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**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)

**COMMENTS OF ALARM.COM AND ENERGYHUB
IN RESPONSE TO ASSIGNED COMMISSIONER AND
ADMINISTRATIVE LAW JUDGE'S RULING PROVIDING
GUIDANCE FOR SUBMITTING DEMAND RESPONSE PROGRAM PROPOSALS**

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March 3, 2014

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EnergyHub and Alarm.com are pleased to provide these comments in response to the Assigned Commissioner’s Ruling issued January 31, 2014 in this proceeding.

I. BACKGROUND

Alarm.com (www.alarm.com) provides a suite of connected home services, including substantial solutions for interactive energy management. In 2013, they completed the acquisition of EnergyHub (www.energyhub.com), a longtime leader in enabling rapid deployment of demand response and energy efficiency programs.

Today, these combined companies have nearly 2 million subscribers nationwide, with a substantial portion that have internet-connected thermostats. In fact, the remote thermostat control element of interactive services packages is one of the features most sought after by consumers. These connected thermostats complement other energy management devices such as pool pumps, window air conditioners, dehumidifiers and

water heaters.

These companies have been active in markets around the country as a demand response aggregator. These activities include participation in the ERCOT market of Texas for several years. In 2014, they will be participants in the markets of PJM and the New York ISO as well. Additionally, they are active partners in many utility-administered demand response programs. All of these activities afford Alarm.com and EnergyHub a breadth of experience that can help inform the discussions in this proceeding and bring benefits to energy customers in the State of California.

II. GENERAL REMARKS

California has long been a leader in deploying innovative technologies (such as advanced metering infrastructure) and innovative utility programs and associated business models (such as demand response). However, recent years have seen rapid and dramatic changes in consumer technologies, expectations and capabilities. Because of these changes, it is appropriate for the Commission to reconsider some of the opportunities and embedded assumptions regarding consumer behavior that affect the program design, market structure and economic incentives of demand response in California.

By participating in this proceeding, EnergyHub and Alarm.com will consistently return to this guiding principle: *Consumer-deployed technologies are a valuable energy management resource that provide economic benefits, resource adequacy needs and support statewide policy objectives; They should be encouraged to participate in California energy markets through both regulated programs and open market mechanisms.*

For example, adoption of networked thermostats has dramatically increased in the past 3-5 years and the rate of adoption is increasing. It is estimated that 15% of new thermostats sold in 2013 were internet-enabled and that by 2015 over 50% will be internet-connected. It is also important to note that many of these sales are associated with purchases of other, non-energy related services, such as home security. In this sense, this technology base represents a latent capacity for energy services that is distinct from services (such as traditional utility demand response programs) where the primary motivation is related to energy management.

EnergyHub is delighted to have been a participant in workshops held during this proceeding. Specifically, in October 2013, EnergyHub President Seth Frader-Thompson offered comments and observations as part of workshops held in San Francisco. Included in his remarks were the following suggested characteristics for a successful Residential Demand Response Program:

- (1) **Direct market access** allowing consumer-owned resources to be aggregated directly into the market, without the requirement to work through a utility,
- (2) **Low-friction end-user enrollment process**, including such seemingly simple tactics as eliminating the need for customers to enter account numbers during the enrollment process, by providing an automated system for looking up account or meter numbers based on the customer's address (provided the aggregator has obtained the customer's consent to do so),
- (3) **Access to meter data for M&V** through mechanisms that provide meter data to consumers, their designated agents or designated market agents.
- (4) **Desirable economics for temperature-sensitive loads**, with particular attention to the financial incentives provided enabling software service

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providers that enable implementation of demand response events.

- (5) **Predictability** in program design and participation so that businesses can plan accordingly.

We believe these general principles are relevant within this proceeding and they inform elements of the specific comments regarding the present Ruling.

III. COMMENTS

There are several opportunities to improve the existing demand response programs managed by the utilities in California. We believe that these improvements can be made within the time and budget limitations offered in the recent Ruling. In particular, these improvements will expand the role of the residential sector and consumer-owned technologies. As California considers the transition to a new market structure for demand response, we believe that there are opportunities to (1) Grow the market for innovative new technologies solutions, (2) Increase the effectiveness of existing programs, and (3) Increase customer participation. Our suggestions are made with those goals in mind.

(1) Incorporate platform and software providers within economic incentives of existing demand response programs.

Currently, economic incentives and rebates for demand response programs in California do not include platform and demand response providers. This stands in contrast to other notable demand response programs and market structures in other states, many of which include an ongoing incentive provided to the entity providing the ongoing platform capabilities upon which each demand response event relies.

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Providing the ongoing capability to manage devices, event participation, verification, and settlement is a critical function of any demand response program or market. We believe that existing programs can be improved without affecting the overall budget approvals (as stipulated in the instant Ruling), but with a modest reallocation. Austin Energy, for example, provides \$25 for customer enrollment and a \$15 per year per customer incentive to the platform provider, which ensures that the demand response resource is available and reliable. California utilities could achieve a similar benefit and improved resource through a reallocation of direct customer incentives (primarily one-time equipment and participation rebates) to incorporate the software platform.

It is our opinion that the current program design (a one-time rebate for device registration and customer participation) (a) will not ensure the customer's continuing participation, (b) does not compensate the service providers for ongoing costs (including customer service, education, compliance and event management), and (c) does not provide an incentive for bringing an aggregated resource into the market.

Under the "bifurcated" market structure contemplated in this proceeding, these service providers and aggregators will have access to market structures that provide ongoing payments for available capacity from these demand resources. By incorporating small changes in how incentives are paid (and including these service providers), the transition period can be used to accelerate the development of this resource *ahead of* the launch of a "bifurcated" market structure.

Please see Attachment A for a brief summary of program designs for demand response resources in California and Texas.

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(2) *Participation of residential customers in existing programs can be increased by expanding “bring-your-own-thermostat” models that incorporate consumer technologies within existing demand response programs.*

In 2013, Southern California Edison moved forward with a program that allows consumer-owned thermostats to be incorporated within the existing air conditioning cycling program that they manage. We believe this is a powerful model that can be replicated statewide across all the California utilities. This is commonly referred to as the “Bring Your Own Thermostat” model.¹

We propose that each utility formalize and expand a mechanism by which customer-owned thermostats and load-control devices can participate in ongoing AC cycling and peak-time rebate programs. By implementing this change during the transition period, deployment of consumer devices can be accelerated in advance of the implementation of changes to the overall demand response market in California. That will increase a critical technology base that can be made available to the market when California moves forward with “bifurcation” of demand response markets.

(3) *Existing Capacity Bidding Program should include residential customers.*

It is our understanding that the Capacity Bidding Program could be a viable mechanism by which demand response resources could be brought into the market. However, it is further our understanding that the existing tariffs exclude the residential segment from being included under this program. We believe that this could be improved by requiring new tariffs that would include residential customers as eligible within this program.

1 ¹ For example, “SCE Rolls Out Bring -Your-Own-Thermostat Concept” available at <http://www.greentechmedia.com/articles/read/sce-rolls-out-bring-your-own-thermostat>

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(4) Pilot programs should include a focus on residential customers and adoption of consumer load management technologies that also leverage advanced metering information and investments.

We generally support the staff proposal regarding pilot programs during the transition period. As has been noted in other comments, we believe that the Commission has an opportunity to further leverage the advanced metering platform in California in order to develop a more robust demand response resource. The pilot programs should explore innovative uses of low-cost load management technologies among residential and small business customers. They should also demonstrate the viability of using customer-owned load management devices (particularly internet-connected thermostats) as an aggregated resource that utilities can procure for their demand response and resource adequacy needs, as envisioned in this proceeding. We recommend using these pilot programs during the transition period to develop the back-end systems required to support future programs for the “bifurcated” market structure. These future programs will require capabilities like mass enrollment and settlement for residential customers and the pilot programs provide an opportunity to put that framework into place.

By establishing a pilot program today, the Commission can help market participants develop the processes and experience that will be critical for the transition to a “bifurcated” market structure. Specifically, consumer-deployed connected thermostats can provide a valuable energy management resource within that structure if the requisite policies and programs are put into place.

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IV. CONCLUSION

EnergyHub believes that there are opportunities to improve existing programs and develop pilot programs during the transition period that will significantly increase consumer confidence, improve market experience and establish working models for critical supporting functions such as settlement and verification of demand response events. The transition funding period provides an opportunity to help develop (1) a strong resource base of consumer technology and (2) experience with the technical functions which will be required for a successful launch of a “bifurcated” market structure.

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Respectfully Submitted,

/s/ Seth Frader-Thompson

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APPENDIX A

*“Bring Your Own Thermostat”
Comparison of Key Program Elements*

The following table summarizes key program elements of several notable and existing demand response programs that provide an opportunity for customer-owned devices to be included within market-driven and utility-administered demand response programs.

	ERCOT	Austin	SCE	SDG&E
Program type	Market	Utility	Utility	Utility
Customer to enter account # to enroll?	No	Yes	Yes	Yes
Customer enrollment incentive	Determined by vendor	\$85	TBD	No
Ongoing customer incentive	Determined by vendor	TBD	\$1.25/kWh PTR	\$1.25/kWh PTR
Vendor enrollment incentive per device	No	\$25	\$30	No
Ongoing vendor incentive	\$48/kW in 2013; varies annually	\$15	TBD	No
Is this a multi-year program?	Yes	Yes	TBD (one year pilot in 2013)	TBD (two-year pilot, 2012-2013)
Conversion rate by EH and partners (relative to SDG&E)	7x	4x	2x	x