

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking To
Enhance the Role of Demand Response
in Meeting the State's Resource
Planning Needs and Operational
Requirements.

Rulemaking 13-09-011
(Filed September 19, 2013)

**REPLIES TO PHASE TWO FOUNDATIONAL QUESTION RESPONSES OF
ENVIRONMENTAL DEFENSE FUND**

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1. Introduction

The Environmental Defense Fund (“EDF”) commends the parties in this proceeding for submitting a set of thoughtful responses to the California Public Utilities Commission’s (“CPUC” or “Commission”) foundational questions. The scope and depth of the submissions provide a solid basis from which to engage in further research, inquiry, and dialogue.

Parties offered a mix of recommendations, as requested in the Commission’s Scoping Memo, relevant to: (1) bifurcation, (2) cost allocation, and (3) back-up generators.¹ EDF replies with the following thoughts related to comments on each issue.

2. Bifurcation

Parties offered a diverse set of comments on whether and/or how to bifurcate demand response (“DR”) resources. Setting aside this broader issue, for which more consideration is warranted, EDF strongly recommends that any bifurcation scheme reflect the following elements:

Commensurate Treatment. Appropriate structures need to be established, which flow through demand and supply chains, to motivate all involved entities, including consumers, Load

¹ Role of Demand Response in Meeting the State’s Resource Planning Needs and Operational Requirements, R. 13-09-011, Attachment 1 (issued Nov. 14, 2013) (Scoping Memo).

Serving Entities (“LSEs”), and third parties. All DR resources should be properly valued based on commensurate Commission attention and valuation. Such commensurate treatment should include the ability for either load modification or supply side DR resources to be considered for resource adequacy.² Likewise, opportunities and competition to provide DR resources should be fostered whenever possible, at both the California Independent System Operator (“CAISO”) and LSE levels.

Thoughtful Treatment of DR Assets. As noted by a number of parties, bifurcation could create unintended ‘siloeing’ of DR resources.³ If DR is cabined into supply- and demand-side, the Commission should take an approach that supports both resource types. For the purposes of these comments, EDF highlights three such issues:

- ‘Demand-side’ DR resources, such as tariffs, are not being deployed to their full potential, leaving significant value on the table.⁴ Under existing conditions, fundamental demand-side DR resources and associated meter data are underutilized – as exhibited by low penetration levels for voluntary time-variant residential rates

² See, e.g., Response of the California Large Energy Consumers Association to Phase Two Foundational Questions, R. 13-09-011 at 3 (E-filing Cal. P.U. C. Dec. 13, 2013) (“DR should either count for RA or be used to adjust downward the load that determines the RA or future resource requirement so that its value is reflected in both planning and in daily grid operations.”) (Response of California Large Energy Consumers Association).

³ See, e.g., Response of the Center for Energy Efficiency and Renewable Technologies to Phase Two Foundational Questions, R. 13-09-011 at 4 (E-filing Cal. P.U.C. Dec. 13, 2013) (“from CEERT’s perspective, the act of “dividing” up DR resources, almost assuredly will lead to piecemeal or “siloed” treatment of a Loading Order preferred resource, the availability and reliance on which should be fully embedded in all procurement decisions made by this Commission”) (Response of the Center for Energy Efficiency and Renewable Technologies); Responses of the Utility Reform Network to Phase Two Foundational Questions Concerning Bifurcation and Cost Allocation, R. 13-09-011 at 2 (E-filing Cal. P.U.C. Dec. 13, 2013) (“the Commission should be careful that DR programs that cannot participate in CAISO markets and that do provide cost-effective demand response benefits are not unintentionally de-emphasized”) (Response of The Utility Reform Network).

⁴ As EDF stated in LTPP Track 4 Opening Comments: “A recently published CPUC Staff Report found that in the summer of 2012 the IOUs “used their DR programs fewer times and hours than the programs’ limits...In contrast, the Utilities dispatched their peaker power plants far more frequently in 2012 in comparison to 2006 – 2011 historical averages.” The referenced CPUC study is at www.cpuc.ca.gov/NR/rdonlyres/523B9D94ABC4-4AF6-AA09-DD9ED8C81AAD/0/StaffReport_2012DRLessonsLearned.pdf.

offered by California's three largest investor-owned utilities ("IOUs"). This situation is perpetuated by a lack of IOU and customer incentives.

- A bifurcation structure that would cabin demand-side DR resources to be primarily driven by independent LSE choices could create inefficient results for supply- and demand-side DR. If demand-side DR avoids more expensive supply-side procurement, its value should be communicated, compensated, supported, and promoted accordingly. Because the CAISO would not have the ability to secure demand-side DR resources, bifurcation could lead to higher cost DR resources being dispatched before lower cost DR resources. Without proper transparency and communication, such a structure could effectively devalue demand-side DR available at lower cost.
- Markets developed for DR resources should be designed to allow for thoughtful treatment of DR assets, helping the state to meet broader clean energy objectives. These objectives should include supporting the emergence of clean, fast acting preferred resources, without unnecessarily excluding DR that already exists on the system. As such, a single set of criteria tailored to generation may not be appropriate with resources as diverse as DR.

The issues highlighted above can be resolved through thoughtful design. As a first step, fostering competition and transparently communicating costs through properly structured programs and tariffs would serve to address many of the issues raised by parties, including Clean Coalition's desire to induce geographically clustered solutions into the marketplace. Likewise,

multiple intervenors – including EDF – support a larger market for DR-related enabling devices that would allow lower-cost DR to be identified.⁵

Additionally, the CPUC, in conjunction with CAISO, may want to consider elements of PJM’s treatment of different DR resources as ‘products,’ that can be bid in differently to a DR market. DR can provide value to the grid, but may require packaging different than that created for generation. As developing such packaging would increase the amount of dispatchable DR available, such an action would support not only DR goals, but overall energy needs as well.

Forecasting. EDF believes that, to the extent possible, demand-side resources should have commensurate opportunities and be incentivized similarly to supply-side assets. However, if demand-side resources are to be accounted for in forecasts, while supply-side assets are to be explicitly procured, the forecasts have to fully and accurately reflect their existence as load modifiers. In particular, demand elasticities should be effectively incorporated into estimates of future load shapes influenced by tariffs and other pricing programs. In addition, forecasting activities need to be synced with transmission and generation procurement and planning activities, so that up-to-date data on demand-side resources are comprehensively considered before decisions related to additional procurement are made.

DR Reliability. EDF concurs with PG&E’s strong disagreement “...that supply-side DR is somehow more reliable than demand-side DR...”⁶ Contrary to CAISO’s assertion, both demand- and supply-side DR performance can be reliably estimated and utilized, both in terms of levels and geographic location. Developing the right tools to do so, including by using

⁵ See, e.g., Response by the Natural Resources Defense Council (NRDC) to Phase Two Foundational Questions, R. 13-09-011 at 1 (E-filing Cal. P.U.C. Dec. 13, 2013) (Response of the Natural Resources Defense Council); Response of the Marin Energy Authority on Phase Two Foundational Questions, R. 13-09-011 at 4 (E-filing Cal. P.U.C. Dec. 13, 2013) (Response of Marin Energy Authority).

⁶ Response of Pacific Gas & Electric (U 39 E) to Joint Assigned Commissioner and Administrative Law Judge Ruling and Scoping Memo, R. 13-09-011 at 4 (E-filing Cal. P.U.C Dec. 13, 2013) (Response of Pacific Gas & Electric).

smartmeter data, should be a CPUC priority. An array of economic literature is available to support and inform analyses of voluntary and incentive-based outcomes.⁷

DR Valuation. EDF agrees with other parties⁸ that the Commission should clearly define and value how system needs will change in the coming years, and help design DR products to meet those needs. This could include those proposed by the California Large Energy Consumers Association, such as: traditional peak-shaving, local reliability or contingency service, integration of intermittent renewable resources/load following (products that can ramp and follow load), ancillary service, and frequency response. This approach should explicitly be incorporated into any LSE and CAISO markets, as well as in utility tariff proposals as part of general rate cases (“GRC”), with phase two GRC proposals examined by the Commission to ensure that they match emerging DR needs.

In designing DR products, it would also be appropriate to consider the full range of DR resources available. Different types of DR – and the attributes of customer makeup within each type – may vary in their potential and value to deliver demand- and supply-side DR (including auto-DR). In this, “customers” should not be viewed as a singular actor, but as able to offer a diversity of predicable capabilities. Further inquiry may be warranted to better understand the value that could be gained by better tailoring and creating DR “products” to thoughtfully match the actual potential of the underlying customer make-up.

3. Cost Allocation

⁷ See, e.g., Brian Arthur Smith, Jeffery Wong, Ram Rajagopal, A Simple Way to Use Interval Data to Segment Residential Customers for Energy Efficiency and Demand Response Program Targeting. 2012 ACEEE Summer Study on Energy Efficiency in Buildings (2012).

⁸ See, e.g., Response of the Direct Access Customer Coalition and Alliance for Retail Energy Markets to Questions on Foundational Issues, R. 13-09-011 at 2 (Cal. P.U.C. Dec. 13, 2013); Response of Olivine, Inc. to Foundational Questions in Order Instituting Rulemaking to Enhance the Role of Demand Response in Meeting the State’s Resource Planning Needs and Operational Requirements), R. 13-09-011 at 4 (E-filing Cal. P.U.C. Dec. 13, 2013) (Response of Olivine, Inc.).

EDF generally agrees with parties who advocate that costs be allocated based on the benefits received, and that any subsidies be made explicit. This decision framework should flow through to rates.

4. Back-Up Generators

EDF commends the Natural Resource Defense Council's call for a pilot to retire, retrofit or replace the dirtiest, pre-2000 back-up generators ("BUGs") and suggests it be combined with EDF's recommended pilot to examine replacing fossil fuel-based BUGs with clean storage, and network them into the grid as a more fully-functioning DR resource. In addition, it may be worth exploring development of "micro-DR grids," matching entities that have high reliability needs with adjacent DR program clusters.

5. Conclusion

EDF thanks the Commission for the opportunity to provide reply comments and participate in this docket. A well designed DR approach, responsive to issues including commensurate attention, 'siloing', equitable treatment, demand forecasting, and access will go a long way to ensuring that negative, unintended impacts will not inhibit DR growth. Thoughtful examination of how differing DR resources can interact in a structured market will likewise enable the Commission to ensure that State energy goals can be met through low cost, clean resources. EDF looks forward to continued participation and dialogue with the other parties in the proceeding to reach these ends.

Respectfully signed and submitted on December 26, 2013.

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