

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the Commission's Own Motion to Conduct a Comprehensive Examination of Investor Owned Electric Utilities' Residential Rate Structures, the Transition to Time Varying and Dynamic Rates, and Other Statutory Obligations.

Rulemaking 12-06-013  
(Filed June 21, 2012)

**INFORMAL COMMENTS OF UTILITY CONSUMERS' ACTION NETWORK ON  
ENERGY DIVISION WORKSHOP FOR ADVANCED DER AND FLEXIBLE LOAD  
MANAGEMENT PROPOSALS HELD MAY 25, 2021**



June 11, 2021

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**I. INTRODUCTION**

On May 25, 2021 Energy Division hosted a virtual workshop to discuss ideas for advanced distributed energy resources (DER) and demand flexibility management, leveraging new system-wide retail rate reforms and load modifying demand response proposals. UCAN supports a Commission Rulemaking to consider all of Energy Divisions' proposals regarding Advanced DER and Demand Flexibility Management.

**II. DISCUSSION**

**A. UCAN Supports a Rulemaking to Consider Energy Division Proposals**

**1. Opening Remarks by Commissioner Houck**

Commissioner Darcie Houck's excellent opening remarks described the challenges California faces to meet the goals of SB 100 to power all retail electricity sold in California with renewable and zero-carbon resources by 2045. As detailed by Commissioner Houck, for the past 140 years we have relied on a flexible fossil fuel energy supply of coal and gas that could be easily dispatched to match customer demand. The old assumption was customer demand remained inflexible and the energy system simply needed to be built to meet it. However, as California has increasingly moved toward a clean energy standard, these assumptions are changing.

As the state works to achieve its clean energy standard and transition away from coal and gas, a big challenge exists in the need to integrate a high level of these renewable but non-dispatchable resources such as solar and wind. One way to meet this challenge is by optimizing all the new tools and technologies available to send time-varying price signals and sufficiently schedule end-use loads and re-shape demand and make it more responsive to supply. This form of flexible load management could provide significant overall system benefits.

As further described by Commissioner Houck, the potential benefits from a responsive and efficient load management system include 1) reduction in peak demand 2) reduction in system and generation capacity costs 3) reduction in greenhouse gas emissions 4) integration of a high level of renewables 4) avoiding mid-day solar curtailment and 6) reshaping the duck curve to avoid a need for 8,000 MW ramps by 2030. All of these potential benefits could help California reach its goal of 100 percent clean electricity by 2045 while maintaining reliability and controlling costs.

## **2. Energy Division Staff Discussions and Presentations**

At the workshop, Energy Division staff provided an informative look-back at all the proceedings and other events at the Commission that laid the groundwork and paved the way for their proposals. All of this previous work provided the sense of a “unified vision” regarding advanced rate design and load modifying demand response strategies. Staff expressed the belief that the current system was “not dynamic enough” from a rate design, demand response and load flexibility standpoint, especially to meet California’s aggressive clean energy goals.

In recommending that the Commission open a Rulemaking to explore Staff Proposals, Energy Division envisioned a single comprehensive venue to address program and policy collaborations in rate design and demand response that could help reduce confusion and increase efficiency. Similar to Commissioner Houck, Energy Division Staff pointed out the many potential benefits of improved integration strategies for system-wide load management including: improved management of ramping and extremes in demand; addressing outdated rate design elements by moving to locational rates that reflect wholesale prices and valuation of an increasingly bidirectional transactional grid; enhancing economic values of DER investments; and leveraging automated technologies for improved load management and grid optimization. Following this overview and historical look-back, staff then presented numerous well-informed and well thought out proposals to address the need for demand response flexibility.

UCAN found the proposals compelling and highly detailed with a comprehensive look back at all the work done in preparation for the proposals. Additionally, the proposals offered an incredibly prescient look forward at the modifications that need to be made to rate design and demand response flexibility in order to optimize available technologies and reach 100% clean energy by 2045. UCAN supports the Energy Division’s recommendation to open a Rulemaking and explore all of these ideas and proposals.

While supporting California’s clean energy goals, UCAN continues to have concerns about affordability issues. Exploring the proposals from Energy Division could help with a lower cost grid of the future. A growing body of evidence shows that a better managed grid with more demand flexibility could help lower overall system costs.

### **3. Need for Data Access a Common Theme and Should be Scoped into Rulemaking**

UCAN notes a common theme that ran throughout the workshop was more access to data. Several presenters discussed how “the data is out there” but that one of the barriers was “access to data.” Many of the proposals, programs and solutions hinge on reliable data. Major strides in developing advanced rate designs and demand flexibility depend on access to data with open-source possibilities. UCAN believes this is a very important issue and should be scoped into the Rulemaking.

#### **B. Evidence Investments in Transmission and Distribution are Main Cost Drivers**

UCAN continues to voice concern about affordability issues.<sup>1</sup> While supporting California’s clean energy goals, UCAN has concerns about the burdens on ratepayers to pay for the myriad of programs the utilities are being directed to provide. These programs include all the transportation electrification projects approved by the Commission over the past several years.<sup>2</sup> Additionally, as we learned at the Affordability Workshop held in the Transportation Electrification Framework proceeding (R.18-12-006) back on February 24, 2021, rates continue to rise due to investments in transmission and distribution:

“Across all three IOUs since 2013, rates have increased by 37% for PG&E, 6% for SCE, and 48% for SDG&E. The growth in rates can be largely attributed to

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<sup>1</sup> UCAN is participating in proceedings addressing affordability issues including: R.18-07-006 (Affordability of Utility Service); R.18-07-005 (Disconnections and Reconnections); R.21-02-014 (Covid-19 Arrearages).

<sup>2</sup> In the SDG&E territory see D.18-05-040 approving Standard Review Projects; D.18-01-004 approving Priority Review Projects; D.16-01-045 approving Power Your Drive Pilot; D.21-04-014 approving Power Your Drive Extension.

increases in capital additions driven by rising investments in transmission by PG&E and distribution by SCE and SDG&E.”<sup>3</sup>

Clearly, these types of dramatic increases are unsustainable and ratepayers bear an unfair burden as they struggle to afford an essential service. Consequently, UCAN believes a Rulemaking to examine the Energy Division proposals is timely. As noted by Commissioner Houck and Energy Division staff, advanced rate design and demand flexibility that optimizes grid conditions can have the effect of avoided system costs. A growing body of evidence supports this premise and needs to be further explored.

### **C. Growing Evidence that DERs and Demand Flexibility Can Reduce Both Costs and Emissions**

As noted at the workshop, advanced rate design and demand flexibility optimizing grid conditions can have the effect of avoided system costs, including transmission and distribution. By identifying and including the value of DERs (solar, battery storage, automated load management) and their ability to assist with flexible demand, there could be less need to build more resources for peak time. These resources are generally expensive transmission and distribution investments and as noted above, these are driving up electricity costs. Avoiding these costs is a necessary step for affordability and lower emissions. New modeling supports this theory.

A recent article by David Roberts for Volts newsletter explains how rooftop solar and home batteries can make a clean grid more affordable.<sup>4</sup> He includes a study by energy modeler Dr. Christopher Clack and his team at Vibrant Clean Energy (VCE).<sup>5</sup> The team developed a model that takes into account DERs and the service they provide. By including distribution grids in the model and co-optimizing those grids with the transmission system, the results show a source of grid flexibility that could save costs. While UCAN has not yet independently evaluated this study, the results follow the theory of the workshop that by creating more demand flexibility system and generation capacity costs could be avoided. This is all good news for ratepayers.

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<sup>3</sup> See Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, Rates, and Equity issues Pursuant to P.U. Code Section 913.1, p. 7. Accessed on the Commission website 6/10/21: [https://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Website/Content/Utilities\\_and\\_Industries/Energy/Reports\\_and\\_White\\_Papers/Feb%202021%20Utility%20Costs%20and%20Affordability%20of%20the%20Grid%20of%20the%20Future.pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Reports_and_White_Papers/Feb%202021%20Utility%20Costs%20and%20Affordability%20of%20the%20Grid%20of%20the%20Future.pdf).

<sup>4</sup> <https://www.volts.wtf/p/rooftop-solar-and-home-batteries>

<sup>5</sup> [https://www.vibrantcleanenergy.com/wp-content/uploads/2020/12/WhyDERs\\_TR\\_Final.pdf](https://www.vibrantcleanenergy.com/wp-content/uploads/2020/12/WhyDERs_TR_Final.pdf)

Consequently, UCAN supports a Commission Rulemaking to explore Energy Division proposals and the research behind any modeled cost savings.

### III. CONCLUSION

With such options as locational hourly pricing and automated load shifting options, ratepayers could optimize their electricity usage to take advantage of fluctuating grid conditions. Such opportunities could provide abundant system savings costs for ratepayers. UCAN supports the Energy Division's recommendation to the Commission to open a Rulemaking on these matters and looks forward to participating in shaping the Grid of the Future.

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Respectfully submitted,

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