

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

Order Instituting Rulemaking Pursuant 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)

**SOLARCITY CORPORATION'S COMMENTS
ON STAFF PROPOSAL FOR DEMAND RESPONSE PILOTS**

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In accordance with the California Public Utilities Commission's ("Commission") Rules of Practice and Procedure, SolarCity Corporation ("SolarCity") submits these comments in response to the questions raised in the Order Instituting Rulemaking ("OIR") regarding Energy Division staff's ("Staff") pilot demand response ("DR") proposals and 2015 DR program bridge funding.

I. DESCRIPTION OF SOLARCITY

SolarCity is California's leading full service solar power provider for homeowners and businesses - a single source for engineering, design, financing, installation, monitoring, and support. Our company provides cost-effective financing that enables customers to eliminate the high upfront costs of deploying solar. SolarCity has more than 2,000 California employees, based at 17 facilities around the state and has provided clean energy services to more than 30,000 California customers.

II. INTRODUCTION

In the OIR, the Commission asked parties to respond to a set of questions related to bridge funding for 2015 and three pilot projects proposed by Staff in an attached appendix. SolarCity does not have specific concerns regarding the proposal for 2015 bridge funding. However, in response to the OIR's Question #2, which asks whether we support the objectives of the proposed pilots and asks for alternative suggestions, we believe that the pilots as currently

described will miss a major DR opportunity. The pilots fail to evaluate the ability of residential customers to provide DR services, and, more specifically, to test DR products consisting of solar/storage/cooling combinations deployed in the residential context.

In general, we support efforts to enable DR providers to participate directly in CAISO's wholesale markets, to the extent this can create additional market opportunities. That said we do not take a position at this point regarding whether direct participation in wholesale markets is preferred to allowing the IOUs to schedule and dispatch DR resources. Which of these is superior may depend on the context and scale of a given DR opportunity. For these reasons we do not oppose the pilots that Staff has proposed, however, in addition to these, we respectfully request that the CPUC consider another pilot, to commence in the 2015 timeframe, that would allow the Commission to assess the viability of residential customer-side solutions to provide robust DR services.

III. RESIDENTIAL DEMAND RESPONSE PILOT PROPOSAL

To date, the IOUs' DR programs have focused largely on commercial and industrial customers, with only limited effort to promote residential customer DR. In the past, this may have made sense. Today, however, the evolution of the market, widespread deployment of advanced metering infrastructure, robust distributed energy technologies (e.g. solar PV, energy storage systems and smart thermostats), innovations in project finance, and ever more sophisticated market actors, combine to create an opportunity to deploy substantial amounts of DR in millions of households. A new pilot program, in addition to the ones proposed by Staff in the OIR, would be an invaluable way to assess the viability of this opportunity.

In addition to providing a means to assess the technical capability of residential customer-side solutions to provide robust and dependable demand response, we believe a well-designed pilot can also assess the responsiveness of residential customers to incentives offered through rate design changes and programmatic initiatives. A pilot focused on residential DR would also provide a platform to assess other emerging issues, including DR strategies to address distributed energy integration issues (deploying smart inverters, for example), the role of distributed energy resources in reducing sub-station loading and deferred maintenance, as well as the ability to effectively forecast solar system output at the household or substation level.

Favorable pilot results can set the stage to expand the role of residential customer-side solutions to provide DR and broadly address local and system reliability needs.

A fundamental element of our proposed pilot is an incentive regime that would be made available to residential customers in a specific high-need area (defined as a locality that is anticipated to require additional investments in generation and/or transmission and distribution to address peak load growth). The scale of the pilot, in terms of DR capability, would be based on the specific circumstances and need within the pilot region. The incentive regime would be designed to encourage customers to provide DR services, and/or allow the IOU to dispatch these services, during those periods when local reliability resources are significantly constrained. This could consist of a tariff combined with programmatic incentives that would reward customers for deploying direct load control technologies and participating in related programs. These could include AC-cycling, pre-cooling,¹ as well as incentives to support the deployment of storage over which the IOUs have direct or indirect control. For example, an opt-in residential tariff with a critical peak rate can create strong incentives for customers to pursue strategies, or opt into programs that drive reductions in peak energy consumption. The combination of tariffs, incentives and programs must make the customers better off, in terms of reduced energy bills, relative to their current tariff. Similarly, a capacity payment or other incentive in exchange for giving the IOU some level of load control could create economic incentives for residential customers to deploy technologies (e.g. onsite storage, and direct load control devices) that can be effectively utilized by the IOUs to further mitigate local reliability concerns on an as-needed, real-time basis.

We note that Southern California Edison (“SCE”) has proposed to establish a “Living Pilot” as part of its Track 4 testimony in the Long Term Procurement Planning (“LTPP”) proceeding (R.12-03-014). On September 26, Staff asked interested stakeholders to submit 3 page proposals that identify approaches to mitigate load growth in a “targeted high need area in Orange County.” These proposals will be presented at a symposium scheduled for November 6

¹ Pre-cooling as used here is defined as using air-conditioning in advance of a peak period, thus allowing less air conditioning to be used during peak hours. Pre-cooling uses the thermal mass of a building to store cool air and reduce the need for cooling during those periods when energy costs are high. The efficacy of this strategy depends on the thermo-dynamic properties of a given building, climate conditions, among other factors. Pre-cooling as presented here is intended to be illustrative only.

and will inform a subsequent application that SCE will file. SolarCity is submitting a proposal to Energy Division that addresses many of the issues we identify here. For reference, and to provide additional information regarding what a residential pilot under the Demand Response OIR might consist of, we attach our Living Pilot Proposal to this filing. Although the Living Pilot Proposal focuses on addressing peak demand issues within a specific pilot region and thus encompasses a somewhat broader set of strategies than those that would be specifically defined as DR, many of the proposed solutions are forms of DR. We note that nothing would or should preclude the Commission from pursuing our residential pilot concept both in this proceeding and in SCE's LTPP pilot proposal. For example, it may make sense to test this pilot concept in multiple utility service territories rather than limiting it to one region, given different operational needs, grid configurations and customer characteristics.

IV. NEXT STEPS

SolarCity requests that the Commission establish a residential DR pilot in this proceeding consistent with what is described in the attached Living Pilot Proposal. To do so we recommend the establishment of a stakeholder-working group to further flesh out the details. The working group would need to identify the pilot region in which the pilot would be conducted, develop a tariff and/or incentives to motivate customer deployment of and participation in DR strategies at reasonable cost to ratepayers, as well as propose an evaluative framework. This working group would be led by Staff and include, at a minimum, utility representatives, distributed energy resource providers (with expertise in distributed generation, DR, energy efficiency and storage), and ratepayer advocates. The working group's efforts would culminate in a Staff proposal, to be issued in this rulemaking for further consideration by stakeholders and the Commission by February 2014. This would allow time for the additional pilot to be considered alongside the other pilots proposed in the OIR, while keeping to the proposed schedule.

V. CONCLUSION

We appreciate the Commission's consideration of our demand response pilot concept and look forward to our future engagement in this proceeding.

Respectfully submitted on October 21, 2013 at San Francisco, California.

BY /s/ David Wooley

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