

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
AIR AND RADIATION

April 3, 2019

Dear ENERGY STAR Smart Home Energy Management Systems (SHEMS) Stakeholders,

With this letter, the U.S. Environmental Protection Agency (EPA) announces the release of the [ENERGY STAR SHEMS Draft 1 Version 1.0 Specification](#) and [Draft Method to Determine Field Performance](#). This is a first of its kind ENERGY STAR specification, and EPA would like to thank stakeholders for their participation and interest since we announced the concept last June. All materials related to EPA's development of the specification can be found at www.energystar.gov/SHEMS.

This specification aims to define a home energy management system that will enhance the consumer "smart home" experience by delivering meaningful energy savings in addition to the comfort and convenience associated with smart home devices. EPA is creating this opportunity to promote energy management in the smart home space as the market continues to grow and evolve. By providing a national platform for smart energy management that is scalable, customizable and can be leveraged by a variety of stakeholders we hope to foster increasingly effective methods of smart home energy management.

Our initial program is designed to facilitate untapped residential energy savings associated with occupancy-based optimization control of key devices and the introduction of additional energy-saving products into the home. Longer term, as we learn more about the market, our goal is to document and increase these savings by leveraging a savings metric. Key features of the Version 1.0 performance criteria include:

- Equipment requirements specifying an ENERGY STAR certified smart thermostat, ENERGY STAR certified lighting and plug load control.
- Standby limits on all required devices.
- Minimum service requirement to receive and utilize occupancy information to produce energy-saving device control actions (e.g. schedules, suggested actions, service initiated actions).
- User access to energy use information to facilitate energy-saving behavior.
- A daily kWh budget for operating lights while away.
- Grid communication and access requirement to enable demand response functionality.
- Data submittal every six months to allow statistical analysis of field data in lieu of laboratory testing to demonstrate ongoing service performance.

Consumer experience, control, privacy and user preferences are key to successful SHEMS and top of mind for the program. The proposed specification is designed to allow service providers to offer a breadth of customization features, varying methods for delivering service and the flexibility to manage these essential elements as the market evolves. EPA understands there may be security risks associated with smart products and systems. Recognizing that this is not our area of expertise, we do not intend to take the lead on developing security standards in the smart home market. To the extent that sound security standards arise, EPA may point to them in ENERGY STAR specifications as appropriate.

Additionally, EPA is committed to supporting the highest levels of interoperability among devices in homes to ensure that the largest number of devices can operate with each other, to improve the user experience by minimizing effort to integrate new devices, and so that those devices can work effectively together to save energy. Pursuing this objective will necessarily require insight into how different system

architectures and protocols work and an understanding of the extent to which different equipment technologies affect key SHEMS functionalities and capabilities.

Finally, while prescriptive load management is not a hallmark of the proposed Version 1.0 SHEMS specification, smart energy load management is an important goal for the future, and we seek to encourage systems to offer load management functionality for homes capable of leveraging this opportunity.

An in-person meeting and accompanying webinar will be held at the Consumer Technology Association headquarters in Arlington, VA on April 12, 2019 from 1pm to 4pm ET. To RSVP to attend in person contact smarthomesystems@energystar.gov; to register for the webinar click [here](#).

Any comments on the Draft 1 specification and Draft Method to Determine Field Performance should be submitted no later than **May 3, 2019**. Please send comments via email to smarthomesystems@energystar.gov. All comments received will be posted to the ENERGY STAR Product Development website, unless the submitter specifically requests otherwise.

Please contact Taylor Jantz-Sell at (202) 343-9042 or Jantz-Sell.Taylor@epa.gov with additional questions or concerns. For questions pertaining to the Method to Determine Field Performance, please contact Abigail Daken at (202) 343-9375 or daken.abigail@epa.gov.

Thank you for your contributions towards the development of this new specification, and for your continued support of ENERGY STAR.

Sincerely,

The image shows two handwritten signatures in black ink. The signature on the left is 'T. Jantz-Sell' and the signature on the right is 'Abigail Daken'. Both signatures are written in a cursive, flowing style.

Taylor Jantz-Sell & Abigail Daken

Co-Leads, ENERGY STAR Smart Home Energy Management Systems
U.S. Environmental Protection Agency

Enclosures:

[ENERGY STAR SHEMS Draft 1 Version 1.0 Specification](#)
[ENERGY STAR SHEMS Draft Method to Determine Field Performance](#)
[ENERGY STAR SHEMS Draft Data Reporting Template](#)