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*Comment Received From: Southern California Gas Company  
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**SoCalGas Comments on the CEC SB 100 Demand Scenarios**

*Additional submitted attachment is included below.*



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Chair David Hochschild  
California Energy Commission  
Docket Unit, MS-4  
Docket No. 23-SB-100  
715 P Street  
Sacramento, CA 95814-5512

**Subject: Comments on the SB 100 Demand Scenarios Workshop**

Dear Chair Hochschild,

Southern California Gas Company (SoCalGas) appreciates the modeling effort and transparent stakeholder process undertaken by the California Energy Commission (CEC), the California Air Resources Board (CARB), and the California Public Utilities Commission (CPUC), (collectively the Joint Agencies), as they develop the Senate Bill (SB) 100 scenarios. Resource assumptions and demand scenarios are two elements of creating the SB 100 Scenarios. While the topic of the August 7, 2024, Demand Scenarios workshop (Workshop) is the main subject of this letter, SoCalGas also recommends that, consistent with the Scoping Plan, the Joint Agencies/CEC continue to evaluate the role of clean fuels such as renewable hydrogen and renewable natural gas (RNG) and carbon capture technologies that can provide reliability and resiliency support for the electric sector and energy system as a whole.

SoCalGas also appreciates the opportunity to provide comments on the Workshop. The CEC has made significant progress in its SB 100 Demand Scenarios modeling effort, and the inclusion of electricity demand for hydrogen production through electrolysis is an important step in assessing how renewable hydrogen can play a role in meeting the State’s SB 100 target of 100 percent clean electricity by 2045.<sup>1</sup> SoCalGas commends the CEC for its efforts in providing detailed information to the public about its SB 100 modeling process including the underlying assumptions used in the various Policy Scenarios for the transportation sector and hydrogen production from electrolyzers.

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<sup>1</sup> SB 100 sets a 2045 goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources.

SoCalGas comments focus on the following topics: 1) SoCalGas supports the CEC on its focus on hydrogen production and electrolysis in the Demand Scenarios, 2) SoCalGas requests clarification on the assumptions used by the CEC in its Demand Forecast load modifiers and SB 100 Demand Scenarios regarding hydrogen use for industrial decarbonization.

**1) SoCalGas supports the CEC on its focus on hydrogen production and electrolysis in the Demand Scenarios.**

SoCalGas supports the directional focus of the SB 100 Demand Scenarios and the inclusion and analysis of electricity demand for hydrogen electrolysis for the Policy Scenario and Policy Scenario (High Hydrogen Use).<sup>2</sup> It is important for the State to accurately determine future electricity demand so that adequate power supplies are available to meet future demand in a reliable and cost-effective way while advancing the State’s climate goals. The determination of future annual electric demand is a critical step in the process of modeling the future makeup of the State’s supply-side resources.

In addition, SoCalGas supports the focus on hydrogen use in the transportation sector in light-duty (LD) and medium- and heavy-duty (MD/HD) transportation, aviation, locomotives, freight trucks, ocean going vessels, and off-road vehicles through the inclusion of the Policy Scenario (High Hydrogen Use). Renewable hydrogen is a suitable solution to meet the energy and operational needs of hard-to-electrify applications such as the heavy-duty transportation sector and cargo-handling equipment at ports. The level of detail and transparency provided by the CEC to the public makes it straightforward to understand the assumptions that went into modeling for each vehicle class.<sup>3</sup>

**2) SoCalGas requests clarification on the assumptions used by the CEC in its Demand Forecast load modifiers and SB 100 Demand Scenarios regarding hydrogen use for industrial decarbonization.**

Multiple regulatory agencies have underscored the need for clean fuels to achieve carbon neutrality and SB 100 targets by 2045. For example, the 2022 CARB Scoping Plan identified significant need for fuel substitution in the industrial sectors, such as chemicals and allied products, pulp and paper, and as a low carbon fuel for buildings.<sup>4</sup> In addition, the United States (U.S.) Department of Energy’s (DOE) *Industrial Decarbonization Roadmap* identified clean and renewable hydrogen as a decarbonization pathway for industrial activities that require high-temperature processing in

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<sup>2</sup> Senate Bill 100 Demand Scenarios Staff Webinar, CEC, August 7, 2024, available at: <https://www.energy.ca.gov/event/webinar/2024-08/senate-bill-100-demand-scenarios-staff-webinar>.

<sup>3</sup> Transportation Energy Demand Scenarios for SB 100, CEC, August 7, 2024, p. 4-5, available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=258359&DocumentContentId=94381>.

<sup>4</sup> 2022 CARB Scoping Plan, CARB, December 2022, p.77-78, available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>.

cement, glass, and electronics manufacturing.<sup>5</sup> Finally, the 2023 Integrated Energy Policy Report (IEPR) further identified the following potential new industries in California that could use clean and renewable hydrogen: ammonia fertilizer production, ammonia and methanol for green international shipping corridors, and alternative pathways for plastics upcycling.<sup>6</sup>

We appreciate the CEC's demand forecast load modifiers for transportation fuel substitution as California's vehicle fleets transition to electric and hydrogen fueled vehicles. It would be equally beneficial for the CEC to provide the same level of detail for its assumptions of fuel switching through electrification and use of renewable hydrogen for industrial decarbonization as the Commission has provided for fuel substitution for the transportation sector.<sup>7</sup> Providing a similar level of detail would enhance transparency of the SB 100 modeling process and allow parties to better understand the inputs and results of the modeling approach.

Understanding the details of how electricity and hydrogen in industry are being considered in the SB 100 Demand Scenarios are important for planning the energy system of the future. Inclusion of hydrogen as a pathway for industrial decarbonization would be a reasonable SB 100 load modifier for the Policy Scenario (High Hydrogen Use). The figure below (on the left) shows fuel substitution of electricity and hydrogen from the 2022 Scoping Plan. We would like the Commission to assess how this energy consumption trajectory is being incorporated into the SB 100 Demand Scenarios.

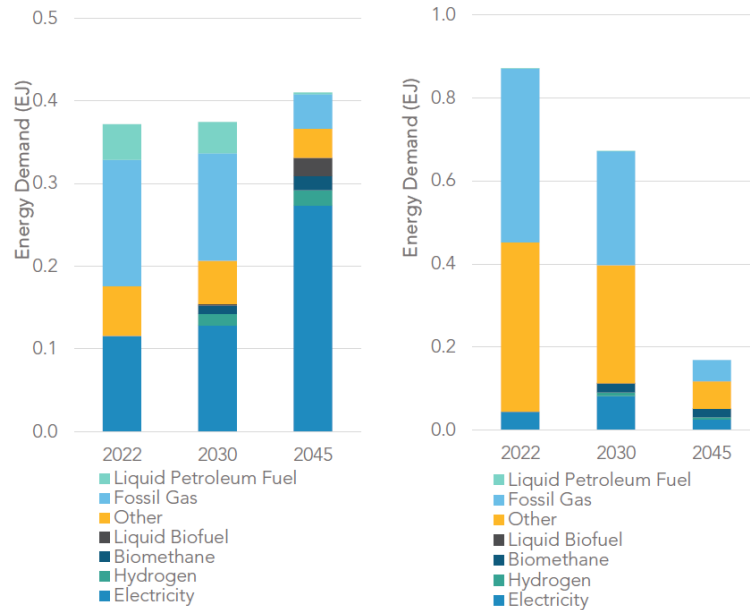
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<sup>5</sup> U.S. DOE, Industrial Decarbonization Roadmap, DOE/EE-2635, September 2022, available at: <https://www.energy.gov/sites/default/files/2022-09/Industrialpercent20Decarbonizationpercent20Roadmap.pdf>.

<sup>6</sup> 2023 IEPR, CEC, February 14, 2024, p. 91, available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=254463>.

<sup>7</sup> *Ibid.*, CEC Transportation Energy Demand Scenarios.

**Figure 1: Final Energy Demand in Industrial Manufacturing (left) and in Oil and Gas Extraction and Petroleum Refining (right) in the Scoping Plan Scenario<sup>8</sup>**



**Conclusion**

SoCalGas appreciates the opportunity to provide feedback as the CEC works through the inputs and assumptions framework it will use in the scenario modeling for the next iteration of the SB 100 Report. The information presented at the SB 100 Demand Scenarios Workshop is a great start and the public would benefit from seeing a higher level of specificity around the assumptions used for industrial decarbonization to highlight how the CEC’s Demand Forecast assumptions for electrification and hydrogen production are incorporated into the Demand Scenarios. We look forward to working with the CEC throughout the 2025 SB 100 process. Thank you for your consideration of our comments.

Respectfully,

*/s/ Kevin Barker*

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<sup>8</sup> *Ibid.*, CARB, p. 208.