

DOCKETED

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On Proposed Addition to Section 110.12

Additional submitted attachment is included below.



March 5, 2018

Docket No. 17-BSTD-02

Submitted via email

Dear Energy Commission Staff,

I respectfully submit this letter to the California Energy Commission regarding the proposed addition of Section 110.12, requiring OpenADR or SEP 1.1 and other demand response controls for residential home thermostats in Joint Appendix 5. These requirements not only create barriers for innovation and customer choice, but make current programs ineligible since they were built off of devices that do not currently have these capabilities, but successfully rely instead on OpenADR platforms to receive signals to dispatch individual devices. By mandating these changes, the Commission is making most current DR programs invalid unnecessarily, wasting ratepayer money and existing assets.

Section 110.12(a)

Section 110.12.a.1 (OpenADR)

Creating OpenADR compliant devices and implementing all the technical requirements of the OCST thermostat are large costs to impose on device manufacturers. Much of the impetus behind the OpenADR is for TOU and DR automation via EMTs, which can already be done via an OpenADR platform that communicates with individual devices. Technology companies will not simply make these individual product and technology changes unless they are incentivized to do so, and scaling this is a difficult proposition as each manufacturer that develops a smart thermostat will be required to build these capabilities inside the thermostat, instead of simply just building an OpenADR complaint cloud platform. If the goal is to enable automated TOU response by posting electricity prices, then the program should consider instead piloting how existing software platforms might be used to take in these prices via OpenADR and then translate that for multiple device manufacturers in order to ensure maximum customer choice. Simply mandating these demand response control requirements for each individual device will not encourage device manufacturers to make these changes, since they have an existing solution that can deliver the same capability. To date, the market has driven innovation and will continue to do so - customers will not purchase devices which do not support their needs, just because they are OpenADR compliant.



OpenADR on a platform, called cloud OpenADR, is already common practice. The cloud OpenADR automation is the most appropriate and cost-effective way to leverage the goals of OpenADR. It is the lowest cost system, and the cloud vendor platform - the receiver - can be abstracted from the actual device. The controls are managed in the vendor platform, where it can communicate with the device via non-OpenADR signals. A manufacturer can then focus on designing top-rate, feature rich customer devices, and can leverage existing integrations with other OpenADR compliant platforms. This will ensure that a wide range of devices is eligible for these programs. Furthermore, OpenADR 2.0 specifically says that the device does not need to have OpenADR built in - OpenADR 2.0 compliance includes having OpenADR signals translated to proprietary device signals, exactly how OpenADR on a platform works.

Section 110.a.2

Section 110.a.2 also excludes z-wave when stating which demand response controls are allowed. The Commission should add z-wave, which is how many major device manufacturers communicate and is equal in capability.

“All demand responsive controls shall be capable of using one or more of the following for communications that occur within the building: Wi-Fi, ZigBee, BACnet, Ethernet, z-wave or hard-wiring.”

Section 110.a.3

Section 110.a.3 should be removed as is inconsistent with how most devices work. In a DR event, devices are getting active server/cloud signals throughout the event and do not natively support DR events.

Joint Appendix 5

The requirements in JA(5) are also problematic and overly prescriptive. JA 5.2.4 and 5.2.6(b), in particular, mandate various demand response controls capabilities that are unnecessary for the device owner and disconnected from how most demand response programs work. Prescribing such capabilities, instead of results, ignores the fact that utilities, aggregators, and device manufacturers have already spent time and money on developing and maintaining the optimal set of functionalities for their customers and to enable DR. As the experts in the demand response field, device manufacturers should be allowed to innovate to achieve a set of results. For instance, the occupant should not need to manually set the offset degrees or the setpoint for a DR event; this is done by the aggregator, manufacturer or utility for optimal customer



comfort and load shed results. The customer can always opt-out of events or not agree to join the program in the first place, but automation is the key to these successful end results.

JA 5.2.4

The Commission should edit the following sections 5.2.4.

"a) A Demand Response Signal shall trigger the OCST to adjust the thermostat setpoint by either the default number of degrees or the number of degrees established by the occupant or the manager of the demand response program (the utility, device manufacturer or third party aggregator).

b) When a price signal indicates a price in excess of a price threshold established by the occupant or the manager of the demand response program (the utility, device manufacturer or third party aggregator), the OCST shall adjust the thermostat setpoint by either the default number of degrees or the number of degrees established by the occupant or the manager of the demand response program (the utility, device manufacturer or third party aggregator).

h) The OCST shall have the capability to allow occupants or the manager of the demand response program (the utility, device manufacturer or third party aggregator) to define setpoints for cooling and heating in response to price signals or Demand Response signals as an alternative to the default event response."

The following section should be removed, since it is too prescriptive. After all, different programs require different actions - and very smart cloud platforms already take the thermal model of each house into consideration before dispatching a required offset to achieve the DR program goals.

"(c) In response to price signals or Demand Response signals, the OCST shall default to an event response that initiates setpoint offsets of +4°F for cooling and -4°F for heating relative to the current setpoint."

JA 5.2.6(b)

The following sections to 5.2.6(b) should also be removed for the same reasons.

"The OCST shall also be equipped with the capability to allow occupants to define setpoints for cooling and heating in response to price signals or Demand



Response Signals as an alternative to the default event response. The default setpoint definitions unless redefined by the occupant shall be as follows:

- 1. The default price response or Demand Response Period setpoint in the cooling mode for OCSTs shall be 82°F. The OCST shall allow the occupant to change the default event setpoint to any other value.*
- 2. The default price response or Demand Response Period setpoint in the heating mode for OCSTs shall be 60°F. The OCST shall allow the occupant to change the default event setpoint to any other value.*
- 4. By default, thermostats shall not be remotely set above 90°F or below 50°F. Occupants shall have the ability to redefine these limits. This measure protects occupant premises from extreme temperatures that might otherwise be imposed by event responses, should the occupant already have a very high or low temperature setpoint in effect."*

The occupant can always opt out of a demand response event if they wish, but it is unnecessary to prescribe the default settings for an OCST. It is also worth noting the customers are agreeing to participate in these programs and in that, agreeing to the specific parameters of the program. Program participation is voluntary.

Conclusion

Prescribing these rules will undoubtedly ensure that most if not all device manufacturers do not participate in the existing or future programs. Instead of prescribing how technology should be developed, the Commission should focus on results - how to encourage demand response participation, technology innovation, and customer choice.

Sincerely,

A handwritten signature in blue ink, appearing to read "Erika Diamond".

Erika Diamond
VP of Energy Markets