

DOCKETED	
Docket Number:	19-BSTD-09
Project Title:	Heat Pump Water Heater Demand Management Systems
TN #:	232501
Document Title:	A. O. Smith Corporation Comments - A O Smith Corporation Comments on Joint Appendix JA13 Qualification Requirements for Heat Pump Water Heater Demand Management
Description:	N/A
Filer:	System
Organization:	A. O. Smith Corporation
Submitter Role:	Public
Submission Date:	3/23/2020 1:41:07 PM
Docketed Date:	3/23/2020

Comment Received From: A. O. Smith Corporation
Submitted On: 3/23/2020
Docket Number: 19-BSTD-09

**A O Smith Corporation Comments on Joint Appendix JA13
Qualification Requirements for Heat Pump Water Heater Demand
Management**

Additional submitted attachment is included below.



March 23, 2020

Commissioner J. Andrew McAllister, Ph.D.
California Energy Commission
Dockets Office, MS-4
Re: Docket No. 19-BSTD-09
1516 Ninth Street
Sacramento, CA 95814

Re: A. O. Smith Corporation Comments on Joint Appendix JA13 Qualification Requirements for Heat Pump Water Heater Demand Management Systems

Dear Commissioner McAllister:

A. O. Smith Corporation (“A.O. Smith”) appreciates the opportunity to provide comments on the California Energy Commission’s (“CEC” or “Commission”) Joint Appendix JA13 Qualification Requirements for Heat Pump Water Heater Demand Management Systems (“JA13”). Heat pump water heaters (“HPWHs”) play a vital role in two key California policy priorities: i) reducing the carbon footprint of our buildings as the State switches water heaters from gas to electricity; *and* ii) helping to manage the integration of increasing amounts of renewable energy as HPWHs shift load and serve as thermal energy storage devices. The Commission’s expeditious adoption of alternative compliance measures for HPWH demand management systems advances policies that will ensure that modern building codes support California’s progress in meeting its climate and energy goals.

About A. O. Smith

A. O. Smith is a global leader in applying innovative technology and energy efficient solutions to products manufactured and marketed worldwide. The company is one of the world’s leading manufacturers of residential and commercial water heating and hydronic heating equipment, as well as a manufacturer of water treatment and air purification products. Along with its wholly owned subsidiary, Lochinvar, LLC, A. O. Smith is the largest manufacturer and seller of residential and commercial water heating equipment, high efficiency residential and commercial boilers and pool heaters in North America.

Discussion

A. O. Smith. has been a key participant in the Building Decarbonization Coalition’s HPWH Working Group, representing a successful collaboration amongst stakeholders supporting

California's market transformation goals for residential water heating. A. O. Smith strongly encourages the Commission to rely on the work product resulting from the HPWH Working Group by adopting the docketed Appendix JA13 with two minor modifications, as further described below.¹ A. O. Smith was a leading participant in the Working Group that established initial HPWH demand management specifications under consideration by the CEC to enable HPWHs to either be controlled remotely, or simply respond to pre-loaded time-of-use price signals providing grid and utility benefits daily. This consensus specification was developed over a many-month process in collaboration with California utilities, HPWH manufacturers, demand response technology and service providers, and many other industry stakeholders. By design, the specification provides high assurances that demand-flexible HPWHs deliver daily load shifting over their lifetime, and that HPWHs can be used as thermal storage by utilities.

Since the development of the HPWH Draft Appendix JA13 specification, there have been several suggested edits to aid Appendix JA13 in remaining current in the coming years. These edits are minor and clarifying in nature, and they do not change the intent of the draft specification.

First, the Northwest Energy Efficiency Alliance released a revised version of the Advanced Water Heating Specification, Version 7.0.² A. O. Smith urges the CEC to update the cross-references in the performance requirements for residential HPWHs to allow compliance with either version 6.0 or version 7.0. Both of these versions contain identical minimum performance requirements (e.g., northern climate uniform energy factor values), but version 7.0 adds a requirement for HPWHs to comply with the CTA-2045A port and application layer requirements.

Next, A. O. Smith supports the edits submitted to the Commission by the Natural Resources Defense Council ("NRDC") on March 20, 2020 that revise the safety requirements to incorporate a compliance pathway for water heaters with an integrated temperature limiting device. A. O. Smith has made minor clarification edits to the NRDC language to ensure that these alternative standards require the water heater to comply with the safety requirements instead of the valve itself. A. O. Smith urges CEC to adopt the following language with regards to the safety requirements in Appendix JA13:

A thermostatic mixing valve conforming to ASSE 1017 shall be installed on the hot water supply line following all manufacturer installation instructions or a water heater that conforms to UL 60730-1, ASSE 1082, or ASSE 1084.

Lastly, the CEC has previously indicated that it intends to provide a builder compliance credit for JA13 compliant HPWHs that utilize their thermal storage capacity to provide daily load shifting for the purpose of customer bill reductions, maximized solar self-utilization and grid harmonization. A.O. Smith strongly supports this approach in order to accelerate the integration of water heater technology by builders of new construction in California. A. O. Smith stands ready

¹ Natural Resources Defense Council Comments Re Submission of Draft Joint Appendix 13 on Water Heater Demand Management Submitted to CEC 2019 Alternative Calculation Method Reference Manuals and Compliance Software Tools, August 8, 2019, see <https://efiling.energy.ca.gov/GetDocument.aspx?tn=229351&DocumentContentId=60762>.

² Northwest Energy Efficiency Alliance, A Specification for Residential Water Heaters - Advanced Water Heating Specification Version 7.0, see <https://neea.org/img/documents/Advanced-Water-Heating-Specification.pdf>.

to work with the Commission on the valuation of the compliance credit to ensure that it reflects the real-world benefits for demand response HPWHs.

Conclusion

A.O. Smith appreciates the opportunity to provide comments in strong support of the Commission's leadership on JA13. A.O. Smith encourages the Commission to continue to move quickly and efficiently on the finalization of JA13 as it pertains to HPWHs, leveraging the resources already available to the CEC by the Building Decarbonization Coalition and others that promote the effective integration of water heater technology. Once again, A. O. Smith appreciates the opportunity to provide its comments and stands ready to work with the Commission moving forward.

Respectfully submitted,

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