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High Gas and Electric Prices in Winter 2022-23: White Paper II

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California Public
Utilities Commission

California Public Utilities Commission

Investigation into High Gas and Electric Prices

The CPUC opened Investigation (I.) 23-03-008 on March 20, 2023, to examine:

1. The factors that contributed to high gas prices in winter 2022-23;
2. Whether entities under the CPUC's jurisdiction played a role in causing the price increases;
3. How gas and electric markets interact and impact utility customers;
4. Whether any additional investigations should be undertaken;
5. Actions the CPUC can take to reduce the likelihood of similar prices spikes in the future; and
6. Actions the CPUC, utilities, or other entities can take to mitigate the impacts of future prices spikes if they do occur.

Investigation into High Gas and Electric Prices

- The CPUC issued [High Natural Gas Prices in Winter 2022-23: Part I](#) on July 2, 2024, which looked into items 1 and 2 on the previous slide
- *White Paper Part II* examines items 1-4
- A third white paper that looks into hedging and the utilities' gas procurement incentive mechanisms will be issued in Q3 2025
- Items 5-6 will be considered in the proceeding

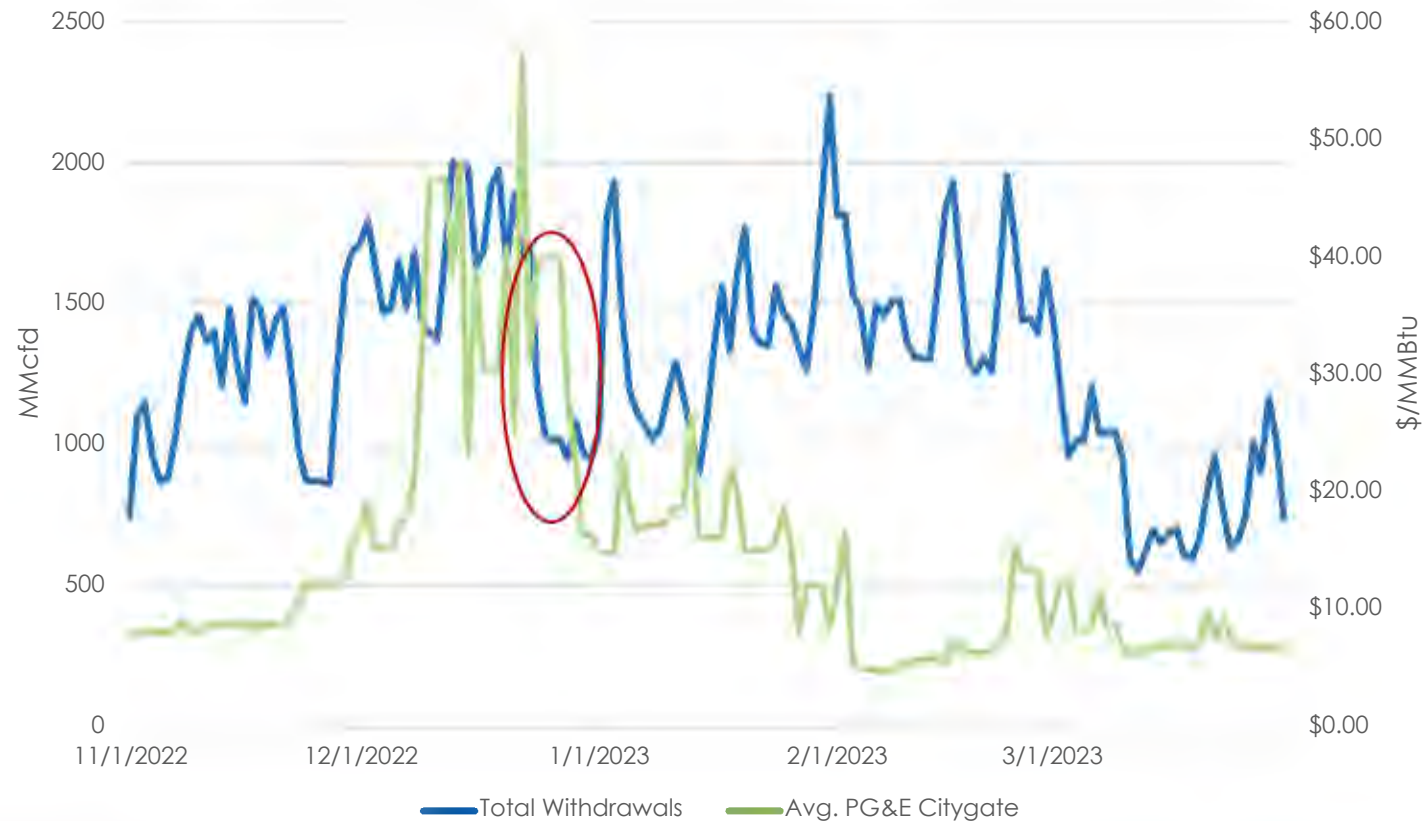
Focus of *White Paper Part II*

- Storage usage in Northern and Southern California during winter 2022-23;
- Independent storage provider (ISP) contracts during winter 2022-23, with comparisons to prior winters;
- The impact of high natural gas prices on California's electric market and electricity customers; and
- Statistical analysis on the impact of high gas prices on electric prices.

Winter 2022-23 Storage Usage

Injectons into and withdrawals from gas storage were more closely associated with weather and demand than gas commodity prices.

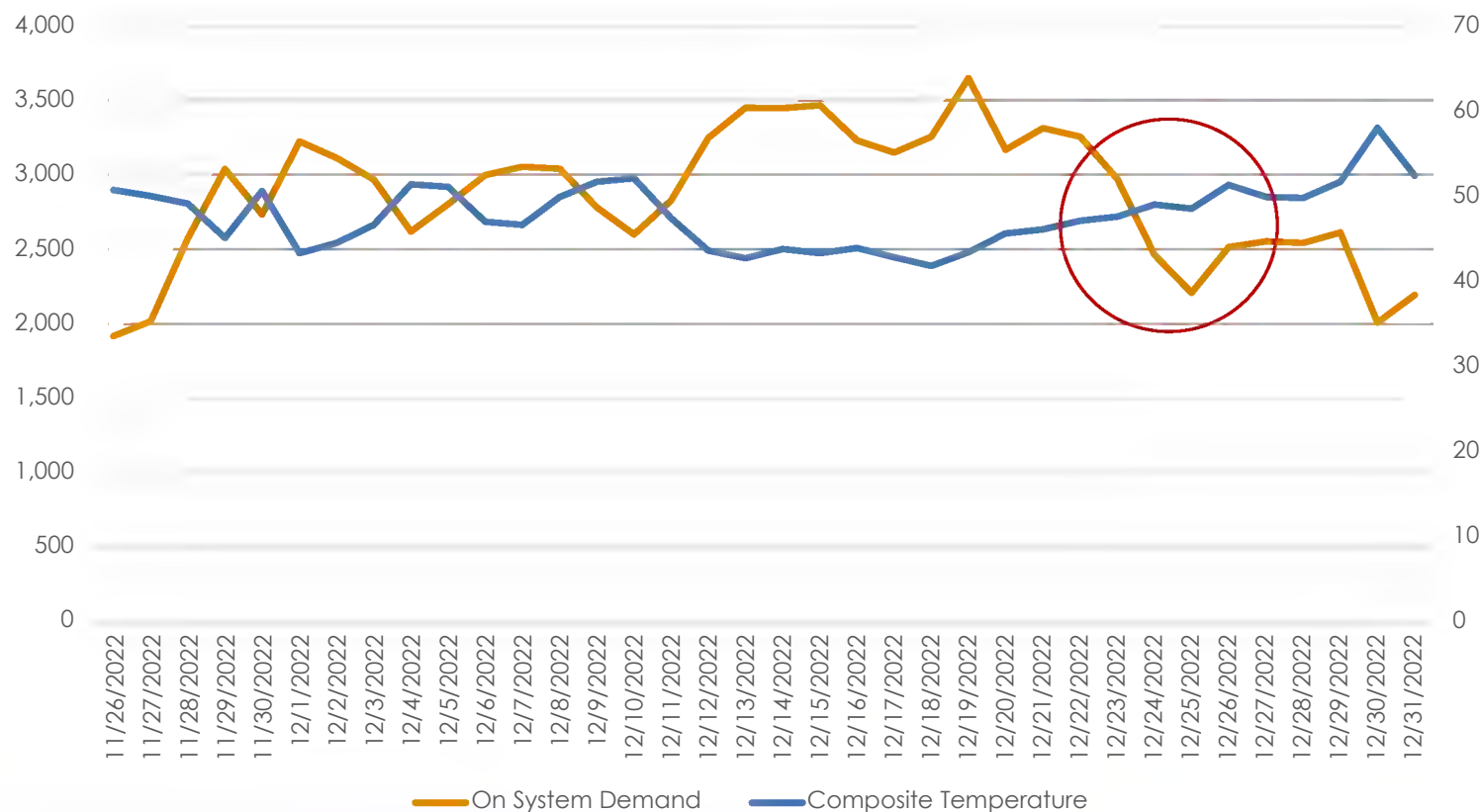
Winter 2022-23 Northern California Withdrawals and PG&E Citygate Prices



Winter 2022-23 Storage Usage

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PG&E System Demand and Composite Weighted Average Temperatures



Winter 2022-23 Storage Usage

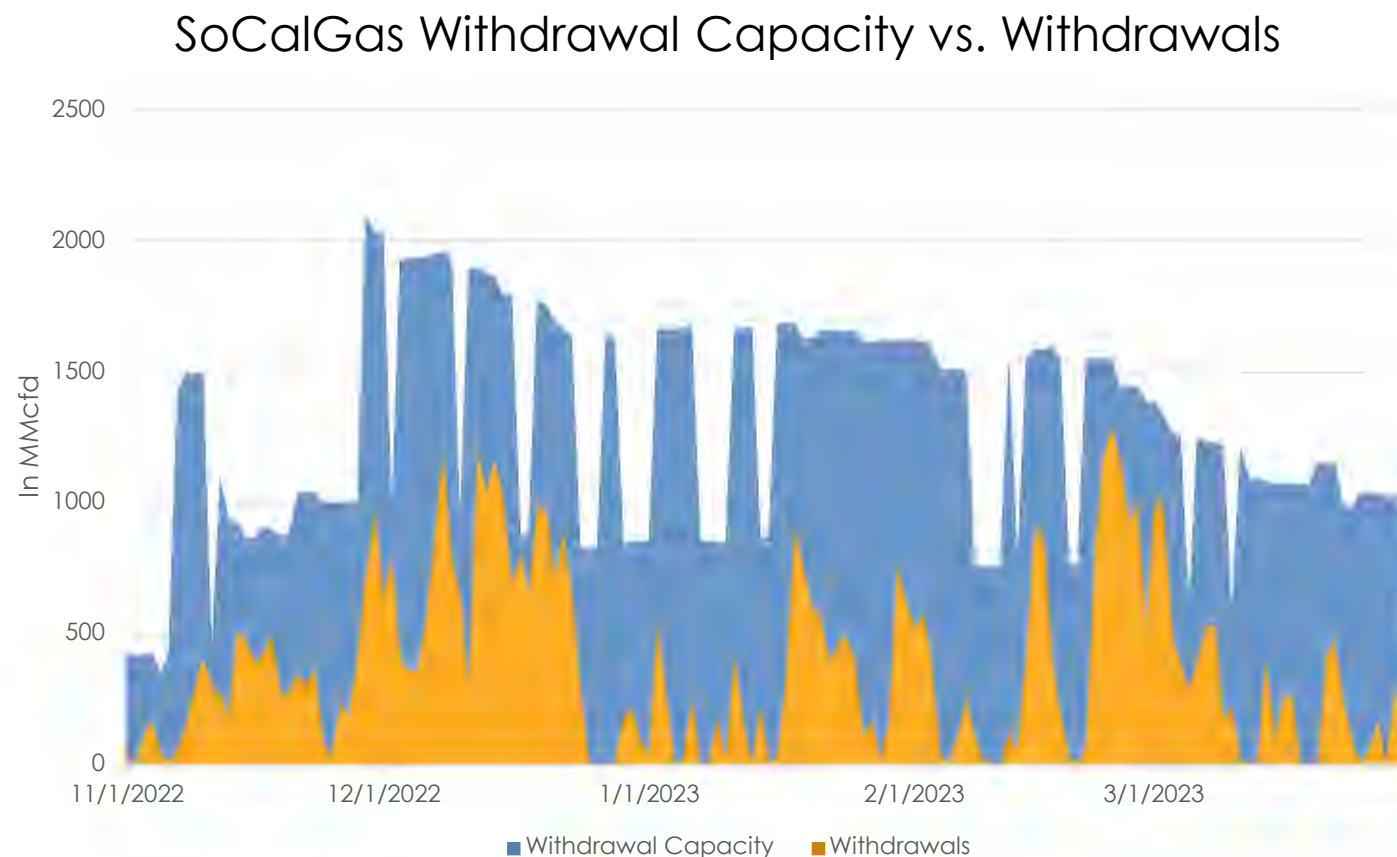
Storage inventories declined significantly over the course of the winter:

PG&E: 68%

ISPs: 74%

SoCalGas: 58%

Withdrawal capacity declines with storage inventory



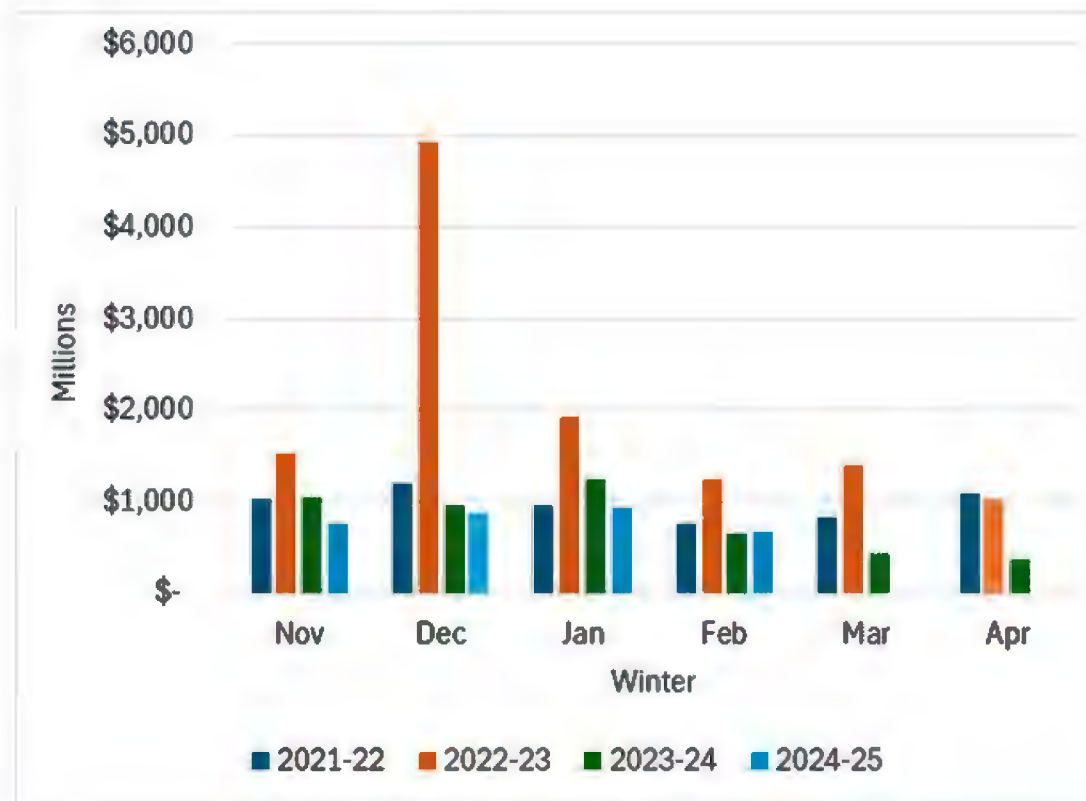
Independent Storage Providers (ISPs)

- The role of ISPs has changed due to the CPUC's approval of PG&E's Natural Gas Storage Strategy (NGSS) in 2019
 - The NGSS was instituted in response to changes to storage regulations and requires PG&E's Core Gas Supply to purchase significant ISP gas storage to serve residential and small commercial (core) customers.
- Staff analyzed ISP contracts to assess whether the ISPs charged PG&E's Core Gas Supply more than noncore customers.
 - While it was not always possible to make apples-to-apples comparisons, the results raised questions about whether the gas storage market remains competitive in the current context.

Impact of High Gas Prices on Electric Costs

- High natural gas prices contributed to high wholesale costs in CAISO's electric market.
 - 2021: \$12.6 billion
 - 2022: \$21.6 billion
 - 2023: \$14.5 billion
- The biggest impact was in December

CAISO Day-Ahead Market Costs, by Month

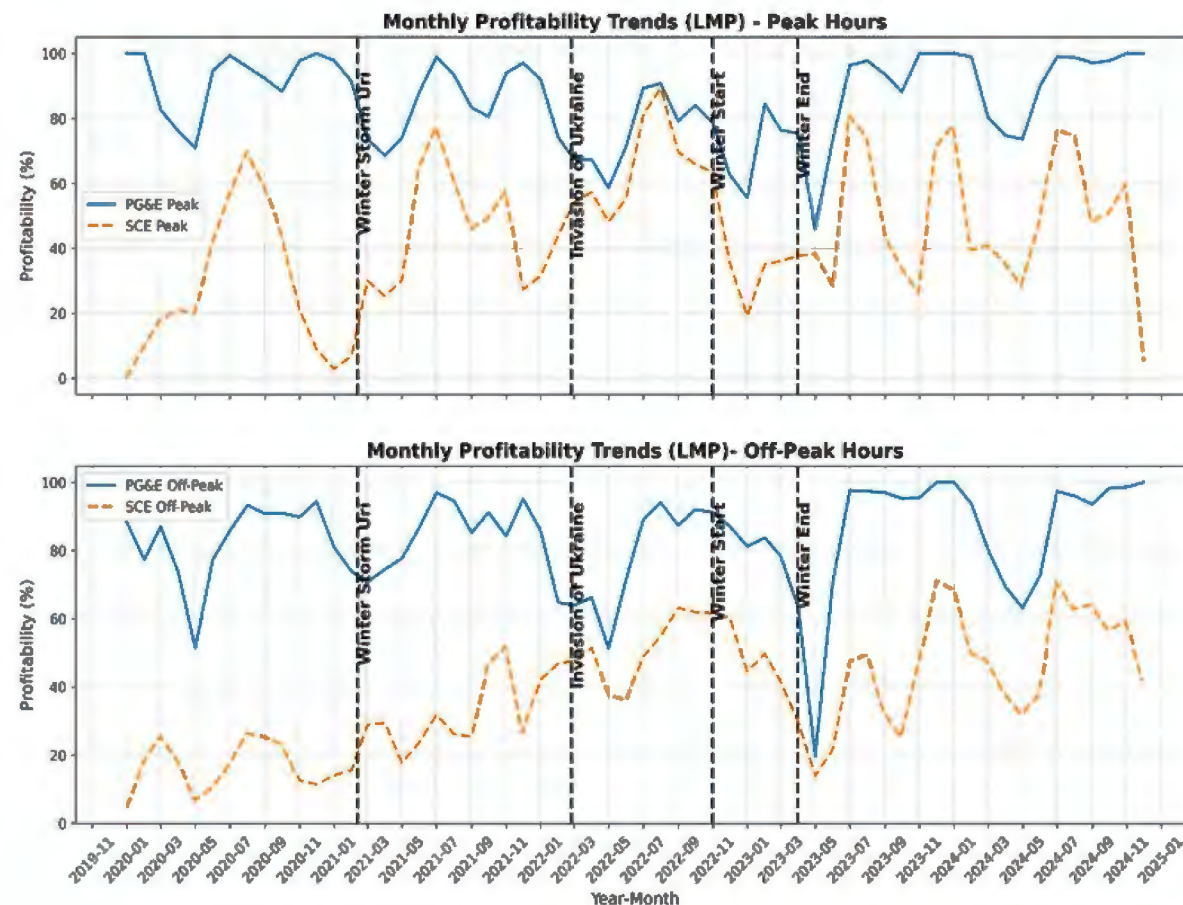


Impact of High Gas Prices on Electric Rates

- Electric customers do not immediately feel the impact of high gas prices on their electric bills because higher than forecasted electric procurement costs are generally collected in retail bills over the following year.
 - In contrast, gas utilities update gas procurement rates every month
- Ultimately, higher wholesale electricity costs raised customer's electric rates.
 - SCE: 3% over 12 months
 - PG&E: 6% over 6 months

Statistical Modeling of Electric Market

- Gas-fired power plants faced varying profit margins depending on their location and the gas prices in that area.
 - Since wholesale electricity prices are set uniformly across the state in the CAISO market, lower gas costs in PG&E's service territory allowed gas-fired generators located there to earn higher profit margins compared to gas-fired generators operating in SCE's area.



Questions?





California Public Utilities Commission

Winter 2023 Natural Gas Prices