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California Energy Commission

Southern California Gas Company Winter 2022-2023 Reliability Assessment

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Winter 2022-23 Assessment Overview

- CEC has prepared, or taken a leading role, in several seasonal winter reliability assessments
- For Winter 2022-23, staff has analyzed supply and demand conditions for the SoCalGas system to inform decisionmakers and the public information about the risk of curtailments



Winter 2022-23 Assessment

What is New?

- *Used CEC Demand Forecast instead of California Gas Report data*
 - CEC Demand staff ran SoCalGas peak demand scenarios using existing and new data (e.g. utility gas data collected for first time in 2021 IEPR cycle)
- Hourly Stochastic Analysis to capture the hourly granularity and uncertainty in demand
- More extensive hydraulic analysis



Winter 2022-23 SoCalGas Analysis

Gas Balance

- Two monthly demand scenarios
- Average
- 1-in-10 demand

Two Peak Demand Scenarios

- 1-in-10 cold day peak demand
- 1-in-35 core customer and 1-in-10 noncore customer extreme peak day demand



Assumptions

Table 1: Winter Supply and Storage Comparison

	Winter 2019-2020	Winter 2020-2021	Winter 2021-2022	Winter 2022-2023
Pipeline Capacity (MMcfd)	~2,800	2,845	2,835	2,815
Total Storage Inventory (Bcf)*	73.4	79	81.1	88.9
Percent Full (Total Storage)	87.70%	94%	96%	97%
Allowed Aliso Inventory (Bcf)	34	34	34	41

* SoCalGas Envoy™: <https://socalgasenvoy.com/>

Table 2: CEC Cold Day and Extreme Peak Day Demand

		Case 1: Cold Day Core + Noncore 1-in-10*	Case 2: Extreme Peak Day 1-in-35 Core + Noncore 1-in-10**
1	Demand		
2	-Core	3,002	3,393
3	-Noncore-Non-Electric Generation	744	705
4	-Electric Generation	914	844
5			
6	TOTAL Demand (Sum Rows 2 to 4)	4,660	4,942



Results - Peak Demand Day Gas Balance

		Case 1: Cold Day Core + Noncore 1-in-10	Case 2: Extreme Peak Day 1-in-35 Core + Noncore 1-in-10
1	Demand		
2	-Core	3,002	3,393
3	-Noncore-NonEG	744	705
4	-EG	914	844
5			
6	TOTAL Demand (Sum Rows 2 to 5)	4,660	4,942
7	Available Pipeline Capacity	2,815	2,815
8	Needed Withdrawal (Row 6 minus Row 7)	1,845	2,127
9	Assumed Available Withdrawal	1,850	1,850
10	Net Shortfall or Curtailment (Row 8 minus 1)	0	277



Uncertainty Remains

- **SoCalGas system remains impaired**
 - Two key transmission lines operating at reduced pressure → reducing delivery capability
- **Storage withdrawal capability is uncertain**
 - Inventory restrictions at Aliso Canyon
 - CalGem safety regulations
- **Risk of curtailments is lower than prior years due to lower demand**
 - Lower demand is mostly due to lower EG demand



Overall Reliability Outlook

- Improved outlook from last winter
- All demand just met in the Cold 1-in-10 Peak Demand Case
- All demand cannot be met in the Extreme 1-in-35 Core and 1-in-10 Noncore Peak Day Demand Case
 - 277 MMcfd curtailment
- Results of gas balance are confirmed by stochastic analysis and hydraulic analysis
- Price spikes could occur during high demand periods