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**SoCalGas Comments on EPIC 4 Investment Plan Scoping
(Consumers, Financing, Workforce)**

Additional submitted attachment is included below.



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July 27, 2021

The Honorable J. Andrew McAllister
California Energy Commission
Docket Unit, MS-4
Docket No. 21-IEPR-06
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Comments on Building Decarbonization (Consumers, Financing, and Workforce)

Dear Commissioner McAllister:

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide public comments on the California Energy Commission (CEC) 2021 Integrated Energy Policy Report (2021 IEPR) Workshop on examining consumer needs, financing availability, and workforce issues associated with building decarbonization held July 12 and 13, 2021. Our comments focus on four areas: (1) clean gaseous fuels are essential for decarbonizing the fuel supply by 2030 and beyond; (2) there is a clear need for innovative financing models; (3) Addressing consumer barriers, including affordability, energy efficiency program limitations and potential consumer adoption challenges is critical; and (4) investing in a skilled workforce to fuel statewide economic growth is necessary.

1. Clean Gaseous Fuels Are Essential for Decarbonizing the Fuel Supply By 2030 and Beyond

While electrification will play a significant long-term role for building decarbonization, decarbonized molecules will also play a pivotal near-term role in electrification (through thermal electricity generation) and end-use decarbonization. Clean fuels support cost-effectively implementing building decarbonization policies and mitigating potential customer conversion challenges.

Notably, of the 25 percent of greenhouse gas (GHG) emissions emitted from California's residential and commercial buildings, 15 percent are attributable to electric end-uses and 10 percent to natural gas end-

uses.¹ Senate Bill 100 (Chapter 312, Statutes of 2018) mandates a path to cut California’s electric grid emissions by procuring renewable and carbon free sources by 2045.² Likewise SoCalGas’ ASPIRE 2045 strategy describes our goal to reduce Scope 1, 2, and 3³ emissions by 2045 with decarbonization milestones along the way.⁴ We are currently investing in a diverse portfolio of technologies and applications to leverage Southern California’s gas grid to transport low- to zero- (and even negative-) carbon molecules, such renewable natural gas (RNG) and hydrogen.

For example, SoCalGas and SDG&E have pushed for the adoption of a renewable gas standard in the Biomethane Rulemaking (R.13-02-008).⁵ This program allows natural gas customers to purchase RNG to fuel their homes and businesses, like renewable energy programs available to electric customers. As stated in the recent California Public Utilities Commission (CPUC) Staff report in the Biomethane Order Instituting Rulemaking (R.) 13-02-008, “complete building sector decarbonization may take decades to achieve and even the most aggressive building electrification models envision a role for biomethane and other renewable gas sources in powering operations that are hard to electrify and helping generate flexible electricity that can balance the intermittency of wind and solar generation.”⁶

Additionally, European countries have been exploring the potential of a hydrogen economy to help further reduce emissions, such as injecting hydrogen into the existing gas grid. For instance, in 2020, the United Kingdom’s HyDeploy pilot project designed to blend carbon-free hydrogen into the gas supply became fully operational in Newcastle, England and has commenced a 10-month run. The HyDeploy pilot is injecting up to 20 percent of hydrogen into Keele University’s existing natural gas pipeline, which supplies 100 domestic properties and 30 faculty buildings.⁷ For this pilot, the hydrogen gas is created using an electrolyzer powered by electricity. The resulting hydrogen is then injected into the existing gas system, with no need for end-users to change appliances or pipelines. If the pilot is successful, it will be expanded to deliver the 20 percent hydrogen blend to 670 nearby domestic and commercial buildings. As the CEC considers how to manage and guide California’s energy transition, we urge thoughtful consideration and analysis of hydrogen and other low and zero-carbon gaseous fuels.

¹ California Air Resources Board, *California Greenhouse Gas Emissions for 2000 to 2018: Trends of Emissions and Other Indicators*, 2020 Edition. Available at https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf.

² See Senate Bill No. 100 (Chapter 312, Statutes of 2018).

³ Scope 3 emissions are indirect GHG emissions from sources not owned or controlled by the company, such as residential, commercial, and industrial buildings, and electric generation.

⁴ SoCalGas Company, *ASPIRE 2045: Sustainability and Climate Commitment to Net Zero*, March 2021. Available at https://www.socalgas.com/sites/default/files/2021-03/SoCalGas_Climate_Commitment.pdf.

⁵ See CPUC A.19-02-015 - Renewable Natural Gas (RNG) Tariff (April 13, 2020). Available at <https://www.socalgas.com/regulatory/A19-02-015>.

⁶ Order Instituting Rulemaking to Adopt Biomethane Standards and Requirements, Pipeline Open Access Rules, and Related Environmental Provisions, Rulemaking 13-02-008, Administrative Law Judge’s Ruling Directing Parties to File Comments on Phase 4A Staff Proposal and Related Questions, June 3, 2021, at 41.

⁷ Aleksandra Dimitrova, *UK hydrogen blended gas project starts operation*, Renewables Now, 02 January 2020. Available at <https://renewablesnow.com/news/uk-hydrogen-blended-gas-project-starts-operation-682129/>.

While it is unfortunate the CPUC denied SoCalGas and SDG&E’s hydrogen blending pilot Application 20-11-004,⁸ we appreciate the CEC’s continuing support of hydrogen research. The CEC’s 2020-2021 Natural Gas research investment plan identifies \$3 million to examine the effects of hydrogen in end-use applications. While funding for these types of projects will need to significantly ramp up, this is a beneficial market signal for the needed scale-up. We respectfully encourage the CEC, through the IEPR, to broaden the CPUC support of gas utilities’ efforts to decarbonize their throughput.

2. Policies Must Address Consumer Barriers, Including Affordability and Energy Efficiency Program Limitations

All California communities face barriers to decarbonizing buildings. Each community has unique needs and impediments which can depend on many factors, including geographic, economic, demographic, or cultural attributes. This increases the importance of developing equitable and geographically specific solutions and targeting resources for residents that are most in need and/or facing disproportionate impacts. Nevertheless, we note that none of the three IEPR Building Decarbonization – Consumers, Financing, and Workforce sessions included a Southern California panelist. More than 50 percent of California’s population reside south of San Bernardino County. And yet, the utilities represented on the panels were MCE Clean Energy and Sacramento Municipal Utility District (relatively affluent areas); the universities represented the University of California (UC) Berkeley (twice) and UC Davis; and the sheet metal labor union represented almost all of California except for Southern California.

Going forward, we respectfully suggest that broader geographic representation on such workshop panels, with a particular focus on addressing lower income communities, will benefit policy outcomes. Table 1 from the Public Policy Institute of California shows 2016-2018 average poverty rates across California counties from highest to lowest.⁹ Although Table 1 does not reflect the hardships experienced by many counties because of the COVID-19 pandemic, the high rates of poverty overwhelmingly are represented by Southern California counties and show a clear need for geographically diverse building decarbonization policy that will address economic hardships. Represented by the red box in Table 1, five of the top seven highest poverty rates in California are in Southern California and those five counties represent about 45 percent of the total California population.

Table 1. Average Poverty Rates Across California’s Counties from Highest to Lowest¹⁰

County	Poverty Rate (%)	County	Poverty Rate (%)	County	Poverty Rate (%)
Los Angeles	22.3	Kern	17.6	Sonoma	15.1
Santa Barbara	21.1	San Francisco	17.5	San Luis Obispo	14.9

⁸ See CPUC Application 20-11-004 – Hydrogen Related Additions (July 15, 2021). Available at <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M393/K334/393334756.PDF>.

⁹ Sarah Bohn, Caroline Danielson, and Tess Thorman, “Poverty in California,” Public Policy Institute of California, July 2020. Available at https://www.ppica.org/wp-content/uploads/JTF_PovertyJTF.pdf#:~:text=Los%20Angeles%20%2822.3%25%29%20and%20Santa%20Barbara%20%2821.1%25%29%20Counties,in%20eligibility%20driven%20by%20the%20cost%20of%20living.

¹⁰ Ibid.

Yolo	20.6	Monterey, San Benito	17.4	Alameda	14.5
Orange	19.7	Lake, Mendocino	17.3	Stanislaus	14.5
Humboldt	19.5	Riverside	17.1	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	14.1
San Diego	19.0	Ventura	17	Del Norte, Lassen, Modoc, Plumas, Siskiyou	14.0
Imperial	18.9	San Bernardino	16.3	Contra Costa	13.9
Santa Cruz	18.6	Sacramento	16.1	Kings	13.9
Butte	18.3	San Mateo	16.0	Napa	13.8
Madera	18.3	Colusa, Glenn, Tehama, Trinity	15.9	Sutter, Yuba	13.1
Tulare	18.3	Merced	15.6	Solano	12.8
Nevada, Sierra	18.1	Marin	15.5	Placer	12.1
Shasta	18	Santa Clara	15.5	El Dorado	10.5
Fresno	17.7	San Joaquin	15.2		

SoCalGas’ service territory continues to require large-scale low-income assistance programs. According to Athens Research 2018 data published July 17, 2019, over 1.9 million households receiving gas service from SoCalGas have income less than two times the federal poverty guidelines (“FPG”). In an ongoing effort to assist low-income utility customers, the CPUC authorized \$11 billion in June 2021 for the California Alternate Rates for Energy (CARE), Family Electric Rate Assistance (FERA), and Energy Savings Assistance (ESA) programs of the State’s investor-owned utilities (IOUs) for 2021- 2026. The programs will continue to directly benefit low-income customers by reducing their energy bill, increasing the comfort and safety of their home, and promoting energy education and efficiency practices that lead to a reliable electricity grid and a lower carbon footprint.

Within our service territory, there also continues to be opportunities for customers to receive ESA Program measures including high efficiency furnaces or smart thermostats that were introduced in the current cycle. Measures installed many years ago are beyond their useful lives. For these reasons, many customers continue to be offered energy saving opportunities, even among those previously served. However, SoCalGas believes the low-income program must adapt and evolve, to appeal to customers that are unwilling to participate in the current ESA Program design. For example, one major barrier is language for undocumented customers and customers in the Asian community. The ESA program quarterly study indicates only five percent of participants in the ESA program are of Asian descent while Asians make up 11 percent of the total customer population in SoCalGas’ service territory.¹¹

¹¹ See CPUC Application 19-11-006 – Energy Savings Assistance and California Alternate Rates for Energy Programs and Budgets for Program Years 2021-2026 (November 4, 2019). Available at https://www.socalgas.com/regulatory/documents/a-19-11-006/SoCalGas_Low_Income_Application_2021-2026_Final.pdf.

While we are improving communications between ourselves and communities with limited English proficiency, community advocacy groups are likewise in need of support. Community advocacy groups represent a direct link to the various neighborhoods across the State and are generally respected by their neighborhood residents. These groups are crucial to support the increase of energy efficiency deployment, particularly targeting low-income households and disadvantaged communities for whom building electrification will impose asymmetrical and inequitable cost burdens. Additionally, there exists a barrier to participation in the ESA program, which is dependent on customer/household income levels. This barrier to entry precludes income-ineligible households of disadvantaged communities requiring energy savings as they may be unable to pay for the costs of energy efficient equipment. We recommend directing more funds for rebates/incentives to specifically target income-ineligible households in disadvantaged communities. Targeting these households not only achieves energy savings, but also enhances public health and safety for families most in need notwithstanding income levels.

Additionally, SoCalGas offers a comprehensive suite of energy efficiency programs, strategies, and solutions to meet the dynamic energy needs of our customers located throughout Southern California. Although we were successful in saving customers more than 46.5 million net therms in 2020,¹² we face numerous challenges and barriers often not addressed at IEPR Building Decarbonization workshops. These challenges result from many tenants of rental housing units being hesitant or resistant to allow multifamily property owners and/or contractors to enter their dwelling units for retrofit work due to health concerns.¹³

Physical barriers in the older housing stock increases the cost and complexity of upgrading appliances and buildings to increase efficiency. For instance, the presence of asbestos is a barrier to energy efficiency building upgrades because of the cost of removal and/or abatement. Currently, it is the building owner's financial responsibility to eradicate the asbestos as doing so is outside the scope of energy efficiency programs. This preclusion in the utilization of funds thereby becomes a barrier for much needed energy efficiency upgrades in lower income communities. There are also opportunities to reconsider the performance and effectiveness of actual appliances in buildings to improve energy efficiency programs without increasing energy bills.

3. Innovative Financing Models at the Local Level Can Help Promote Equity Across Communities

As expressed by Mark Cooper, Consumer Federation of America, during Session 1 of the workshop, there is a need for access to capital and to reward investments that will promote building decarbonization in California. In September 2020, the Milken Institute published a report that continues its work on advancing the green bond market.¹⁴ Specifically, the 2020 report found that the State can play a critical

¹² See CPUC Rulemaking 13-11-005 – Energy Efficiency Programs 2020 Annual Report (November 14, 2013). Available at https://www.socalgas.com/sites/default/files/SCG_2020_Energy_Efficiency_Annual_Report.pdf.

¹³ Ibid.

¹⁴ Milken Institute, *Financial Innovations Lab: Growing the US Green Bond Market: Lab 2*, 2020. Available at https://milkeninstitute.org/sites/default/files/reports-pdf/MI_GreenBondsLab_FINAL%20WEB_0.pdf.

supporting role by eliminating or reducing the costs related to issuing green bonds which could motivate smaller municipalities to participate in the green bond market. For instance, fees assessed by the California Debt and Investment Advisory Commission (CDIAC), are usually 2.5 basis points (0.025 percent), or up to \$5,000.¹⁵ These substantial fees are most likely an obstacle for smaller municipalities.

Along these lines, the 2020 report suggested developing a “Best in Class” award program for exemplary green bond issuers to highlight municipalities exceeding expectations for issuances. This then signals to the rest of the market that green capital planning can have a strong positive effect on sustaining a just and equitable zero-carbon future. Furthermore, issuances of green capital and green bonds may better serve equity goals across all communities through the incorporation of a pilot green bond project. In this instance, a pilot project can be defined as an initial demonstration that has not yet been funded to scale. Whether a green bond pilot project includes a partnership with a local philanthropy, government partner, and/or IOU, green bond pilot projects encourage transparency, provides adequate backstopping, and will allow piloting at the local level. As the green bond pilot projects come to maturity, the local leaders of these projects can facilitate coordination among one another to share success stories that will spur further investment.

Additionally, the 2020 report suggested that the State develop a pooled fund, which would aggregate smaller issuers that meet specific predefined criteria, such as the capital planning metrics, and help bring these smaller issuers to market at a lower cost through a credit enhancement. In fact, debt backed by the State would lower the repayment risk for issuers, and the pooled structure would diversify the risk for investors. *“The credit enhancement could also be in the form of a reserve fund, where capital is collected on a schedule, and reserves are allocated towards requirements to ensure green bond issuance. Another avenue of attracting a broader investment base is to develop incentives that appeal to the tax-exempt market.”*¹⁶ In fact, tax-exempt investors derive no additional benefit from investing in tax-exempt bonds and typically prefer the higher yields available on taxable bonds. To attract these investors, the 2020 report stressed the importance of developing a taxable green bond market. *“One way to do that would be with a state-sponsored interest rate subsidy on tax-exempt green bonds, which would enable municipal issuers to compete with the higher yields of taxable bonds. The government subsidy would pay the spread between the issuer interest rate and borrower coupon.”*¹⁷

4. Investing in a Skilled Workforce Fuels Statewide Economic Growth

Though financial incentives are critical to bridge available resources, it is also equally impactful to build a deeper pool of qualified workers that can also fuel statewide economic growth. California’s continued economic success depends on cultivating an educated, skilled workforce that is built on robust, broad-based access to education and employment opportunities statewide. This includes assessing the State’s workforce strengths and weaknesses and considering the existing types of skills required for the various

¹⁵ Ibid., at 10.

¹⁶ Ibid., 13.

¹⁷ Ibid.

stages of building decarbonization (*i.e.*, innovating, developing, manufacturing, installing, and repairing).¹⁸

In this vein, researchers at the University of Massachusetts-Amherst published a 2021 study that shows a climate stabilization project can serve as a major engine of economic recovery and expand economic opportunities statewide, particularly focusing on conditions in Kern, Contra Costa, and Los Angeles Counties. The researchers developed a just transition program for workers and communities that includes an increase of over 1 million jobs through investment programs in energy efficiency, clean renewable energy, public infrastructure, land restoration and agriculture.¹⁹ Good-quality worker training programs will be needed to ensure that a wide range of workers have access to the jobs created by clean energy investments, including people of color and women, and that the newly employed workers can perform their jobs effectively. Without adequate training, a full-time job is insufficient to guarantee economic stability. This effort can also highlight the State's priorities and incongruities in supply and demand as well as the workforce goals needed to achieve a carbon neutral economy by 2045.

In closing, successful building decarbonization efforts will necessitate special consideration of clean gaseous fuels, consumer barriers and energy efficiency program limitations, innovative financing tools, and investment in a skilled workforce. How we proceed with the State's building decarbonization programs and policies is crucial to maintain and sustain California's economy now and in the future. We look forward to continuing to participate in this important dialogue and appreciate your consideration of our comments.

Respectfully,

/s/ Kevin Barker

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¹⁸ Wan-Lae Cheng, Thomas Dohrmann, Mike Kerlin, Jonathan Law, and Sree Ramaswamy, "Creating an effective workforce system for the new economy," *McKinsey & Company*, 3 July 2018. Available at <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/creating-an-effective-workforce-system-for-the-new-economy#>.

¹⁹ Robert Pollin, Jeannette Wicks-Lim, Shouvik Chakraborty, Caitlin Kline, and Gregor Semieniuk, "A Program for Economic Recovery and Clean Energy Transition in California," *University of Massachusetts-Amherst*, June 2021. Available at <https://peri.umass.edu/images/CA-CleanEnergy-6-8-21.pdf>.