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Center for Sustainable Energy (CSE) Comments on Draft Scoping Order for the 2021 Integrated Energy Policy Report

Additional submitted attachment is included below.

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February 19, 2021

California Energy Commission
Docket Unit, MS-4
Re: Docket No. 21-IEPR-01
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket No. 21-IEPR-01– Comments of Center for Sustainable Energy® regarding the Draft Scoping Order for the 2021 Integrated Energy Policy Report Update

I. INTRODUCTION

The Center for Sustainable Energy® (CSE) appreciates the opportunity to comment on the Draft Scoping Order for the 2021 Integrated Energy Policy Report Update (2021 IEPR Update). CSE is a 25-year-old national nonprofit driven by one simple mission – decarbonize. We provide program administration, technical assistance, and policy advisement, and serve as a trusted and objective resource helping government agencies implement successful sustainable energy programs. Our vision is a future with sustainable, equitable, and resilient transportation, buildings, and communities, and as such, we support holistic and long-term planning with an integrated approach.

CSE commends the California Energy Commission's (Energy Commission) leadership in developing and updating the Integrated Energy Policy Report, which provides essential information for policymakers and stakeholders on the current and forecasted state of the energy sector. Regularly updated reports allow for more efficient planning of clean energy strategies, and the comprehensive scope of the IEPR provides greater opportunity to integrate these strategies and measure progress toward state climate goals. CSE supports the four key topics proposed for the 2021 IEPR Update and is pleased to offer the following comments on the Draft Scoping Order. In addition to our general support of the areas of discussion outlined within each of the four topics, we offer the following specific recommendations:

1. ***Energy Reliability Over the Next Five Years***
    - Prioritize distributed energy resources and demand response solutions and explore new market mechanisms to encourage their deployment, while ensuring equitable access to low-income consumers, low-income communities, disadvantaged communities and tribes.
    - Include an assessment of opportunities for storage resources to improve reliability.
2. ***Evolving Role of Pipeline Gas: Trends and Outlook***
    - Explicitly include equity considerations and impacts on the existing workforce within analytical assessments.
    - Develop a framework for assessing when renewable gas, hydrogen, and other zero-carbon alternatives are consistent with decarbonization goals to guide decision-making.
3. ***Building Decarbonization and Energy Efficiency***
    - Focus on accessible financing solutions, such as on-bill financing, and explore emerging private financing models including energy as a service.

- Consider strategies for addressing ongoing maintenance and retrocommissioning cost barriers.
- Review the coordination, training, and data needs of local and regional governments and make recommendations to address needs and include a discussion of workforce needs for implementing decarbonization measures.

II. ENERGY RELIABILITY OVER THE NEXT FIVE YEARS

As California transitions to a decarbonized future, maintaining the safe and reliable delivery of electricity to all Californians remains the upmost importance. Increasing penetrations of intermittent renewable resources on the grid, electrification strategies in the building and transportation sectors, and early retirements of generation resources misaligned with state goals will require careful planning and new and innovative solutions to reliability needs. As such, CSE supports the Energy Commission's proposed analysis of electric reliability over the next five years.

We are specifically encouraged by the Energy Commission's recognition of the important role distributed energy resources (DER) and demand response (DR) can play in supporting reliability and resource planning. Furthermore, investments in targeted energy efficiency and demand-side management strategies for reducing stress on the grid should not only be encouraged but prioritized for meeting reliability needs to be consistent with the state's loading order policy.

As such, CSE supports the proposed review of opportunities to address issues and barriers to expanding the role of DERs and DR, including an examination of market trends. In addition, we recommend such a review explore additional opportunities to open the market to DER and DR solutions, such as reconsidering existing market structures and the evolving role of various actors, including community choice aggregators, distribution system operators, DER providers, etc. The deployment of and access to these DER and DR solutions needs to happen in an equitable manner to ensure that low-income consumers, disadvantaged communities, low-income communities, and tribes also reap the economic and health benefits afforded by these technologies.

We believe the analysis completed through the 2021 IERP Update will support ongoing efforts in the state to expand the use of DERs and DR, such as the California Public Utilities Commission's (CPUC) *Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning, and Evaluation of Integrated Distributed Energy* (R.14-10-003) and the California Independent System Operator's (CAISO) energy storage and distributed energy resources (ESDER) initiative. Moreover, it is evident that energy storage will play an essential role in maintaining reliability as the grid is increasingly powered by intermittent renewable resources, and as such, we recommend including an assessment of opportunities for storage resources to improve reliability that considers battery, thermal, flexible combined heat and power (CHP), and other energy storage resources.

III. EVOLVING ROLE OF PIPELINE GAS: TRENDS AND OUTLOOK

CSE recognizes there will be several challenges for the energy system as the state moves towards a decarbonized future, one of which will be addressing the evolving role of pipeline gas. As such, we applaud the Energy Commission for including an assessment of the gas system in the 2021 IEPR Update. Accurate data and forecasting of various scenarios will be essential for informing strategic planning efforts aimed at reducing the state's reliance on fossil fuels and corresponding infrastructure in a way that ensures a just and safe transition. As such, we strongly support the proposal to coordinate with the CPUC to develop analytical assessments to study the impacts of a decline in fossil gas on rates and system reliability. CSE recommends these analytical assessments explicitly include equity considerations, as well as impacts on the existing fossil fuel workforce.

CSE also recognizes that renewable gas, hydrogen, and other zero-carbon alternatives will play an important role in meeting California's decarbonization goals. However, these resources and technologies should be limited to use cases in which there are not currently viable all-electric alternatives and remain consistent with state goals. As such, CSE supports the proposal to identify the most suitable applications for renewable gas, hydrogen, and other zero-carbon alternatives and encourages the Energy Commission to develop a framework for assessing when renewable gas, hydrogen, and other zero-carbon alternatives are consistent with decarbonization goals to guide decision-making. Example questions to consider for prioritizing use cases include:

- *Is there an all-electric alternative that is cost competitive, technologically feasible, and provides the same values?*
- *Does the use case contribute to additional fossil fuel infrastructure that will lock in long-term use (e.g., >10 years)?*
- *Does the technology result in the capturing of emissions that would otherwise be released into the environment?*
- *Will policy support of the technology and respective fuel source build a market for carbon-emitting practices that would not be valuable otherwise?*
- *Is there a viable path forward to a zero/negative-emission future or phase out plan?*

IV. BUILDING DECARBONIZATION AND ENERGY EFFICIENCY

CSE strongly agrees with the Draft Scoping Order's assertion that "[d]ecarbonizing California's building stock is an essential element of meeting the state's long-term carbon neutrality goals," and as such, is supportive of the Energy Commission's proposed focus on this topic within the 2021 IEPR Update. We are specifically encouraged by the inclusion of equity considerations, expanded financing opportunities for renters and low-income Californians, and integration of building decarbonization and energy efficiency (EE) with load flexibility efforts.

CSE agrees that removing the upfront cost barriers for comprehensive retrofits will be essential for decarbonizing the existing building stock necessary for meeting the state's climate goals. Financing opportunities must be available to all Californians, especially low-income consumers, disadvantaged communities, low-income communities, and tribes. As such, we encourage the Energy Commission to focus on accessible financing solutions, such as on-bill financing and other strategies outlined in a 2020 policy roadmap developed by the Building Decarbonization Coalition.[1]

Moreover, we applaud the Energy Commission for exploring emerging private financing models. One such model to consider is energy as a service (EaaS), which currently exists in various forms for residential and commercial and industrial (C&I) customers who are willing to share the risk in the upfront cost but outsource the entire energy needs of the customer, such as rooftop solar leasing. California should work to pioneer the EaaS business model beyond the success it has already demonstrated in the solar and storage market. Pilot demonstrations and incentives for EaaS geared toward deep energy efficiency and electrification retrofits could spur accelerated adoption of electric, efficient, and flexible HVAC equipment and water heating in residential and C&I customer segments.

In addition to removing upfront cost barriers, CSE recommends the 2021 IEPR Update also consider strategies for addressing ongoing maintenance and retrocommissioning cost barriers. CSE's experience managing retrofit projects, specifically in the Electric Program Investment Charge (EPIC)-funded *San Diego Libraries Zero Net Energy (ZNE) and Integrated Demand Side Management Demonstration Project* and *Empowering Energy Efficiency in Existing Big-Box Retail/Grocery Stores Project*,[2] has demonstrated the challenges associated with estimating the costs and ensuring financing for equipment repairs and maintenance items that follow a significant retrofit project.

CSE supports the proposal to include a discussion of data and analytical tools needed to enhance assessments and measure progress of decarbonization of California's building stock. Both of the EPIC-funded EE retrofit projects noted above have experienced several challenges with existing data and tools, including evaluating ZNE achievement based on time dependent valuation (TDV), integrating submetering data into controls systems, ensuring accurate collection of whole-building data, and gathering onsite generation data for buildings with power purchasing agreements. Moreover, measuring progress of building decarbonization efforts will benefit from a robust and accurate inventory of the state's building stock as well as research to identify the differences between expected energy performance and actual performance of code-compliant buildings.

As many of these efforts are implemented at the local and regional level, we recommend the update include a review of coordination, training, and data needs of local and regional government entities to

[1] Mast, B., Hummel, H., & Clinton, J. (2020). *Towards an Accessible Financing Solution* [White Paper]. Building Decarbonization Coalition. http://www.buildingdecarb.org/uploads/3/0/7/3/30734489/bdc_whitepaper_final_small.pdf

[2] Additional project information available at https://sites.energycenter.org/sdzn3 and https://sites.energycenter.org/bigbox/

ensure the successful implementation of state policies. Moreover, decarbonizing the building sector will require a well-trained workforce to install technologies, such as heat pumps, as well as an understanding of load management concepts, controls integration, and the interaction of building systems. As such, CSE suggests the 2021 IEPR Update building decarbonization analysis include a discussion of workforce training and development needs.

More broadly, CSE recommends the Energy Commission consider the current state, and future, of EE in California. The investor-owned utility (IOU) EE rolling portfolio programs, which have been historically impactful, are significantly hampered by current regulatory restraints, in particular cost-effectiveness requirements. For this reason, CSE urges the Energy Commission to explore and encourage opportunities to complement, and transcend, the IOU programs by finding more innovative and holistic approaches to reducing energy consumption and greenhouse gas (GHG) emissions. Such opportunities will be essential to meeting state goals, particularly the cumulative doubling of EE. Specifically, CSE is optimistic that the CPUC's Market Transformation framework can serve as an effective vehicle to identify the next tranche of EE initiatives and urges the Energy Commission to consider the potentially significant role of this new paradigm.

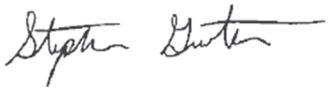
V. ENERGY DEMAND

Regularly updated data is essential for maintaining the accuracy and value of energy forecasts. As such, CSE strongly supports the proposal to update the energy demand forecast, including the proposals to extend the forecast timeframe to 15 years, improve methodologies around future extreme weather events, and develop additional energy demand scenarios. Moreover, reassessing 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, is critical for understanding their potential impact on California's load profile and helping inform strategies for managing the grid to maximize their benefits, such as GHG emissions reductions. Lastly, we applaud the proposal to explore new programs, policies, potential market changes, and other demand-side strategies alongside the energy demand forecast effort.

VI. CONCLUSION

CSE appreciates the opportunity to provide these comments regarding the Draft Scoping Order for the 2021 IEPR Update. We look forward to continued collaboration with the Energy Commission and stakeholders in updating the IEPR to help inform future energy policy and planning efforts.

Sincerely,



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