

DOCKETED

Docket Number:	19-DECARB-01
Project Title:	Decarbonization
TN #:	231276
Document Title:	Southern California Edison Company Comments - SCE Comments on Scope of AB 3232 Building Decarbonization Assessment
Description:	N/A
Filer:	System
Organization:	Southern California Edison Company
Submitter Role:	Public
Submission Date:	12/17/2019 6:19:40 PM
Docketed Date:	12/18/2019

Comment Received From: Southern California Edison Company
Submitted On: 12/17/2019
Docket Number: 19-DECARB-01

SCE Comments on Scope of AB 3232 Building Decarbonization Assessment

Additional submitted attachment is included below.



Catherine Hackney
Director, Regulatory Affairs

December 17, 2019

California Energy Commission
Docket Office, MS-4
Re: Docket No. 19-DECARB-01
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.ca.gov

Re: Southern California Edison Company's Comments on the California Energy Commission Docket No. 19-DECARB-01: Commissioner Workshop on Building Decarbonization Assessment

Dear Commissioners:

On December 4, 2019, the California Energy Commission (CEC) held the *Commissioner Workshop on Building Decarbonization Assessment* (Workshop) to discuss and gather input on the scope of the Building Decarbonization Assessment (Assessment) required by Assembly Bill (AB) 3232 (Friedman, Chapter 373, Statutes of 2018). CEC staff, led by Commissioner J. Andrew McAllister, presented the preliminary scope of the Assessment and staff's recommended greenhouse gas (GHG) emission baseline. The CEC, the California Air Resources Board (CARB), the California Public Utilities Commission (CPUC), and the California Independent System Operator also provided overviews of their efforts related to decarbonization.

Southern California Edison (SCE) appreciates the opportunity to provide comments on the preliminary scope of the Assessment. SCE recommends the CEC set specific targets for building decarbonization by sector in support of California's economy-wide environmental goals and then use the Assessment to determine the least-cost portfolio of measures needed to reach those targets. This will send a clear signal that ensures enabling policy and planning activities by state agencies, utilities, and other stakeholders are coordinated and consistent.

SCE's comments are structured to respond to the eight scoping questions for stakeholder feedback and comments, which appear at the end of the preliminary scoping document docketed on November 25, 2019.

Responses to 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?*

Yes – CEC staff should also include 2045 zero-carbon goals in the Assessment.

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

The proposed GHG emissions baseline approach is reasonable given the reporting gaps (e.g., CARB's GHG inventory does not include front-of-the-meter methane emissions from natural gas infrastructure leaks for the residential and commercial sectors). The electricity emissions accounting is also reasonable. However, while the baseline approach may not include all sources of GHG emissions from energy use in buildings, SCE requests that CEC staff include additional data and analysis in the Assessment that consider how building decarbonization strategies might impact GHG emissions from sources not included in the baseline approach. For example, although front-of-the-meter methane emissions from natural gas infrastructure leaks may not be part of the GHG emissions accounting, the Assessment should describe how building decarbonization strategies impact methane emissions from production, transmission and distribution, and the meter.

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?*

SCE recommends the Assessment explore the role emerging technologies may play in meeting building decarbonization goals, including a comprehensive review of the challenges and opportunities for such technologies (e.g., very efficient heat pumps, ultra-low global warming potential (GWP) refrigerants, and retrofit-ready or low voltage options). CEC staff should consider including modeling scenarios that assume improvements in cost and performance for these technologies to inform research and development targets.

SCE also recommends the Assessment consider impacts, challenges, and opportunities for building developers and equipment manufacturers. For example, emissions from refrigerants will need to be addressed to enable the levels of building decarbonization necessary to reach the state's 2030 and 2045 environmental goals. However, clear limits on these high-GWP gases do not exist. This creates market uncertainty for equipment manufacturers who require clear expectations to schedule any phase-out of high-GWP refrigerants. The Assessment should also explore the role of building and appliance energy efficiency standards.

Finally, SCE recommends the Assessment include a review of building decarbonization programs in California and other states and recommend ways to improve the efficacy of ongoing and potential future programs. This should include load management initiatives, retrofit and new construction incentive programs, innovative financing models, gas and electric rate structures, and changes in codes and standards. For example, states such as Hawaii, Massachusetts, and Vermont are redesigning their energy efficiency programs with an increased focus on GHG emissions reduction.

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?

From a cost perspective, the Assessment should include (as listed above) indirect fuel infrastructure costs associated with building decarbonization strategies. CEC staff should also consider indirect benefits from building decarbonization strategies. Examples include health benefits such as improvements to indoor air quality and reduction in criteria pollutants; broader economic benefits such as job creation and innovation; and exclusion of gas piping from new construction of all-electric homes and buildings.

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?*

Rather than assessing each individual building decarbonization measure using a cost-effectiveness test like the CPUC does with energy efficiency and other distributed energy resources, CEC staff should use the Assessment to determine the least-cost portfolio of measures needed to reach building decarbonization targets in support of California's economywide environmental goals. Using GHG emissions reduction as a unifying metric by which to evaluate building decarbonization measures will ensure the Assessment's portfolio of measures and associated recommendations align with the state's goals.

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.*

In addition to the list of studies provided in the scoping document, SCE recommends *Pathway 2045*¹ be reviewed as part of the Assessment. *Pathway 2045* maps out a feasible and low-cost path to meeting California's long-term decarbonization goals, including an in-depth assessment of building decarbonization. The results show that almost three-quarters of space and water heating needs to be electric by 2045.

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

The Assessment should analyze the following building decarbonization strategies:

- Fuel switching (e.g., electric space and water heating);
- Electric load management (e.g., load shifting to mid-day);
- Emerging technologies (as discussed above);
- Whole-building strategies (i.e., integrated sets of decarbonization measures); and

¹ SCE's *Pathway 2045: Update to the Clean Power and Electrification Pathway* (2019) can be found at <https://www.edison.com/home/our-perspective/pathway-2045.html>.

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- Market transformation policy and program changes (e.g., codes and standards, incentive programs, innovative financing models, and gas and electric rate structures).

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?*

SCE recommends the workshops cover lessons learned from building decarbonization programs in California or other states. This should include load management initiatives, incentive programs, innovative financing models, gas and electric rate structures, and codes and standards. The workshops should also cover trends in emerging technologies for building decarbonization. Finally, the workshops should also provide an opportunity for stakeholders to review and comment on the modeling and analysis underlying the Assessment. This should occur once CEC staff has formulated a clear methodology and/or once preliminary results are generated. For example, SCE is interested in the assumptions or forecasts CEC staff will use to describe future electricity generation profiles when accounting for the incremental emissions from the increased loads from fuel substitution activities.

Conclusion

SCE thanks the CEC for consideration of the above comments and looks forward to its continued partnership with stakeholders in the development of the AB 3232 Building Decarbonization Assessment. Please do not hesitate to contact me at (916) 441-3979 with any questions or concerns you may have. I am available to discuss these matters further at your convenience.

Very truly yours,

/s/

Catherine Hackney