

Topic	Subtopic	Comment Summary	EPA Response
Scope		One commenter expressed that the scope section was unclear regarding how solar, storage and other distributed energy resources fit in, since they are not expressly noted in that section.	In Draft 2, EPA has clarified the SHEMS package definition which is referenced in the scope to make clear that devices capable of energy savings and grid services beyond those prescribed by the specification may be included in an ENERGY STAR certified SHEMS package. Distributed energy resources such as solar inverters for rooftop solar and battery storage are identified explicitly in the list of Optional Encouraged Devices. Additionally, the ENERGY STAR website will indicate which SHEMS packages integrate with these devices in the list of certified products.
Eligibility Criteria	Energy-Saving Actions	One stakeholder requested that service providers be allowed to provide either suggested (service-suggested events requiring user approval) or implicit (service initiated actions, that do not require user approval) but not both. The stakeholder further commented that service providers may categorize energy saving action triggers differently and that these triggers should be left to service providers rather than being dictated by the specification.	While EPA is requiring service providers to build SHEMS which perform at least one implicit energy-saving action (initiated by the service provider without action from user) in addition to suggested triggers (service-suggested actions for the user to grant permission for an action to proceed), it is up to the service provider to determine the appropriate combination and implementation of the various triggers for their customers. EPA believes that energy savings events driven by the service based on occupancy information and machine learning are key to delivering energy savings in the smart home. EPA recognizes that different users will have different preferences for granting permission for these events; however, it is the Agency's expectation that the default service will produce energy-saving device control actions through a combination of hard, soft, and suggested triggers. It is essential that service providers are recording and categorizing triggers consistently for reporting and evaluation purposes. EPA is open to additional examples in the definitions of implicit, explicit and suggested actions to ensure reporting of energy savings action triggers are coded consistently.
Eligibility Criteria	Occupancy Detection Requirements	One stakeholder requested that EPA revise the requirements to allow transient occupancy devices to fulfill the occupancy detection requirements.	EPA recognizes the value of occupancy detection using transient devices and how they can be effective in conjunction with persistent occupancy detection, in a variety of cases when the transient devices (like a mobile phone) are present and configured correctly. However, EPA does not believe that transient occupancy devices alone are sufficiently reliable to provide ongoing dwelling level occupancy detection, as there are no guarantees that such devices are used by all occupants of the home or configured properly. EPA has maintained the persistent occupancy device requirement in Draft 2. Leveraging transient occupancy devices is encouraged to provide additional information and value.
Eligibility Criteria	User Preferences	One stakeholder commented on the requirement that SHEMS services "allow users to configure system preferences, provide feedback, and to adjust how responsive the system is to detected occupancy" and the requirements that "the SHEMS service provider shall maintain documentation that demonstrates compliance to these requirements." The stakeholder expressed that it is unclear how a SHEMS service provider can ensure the required compliance if the user can alter the settings.	EPA expects service providers to ensure that the SHEMS package they offer to consumers maintains compliance with ENERGY STAR requirements (i.e. the package that is described and marketed as ENERGY STAR certified). Recognizing that user preferences may lead to deviations from these requirements, the Agency has clarified them to indicate that energy-saving device control actions implemented through hard, soft, and suggested triggers are required as a default. User changes to system preferences should be captured in the field data collected, and installations lacking required devices will not be included in the data analysis.
Eligibility Criteria	Package/Device Sales and Marketing	There were comments on the language that the devices "may be sold separately and integrated in the field." One commenter was unclear about whether the devices had to be sold together, while another commenter expressed concern about incomplete packages and recommended that EPA require all devices to be marketed, sold, installed and maintained as a single package.	EPA has included Partner Commitments with Draft 2 to clarify the expectations for marketing and labeling of SHEMS Packages. The package as marketed must meet the requirements but the way a consumer achieves the package is flexible. For instance, a consumer interested in an ENERGY STAR SHEMS may already have a device that is part of the package, such as the millions of Americans who already own an ENERGY STAR certified smart thermostat. Draft 1 included the following text "The following devices are required to be a part of a certified SHEMS package, though these devices may also be sold separately and integrated in the field." The Partner Commitments and Draft 2 eligibility requirements further clarify this flexibility. The intent is to support a variety of different business models that achieve the same end results. Only installations that meet the package requirements will be included in the field data analysis. We believe it is important to provide flexibility to both consumers and service providers in how they achieve a SHEMS package. Some companies may choose to bundle the devices with the service and sell a bundle together directly to the consumer, while others may not sell any required devices directly to their customers, but market the package to indicate which products are needed to work with their SHEMS to achieve the ENERGY STAR certification. In the Method to Determine Field Performance, only data from complete installations is reported, so the body of data to be analyzed should meet all minimum requirements and contain all required devices. In this way, EPA preserves flexibility around consumer choice but effectively credits only installations that fully qualify for the ENERGY STAR label.
Eligibility Criteria	Plug Load Control Devices	Stakeholders expressed confusion as to whether a sub metering system alone would fulfill the plug load requirements since it doesn't control plug load.	While a single smart plug is not equivalent to a smart power strip, and neither are equivalent to a sub metering system, all three options provide a pathway to understanding plug loads, which is EPA's goal with this requirement. To support a variety of business models and consumer preferences, EPA has provided three different options to fulfill the plug load control and monitoring requirement even if they don't all provide the same function. While sub meters do not control plug loads, they provide insight into the whole home's energy use which can help a SHEMS better manage and suggest ways to save energy. Sub metering can also indicate the opportunity to strategically add smart plugs to the system.
Field Data	Period of Analysis	One stakeholder recommended that the Period of Analysis for periodic data submission be a full calendar year like it is for connected thermostats in order to reduce the effect of seasonal vacations.	Reporting six months of data every six months will give EPA a chance to look for evidence of seasonal effects on monthly data as we work to develop a savings metric. As part of this process, EPA will consider whether seasonal variation requires analysis of a full year of data, as the connected thermostat metric does.
General	Revision cycle	One comment suggested the effective date have a shelf life and EPA perform a review every 18 months.	EPA's intent is to make this specification as forward-looking as possible by preserving flexibility. The main focus after releasing this specification will be to develop a metric to evaluate savings from different systems for Version 2.0. We expect this process to take approximately two years. As part of the process, we will revise the specification and all SHEMS will need to recertify to the new requirements to maintain qualification. While we recognize the smart home market is rapidly innovating, the specification was designed to accommodate evolution. The field data collection, however, is expected to prompt a timely revision to ensure we are collecting the data necessary to properly evaluate systems.
General	Interoperability	Several commenters expressed concern regarding interoperability and how data from devices will be aggregated.	This initial SHEMS specification is intentionally designed to address interoperability through its focus on partnering with service providers that are already managing the interoperability and security of their systems. Service providers carefully select and test devices to include in their ecosystem. For this reason, they should be well suited to continue to manage this process for ENERGY STAR certified SHEMS packages. The only data from devices that must be aggregated, according to the specification and Method to Demonstrate Field Performance is to derive the whole system standby power, which has been clarified for expectations and made optional in draft 2. EPA has not specified how this data is to be aggregated. EPA does intend to display communication protocols associated with each certified SHEMS packages on the ENERGY STAR web site listings.
General	Quantifiable savings	Utility stakeholders expressed concerns that they would not be able to pilot SHEMS programs until energy savings were more rigorously quantified. They further commented that the specification would be premature due to this concern, and that integrated load management would need to be part of the SHEMS specification to conclusively demonstrate value to utilities.	To support utility programs' ability to pilot and demonstrate value associated with SHEMS programs, EPA included requirements for grid services capabilities and additional platform capabilities to support water heater control and time of use pricing. EPA has also required reporting of compatibility with any additional encouraged devices in order to provide utilities further options that may add value to a potential pilot program. Version 1 will provide the opportunity to collect data and enable the development of a metric which will more definitively identify savings.

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General	Data Collection	One stakeholder recommended that EPA collect data regarding which additional devices a package is compatible with.	EPA expects that service providers will maintain their own website URL with a list of all the devices their ENERGY STAR certified SHEMS is compatible with. In the ENERGY STAR Product Finder, EPA will list associated required and priority devices and provide a link to the service provider website URL for the most accurate and up-to-date list of compatible devices. EPA will be releasing a preview of the information that would appear in the ENERGY STAR Product Finder for certified SHEMS packages shortly after the release of the Draft 2 specification. We encourage stakeholders to submit comments regarding additional priority devices to list specifically through the listing of certified packages on the ENERGY STAR web site.
General	Certification with New Devices and Specification Revisions	One stakeholder asked how the addition of new connected devices would affect certification of the SHEMS. Another stakeholder expressed concern regarding alerting users if the version of the ENERGY STAR specification changed and/or the SHEMS lost certification.	Initial certification will be based on the service provider's SHEMS offering at the time of certification. Service providers must keep their certification up-to-date with regards to any required devices which are marketed as part of an ENERGY STAR package. EPA intends to collect and list information for all required devices included in ENERGY STAR SHEMS packages on the ENERGY STAR web site listings. Adding new, optional connected devices to a SHEMS package would not affect certification. SHEMS packages offered to consumers must be certified to the current ENERGY STAR SHEMS specification. In the event that a service provider's SHEMS package loses ENERGY STAR certification, such as at the time of the next specification revision, EPA's expectation is that the partner will remove the ENERGY STAR mark and other references from any promotional materials, websites, and applications associated with the SHEMS.