

DOCKETED

Docket Number:	21-IEPR-05
Project Title:	Natural Gas Outlook and Assessments
TN #:	239711
Document Title:	Southern California Gas Company Comments - SoCalGas Comments on CEC IEPR Workshop on Renewable Natural Gas
Description:	N/A
Filer:	System
Organization:	Southern California Gas Company
Submitter Role:	Public
Submission Date:	9/14/2021 4:37:41 PM
Docketed Date:	9/14/2021

*Comment Received From: Southern California Gas Company
Submitted On: 9/14/2021
Docket Number: 21-IEPR-05*

**SoCalGas Comments on CEC IEPR Workshop on Renewable
Natural Gas**

Additional submitted attachment is included below.



Kevin Barker
Senior Manager
Energy and Environmental Policy
555 West 5th Street
Los Angeles, CA 90013
Tel: (916) 492-4252
KBarker@socalgas.com

September 14, 2021

Commissioner J. Andrew McAllister
Commissioner Siva Gunda
California Energy Commission
Docket Unit, MS-4
Docket No. 21-IEPR-05
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Comments on Renewable Natural Gas

Dear Commissioners McAllister and Gunda:

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments on the California Energy Commission's (CEC) Integrated Energy Policy Report (IEPR) Commissioner Workshop on Renewable Natural Gas (RNG). SoCalGas commends the CEC for hosting a workshop to discuss policy approaches to facilitate the RNG market in California. Clean molecules like RNG can play a critical role to enable the State to reach net-zero greenhouse gas emissions by 2045. As part of that effort, SoCalGas has set a goal to replace 20 percent of our traditional core gas deliveries with RNG by 2030. We look forward to continuing the partnership with the CEC, California Public Utilities Commission (CPUC), among other stakeholders, in our shared work to advance the public interest.

SoCalGas's comments focus on the following topics: (1) SoCalGas' responses to Commissioner's questions; (2) Producing RNG is a valuable resource to reduce short lived climate pollutants; (3) Supply estimates show that RNG can play a significant role in decarbonizing the gas grid; (4) The CEC should fund thermal conversion pilot projects which facilitate renewable gases that can provide flexible generation power and long-duration energy storage.

1) SoCalGas' responses to Commissioner's questions

At the workshop, CPUC Commissioner Rechtschaffen asked Yuri Freedman, presenter on SoCalGas' strategic objectives regarding RNG, questions relating to: (1) how much RNG is

flowing in the SoCalGas system today (2) what are the costs; and (3) where is it coming from and where is it going? SoCalGas provides the below information in response to these questions.

In 2020, RNG accounted for nearly four percent of SoCalGas' core deliveries.¹

We do not have the total costs of the RNG in our system because the majority of RNG in our system today is the result of third-party customer private transactions. Further, the cost of RNG per MMBTU will vary depending on the source and length of contract. Nonetheless, SoCalGas provides the CPUC with confidential information pertaining to the purchase of RNG for our public access stations in the Quarterly Activity Report, which is prepared in accordance with the CPUC's approval of Advice Letter 5295-G, effective June 17, 2018.² The Advice Letter states that SoCalGas will report on activities related to the Pilot such as the following: "RNG volumes procured, credit proceeds received from the suppliers, program administrative costs, and noted learnings and insights."³

In 2020, approximately 95 percent of the RNG in our system came from out of state, while five percent was injected into our system directly. We purchase RNG for our SoCalGas and San Diego Gas and Electric Company (SDG&E) public access stations which is then sold to transportation customers. Private fleet owners also transport RNG over our system to meet the California Air Resources Board (CARB) Low Carbon Fuel Standard (LCSF) Compliance. Additionally, the University of California system is building their own biomethane facilities and buying RNG to meet their carbon neutral goals. Lastly, what was not discussed in the workshop was the Senate Bill 1383 (Lara, Chapter 395, 2016) compliance requirement to procure RNG. Beginning in 2022, municipalities will be able to use RNG to meet their SB 1383 compliance.⁴

Additionally, in response to Commissioner Gunda's question to workshop panelists regarding recommended near-, mid-, and long-term policy approaches presented by Sam Wade from Renewable Natural Gas Coalition (RNGC), SoCalGas provides the following supplemental information to the response provided (Figure 1).^{5,6}

¹ As a reminder, SoCalGas does not purchase gas on behalf of non-core customers.

² See CPUC Advice Letter 5295-G, July 5, 2018. Available at <https://www2.socalgas.com/regulatory/tariffs/tm2/pdf/5295.pdf>.

³ *Id.*, at 6.

⁴ "Using Recycled Organics Products," CalRecycle, last modified May 4, 2021. Available at <https://www.calrecycle.ca.gov/Organics/SLCP/Procurement>.

⁵ RNGC's presentation named "RNG: Building on Lessons from Low Carbon Fuel Standard Success to Drive RNG Use Across All Sectors." Available at <https://www.energy.ca.gov/event/workshop/2021-08/session-2-iepr-commissioner-workshop-renewable-natural-gas-policy-approaches>.

⁶ SoCalGas is responding to Commissioner Gunda's question at 1:49:03 of the second session recording. Available at <https://www.energy.ca.gov/event/workshop/2021-08/session-2-iepr-commissioner-workshop-renewable-natural-gas-policy-approaches>.

It is clear that RNG can play a significant role with businesses and, particularly, hard-to-decarbonize sectors as a “drop-in” zero-to-low carbon fuel for natural gas end-uses. Many companies that use significant levels of natural gas in their production process do not have readily available alternative electric options for those process. However, until more RNG is produced, and supply more closely matches demand, it would be premature to adopt policies that direct RNG to specific customer sectors. SoCalGas agrees with the RNGC that RNG policies today should focus on increasing both production and demand by allocating funds for developer incentives and consumer programs for greater end-uses. Additionally, implementation of a statewide biomethane procurement standard as defined by SB 1440 (Hueso, Chapter 739, 2018), will provide a signal to RNG investors and developers that long-term offtake contracts will be available, stimulating more supply and lowering costs. We suggest a Renewable Gas Standard could be administered similar to the Renewable Portfolio Standard (RPS) with the CEC certifying and verifying eligible renewable gas. As the gas grid becomes more decarbonized, there is also the possibility that RNG can be allocated to specific customer sectors or even hydrogen production.

2) Producing RNG is a valuable resource to reduce short lived climate pollutants

As described by many presenters in the workshop, RNG or biomethane is produced from raw biogas typically derived from organic waste streams such as dairy manure, landfill gas, municipal organic waste (*i.e.*, food scraps, lawn clippings, and animal and plant-based material), agricultural waste, forest debris, and wastewater treatment byproducts. Capturing waste stream biogas emissions and producing RNG is a valuable renewable resource that will help achieve critical climate change objectives since the majority of methane emissions in the State come from the dairy and livestock sector (54 percent) and landfilled organic waste (22 percent).⁷ Further, RNG can be considered carbon negative depending on the feedstock and conversion system.⁸ Capturing methane from waste streams and utilizing it in an engine, fuel cell, water heater, stove or other end use fueled by gas avoids the global warming impact such methane would have produced if it had been released into the environment because methane is a powerful short-lived climate pollutant (SLCP) with a global warming potential 25 times greater than carbon dioxide.⁹ One primary benefit of RNG is that it is a drop-in fuel; it can be deployed where it is needed in existing gas pipeline infrastructure without the need for equipment or infrastructure changes.¹⁰ It can also be available 24 hours of the day and does not exhibit intermittency issues that other renewable energy sources such as solar or wind have.

⁷ “Short Lived Climate Pollutants Public Workshop,” CARB, June 2021. Available at https://ww2.arb.ca.gov/sites/default/files/2021-06/carb_sp_kickoff_june2021.pdf.

⁸ “Get the Facts: Common Myths of Natural Gas Vehicles (NGV) and Renewable Natural Gas,” California Natural Gas Vehicle Partnership, at 1. Available at <https://cngvp-7f8e.kxcdn.com/pdf/cngvp-get-the-facts.pdf>.

⁹ “GHG Global Warming Potential,” CARB, last modified September 9, 2021. Available at <https://ww2.arb.ca.gov/ghg-gwps>.

¹⁰ “Energy Systems, Chapter 7,” Intergovernmental Panel on Climate Change (IPCC), at 536. Available at https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter7.pdf.

Currently, RNG is helping California reduce SLCs and criteria air pollutants emissions as a transportation fuel in near-zero emission heavy-duty trucks. Today, the use of RNG in the heavy-duty transportation sector is achieving greater greenhouse gas (GHG) emission reductions than electric vehicles. Beginning in September 2020, the RNG procured for and sold at California's compressed natural gas refueling stations had a carbon intensity (CI) of -5.845 gCO₂e/MJ, meaning that such RNG reduces GHG emissions in its full lifecycle.^{11,12} This is in comparison to a 2020 annual CI of 82.92 gCO₂e/MJ for transportation fuel supplied by grid electricity.^{13,14} CARB's LCFS reporting shows that by the end of 2019, 98 percent of all natural gas used in motor vehicles was RNG.¹⁵

Given these significant benefits of RNG, we encourage the CEC to continue advancing the use of RNG as a transportation fuel and make policy recommendations to promote the in-state production and distribution of RNG for stationary end-uses.

3) Supply estimates show that RNG can play a significant role in decarbonizing the gas grid

RNG supply potential estimates presented by Verdant Associates during the workshop illustrate the overall potential for RNG to replace traditional natural gas and decarbonize the gas grid. SoCalGas has reviewed results from recent reports published by Livermore Laboratory Foundation, CEC, E3 and the University of California, Irvine, and ICF.^{16,17,18,19,20} The results are

¹¹ "LCFS Pathway Certified Carbon Intensities," last modified August 9, 2021. Available at <https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities>.

¹² Laura Sanicola, "California's renewable natural gas vehicles turn carbon negative in 2020," Reuters, June 2, 2021. Available at <https://www.reuters.com/business/autos-transportation/californias-renewable-natural-gas-vehicles-turn-carbon-negative-2020-2021-06-02/>.

¹³ "Low Carbon Fuel Standard Annual Updates to Lookup Table Pathways," CARB, January 2020, at 2. Available at https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/elec_update.pdf.

¹⁴ Carbon intensity (CI) is a measure of the GHG emissions released by the full lifecycle of a fuel, including production, transportation, and consumption, according to "California Climate Policy Fact Sheet: Low Carbon Fuel Standard," CARB, at 1. Available at <https://www.law.berkeley.edu/wp-content/uploads/2019/12/Fact-Sheet-LCFS.pdf>.

¹⁵ "CARB LCFS Data Dashboard, Figure 2," CARB, April 2, 2021. Available at <https://www.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm>.

¹⁶ "Getting to Neutral: Options for Negative Carbon Emissions in California," Livermore Laboratory Foundation & Climateworks Foundation, August 2020. Available at https://www.gs.llnl.gov/content/assets/docs/energy/Getting_to_Neutral.pdf.

¹⁷ Sheehy, Phil, "Potential to Develop Biomethane, Biogas, and Renewable Gas to Produce Electricity and Transportation Fuels in California," presentation at Joint Agency Workshop on Renewable Gas, June 27, 2017. Available at <https://efiling.energy.ca.gov/getdocument.aspx?tn=220291>.

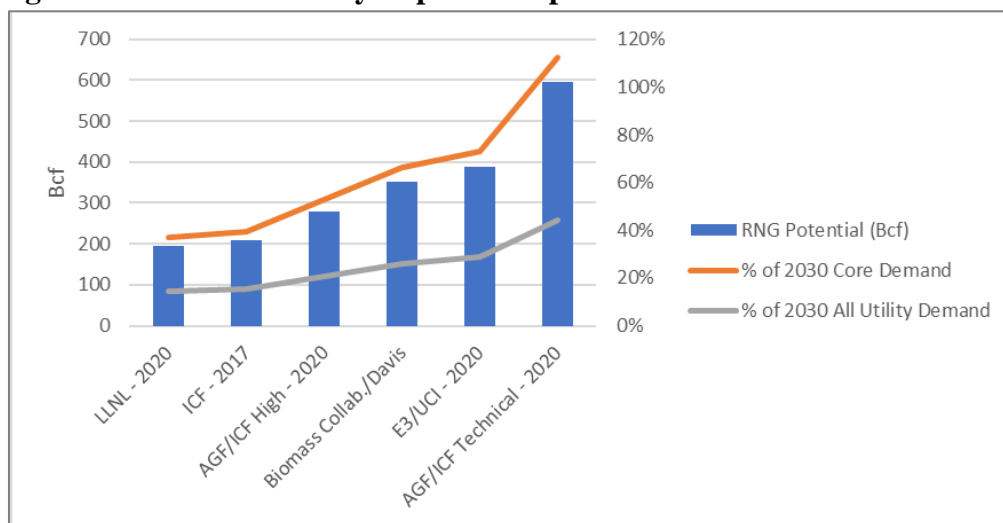
¹⁸ "ICF 2019 Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment," American Gas Foundation, 2019. Available at <https://www.gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf>.

¹⁹ "Final 2017 Integrated Energy Policy Report," CEC, February 2018. Available at <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2017-integrated-energy-policy-report>.

²⁰ "The Challenge of Retail Gas in California's Low Carbon Future, Appendix A," E3 and University of California, Irvine, 2020. Available at <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-055/CEC-500-2019-055-AP-G.pdf>.

charted in Figure 1 (below). We believe that a more reasonable comparison would be to the 2030 “Utility Total” natural gas demand estimates in the 2020 California Gas Report (CGR).²¹ The RNG potential estimates published in 2020 by the CEC indicate that in-state supplies of RNG could provide approximately 70 percent of core customer (*e.g.*, residential, commercial and industrial core customers) demand in 2030 and approximately 30 percent of all gas demand for California in 2030.^{22,23}

Figure 1. RNG Potential by Report Compared to Estimated 2030 Demand²⁴



4) The CEC should fund thermal conversion pilot projects which facilitate renewable gases that can provide flexible generation power and long-duration energy storage

The Forest Biomass Utilization Plan, adopted by the California Board of Forestry in 2020, recommends allocating 20 percent of the CEC Electric Program Investment Charge (EPIC) funding to biomass conversion. This funding will accelerate the adoption of advanced technologies that are cleaner, lower-emission, and have the potential to provide carbon negative emissions by reducing open burning and producing biochar, which can provide a mechanism for permanent carbon sequestration. California generates an enormous volume of woody and cellulosic waste from forest thinning and other vegetation removed for wildfire mitigation, agricultural waste, and urban wood waste. Much of this waste biomass is burned, either in controlled burns or wildfires, which emits black carbon, an SLCP. Converting organic waste to energy is critical to reduce SLCPs, which can have a much more significant impact than the carbon dioxide emitted by fossil

²¹ “2020 California Gas Report,” prepared by California gas and electric utilities, at 22, In. 27. Available at: https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf.

²² “The Challenge of Retail Gas in California’s Low-Carbon Future, Technology Options, Customer Costs, and Public Health Benefits of Reducing Natural Gas Use,” CEC, April 2020. Available at: <https://www.energy.ca.gov/sites/default/files/2021-06/CEC-500-2019-055-F.pdf>.

²³ The “Utility Total” demand estimates include natural gas used for electric generation and exclude natural gas use outside the control of the investor-owned utilities (IOUs).

²⁴ *Id.*

fuel burning.²⁵

According to the California Forest Carbon Plan, converting biomass to energy cuts both black carbon and methane emissions by 98 percent compared to open burning or wildfires. As such, California is relying on SLCP reductions for more than one-third of all the carbon reductions needed to meet the requirements of SB 32 (Pavley, Chapter 249, 2016). The State's SLCP Reduction Strategy, in turn, relies heavily on bioenergy to reduce methane and black carbon emissions from the decay or burning of organic waste. CalRecycle's regulations to implement SB 1383 (Lara, Chapter 395, 2016) similarly rely heavily on bioenergy to put diverted organic waste to beneficial use. Renewable gases produced from biomass can thus be integrated into the gas grid to support the gas system in providing flexible generation power and long-duration energy storage – the existing gas system is long duration storage infrastructure. These low or even carbon negative fuels can also fuel backup generators and power microgrids.

Conclusion

As California continues to progress towards its decarbonization goals, RNG can play a critical component towards decarbonizing California's transportation and industrial sectors expeditiously. A productive discussion on the RNG market and policy approaches between the CEC, CPUC, stakeholders and SoCalGas will assist in aligning our vision of a clean future for Californians. SoCalGas looks forward to contributing to and advancing California's decarbonization efforts by continuing to collaborate with all stakeholders as we define solutions for leveraging the fuel system and enabling a clean energy transition. Thank you for consideration of our comments.

Respectfully,

/s/ Kevin Barker

Kevin Barker
Senior Manager
Energy and Environmental Policy

cc: Commissioner Karen Douglas, CEC
Commissioner Patty Monahan, CEC
Commissioner Cliff Rechtschaffen, CPUC
Commissioner Darcie Houck, CPUC

²⁵ "CARB, Short-Lived Climate Pollution Reduction Strategy," adopted March 2017, at 40, Table 5. Available at https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf.