019
  - OC: 4.9.2019
  - MIC: 4.10.2019
  - MRC: 4.25.2019

- **Second Reads / Endorsement**
  - SOS: 5.2.2019
  - OC: 5.14.2019
  - MIC: 5.15.2019
  - MRC: 5.30.2019