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Comments on Draft Scoping Order for the 2021 IEPR

Additional submitted attachment is included below.



INSTITUTE OF THE ENVIRONMENT AND SUSTAINABILITY
LA KRETZ HALL, SUITE 300
619 CHARLES E. YOUNG DR. EAST
BOX 951496
LOS ANGELES, CA 90095-1496
PHONE: 310-825-5008
FAX: 310-825-9663
<http://www.environment.ucla.edu/>

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RE: Comments of the California Center for Sustainable Communities (CCSC) at UCLA on the Draft Scoping Order for the 2021 Integrated Energy Policy Report

The California Center for Sustainable Communities (CCSC) at UCLA's Institute for the Environment and Sustainability studies the evolution of urban infrastructural systems in California, and the social and environmental impacts of their operation, with special focus on those that deliver energy and water.

Accordingly, we welcome the opportunity to comment on the CEC's Draft Scoping Order for the 2021 Integrated Energy Policy Report. We have the following suggestions:

Background

For the 2021 IEPR, the CEC proposes to make the following enhancements to the forecast; 1) extend the forecast timeframe to 15 years to coincide with several state goals that are planned for 2035...

We suggest this be changed to read "...extend the forecast timeframe to 25 years to coincide with several state goals that are planned for 2035 and 2045...". This is also consistent with Scope Item 2, Bullet Point 1, which references a 25-year planning horizon for natural gas demand.

1. Energy Reliability Over the Next Five Years

Bullet Point 4: Whether it is economically workable to retrofit existing pipeline gas-fired electric generation resources to improve their efficiency to support achieving policy goals.

This point should clarify whether what is meant by 'economically workable'. Is the point meant to mean workable for the incumbent utilities, for the economic impact of GHG emissions and criteria pollutants mitigation, or other?

Bullet Point 5: Opportunities to address issues and barriers related to expanding the role of distributed energy resources and demand response in supporting reliability and resource sufficiency both in the near term and in long-term planning. This exploration will consider

market trends and will examine the current and potential roles of smart meter data in enabling these resources.

Barriers go beyond market trends and should include the grid infrastructure, including the impacts of Rule 21 and how it is applied, variously by the different utilities, behind the meter battery storage and its regulation regarding providing power to the grid, and more.

2. Evolving Role of Pipeline Gas: Trends and Outlook

Bullet Point 3: Explore the role of renewable gas, hydrogen, and other zero-carbon alternatives such as engineered carbon removal (ECR) in a low carbon future, to replace and/or complement the use of fossil gas with focus on: identification of the most suitable applications; availability and pricing; and opportunities to repurpose existing infrastructure to integrate the usage of renewable gas, hydrogen, and ECR.

We suggest that the assessment of the role of renewable gas also include consideration of the emissions of criteria pollutants and air toxics associated with its combustion, as well as the geographic distribution of those emissions, especially with respect to under-resourced communities. The way Bullet 3 is stated, implies a priori these resources should be integrated.

3. Building Decarbonization and Energy Efficiency

Bullet Point 2: An update on targets towards a statewide doubling of energy efficiency, as required by SB 350.

We suggest the IEPR address fundamental issues with the tracking and evaluation of energy efficiency measures. A radically transparent system should be developed to account for all ratepayer funds that have been invested in all aspects of EE programs (including administration, implementation, EM&V, research, etc.). An analysis of measured changes in energy consumption should be undertaken using actual, account-level metered energy data. An evaluation of the adequacy of EE program implementation and record-keeping should be undertaken, and recommendations made for improvements. Based on the aforesaid findings, a re-evaluation of the future role of EE in meeting the state's targets for GHG reduction should be undertaken, and should include consideration of the increase in home sizes occurring in parallel with Title 24 improvements¹.

Bullet Point 4: Analysis of equity considerations related to decarbonization to support equitable decarbonization measures.

This analysis should include consideration of households currently living with energy insufficiency, as well as households using excess amounts of energy per capita².

Bullet Point 5: Strategies to increase innovative financing approaches – removing the upfront costs barriers – for the comprehensive retrofits of existing buildings that support California's

¹ Fournier, E.D., Federico, F., Porse, E., Pincetl, S. (2019). Effects of Building Size Growth on Residential Energy Efficiency and Conservation in California. *Applied Energy*, 240, 446-452. DOI: 10.1016/j.apenergy.2019.02.072

² Fournier, E.D., Cudd, R., Federico, F., and Pincetl, S. (2020). On Energy Sufficiency and the Need for New Policies to Combat Growing Inequities in the Residential Energy Sector. *Elementa, Science of the Anthropocene* 8: 24. DOI: <https://doi.org/10.1525/elementa.419>

decarbonization goals, including expanded financing opportunities for renters and low-income Californians, to be done in collaboration with CPUC initiatives (for example, CPUC Rulemaking 20-08-022).

The thinking around financing for low-income and under-resourced communities needs to recognize the inappropriateness of expecting market-based approaches to address needs in these communities.

4. Energy Demand

Electricity, Natural Gas, and Transportation Demand Forecasts: The CEC will prepare new end-user electricity, natural gas, and transportation fuel demand forecasts to 2035.

As mentioned above, we suggest that demand forecasts be extended through 2045, given the state's target for a 100% renewable electricity grid by that date. While we recognize that forecast uncertainty increases with the forecast horizon, 25 years is not too far in advance to start planning for this pivotal point in the state's energy system future.

[T]he CEC will reassess the impacts on electricity demand of climate change, behind-the-meter generation, adoption of battery storage, energy efficiency standards, fuel substitution programs, and transportation electrification trends.

As mentioned above in our comments on Scope Item 3, Bullet Point 2, we believe there needs to be a deep reassessment of the impact of energy efficiency standards on electricity demand, using actual metered energy data, as well as addressing gaps in recordkeeping and accessibility of data on energy efficiency programs and expenditures.

[T]he CEC will improve methodologies for quantifying the likelihood, severity, and duration of future extreme heat events.

We recommend this also include consideration of the direct impact of high heat on grid infrastructure³.

³ Burillo D., Chester M.V., Pincetl S., Fournier E. 2019. Electricity infrastructure vulnerabilities due to long-term growth and extreme heat from climate change in Los Angeles County. Energy Policy 128:934-953.