

DOCKETED

Docket Number:	19-IEPR-06
Project Title:	Energy Efficiency and Building Decarbonization
TN #:	229838
Document Title:	Comments of Environmental Defense Fund on the Integrated Energy Policy Report
Description:	N/A
Filer:	System
Organization:	Environmental Defense Fund/Michael Colvin
Submitter Role:	Public
Submission Date:	9/24/2019 3:54:43 PM
Docketed Date:	9/24/2019

Comment Received From: Michael Colvin
Submitted On: 9/24/2019
Docket Number: 19-IEPR-06

Comments of Environmental Defense Fund

Additional submitted attachment is included below.

**Comments of Environmental Defense Fund
on the Integrated Energy Policy Report August 27, 2019
Hearing on Building Decarbonization (Docket 19-IEPR-06)**

Environmental Defense Fund (EDF) is pleased to offer the following comments on the August 27, 2019 workshop focusing on Energy Efficiency and Building Decarbonization. EDF appreciates the thoughtful analysis done to date in this docket (and other related IEPR dockets) that indicates that building electrification is the most pragmatic and cost-effective way to decarbonize a building. EDF offers comments on the following areas:

- 1) the need for definitions to help define decarbonization goals in buildings
- 2) strategies for when electrification is not possible
- 3) what to do with legacy gas infrastructure

1. Need for Clarity on Building Goals and Definitions

EDF suggests that the Energy Commission focus on clarifying certain threshold definitions, including the difference between an all-electric building and a decarbonized building. Once clarified, the Energy Commission can then overlay these definitions with established state policy goals, including doubling of energy efficiency established in Senate Bill 350 and zero net energy buildings. The pathway to decarbonize a building will be different if it is existing versus new construction, and EDF encourages the Energy Commission to bring greater clarity to the space.

2. Strategies for Decarbonization When Electrification is Not Feasible

EDF anticipates that the primary way that a building will be decarbonized is to electrify each of the end uses and then supply that building's electricity with either on-site generation or with grid electricity dominated by renewables and other forms of carbon-neutral content. However, there are some instances where this model may not be feasible or appropriate. For instance, not all end uses in commercial and industrial buildings can be electrified. Those buildings should still be provided a decarbonization pathway. Another example may be renter/landlord situation, where the tenant pays the energy bill but cannot upgrade a building's equipment. A third option may be buildings that have recently undergone significant gas efficiency upgrades – it would be a waste of ratepayer money to “rip out” those recently installed units to electrify them before the end of their useful life. These are a few examples, and there are obviously many more. While EDF does not think that the Energy Commission should identify every single permutation of building type, fuel supply and ownership, it should consider each of these attributes as it designs the state's overall policy goals and objectives.

EDF is also keenly aware that there are several market-ready technologies to help buildings electrify, but the time and expense of building and electrical panel upgrades that would be required may make fuel switching impractical. The Energy Commission may wish to consider both contractor training and financing programs that would help reduce this barrier to entry.

3. Equity and Cost Implications of Legacy Gas Infrastructure

EDF contends that the most cost-effective way to decarbonize a building will be to electrify it. However, the gas system still has to be paid for. If an individual customer leaves the gas system, the remaining customers can assume the departed customer's fair share of the revenue requirement. One customer leaving the system will not make a material difference. However, if we start electrifying entire neighborhoods and cities, the state needs to think about who is left attached to the system. A significant reduction in the number of customers will lead to cost-shifts onto the remaining customers, threatening affordability. EDF contends that the early adopters who electrify will more likely have access to financial capital or disposable income, where it is likely the customers who remain on the system may not have such financial advantages. It would be a policy failure if the remaining customers, who are more likely to be low-income, got stuck with the price of the entire gas system. It would be unaffordable. The state may need to consider ratemaking remedies such as accelerated depreciation, securitization or exit fees as a remedy. Guidance from this docket on the timeline will help create a smooth transition.

In addition, the state may want to use the age, remaining book value and other attributes of the gas system to help prioritize when and where to electrify buildings. Using these attributes as criteria will help avoid uneconomic new investment in the system, and help maintain a safe and reliable gas system. We encourage the Energy Commission to develop timelines for the planned exodus away from the natural gas system as more buildings electrify, and to research fuel substitutes to flow through the gas system for when electrification is not feasible.

EDF attaches to these comments a recently released Gridworks¹ report entitled: *California's Gas System in Transition: Equitable, Affordable, Decarbonized and Smaller*. One recommendation in this report seems particularly relevant to this docket, which is the need for a gas infrastructure planning docket. Such work would include a statewide assessment of existing gas infrastructure, options for infrastructure contraction and other cost reductions, and identification of customers that have limited options for electrification.

¹ EDF participated as a stakeholder during this report's development. The full report is available online, at https://gridworks.org/wp-content/uploads/2019/09/CA_Gas_System_in_Transition.pdf
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Conclusion

EDF thanks the Energy Commission for its leadership on building decarbonization, and hopes that the next IEPR document will have clear definitions, strategies for decarbonization when electrification is not feasible, and long term planning for legacy gas investments.

Respectfully submitted on September 24, 2019

Michael Colvin
Director, California Energy Program
Environmental Defense Fund
mcolvin@edf.org | (415) 293-6122