

Draft 2 Version 8.0 Displays Comment Summary

Document	Topic	Subtopic	Comment Summary	EPA Response
Draft 2 Specification	General	Standards	One stakeholder expressed support for the reporting of applicable privacy, cyber security, and demand response standards, and further recommended that EPA work with appropriate entities to develop consumer privacy standards specific to SHERMS products.	Thank you for your comment. EPA has not historically participated in the development of privacy standards, and anticipates that it would be more likely that EPA would reference relevant standards as they are developed and gain acceptance.
Draft 2 Specification	General	Interoperability	One stakeholder emphasized the importance of interoperability to providing useful SHERMS packages that achieve energy savings, citing the recommendations developed in Redefining Home Performance in the 21st Century: How the Smart Home Could Revolutionize the Industry and Transform the Home-to-Grid Connection.	Thank you for your comment. EPA has sought to encourage interoperability in the Version 1.0 specification as much as practical given the state of the market today, and will continue to push for interoperability as appropriate in future versions of the specification.
Draft 2 Specification	General	Installation	One stakeholder offered to collaborate with EPA to develop guidance for contractors installing ENERGY STAR Certified SHERMS packages.	EPA appreciates the offer and will consider working to develop guidance for contractors as the program matures and EPA gathers more information about how systems are being installed.
Draft 2 Specification	General	Certification	One stakeholder recommended that EPA allow the SHERMS package and individual devices which are required to be independently ENERGY STAR certified to be certified simultaneously.	EPA relies on third party certification bodies for processing certification to individual ENERGY STAR specifications. There will likely be certification bodies that can perform all certifications covering lighting, thermostats, and SHERMS and can manage these certifications.
Draft 2 Specification	General	Verification Method	Utility partners recommended that EPA develop a verification method for the SHERMS program and proposed several possible options. The options proposed included requiring service providers to: maintain purchase records, marketing materials, and/or records of certain data in order to facilitate verification.	EPA will be exploring various methods to ensure certified SHERMS continue to meet requirements and may consider these recommendations as the program develops.
Draft Partner Commitments	Partner Commitments	Installers	One stakeholder requested clarification that installation providers such as home performance or HVAC contractors would not be subject to the requirement that partners not market competing package offerings not meeting the ENERGY STAR Eligibility Requirements.	Waiting to finalize response until we address the partner commitments. Recommend possibly mentioning installers in the definition of service providers.
Draft Partner Commitments	Partner Commitments	Marketing and Sale of SHERMS Package Devices	Utility partners recommended that EPA clarify and add additional requirements to the Partner Commitments, section 1.1.7, regarding the marketing of the basic SHERMS package and additional components. The comment specifically noted that manufacturers should be required to note which existing equipment is needed in order to operate add-on components.	EPA has reviewed the current requirement and determined that it is sufficiently clear for the purposes of providing and marketing an ENERGY STAR Certified SHERMS. EPA recognizes the value of providing clear information regarding add-on devices, but since such devices are beyond the scope of the ENERGY STAR requirements EPA has not included additional requirements. EPA expects that it is in the best interests of service providers to provide such information to customers in order to maintain a positive user experience, and such a requirement is thus unnecessary.
Draft 2 Specification	Definitions	Installation Professional	One stakeholder recommended that EPA consider developing guidance and identifying the home performance and HVAC contracts that would be responsible for installing SHERMS packages.	EPA appreciates the recommendation and is also interested in encouraging best practices in installation. However, EPA does not believe that the specification and method to determine field performance are appropriate methods in which to address the installation of SHERMS, as EPA does not expect that all installations will require professional installation. EPA will consider possibilities for addressing installation after the Version 1.0 specification is finalized.

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Draft 2 Specification	Definitions	Automated Actions	One stakeholder recommended that EPA require SHEMS to notify the user and provide an opportunity for override for all implicitly generated automated actions.	EPA encourages service providers to notify users of implicitly generated actions when appropriate based on a given action and the user preferences. Requiring notification every time could lead to user frustrations or annoyance. Accordingly, EPA prefers to give service providers flexibility in configuring a notification system that can be customized for end users, and has not made the recommended change.
Draft 2 Specification	Eligibility Criteria	SHEMS Definition	One stakeholder expressed support of the clarified definition provided.	Thank you for your comment.
Draft 2 Specification	Eligibility Criteria	Certification Version	One stakeholder requested that EPA specify that packages must maintain ENERGY STAR Certification to Version 1.0. Similarly, another stakeholder suggested labeling the specification version with the effective year (e.g. 2019 - Version 1.0) in order to notify contractors, real estate agents, and homeowners if a SHEMS needs updating.	The ENERGY STAR product certification mark does not indicate versions of various specifications on consumer-facing materials; rather, the mark indicates a simple binary message that products met the current ENERGY STAR specification at the time of production, or, in the case of SHEMS, at the time they were marketed to customers. As such, EPA does not reference specific versions of the specification in maintaining certification or include products not meeting the current version of a specification in the list of certified products.
Draft 2 Specification	Eligibility Criteria	Additional Platform Capabilities	One stakeholder expressed strong support of the continued requirement for compatibility with a connected water heater or water heater control product, noting that the requirement is consistent with ENERGY STAR program's goal of accelerating the adoption of existing energy-saving technologies and systems. The stakeholder further argued that connected water heating technologies are sufficiently mature for easy integration into a SHEMS package.	Thank you for your comment.
Draft 2 Specification	Eligibility Criteria	Service Capabilities	Two stakeholders expressed support of EPA's clarification that automated actions must be enabled by default through hard, soft, and suggested triggers. Another stakeholder requested clarification regarding how energy consumption data needs to be displayed to the user. The commenter noted that, given the current state of the market, centralized dashboards are uncommon and would present a substantial barrier to the development of SHEMS packages if required.	Thank you for your comments regarding automated actions enabled by default. Thank you for this information. The requirement is deliberately vague to allow partners to innovate around effective communication of energy information, but we do expect some such feedback to users. The Final Draft language clarifies that it applies only to energy used by devices reporting to the SHEMS, which should simplify implementation.
Draft 2 Specification	Eligibility Criteria	Energy Data Reporting	Three stakeholders submitted comments regarding energy data reporting requirements. One recommended that EPA require a standard sampling rate, and another recommended specifying the units in which energy data should be reported. A third stakeholder requested that EPA provide additional support to SHEMS capable of providing homeowners with access to their meter data.	EPA appreciates the comments. While EPA recognizes the benefits of standardizing energy data reporting sampling rates, EPA does not believe this is currently practical, and has instead included this item in Criteria for Future Revisions. With regard to specifying a unit for reporting, EPA believes that service providers will report data in a useful format, and that an explicit requirement is therefore not necessary at this time. EPA has clarified the handling of data precision in submitting field data, in the Method to Demonstrate Field Performance. Regarding recognizing services offering access to meter data, EPA has added this field to the package information to be made available through the list of certified packages.
Draft 2 Specification	Eligibility Criteria	Malfunction User Notification	Utility partners requested that EPA provide an explanation of the mechanism by which the SHEMS system may know that an occupancy sensor has failed.	EPA anticipates that systems are designed to detect when occupancy sensors stop communicating with the SHEMS. Since EPA is not aware of any more complex methods of detecting malfunctions, EPA has not included this information in the specification, as EPA expects that service providers have already developed such functionality.
Draft 2 Specification	Eligibility Criteria	Persistent Occupancy Device	One stakeholder commented that a smart phone with geofencing is more effective than single-point occupancy detectors, and requested this be added as an option for meeting the occupancy detection requirements.	EPA recognizes that smart phones with geofencing may be valuable in certain situations, but contends that occupancy devices located within the home are necessary in order to provide reliable occupancy detection which is not dependent on a single transient device which may be lost or lose power. Accordingly, EPA has not made the requested change. However, EPA has included a requirement that service providers recommend that occupancy devices be placed in high-traffic areas of the home in order to maximize the effectiveness of occupancy detection.
Draft 2 Specification	Eligibility Criteria	Service Capabilities	One stakeholder recommended that EPA include a requirement that the SHEMS continue to function appropriately in the event that network connection is lost.	Essential thermostat functions (ability to set a room temperature and control HVAC equipment) are addressed in the Connected Thermostat specification, and therefore by reference in the SHEMS specification. EPA expects that service providers have reason to develop other capabilities, such as preserving certain non-critical device settings, and a requirement may not be necessary in those cases. EPA may explore which other essential functions might be worthwhile to require in the future. In particular, functions that impact health and safety might be identified and required to operate when the system is disconnected from a cloud.

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Draft 2 Specification	Eligibility Criteria	Vacation Safety Mode	One stakeholder commented that the vacation safety mode lighting budget of 0.03 kWh per day may not be realistic for larger homes, and increasing the budget to 0.1 kWh per day would have a relatively small impact on annual energy increase.	EPA anticipates that the budget allotted, which would power a 10W LED bulb for 3 hours, should be sufficient for maintaining a reasonable appearance of occupancy in vacation safety mode and could be leveraged creatively regardless of house size and configuration, e.g. operating several different lights in different locations for short periods of time. EPA has not received any data that would argue for a larger daily lighting budget for this function.
Draft 2 Specification	Eligibility Criteria	Additional Required Capabilities	Utility stakeholders expressed support for EPA's decision to maintain the required capabilities to connect to a water heater and support optimization based on TOU pricing. They further requested that EPA require service providers to support water heater control via an open communication standard in order to enable connectivity with a range of products.	EPA appreciates the support and acknowledges the value of open standards. EPA is not currently aware of any standard that could be used for water heater control that covers all layers of the communications stack. Our intention is to monitor developments and consider requiring such a capability in future versions of the specification.
Draft 2 Specification	Eligibility Criteria	Optional Encouraged Devices	One stakeholder recommended adding Smart IR blasters capable of controlling split system air conditioning units to the list of optional encouraged devices. Another stakeholder recommended collecting data regarding devices not captured in the list of encouraged devices that were included in installations as add-ons.	Though any device that can bring un-connected large loads under SHEMS control is valuable, EPA is not aware of a reliable performance standard for such products and will not be including them in the list of encouraged devices at this time. Through its regular engagement with partners, EPA will monitor products offered as additional devices by service providers in order to capture relevant market developments in the future.
Draft 2 Specification	Eligibility Criteria	Plug Load Control/Measurement Options	Utility partners recommended removing home energy sub metering systems from the list of options for meeting the plug load control and measurement requirement. The comment indicated that they found little incremental or energy savings potential for sub-metering over aggregate metering.	EPA is aware of studies demonstrating that access to real-time energy use data often leads to energy-saving behavioral changes. Though difficult to quantify, EPA considers these benefits and potential savings sufficiently valuable to recognize. In addition, while disaggregation and real time energy feedback can also be provided with smart meters, not every customer has one, and the higher data rate of submetering devices has the potential to yield additional customized insights. Accordingly, EPA has maintained the option to include a home energy submetering system as part of a certified SHEMS package.
Draft 2 Specification	Eligibility Criteria	Grid Service Criteria	<p>One stakeholder asked about a Demand Response arrangement in which the DR signal is received by a provider-run system and relayed to the device by some other means (such as cloud computing) would be acceptable.</p> <p>Another stakeholder suggested referencing standard IEEE 2030.5, which is applicable to systems incorporating Distributed Energy Resources (DERs).</p> <p>Utility partners expressed support of language supporting the DR reporting capability of SHEMS products. They additionally requested that EPA mandate that the SHEMS be capable of accepting DR signals based on open standards, at minimum through a cloud integration, and suggested that OpenADR 2.0a and 2.0b would both be acceptable.</p>	<p>Yes, it is acceptable for the SHEMS installation to implement DR through a cloud system, where the DR request is received off-site and the actions in response are communicated to devices in the home through other means. For instance, a service provider could implement an OpenADR virtual end node (VEN) in their cloud, and use whatever means are already used to control devices in the home to assure the home responds appropriately, or could act as a DR aggregator. Note, however, that some utilities have made it very clear that such a system is not acceptable to them as a means to implement DR, and ultimately providers may find it necessary to implement an open-standards based DR client of some type in customers' homes.</p> <p>As for requiring open standards for DR communication, EPA anticipates such a requirement in a future version of the SHEMS specification, but does not believe the smart home services market is ready for it at the moment. Language has been added to the consideration for future revisions section to make this clear. Likewise, EPA has added a specific reference to IEEE 2030.5 in the considerations for future revisions section.</p> <p>Thank you for the information about the different OpenADR profiles. EPA will distinguish them in our pick lists of supported standards. EPA expects that OpenADR compliance will be sufficient for service providers to be listed as supporting Open ADR, and will review our QPX and field data language to be sure it allows such.</p>

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Draft 2 Specification	Eligibility Criteria	Field Performance	One stakeholder recommended removing the requirement that the platform be capable of identifying the number of away hours each week of each trigger type.	As noted in EPA's response to a similar recommendation with regard to the Method to Determine Field Performance, EPA has maintained this requirement in order to gather insight into the degree of automaticity implemented by systems and possible impacts on savings.
Draft 2 Specification	Effective Date		One stakeholder recommended that EPA review the SHEMS specification every 18 months to two years to ensure that the specification has evolved with the market.	Thank you for your comment. EPA intends to develop Version 2.0 once it has gathered sufficient data to develop a performance metric, likely 2 years following Version 1.0. After that, EPA intends to revise the specification as necessary to keep abreast of market developments.
Draft 2 Specification	Criteria for Future Revisions		One stakeholder recommended that EPA add an item to consider requiring compatibility with EV Supply Equipment in future versions. Another stakeholder expressed interest in working towards aligning the efforts of the SHEMS program and Home Performance eXtensible Markup Language (HPXML).	While EPA is supportive of SHEMS integration with ENERGY STAR certified EV supply equipment, unlike water heaters, electric vehicles are not currently a ubiquitous feature of all households, nor likely to be in the next two years. Should they become so EPA will consider such a requirement.  Regarding HPXML, EPA is interested in pursuing such coordination in future versions of the specification and appreciates the support.
Draft 2 Method to Determine Field Performance	Appendix A 2) Program Performance Data	Away Hours Reporting	One stakeholder asked EPA to consider eliminating the requirement that service providers report the number of away hours generated by each trigger type (explicit, implicit, and suggested), citing the burden associated with modifying the data structures already in place in service provider databases. The stakeholder also noted that the specific categories requested by EPA are unlikely to align well with all service provider's methods for classifying away time, leading to likely difficulties with data quality. The stakeholder further commented that, while being academically informative, such granular data seemed unnecessary to understanding the drivers of energy savings.	Thanks for your comment. EPA is aware that the particular distinctions between triggers may not match well to all devices, and may in fact not be exactly the way any service provider classifies their systems' states. As a result, service providers may not be exactly uniform in how they classify edge cases, such as automatically generated schedules. However, EPA needs some insight into systems' degree of automaticity and the potential for this to affect savings, and considers the current definitions to be a good first try. We look forward to robust discussions on this topic as the specification is used.
Draft 2 Method to Determine Field Performance	Definitions	Population for Analysis	One stakeholder recommended requiring that the minimum population for analysis include a minimum number of installations that are not in the same geographic location or multi-dwelling property.	EPA appreciates this proposal and will consider including such a requirement in the future, but does not believe that the market is sufficiently developed at this point in time.