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SDG&E Comments on the CEC's Dec 4, 2019 Staff Workshop for the Building Decarbonization Assessment

Additional submitted attachment is included below.



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California Energy Commission
Docket Unit, MS-4
Re: Docket No. 19-DECARB-01
1516 Ninth Street
Sacramento, CA 95814-5512
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RE: San Diego Gas & Electric Comments on the December 4, 2019, Staff Workshop for the Building Decarbonization Assessment, Docket No. 19-DECARB-01

Dear Commissioners:

San Diego Gas & Electric Company (“SDG&E”) thanks the California Energy Commission (“CEC”) for hosting the *Staff Workshop for the Building Decarbonization Assessment* (“the Workshop”) on December 4, 2019. SDG&E appreciates the opportunity to comment on the Workshop and the ongoing proceeding to implement Assembly Bill (“AB”) 3232 (Friedman, Chapter 373, Statutes of 2018).

AB 3232 requires the CEC, in conjunction with the California Public Utilities Commission (“CPUC”), California Air Resources Board (“CARB”) and California Independent System Operator (“CAISO”), or collectively (“the Agencies”), to assess the potential for the State to reduce greenhouse gas (“GHG”) emissions in the State’s residential and commercial building stock by at least 40 percent below 1990 levels by January 1, 2030. During the Workshop, the Agencies presented an overview of their respective work related to decarbonization and the preliminary baseline and project scope of the Building Decarbonization Assessment (“the Assessment”).

SDG&E appreciates the coordinated approach of the Agencies in establishing a baseline for GHG emissions in the building sector and determining the scope of the Assessment, including engagement with stakeholders and the public to ensure the appropriate metrics and factors are taken into consideration. SDG&E’s comments on the Workshop will respond to the scoping questions for stakeholder feedback and comments found at the end of the *Building Decarbonization Assessment Project Scope* uploaded to the Docket on November 25, 2019.

Overview

SDG&E supports a balanced and responsible approach to implementing ambitious statewide goals to reduce carbon emissions. This includes maintaining an economy-wide

perspective on decarbonization and prioritizing affordability, reliability and technology inclusivity in statewide efforts to reduce emissions from the building sector, as well as the electricity supply that will increasingly support decarbonization in multiple sectors. It is too early in the process for the State to eliminate technology or fuel options in determining the path forward on decarbonization. The optimal solution may not exist or be known yet; therefore, it is imperative that all technology and fuel options remain on the table as the State plots its course toward economy-wide carbon neutrality by 2045 and net negative emissions thereafter. The State must strike the right balance in achieving its decarbonization goals to protect the State's economy and preserve choice, affordability and reliability for California residents.

In addition to analyzing electrification as a pathway to decarbonization of residential and commercial buildings, SDG&E recommends that the State also emphasize research on high-efficiency gas appliances, renewable natural gas, and fuel switching to enable cleaner use of natural gas appliances and the existing natural gas system infrastructure.

Scoping Questions for Stakeholder Feedback and Comments

1. The legislation calls for a building decarbonization assessment for 2030. Should CEC staff also include a review of feasibility for California's 2045 zero-carbon goals?

CEC staff should focus their assessment on statutorily required mandates. Though SDG&E supports California's aggressive approach to decarbonization, the post-2030 economy-wide goals should not be the priority.

2. Is the proposed baseline recommendation the best approach for the Assessment? Why or why not?

SDG&E generally supports the CEC's recommendation that 1990 baseline emissions be calculated by capturing emissions from (1) fuel combustion, and (2) behind-the-meter leaks. SDG&E believes that it would be difficult to include GHG emissions calculations for generation or for transmission and distribution in the 1990 baseline calculation for building sector emissions. It is not clear that this would add substantial value to the Assessment, and attempting to include upstream emissions calculations from 1990 to 2030 would potentially duplicate electric sector GHG emissions modeling under the IRP proceeding.

The CEC's Workshop presentation suggests that electricity generation emissions be accounted for by capturing incremental emissions from the increase in electric load from fuel substitution activities.¹ However, the Assessment should take into account that electric utilities have different emissions profiles. SDG&E is currently providing its customers with roughly 45 percent renewable energy, and that percentage may increase as community choice aggregation ("CCA") expands within our territory and accelerates load departure. The City of San Diego, representing more than 40 percent of SDG&E's total load, has formed a Joint Powers Authority with four other cities in the region and filed their Implementation Plan with the CPUC, with the

¹ The CEC will set the date these incremental emissions will begin accruing based on fuel substitution modeling assumptions, likely in 2020 or 2021, per California Energy Commission, *CEC Staff Recommended 1990 Greenhouse Gas Emission Baseline for Building Decarbonization Assessment* (November 22, 2019).

goal of providing energy to customers in 2021. Considering the City's move and current CCA and Direct Access customers in SDG&E territory, if other jurisdictions that have expressed interest also proceed with forming CCAs, SDG&E could be left serving roughly 20 percent of the load in its territory in a just a few short years. As a result, SDG&E's renewables profile could change dramatically and in short order, as would the calculation of GHG emissions from residential and commercial buildings in SDG&E territory. Similarly, the Assessment should also consider differences in customer makeup and building stock among utility service territories. Please see responses to Questions 4 and 7 below for additional information on SDG&E's customer makeup and building stock.

Additionally, the *CEC Staff Recommended 1990 Greenhouse Gas Emissions Baseline for Building Decarbonization Assessment* document (uploaded to the Docket on November 22, 2019) indicates that while including electric generation in the baseline calculation would expand the scope of emissions reductions efforts that could be deployed, to include energy efficiency/demand-side management, said expansion of scope could also conflict with other emissions reductions efforts under SB 100 or SB 350, which sets the goal of doubling statewide energy efficiency savings by 2030. Further, upstream emissions are also being addressed in the implementation of SB 1383 (Lara, Chapter 395, Statutes of 2016), under which CARB, the CPUC and CEC are required to work together to establish infrastructure and procurement policies to encourage biomethane projects and renewable gas use. The goal is to reduce livestock and dairy methane emissions by up 40 percent below the sector's 2013 levels by 2030, with the added benefit of facilitating decarbonization of the natural gas system using renewable gas.²

3. Staff has identified sectors and topics that will be assessed for impacts, challenges, and opportunities. Do you think this list is appropriate? What additional sectors or topics should be added to the scope of the Assessment?

SDG&E supports the list of sectors and topics identified in the scoping document to be addressed in the Assessment (*building owners; ratepayers; low-income and disadvantaged communities; low-income housing, multifamily, high-rise buildings; workforce; and grid reliability*).

To the existing list in the Assessment scoping document, SDG&E would add *critical infrastructure*, with a focus on reliability and building code exemptions. The ongoing threat of wildfire and other natural disasters in California demands that the Assessment consider the requirements to keep critical infrastructure functioning during emergencies and catastrophic events to support response and recovery efforts. The imperative of protecting the functionality of critical infrastructure must be balanced with the State's efforts to reduce GHG emissions, with priority given to public safety.

² The CEC was directed to lead development of recommendations for the production and use of renewable gas, including biomethane and biogas, in its 2017 Integrated Energy Policy Report; and the CPUC was mandated to direct gas corporations to implement a minimum of five dairy biomethane pilot projects to demonstrate interconnection to the gas pipeline system (R.17-06-015 and Decision ("D.")17-12-004).

In addition, SDG&E recommends that grid reliability assessments be consistent with the reliability modeling done in the IRP Proceeding (R.16-02-007). Ideally, the modeling would be done in the Strategic Energy Risk Valuation Model (“SERVM”) with a 0.1 Loss of Load Expectation.

4. *Building costs from substituting end-use appliances include direct and indirect costs. One example of indirect costs are fuel infrastructure costs, such as gas piping to and within buildings, and electric distribution systems. Which indirect costs should be included in this Assessment and what are sources for this information?*

SDG&E supports customer choice and flexibility in appliance and fuel supply options. The Assessment should include the direct and indirect costs of substituting end-use appliances and equipment in residential and commercial buildings, including the cost of including or not including gas distribution infrastructure in new construction. Please see additional information in response to Question 5 below.

SDG&E does not support inclusion of societal costs or benefits in the Assessment, including health impacts related to air quality or economic impacts related to job creation. While those are important issues for the State to address, it is very difficult to place a value on those costs for purposes of this Assessment and utility ratepayers should not bear the disproportionate burden of health, economic and other societal costs. Please see additional information in response to Question 5 below.

Additionally, the Assessment should take into account differences among service territories when considering cost. SDG&E’s service territory differs markedly from the territories of the other large investor-owned utilities (“IOUs”) in California. SDG&E’s total number of customers and distributed square miles of territory are significantly less than the other IOUs. This allows SDG&E to be nimble and innovative in certain instances, but these characteristics can also put SDG&E customers at a disadvantage when statewide mandates are expected to be applied equally across all IOUs. For example, large capital expenditures and their associated investments are spread among significantly fewer customers when implemented by SDG&E, thereby increasing rate pressures. SDG&E also has a significantly different customer makeup by type, size and climate. In its service territory, SDG&E has few agricultural customers or large industrial customers, with almost no manufacturing; the majority of SDG&E’s load consists of residential and small commercial customers. Another distinguishing characteristic is that, despite a growing inland population, most of SDG&E’s customers are located within 35 miles of the coast. This means that, currently, HVAC cooling is used less in populated areas. Please see response to Question 7 below for additional information on SDG&E’s customer make-up.

When taken together, these service territory differences can present opportunities as well as serious challenges for SDG&E. Likewise, other IOUs have distinct challenges and opportunities in their service territories. As such, careful consideration should be given when assessing costs statewide.

5. *The total costs to reduce or eliminate emissions from energy usage are uncertain. However, reducing or eliminating emissions will have cost impacts, at the individual and social level. Which cost-effectiveness tests should be included in this Assessment?*

SDG&E supports the costs to be measured in the Assessment, as outlined in the Project Scope document, and suggests adding consideration of resiliency and rate impacts to cost-effectiveness calculations. Other variables that the Agencies could consider in evaluating cost effectiveness are building stock and building vintage, which vary in different parts of the State.

In analyzing the total cost of reducing GHG emissions from the building sector, SDG&E currently complies with CPUC-required cost effectiveness tests. SDG&E energy efficiency programs strictly utilize the Total Resource Cost (“TRC”) test, which can include metrics like the cost of purchasing new equipment or appliances. In analyzing the cost of electrification, SDG&E utilizes the Fuel Substitution Test as well as the cost effectiveness test. CPUC D.19-08-009 discusses the application of the Fuel Substitution Test and in particular cost effectiveness and participant costs.³ The CPUC discusses the appropriateness of including all or partial upgrade costs required to supply energy to the new measure. SDG&E recommends that alongside the CPUC, the CEC should also review the appropriateness of when to include all or partial upgrade costs, particularly for retrofits. It would be useful to develop general guidelines for the inclusion of these costs in cost effectiveness calculations to facilitate the review of cost effectiveness.

The CPUC has adopted a three-element Societal Cost Test (“SCT”), which includes a societal discount rate, an avoided social cost of carbon, and an air quality adder, to be tested in the IRP proceeding for informational purposes through December 31, 2020. This test will help the CPUC determine to what extent, if any, the SCT will help meet California’s emissions reduction goals. Because an evaluation of the collected data in the IRP proceeding will not be performed until after December 31, 2020, and the Building Decarbonization Assessment is to be completed by the end of 2020 (the CEC plans to adopt the Assessment by November 11, 2020, per the Project Scope document), inclusion of the SCT in the Assessment would be premature. Further, there is a basic philosophical question to be answered by policy and lawmakers as to whether utility ratepayers should be responsible for shouldering the burden of health, economic or other societal costs. SDG&E maintains that this should not be the case.

6. *What additional data, analyses, or studies should be reviewed as part of the Assessment? Please specify sources, and include links or electronic copies, if possible. Also, include a brief rationale on the relevance to the Building Decarbonization Assessment.*

Broadly speaking, the Building Decarbonization Assessment should look at affordability, electric and gas rates, and resiliency (including fire resiliency and islanding capabilities of distributed energy resources) in its analyses. There is a plethora of publicly-available studies that the Agencies could consult for information relevant to the Assessment on these points.

³ D.19-08-009, Decision Modifying the Energy Efficiency Three-Prong Test Related to Fuel Substitution (issued August 5, 2019) at 21-24.

7. *What strategies or actions should be analyzed as options for reducing GHG emissions in the building sector?*

The service territory of each IOU has specific characteristics that differentiate it from the other IOUs; these differences should be considered in the development of Building Decarbonization Assessment strategies. Several distinct characteristics inform SDG&E's desired focus related to the Assessment:

- 1) The majority of SDG&E's customers are located in the CEC's California Building Climate Zones 7 and 10, which are moderate climate zones.
- 2) SDG&E's primary focus would be its residential and commercial evaluations strategies since the majority of its gas and electric consumption are from these building sectors.
 - SDG&E's gas consumption is 57 percent residential, 38 percent commercial, five percent industrial and one percent agricultural.
 - SDG&E's electrical consumption is 36 percent residential, 57 percent commercial, eight percent industrial and two percent agricultural.
- 3) For the residential sector, SDG&E recommends that there be an emphasis on breaking out the assessment of single-family buildings and multifamily residential low-rise and high-rise buildings.
- 4) SDG&E recommends that there be a strategy to address residential renters versus owners since roughly 49 percent of SDG&E's residential customers are renters.
- 5) SDG&E recommends that there be an emphasis on strategies to develop solutions for small commercial building sectors representing 85 percent of SDG&E's commercial customers.

8. *The CEC is planning to hold workshops on the Building Decarbonization Assessment in early 2020. Are there specific topics that you would like to have discussed at a workshop?*

SDG&E believes the current list of topics for Assessment workshops to be held in 2020 is comprehensive and covers the gamut of relevant issues.

Conclusion

SDG&E recommends that the Agencies pursue a balanced and responsible approach to implementing the State's ambitious goals to reduce carbon emissions, including from residential and commercial buildings. To this end, SDG&E continues to support customer choice and flexibility when it comes to both appliances and fuel supply options. It is vital that the State strike the right balance in achieving its building-sector and economy-wide decarbonization goals in order to safeguard the State's economy and protect quality of life, as a function of affordability, reliability and choice, for California residents.

SDG&E appreciates the opportunity to comment on the Workshop and looks forward to continued engagement in this proceeding on the development of a Building Decarbonization Assessment for the State of California, as required by AB 3232.

Sincerely,

/s/ Tim Carmichael

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