



Aliso Canyon Phase 5

Maximum gas constraint

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History

- Summer 2016, ISO initiated stakeholder process to explore mechanisms or tools to support reliability concerns due to limited operability of Aliso Canyon
- Limited operability of Aliso Canyon amplified existing gas management challenges in southern California
 - Design of SoCal gas system
 - Increased net electrical load ramps result in higher instantaneous draw on gas system

Electric system reliability concerns due to limitations of the gas system in southern California

- During stressed conditions, SoCal Gas determines gas limitations or curtailments
 - Avoid further stress on gas system
 - Like the CAISO, SoCal Gas must service demand
- SoCal communicates gas system limitations to CAISO operators
 - If gas system limitations are not captured in the CAISO market, adverse impact to electric system reliability
 - Gas resources are needed for the morning and evening demand ramps

CAISO implemented the maximum gas constraint to manage generator gas consumption in southern California within bounds established by SoCal Gas

- CAISO usage of tool:

Year	#of Days	% of year	% intervals constraint binding
2016	19	5%	0.0%
2017	6	2%	0.5%
2018	14	4%	0.7%
2019**	4	3%	0.05%

- Authority for tool expires December 31, 2019

Propose to make the existing tariff provisions permanent

- Maximum gas constraint
 - Allows coordination between CAISO and SoCal Gas for periods when the gas system is constrained
 - Ensures reliable gas and electric system operations
- Competitive path assessment
 - Allows the CAISO to manually override the dynamic competitive path assessment to determine if transmission constraints are uncompetitive
 - Allows supply limitations to be reflected in market power mitigation process
- Virtual bidding
 - If the maximum gas constraint is causing market inefficiencies, CAISO may suspend virtual bidding

BPM enhancements to maximum gas constraint

- Change calculation of constraint to more accurately capture when electric gas-fired generation is needed
 - Shape constraint to allocate gas usage based on electrical system need

Next steps

- File tariff changes mid-October for January 1, 2020 effective date
- Comments or questions?