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Joint CCA comments on April 8, 2019 Joint Agency Workshop

Additional submitted attachment is included below.

April 22, 2019

California Energy Commission
Docket Unit, MS-4
Re: Docket No. 19-IEPR-06
1516 Ninth Street
Sacramento, CA 95814

RE: Comments of the Joint CCAs on Joint Agency Workshop on Building Decarbonization

East Bay Community Energy, Peninsula Clean Energy, Silicon Valley Clean Energy and Sonoma Clean Power (the "Joint CCAs") appreciate the opportunity to submit these comments on the April 8 Joint Agency Workshop on Building Decarbonization. The Joint CCAs offer several recommendations related to topics discussed during the workshop. Specifically, the Joint Agencies should:

A. Recognize Renewable Natural Gas ("RNG") as an inappropriate solution.
B. Develop a statewide plan to support worker education and retraining.
C. Prioritize decarbonization initiatives and incentives for existing buildings.
D. Adopt changes to Building Standards Code that better account for GHG emissions reductions.
E. Ensure that all supported appliances are smart grid-ready to support load-shifting capabilities.

A. <u>Renewable Natural Gas is not an appropriate solution for building decarbonization.</u>

Electrification is a faster and more certain approach to decarbonization, despite the series of problematic assertions about the proper role of renewable natural gas in building decarbonization efforts raised in the workshop. First, using a 20% RNG natural gas mix in natural gas appliances does not offer equivalent decarbonization to electrification, because today there are times in which the state's energy mix is significantly cleaner than the system average, as pointed out by the Energy Commission.[1] Furthermore, the electricity sector is on a far faster trajectory of decarbonization than the state's natural gas mix, which means that by the time RNG producers can deliver a 20% RNG mix, the electricity mix will be substantially cleaner than it is today and cleaner than natural gas overall. Finally, in many areas of the state, energy use is far cleaner than the state average as CCAs move faster to deploy GHG-free and renewable energy.

More significantly, the comments of Southern California Gas fail to address the implications of the limited available supply of natural gas. Since there are sharp limits on the total potential of natural gas, we must necessarily consider where that limited and valuable supply should best be deployed to maximize GHG reductions. As noted in the 2018 Integrated Energy Policy report, demand from buildings and industry exceeds the in-state potential renewable natural gas supply.[2] Even where out-of-state imports of RNG are taken into account, supply falls far short of the expected demand for natural gas.[3]

[1] Presentation of Heriberto Rosales, California Energy Commission, April 8, 2019 Workshop, slides 4 & 5, http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Demand_Side_Management/EE_and_Energy_Savings_Assist/BD-CEC.Decarb.Policy.Overview.edited.HR.V3.5.April.5.2019.pdf
[2] 2018 Integrated Energy Policy Report, Volume II. Adopted February 20, 2019. At p. 40.
[3] Presentation of Panama Bartholomy, Building Decarbonization Coalition, April 8 Workshop, slide 21.

Using the limited supply of RNG in buildings would force California to forego opportunities to lower GHG emissions from other sectors that could be decarbonized if the limited RNG supply were deployed in those sectors. In considering the decarbonization impacts of using RNG in buildings, the Energy Commission should evaluate the GHG emissions that would not be avoided in other sectors as a result of diverting RNG to buildings. This analysis is critical to understanding whether the residential sector is the optimal use of this limited resource.

Finally, the Commission must consider several additional factors in evaluating the use of RNG in decarbonizing the residential sector. First, any assessment of the decarbonization impact must evaluate when large quantities of RNG might be available. While there is potential for significant supplies of RNG in the future, current production capacity is almost negligible. In addition, evaluating the role of RNG must account for fugitive emissions from methane, whether from a fossil fuel or renewable source. Significant relative GHG emissions savings could be realized if RNG supplies were used in a small number of new industrial facilities rather than being sent through a sprawling, aging and leaky natural gas pipeline network to serve a much larger number of smaller end users. Lastly, experience has shown that natural gas infrastructure also has reliability issues, such as in Aliso Canyon or in the various instances in which earthquakes, fires, or explosions take natural gas infrastructure offline. Not only are natural gas distribution lines subject to disruption, but they can take significantly longer to repair, giving rise to much longer-term resilience issues.

B. A statewide plan to support worker education and retraining should be developed.

The Joint CCAs urge the Commissions to directly address worker retraining to ensure a "just transition" to a low-carbon energy future. Numerous parties in attendance at the April 8 workshop issue raised concerns about the potential for worker displacement as a result of building decarbonization efforts. The Joint CCAs note that worker displacement has yet to be directly addressed in the formal proceedings of the Joint Agencies.

CCAs across the state have recognized the need for worker training and re-training and are developing approaches to address this issue. East Bay Community Energy, for example, addresses the need for a "just transition" explicitly in its Joint Power Agreement. In establishing the East Bay Community Energy Authority, eleven cities and the County of Alameda stated that they "[r]ecognize the value of workers in existing jobs that support the energy infrastructure of Alameda County and Northern California. The Authority, as a leader in the shift to clean energy, commits to ensuring it will take steps to minimize any adverse impacts to these workers to ensure a 'just transition' to the new clean energy economy."[4] Similarly, Peninsula Clean Energy's Inclusive and Sustainable Workforce Policy emphasizes that one of PCE's strategic goals is to "[s]upport … local businesses, union labor and apprenticeship and pre-apprenticeship programs that create employment opportunities are important components of building and sustaining healthy and sustainable communities,"[5] which PCE is working to implement with union representatives to develop strategies for workforce development and through engagement with local training programs.

[4] East Bay Community Energy Authority Joint Powers Agreement. December 1, 2016. At p. 2. Available at https://ebce.org/wp-content/uploads/EBCE_JPA_Agreement_12_1_16.pdf

[5] Peninsula Clean Energy Inclusive and Sustainable Workforce Policy, available at https://www.peninsulacleanenergy.com/wp-content/uploads/2018/10/Policy-10-Inclusive-and-Sustainable-Workforce-revised-10-25-18.pdf

While commitments among individual CCAs or other local agencies are important, statewide coordination will be necessary to address the scale of workforce opportunities and challenges presented by building decarbonization. The transition to all-electric buildings will not happen all at once, and the existing workforce will be needed to ensure existing gas infrastructure is safely decommissioned. If the state begins developing robust plans and programs now, there will be enough time for worker retraining. As cited in the CEC's 2018 Integrated Energy Policy Report, the SB 350 Low-Income Barriers Study recommended that the state "formulate a statewide clean energy labor and workforce development strategy." [6] Worker displacement and retraining needs should be prioritized as part of a statewide process and included in the California Workforce Development Board's upcoming state plan for economic and workforce development in a low-carbon economy.

C. Decarbonization initiatives and incentives for existing buildings should be prioritized.

Effective decarbonization requires mitigating emissions from existing buildings. According to the Building Decarbonization Council, "a third of California's 2045 building stock will be built between now and then."[7] This implies that two-thirds of the state's building stock is *already* built and highlights the need to address emissions from those buildings. Several parties discussed the challenges associated with installing new, low-emissions space heating and cooling technology during the April 8 workshop. For example, Berkeley City Councilmember Kate Harrison, in addition to presenting on the City of Berkeley's approach to building decarbonization, described the challenges she had replacing her gas heater with an electric appliance in her own home. Decarbonization policy must address barriers to electrification in renovations and develop approaches to decarbonize the existing building stock.

As Southern California Edison noted during the workshop, robust marketing, outreach, and engagement with local governments and community-based organizations will be needed in order to deploy new space and water heating technology for existing buildings. In particular, the Joint CCAs support the recommendations offered during the April 8 workshop by NRDC for the TECH program administration, including the suggestion to develop "quick start mini-pilots," and to focus on engaging manufacturers, distributors and contractors.[8] Certainly, creating strong upstream incentives and education is a promising approach to addressing the existing housing stock, but more intensive approaches may also be needed.

D. Changes to Building Standards Code that better account for GHG emission reductions should be adopted based on lessons learned from BUILD and TECH programs.

The April 8 workshop did not directly address the overlap and potential misalignment between the Title 24 building codes and standards development cycle overseen by the CEC and the CPUC's Order Instituting Rulemaking ("OIR) Regarding Building Decarbonization, nor did it address the broader need for consideration of greenhouse gas ("GHG") emissions in Building Standards Code. The Joint CCAs see a need for additional coordination between the CEC and CPUC related to the timelines for building code adoption and the CPUC's Building Decarbonization proceeding.

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[6] "2018 IEPR Update Volume II." Adopted February 20, 2019. At p. 130. See https://www.energy.ca.gov/2018publications/CEC-100-2018-001/CEC-100-2018-001-V2-CMF.pdf

[7] "A Roadmap to Decarbonize California Buildings." February 2019, at p. 5. Available at https://gridworks.org/wp-content/uploads/2019/02/BDC_Roadmap_final_online.pdf

[8] Presentation of Merrian Borgeson, NRDC, April 8, 2019 Workshop, slide 5.

A key limitation of the current Building Standards Code is that it does not account for GHG emissions reductions. For example, metrics such as Time Dependent Valuation, used in Title 24, are not carbon based. In addition, the City of Berkeley identified shortcomings in addressing electrification in Title 24 as a barrier to REACH codes and the three-prong test as a barrier to adoption of electric appliances.[9]

The Joint Agencies should seek to better incorporate GHG emissions reductions accounting into the 2022 Building Standards Code cycle. A helpful first step towards this effort would be to commission a report on the BUILD and TECH programs that outlines lessons learned from the programs and addresses how state agencies might better support development of building codes that facilitate reduction of GHG emissions.

E. Appliances should be smart grid-ready to support load-shifting capabilities.

As the CPUC and CEC develop a coordinated strategy for decarbonizing buildings, policymakers should look beyond fuel switching to ensure that the new devices deployed can be used to actively support renewable integration and the 100% renewable energy grid. In the context of the workshop, the Energy Commission in particular highlighted that the carbon intensity of the grid varies dramatically throughout the day. [10] This creates two distinct opportunities that could be realized if the state's decarbonization policy creates a platform of dispatchable, responsive devices.

First, devices which can be programmed or activated at particular times of day can take advantage of cleaner grid energy during the solar window, resulting in greater GHG benefits from electrification. In addition, as pointed out by NRDC, such devices can move energy use out of the evening ramp, helping to address statewide grid needs which drive substantial GHG emissions resulting from ramping capacity. [11] Second, if these devices are also "smart-grid ready" to enable remote dispatch, then aggregations of devices can be deployed to provide grid services. In particular, dispatchable aggregations of devices such as heat pump water heaters, HVAC systems, and dryers could be used to provide renewable integration services through shimmying or longer duration load shift products. Furthermore, deployment of such aggregations can provide revenue streams that may help homeowners offset the costs of the electrified devices.

However, realizing these critical functions in the grid will require foresight and coordination between the CEC and CPUC to ensure that the necessary connectivity and timing functions are incorporated in all devices deployed for building decarbonization.

Conclusion

[9] City of Berkeley Presentation, April 8, 2019 workshop, slide 4, http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Demand_Side_Management/EE_and_Energy_Savings_Assist/BD%20Meeting%20the%20Climate%20Challenge%20in%20Berkeley%20v2.pdf

[10] Presentation of Heriberto Rosales, California Energy Commission, April 8, 2019 Workshop, slides 4 & 5, http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Demand_Side_Management/EE_and_Energy_Savings_Assist/BD-CEC.Decarb.Policy.Overview.edited.HR.V3.5.April.5.2019.pdf

[11] Presentation of Merrian Borgeson, NRDC, April 8, 2019 Workshop, slide 10.

The Joint CCAs appreciate the opportunity to comment and look forward to continuing to work with the Joint Agencies on these important issues.

Respectfully submitted,

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