

Gas Pipeline Switching Procedure Review

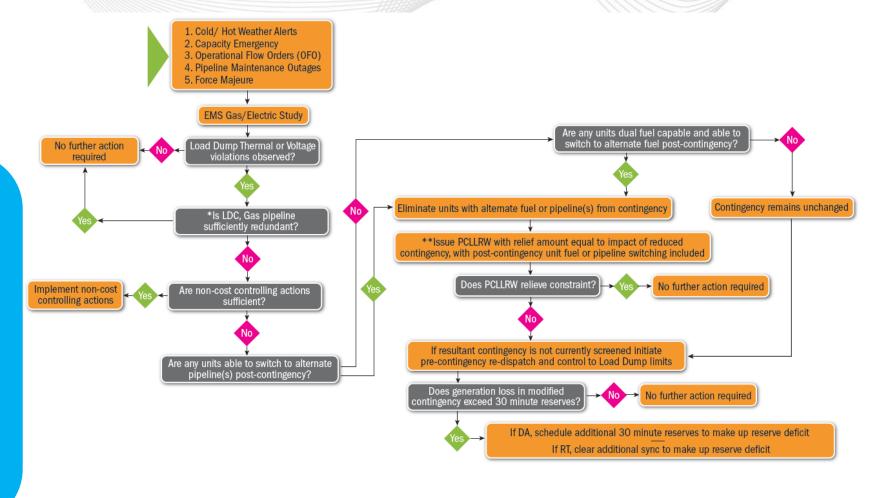
MIC Special Session September 27, 2019 Chris Pilong

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Existing M-03 procedure (no physical/cyber threat)

- There is no precontingency gas pipeline switching step in the 'no physical/cyber threat scenario' flowchart
- Gas Contingency
 Switching Cost
 recovery is not
 applicable under this
 scenario

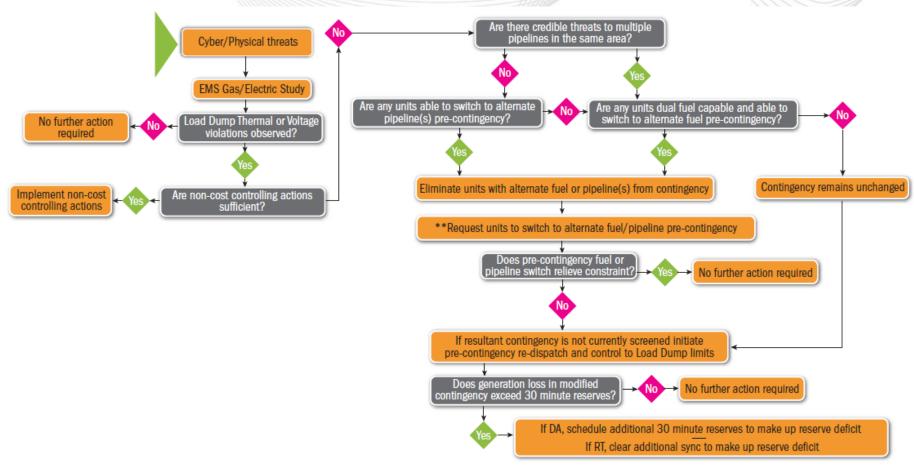


- *Primary Firm Service: Predefined LDC and compressor station contingencies account for primary firm contractual agreements between generators and pipelines/LDCs.
- **Post-Contingency Control: If sufficient time exists, implement least cost option of post-contingency re-dispatch or alternate fuel/pipeline switching. Otherwise, implement post-contingency load shed as last option.

Decision Point



Existing M-03 procedure: Credible Threat Scenario



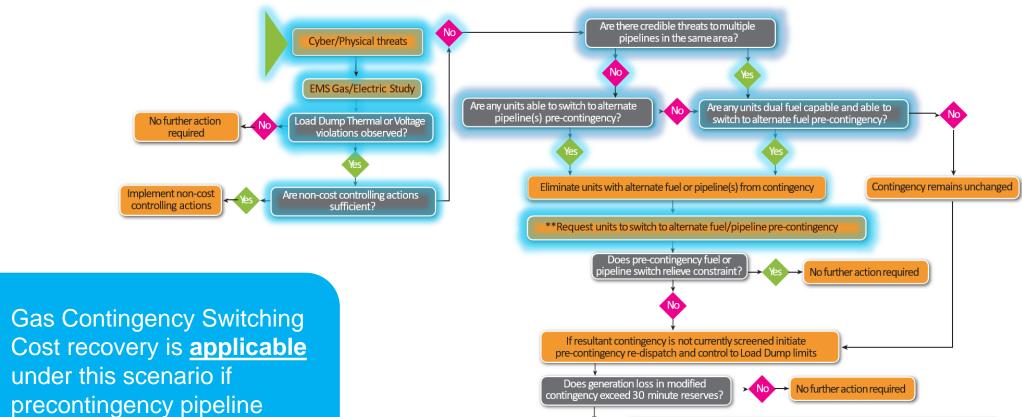
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Decision Point

^{**}Pre-Contingency Control: Implement least cost option of pre-contingency re-dispatch or alternate fuel/pipeline switching. Otherwise, implement post-contingency load shed as last option.



Existing M-03 procedure: Credible Threat Scenario



Decision Point

switching is requested

If DA, schedule additional 30 minute reserves to make up reserve deficit If

RT. clear additional sync to make up reserve deficit

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^{**}Pre-Contingency Control: Implement least cost option of pre-contingency re-dispatch or alternate fuel/pipeline switching. Otherwise, implement post-contingency load shed as last option.



Credible Threat Scenario (Additional details)

- A credible threat greatly increases the chance of a pipeline loss/fault and pre-contingency action is prudent.
- Pre-contingency pipeline switching will only be implemented under the physical/cyber threat scenario and after discussion with the generation owner.
- After the discussion, an Operating Instruction to switch will only be issued if the generation owner is able to do so without violating, e.g., a pipeline issued OFO or other Tariff provisions, and has access to an alternate fuel source or fuel type within a timeframe consistent with the reliability needs of the electric system.