

CPUC

Clean Coalition response to:

**Advice 3379-G/4215-E
(Pacific Gas and Electric Company ID U 39 M)**

**Advice 2887-E
(Southern California Edison Company ID U 338 E)**

**Advice 2473-E
(San Diego Gas & Electric Company ID U 902 M)**

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I. Introduction

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to local energy systems through innovative policies and programs that deliver cost-effective renewable energy, strengthen local economies, foster environmental sustainability, and enhance energy security. To achieve this mission, the Clean Coalition promotes proven best practices, including the vigorous expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load.

The Clean Coalition drives policy innovation to remove major barriers to the procurement, interconnection, and financing of WDG projects and supports complementary Intelligent Grid (IG) market solutions such as demand response, energy storage, forecasting, and communications. The Clean Coalition is active in numerous proceedings before the California Public Utilities Commission and other state and federal agencies throughout the United States, in addition to work in the design and implementation of WDG and IG programs for local utilities and governments.

A summary of our comments on the CES-21 advice letters follows:

- The Clean Coalition supports CES-21 and its funding mechanism since we feel that well-spent R&D provides many societal goods that far outweigh the direct expenditures
- We also support the IOU request to extend the first-year program to 18 months, for the reasons stated in the advice letters
- That said, we are concerned about the governance structure and accountability of CES-21. We also recognize that it is too late in the process for major changes, so we recommend, rather than wholesale changes, that the Commission commit to reviewing in detail the current governance

structure after the first 12-18 month cycle is completed, with an eye toward accountability for results.

- We urge the Commission and CES-21 board to drop the cyber security component of this research effort since the IOUs are heavily incentivized and compensated to ensure adequate cyber security without CES-21 funding. At the least, the Commission should require more information before agreeing to fund the cyber security component
- We urge the Commission and the CES-21 board to allocate 40% of all ratepayer funds for competitive third party solicitations, with at least half of that amount offered in competitive solicitations
- We strongly oppose the IOU suggestion that all intellectual property accrue to the IOUs. Rather, ratepayer-funded research should result in ratepayer benefits and refunds to ratepayers if revenue is realized from such intellectual property. We urge the Commission to request comments from parties and/or to hold a workshop on this important issue
- We also urge the Commission and CES-21 to define a process for regularly soliciting third party ideas about appropriate research agendas and specific research projects
- We urge one specific research area to be added at this time: automation of interconnection studies. Interconnection and grid modeling improvements are addressed in some areas of CES-21 but improving the interconnection study process is not specifically addressed. Due to the importance of improving this process we strongly urge CES-21 to add this area to its first 18-month agenda

I. Discussion

A. The Clean Coalition supports CES-21

The Clean Coalition supports CES-21 and its funding mechanism since we feel that well-spent R&D provides many societal goods that far outweigh the direct expenditures. We also support the IOU request to extend the first-year program to 18 months, for the reasons stated in the advice letters

B. The CES-21 governance structure should be monitored and restructured if necessary

While the Clean Coalition is supportive of CES-21, we are concerned about the governance structure and accountability of this major new R&D effort. In particular, we feel that additional Commission oversight or structural changes may be needed to improve accountability for the large sums of ratepayer monies that will be allocated to this five-year effort. We also recognize that it is too late in the process for major changes, so we recommend, rather than wholesale changes, that the Commission commit to reviewing in detail the current governance structure after the first 12-18 month cycle is completed. The Commission should not lose sight of the fact that ratepayers are entirely funding this effort, requiring that accountability for ratepayer benefits be paramount in any evaluation of CES-21.

C. Cyber security efforts should not be funded through CES-21 without more analysis

Table 1 (p. 5) of the advice letters lists the IOUs’ requested funding for the first 18 months and for the full five-year period. Cyber Security is the single biggest line item, with \$35.9 million requested over 66 months and \$7.1 million requested for the first 18 months. P. 4 of the business case for Cyber Security research lists two alternatives to the proposed research and concludes without any analysis that the alternatives don’t measure up to the proposed CES-21 research in terms of benefits. P. 5 of the business case states that no duplication of research will occur in this area. P. 7 of the business cases describes some “market research” in this area.

It seems, however, with respect to the Cyber Security component, and for other components of the proposed research, that a more robust effort should be made to demonstrate 1) that the proposed research isn’t already being done, and 2) why it must instead be funded by CES-21. Without these additional details the Commission has little means for determining the need for, or wisdom of, the proposed research. While we feel that these criteria should apply to all areas of proposed research, it is particularly important with respect to the cyber security area because this is by far the single biggest budget item and because it seems that a vigorous national focus on cyber security may provide for some savings in this area. Cyber security is an important national issue that is being largely addressed by DOE, DHS and DOD actions at the federal level in addition to private enterprise initiatives. CES-21 funding should be prioritized toward issues, including those aspects of security, which are not duplicated elsewhere and have special relevance for California’s goals and circumstances.

For example, in the statement regarding lack of duplication, the IOUs should be required to list current similar efforts, rather than simply issue a statement of non-duplication, and describe how the proposed research will complement

existing efforts. It seems that in the key area of cyber security that many similar efforts are taking place now – particularly given the importance of the cyber threat that the advice letters demonstrate.

Last, since there are clear shareholder benefits from the proposed research, a case should also be made as to why no shareholder funding is to be provided. Or, if there is a good case that shareholders should contribute funds, a defined amount should be specified for each area.

D. Intellectual property should not accrue solely to shareholders

Similarly, intellectual property resulting from CES-21 should not accrue solely to IOU shareholders. The advice letters state (p. 13):

As specified in OP 18 of D. 12-12-031, the Joint Utilities have the option to jointly retain title and authority to license any intellectual property produced or derived from the CRADA, and upon request the Joint Utilities will license such intellectual property on fair, reasonable and non-discriminatory grounds to Lawrence Livermore National Security, LLC (LLNS) and third parties for a fair and reasonable licensing fee, subject to Commission approval as appropriate and also subject to rights retained by the U.S. Federal Government under the CRADA. (D.12-12-031, OP 18).

This seems to be a clear example of socialized investments from ratepayers leading to purely private profit. As such, the Commission should deny this aspect of CES-21. The Clean Coalition feels strongly that ratepayers must benefit from any intellectual property resulting from ratepayer funding. We recommend that any revenue from CES-21 intellectual property (licensing or otherwise) be recycled back into CES-21 R&D efforts, or if this revenue is realized after CES-21 has ended, such funds should be dedicated to a new R&D effort focused on needs identified by the Commission working with the IOUs and stakeholders. However, we feel that this is an area of sufficient importance that the

Commission should request comments from parties on this specific issue and/or hold a workshop to air the relevant discussion points before making a final decision.

E. 40% of all CES-21 funds should be allocated to third party research

No figures are provided in the advice letters for the amount of research funding that will go to third parties. P. 13 of the advice letters describes planned “third party activities,” but does not include numbers or dollar amounts. We recommend that at least 40% of CES-21’s budget be allocated for third party research, with at least half of this amount to be awarded only after a competitive solicitation. This allocation ensures that this ratepayer funding will be devoted to research that includes a broader set of perspectives, will draw from the strengths of various institutions and companies, and will benefit a broader swath of the research community than just the IOUs and LLNL. Allowing half of the third party funding to go to non-competitive solicitations provides more flexibility to CES-21 than requiring that all of this funding be provided in competitive solicitations.

F. CES-21 should include a defined process for considering research recommendations by third parties

We also urge the Commission and CES-21 to define a process for regularly soliciting third party ideas about appropriate research agendas and specific research projects. We recommend an annual process whereby ideas are solicited actively, preferably with an online portal, with a defined beginning and ending date for solicitations, and a template provided. CES-21 staff should acknowledge receipt of submitted proposals and should have staff review all submissions in a

process that takes each submission seriously.

G. Interconnection study optimization and automation should be added as a research area in the first 18 months

We urge one specific research area to be added at this time: automation of interconnection studies. Interconnection and grid modeling improvements are addressed in the “Planning Engine” section of the advice letters but the interconnection study process is not specifically addressed. Due to the importance of improving the interconnection study process we strongly urge CES-21 to add this area to its first 18-month agenda.

We describe this reform effort as “Interconnection 3.0.” Interconnection 3.0 refers to a future interconnection process that relies on the most up-to-date information technology and grid modeling. Rather than waiting years for interconnection studies, as is often the case with current procedures, Interconnection 3.0 will allow parties to obtain phase I studies or Fast Track results within a matter of hours or days, make a decision about how to proceed and then receive the results of Phase II studies within days also. In short, Interconnection 3.0 will radically improve current interconnection study procedures and act as a gold standard model for other states and nations.

This vision is possible because modeling software may be improved such that current procedures that rely heavily on engineering judgment and antiquated procedures may be eliminated or improved. With a robust grid model, each utility will be able to simply plug in the applicant’s data and receive information with respect to necessary upgrades and the costs of such upgrades in a dramatically accelerated process. At the least, the current cluster study process could through these efforts be dramatically sped up.

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II. Conclusion

We urge the Commission to adopt the above recommendations.

Respectfully submitted,

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Tam Hunt

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