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SoCalGas Comments on 15 Day Changes to 2022 CA Energy Code

Additional submitted attachment is included below.



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July 28, 2021

The Honorable Andrew McAllister
Commissioner, California Energy Commission
Docket Unit, MS-4
Docket No. 21-BSTD-01
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Comments on the 15-Day Changes to the Proposed 2022 Energy Code Update

Dear Commissioner McAllister:

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide public comments on the California Energy Commission's (CEC's) Proposed Changes to the California Code of Regulations, Title 24, Parts 1 and 6 (Proposed 2022 California Energy Code). Considering the magnitude of energy transition unknowns, we recognize the breadth of the challenge being undertaken by the CEC to project and assess future costs and benefits and to ensure that California's new building stock is created as energy efficiently and cost-effectively as reasonably possible.

While mindful of the challenge to project into the future, we respectfully request that the CEC energy efficiency staff consult with CEC staff working on the energy demand forecast, concerning discrepancies that may exist between the rate forecasts used for the Proposed 2022 California Energy Code and the energy demand forecasts used for utility procurement plans. For example, the Proposed 2022 California Energy Code assumes increasing natural gas rates and decreasing electricity rates that plateau, despite large cost increases associated with wildfire hardening of the electric grid. We understand the process is near completion, so we suggest that the CEC consider third-party evaluations of the next building code cycle, which has worked well at the South Coast Air Quality Management District (SCAQMD).

Unbundling the CEC's cost and benefit assumptions is critical to understanding the impact of the proposed code changes and assessing specific impacts on housing costs, as required by State Law. In our comments for the 45-day language, we asked for more clarification regarding the benefits

of the measures as attributed to the residential sector and non-residential sector.¹ We greatly appreciate the CEC’s clarification that the costs borne by the Proposed 2022 California Energy Code are 49 percent residential and 51 percent non-residential, while the benefits are 25 percent residential and 75 percent non-residential.² Since the benefits greatly favor the non-residential sector and the costs are split evenly between the two building types, the relative cost-effectiveness for the residential measures appears questionable.

Furthermore, the sensitivity analyses outlined in our previous comments suggest that reasonable changes to input assumptions, including equipment costs, operation and maintenance costs, and gas and electric price forecasts (including hydrogen, renewable natural gas, and synthetic gas) could result in heat pump water heaters not being cost effective in additional climate zones. Given this, it is in the public interest for the proposal to express, in detail, the granular costs and benefits attributable to each potential measure and how they will affect the cost-effectiveness for both the residential and non-residential sectors distinctly. In a 2017 report assessing how regulatory agencies can improve their analyses, the California Legislative Analyst Office (LAO) found that most State agencies do not adequately assess uncertainty and that sensitivity analyses “[provide] the agency and the public with a better understanding of the risks—both positive and negative—of a particular approach.”³ SoCalGas continues to recommend that the CEC build in the uncertainty of the future by utilizing a range of rate forecasts to determine cost-effectiveness.

An effective assessment of uncertainty is critical when evaluating the implications of the cost-benefit analysis of the proposed building code changes. Our review of the CEC’s economic assessment identifies several areas where reasonable differences in assumptions surrounding technology and future energy prices and costs could change the results of the analysis used to support the Proposed 2022 California Energy Code. These include operations and maintenance (O&M) costs for heat pump water heaters, projections of natural gas rates, and projections of electricity rates. Cost assumptions, such as heat pump installation costs, based on a single data point also create significant uncertainty in the results, and raise questions regarding the validity of the results. Also, plateauing of electricity rates after 2030 does not seem reasonable given the trend toward expenditures to harden the system to prevent wildfire risks and Public Safety Power Shutoff (PSPS) events. For example, Pacific Gas & Electric’s recent announcement that it expects to spend \$20 billion on underground transmission lines in the State illustrates how external factors and a changing climate can trigger unforeseen price impacts.⁴ Electricity price forecasts are a critical

¹ See SoCalGas Comments on the Proposed Changes to the 2022 Energy Code Update Rulemaking (TN 238386), 21 June 2021. Available at <https://efiling.energy.ca.gov/GetDocument.aspx?tn=238386&DocumentContentId=71682>.

² Email Correspondence with Peter Straight, Supervisor Development, CEC Building Standards Office, on June 28, 2021.

³ See Mac Taylor, “Improving California’s Regulatory Analysis,” California Legislative Analyst Office, February 2017, at 14. Available at <https://lao.ca.gov/reports/2017/3542/Improving-CA-Regulatory-Analysis-020317.pdf>.

⁴ See PG&E External Communications, PG&E Announces Major New Electric Infrastructure Safety Initiative to Protect Communities from Wildfire Threat; Undergrounding 10,000 Miles of Power Lines in Highest Fire-Threat Areas, Pacific Gas and Electric Company, July 2021. Available at https://www.pge.com/en/about/newsroom/newsdetails/index.page?title=20210721_pge_announces_major_new_electric_infrastructure_safety_initiative_to_protect_communities_from_wildfire_threat_undergrounding_10000_miles_of_power_lines_in_highest_fire-threat_areas.

component of the analysis but include significant uncertainties that cannot be addressed unless they are identified and evaluated. Without an assessment of uncertainty, it is not possible to determine whether the selected baseline assumptions are biasing the conclusions of the analysis. The relatively small margin between costs and benefits observed in many of the climate zone-specific analyses for water heaters after the O&M costs are correctly accounted for, as addressed in our previous comments, emphasizes the importance of this issue. For example, a 10 percent change in electric heat pump costs would shift the results to favor the instantaneous gas water heater option in half of the California climate zones.

The 15-day language still includes two separate capture efficiencies for stove tops using electricity and natural gas. Since the act of cooking is a well-recognized source of particulate matter (PM 2.5) in homes and PM 2.5 can cause wheezing amongst asthmatic individuals, the most health-protective approach to ventilation would be to require stove tops to have a single capture efficiency regardless of fuel source; and we recommend the more stringent capture efficiency. Furthermore, in future code cycles, we recommend utilizing data from the proposed CEC funded research on “Randomized Trial Study to Determine Impact of Gas Stove Interventions on Children Asthma” as studies up to now do not show conclusive evidence of needing higher capture efficiencies depending on fuel source.⁵ A report published earlier this year by the CEC noted that “these results imply that gas cooking appliances in the HENGH homes did not lead to widespread problems with indoor NO₂.”⁶

Since building code cycles occur every three years, one opportunity to continually refine the process is to look at best practices from other State government procedures. Independent, third-party evaluations of a public agency’s economic assessments can highlight both the strengths of their approach as well as identify areas for improvement, such as increasing transparency and clearly documenting data, methods, and assumptions.⁷ In 2014, the SCAQMD’s Governing Board approved an independent review of the agency’s socioeconomic assessments with Board Members acknowledging that the agency may “appear biased to perform only an internal analysis of the cost-benefit of proposals” and that such review would “allow the Board to be better informed prior to approving regulations.”⁸ As a result, SCAQMD worked with sister agencies, the regulated community, academia, environmental groups, and the public to enhance both the development and documentation of the socioeconomic assessment for the agency’s 2016 Air Quality Management Plan, with clear direction to “...report not only on overall impacts, but to also discuss uncertainty

⁵ See Notice of Workshop, Request for Comments on Forthcoming Solicitation Regarding Randomized Trial Study to Determine the Impact of Gas Stove Interventions on Children with Asthma, Docket No. 19-ERDD-01, TN# 236966

⁶ See “Ventilation and Air Quality in New California Homes with Gas Appliances and Mechanical Ventilation,” March 2020, page 80. Available at: <https://www.energy.ca.gov/sites/default/files/2021-05/CEC-500-2020-023.pdf>

⁷ See Abt Associates, “Evaluation of SCAQMD Socioeconomic Assessments,” Presentation for the SCAQMD Governing Board Meeting November 7, 2014. Available at: https://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/abtassoc_scaqmdsocioeconeval_110714.pdf?sfvrsn=2.

⁸ See SCAQMD Governing Board Meeting Minutes for January 4, 2013. Available at <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2013/2013-jan4-001.pdf?sfvrsn=0>.

and provide a range of estimates through sensitivity analyses.”⁹ With SCAQMD as an example of best practice, we respectfully request that an independent audit of the CEC’s natural gas and electricity rate modeling be conducted before the next Energy Code Update. Doing so will allow Commissioners, individuals, and businesses to better understand the important tradeoffs between different compliance options.

We appreciate the opportunity to provide public comments on this matter of critical importance to the residents of California.

Respectfully,

/s/ Kevin Barker

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⁹ See SCAQMD, “Final Socioeconomic Report for the 2016 Air Quality Management Plan,” 08 March 2017. Available at http://www.aqmd.gov/docs/default-source/clean-air-plans/socioeconomic-analysis/final/sociofinal_030817.pdf.