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SoCalGas Comments on the CEC IEPR Staff Workshop on Demand Scenarios

Additional submitted attachment is included below.

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April 21, 2022

The Honorable Siva Gunda
Vice Chair, California Energy Commission
Docket Unit, MS-4
Docket No. 22-IEPR-03
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Comments on the CEC IEPR Staff Workshop on Demand Scenarios

Dear Vice Chair Gunda:

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments on the California Energy Commission (CEC) 2022 Integrated Energy Policy Report (IEPR) Update Staff Workshop on Demand Scenarios. Inter-agency coordination and a transparent public process provides a stronger foundation upon which California strives to meet its reliability needs and climate goals during the energy system transition. In an effort to help the State maintain reliability and resiliency towards achieving its decarbonization goals, our comments focus on the following topics: 1) Model results from the CEC's Demand Scenarios highlight an opportunity for clean fuels focused supply side programs to help close the emissions gap, supporting deeper emissions reductions in 2030 and beyond; 2) Green hydrogen production via on and off-grid electrolysis should be incorporated into the CEC's Demand Scenarios; and 3) Hard-to-abate sectors like industry should have clean fuels and carbon capture, utilization, and storage (CCUS) technology as modeling components to align with the 2021 IEPR recommendation.

1) **Model results from the CEC's Demand Scenarios highlight an opportunity for clean fuels focused supply side programs to help close the emissions gap, supporting deeper emissions reductions in 2030 and beyond.**

The demand scenarios focused on the impacts of programs, standards, and policies that impact California's energy demand and GHG emissions. The High Electrification Policy Compliance scenario, which consists of existing and expected policies, highlighted an emissions gap as early

as 2030. The High Electrification Mitigation Demand scenario was the only scenario to meet 2030 GHG reduction goals, in part due to the addition of clean fuels. The demand scenarios clearly illuminate the importance of clean fuels as does Volume III of the 2021 IEPR which states, "As California brings rapidly increasing amounts of renewable resources onto the electricity[1] to midterm, gas generation is needed to integrate these renewables and ensure reliability…. Renewable gas and renewable hydrogen may become important clean fuels for thermal generation in the longer term depending on the availability and costs of these fuels."[2] Indeed, dispatchable, just-in-time energy provided by the gas grid has already enabled the deployment of renewables on the electric grid and will fill this vital role in both the mid- and long-term through the deployment of clean fuels like renewable natural gas (RNG), renewable hydrogen, synthetic natural gas, and biofuels.[3] Clean fuels are thus critical for supporting decarbonization of the electric sector and can play an important role in decarbonizing other sectors as well due to the flexible nature of clean fuels.

Utility-led supply side programs that deliver clean fuels can help address the emissions gap, supporting deeper reductions in 2030 and beyond. For example, efforts to decarbonize pipeline gas can be sized according to the anticipated emissions gap and can be implemented in the near term. Utilities can also deliver clean fuels like hydrogen and develop a carbon management network to help mitigate emissions in the medium term to reduce post 2045 emissions that are shown in all the scenarios studied. Utility-led, clean fuels focused initiatives also have a relatively high level of implementation certainty compared to other mitigation measures. As the policymakers contemplate what programs should be developed to increase the State's likelihood of achieving the ambitious GHG goals that have been adopted, SoCalGas recommends that regulators give utilities the opportunity to propose clean fuels programs for consideration. Clean fuels programs can have dual benefits, not only decarbonizing sectors like buildings and industry but also supporting electric sector reliability and decarbonization.

2) **Green hydrogen production via on and off-grid electrolysis should be incorporated into the CEC's Demand Scenarios.**

Given the interdependency between the gas and electric grids, the continued need to maintain reliability and resiliency, and the need to meet climate goals, the Demand Scenarios should take into consideration and understand the additional electrical load due to renewable energy needed to produce renewable hydrogen via electrolysis. Although the quantity of this load is currently uncertain and some renewable hydrogen electrolysis will likely occur through off-grid renewable energy production, it would be overlooking an important data point to completely exclude grid electricity consumption for renewable hydrogen electrolysis from IEPR Demand Scenarios and

[1] *See* California Energy Commission (CEC), "2021 IEPR Volume III: Decarbonizing the State's Gas System," pg. 3, March 9, 2022, available at: https://efiling.energy.ca.gov/GetDocument.aspx?tn=242233.
[2]. *See* "SoCalGas Clean Fuels," SoCalGas, last modified November 9, 2021, available at: https://www.socalgas.com/sustainability/clean-fuels
[3] *Ibid.*

the Inter-Agency High Electrification Demand Scenarios.[4] SoCalGas anticipates that renewable hydrogen production through electrolysis will need to occur using both off-grid and on-grid electricity,[5] and recommends that the CEC include on-grid renewable energy demands for electrolysis in all its demand scenarios. SoCalGas offers our assistance in collaborating with the CEC and stakeholders on how best to incorporate these potential impacts into the long-term IEPR and Inter-Agency High Electrification Demand Scenarios.

3) **Hard-to-abate sectors like industry should have clean fuels and carbon capture, utilization, and storage (CCUS) technology as modeling components to align with the 2021 IEPR recommendation.**

The CEC astutely noted that "There are industry requirements for heat and feedstock that cannot be directly electrified economically [and] [d]ecarbonization efforts must ensure that California's industrial base, which is an essential driver of the economy, remains competitive while achieving GHG reductions."[6] CCUS is expected to play an important role in the decarbonization of California's industrial sector. Volume I: Building Decarbonization of the 2021 IEPR made the policy recommendation that "relevant state agencies should investigate the feasibility and opportunity for CCUS hubs in California with centralized utilization or sequestration or both to increase the value of CCUS for industries."[7] CCUS used in conjunction with electrolysis and steam methane reformation enables the use of natural gas to produce hydrogen while reducing the carbon footprint of these processes. Bioenergy with carbon capture and storage (BECCS), a process where biomass is converted into hydrogen with the resulting carbon emissions captured and stored, can potentially result in net negative carbon emissions.[8] Given the need to understand cost-effective, technically feasible solutions for industry to decarbonize, CCUS and other related technologies are important pathways that should be included in the IEPR and Inter-Agency High Electrification Demand Scenarios. SoCalGas has conducted considerable modeling and analysis of the CCUS technology pathway in our previously referenced 2021 Clean Fuels whitepaper and thus offers our assistance to integrate the important elements for CCUS in future demand scenario analysis.

[4] During the CEC IEPR Staff Workshop on Demand Scenarios, Anitha Rednam specified that CEC Demand Scenario modeling considers renewable hydrogen to be produced using off-grid electrolysis and thus the electric demand for this process has not been accounted for in the Demand Scenarios.
[5] *Ibid*., SoCalGas Clean Fuels, pg. 63.
[6] *See* CEC, "2021 IEPR Volume III: Decarbonizing the State's Gas System," pg. 4, March 9, 2022, available at: https://efiling.energy.ca.gov/GetDocument.aspx?tn=242233.
[7] *See* "2021 IEPR Volume I: Building Decarbonization," CEC, February 22, 2022, pg. 185, available at: https://efiling.energy.ca.gov/GetDocument.aspx?tn=241599.
[8] *Ibid*., SoCalGas Clean Fuels, pg. 50.

Conclusion

The IEPR and Inter-Agency High Electrification Demand Scenarios are important tools to inform the pathways to achieve California's energy and GHG emissions reduction goals, as well as inform the California Public Utilities Commission's (CPUC) Integrated Resource Planning (IRP) and the California Independent System Operator's (CAISO) 2022-2023 Transmission Planning Process (TPP). SoCalGas looks forward to contributing to and advancing those efforts by continuing to work with the CEC, CPUC, CAISO, and sister agencies to define solutions for leveraging the gas system to support the energy transition through clean fuels. Thank you for your consideration of our comments.

Respectfully,

/s/ Priscilla R. Hamilton

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