BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Resources Future.  
Rulemaking 21-06-017  
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CLEAN COALITION COMMENTS IN RESPONSE TO ADMINISTRATIVE LAW JUDGES’ RULING SETTING A WORKSHOP, ADMITTING INTO THE RECORD PART 1 OF THE ELECTRIFICATION IMPACTS STUDY AND RESEARCH PLAN, AND SEEKING COMMENTS

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I. INTRODUCTION


II. DESCRIPTION OF PARTY

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of distributed energy resources ("DER") — such as local renewables, demand response, and energy storage — and we establish market mechanisms that realize the full potential of integrating these solutions for optimized economic, environmental, and resilience benefits. The Clean Coalition also collaborates with utilities, municipalities, property owners, and other stakeholders to create near-term deployment opportunities that prove the unparalleled benefits of local renewables and other DER.

III. FEEDBACK ON PART 1 OF THE ELECTRIFICATION IMPACTS STUDY

The Clean Coalition appreciates the hard work that Kevala put into preparing Part 1 of the Electrification Impacts Study ("EIS"). We laud the bottom-up methodology used in the study as necessary to approximate the costs of electrification in a more holistic fashion than has
previously taken place on the record for this proceeding. In addition to the shocking $50 billion price tag, the study clearly underscores the need to expand the scope and time horizon of the Distribution Planning Process (“DPP”). For each of the three utilities, Kevala presents a difference cost for the necessary capacity upgrades of the primary distribution system by comparing the Base Case in the 2021 Integrated Energy Policy Report (“IEPR”) to the Grid Needs Assessment (“GNA”). The Clean Coalition supports Kevala’s takeaway that the difference should be analyzed in Part 2 of the study.

The unmitigated case presented in Part 1 of this study definitively shows that the uptake in electric vehicles (“EVs”) as Transportation Electrification occurs will be the main driver of the changing electric grid, on both the primary and secondary distribution system. While EV adoption poses a significant cost to the grid, EVs offer unique benefits as mobile batteries that can be utilized during extreme weather events or other issues that call grid reliability into question. A question also remains—to be answered in Track 2 of this proceeding—about the level of savings associated with the implementation of a Distribution System Operator (“DSO”) system. According to a 2016 study (see below) by Southern California Edison (“SCE”), coordinated DER management has the potential to increase the value of DER to as much as 140% of the value that the average DER can create.

![Figure 5: Impact of DSO coordination of DERs on benefits to grid](image)

Note: 100% indexed to average DER benefits

- Energy
- Capacity
- Distribution
- Operational
- Societal

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Southern California Edison, September 2016
The costs of transitioning the grid in order to achieve electrification need to be compared with the different levels of savings the ratepayers will realize depending on the path the state chooses to accomplish its energy goals.

While it is not a focus of the study, Part 1 shows the value that the widespread deployment of microgrids can have in reducing the number of upgrades needed. EVs charging during daylight hours, when solar is at peak production levels, will actually help the grid by reducing the amount of energy that needs to be curtailed or traded on energy imbalance markets. The real need for upgrades will come from EVs charging during peak periods, which makes microgrids capable of islanding (or scheduled to island) during the system peak extremely valuable. Both microgrids at individual facilities and Community Microgrids can provide this service. Beyond microgrids, this study should be the start of a dialogue about new and innovative agreements between the utility and new generation/load about constraints that might limit upgrades. Moreover, while the purpose of this proceeding is not to prescribe the proper number of DER, it is worth noting that strategically sited DER—including energy storage—have the potential to mitigate some of the upgrades that will otherwise be required.

An expected 30% of the total cost—$15 billion of a total $50 billion—will be needed for secondary distribution upgrades. This calls into question whether there will enough transformers; given the existing (and continuing) shortage, this issue needs to be a priority.

IV. CONCLUSION

The Clean Coalition appreciates the opportunity to submit these comments in response to Part 1 of the EIS and we look forward to continuing the dialogue.

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