

April 2, 2019

Ms. Taylor Jantz-Sell and Ms. Abigail Daken  
US Environmental Protection Agency  
Ariel Rios Building 6202J  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Ms. Jantz-Sell and Ms. Daken:

The Consortium for Energy Efficiency (CEE) respectfully submits the following comments in response to Smart Home Energy Management Systems Discussion Guide and Work Group Summary, released by the Environmental Protection Agency (EPA) on June 26, 2018 and February 12, 2019.

CEE is the binational organization of energy efficiency program administrators and a staunch supporter of the ENERGY STAR® Program. CEE members are responsible for ratepayer-funded efficiency programs in 38 US states, the District of Columbia, and four Canadian provinces. In 2016, CEE members directed nearly \$7 billion of the \$8.8 billion in energy efficiency and demand response program expenditures in the two countries. These comments are offered in support of the local activities CEE members carry out to actively leverage the ENERGY STAR brand. CEE consensus comments are offered in the spirit of strengthening ENERGY STAR, so it may continue to serve as the national marketing platform for energy efficiency.

CEE highly values the role ENERGY STAR plays in differentiating energy efficient products and services that the CEE membership supports locally throughout the US and Canada. We appreciate the opportunity to provide these comments.

## **Until EPA Addresses the Full Spectrum of Amenity Suggested by the Phrase “Smart Home”, CEE Recommends Using Banners such as “Connected” or “Energy Management Services”**

The naming of an ENERGY STAR home energy management proposal should accurately represent the scope and amenity delivered to consumers and remain consistent with past CEE Board and ENERGY STAR management discussions.

When ENERGY STAR was first developing connected product criteria in 2012, EPA leadership, in consultation with the CEE Board, elected to avoid the term “smart,” instead using the term “connected.” At that time, the term “smart” was used to represent a wide array of services and amenity, only sometimes including energy-related services. The Board Committee on ENERGY STAR has observed a wide range of consumer expectations associated with “smart” products and “smart” meters and were concerned that if any of the products recognized by ENERGY STAR did not meet these dynamic expectations, it could reflect poorly on the ENERGY STAR brand. In some jurisdictions, the term “smart” had negative customer associations due to initial opposition to the roll out of smart meters as well as perceptions of complexity and high expense.

We believe the scope of the current proposal is too limited to be accurately characterized as a “smart” home service or solution. Prematurely labeling services as “smart” that primarily focus on occupancy sensing and fail to address load management and energy saving behavior change is likely to undermine medium-term efforts by utilities to promote an Integrated Home. CEE members have defined an integrated home as efficient, enabled load management capabilities (including price responsiveness), and capable of two-way communication with the utility distribution system and other third parties providing energy management services. It anticipates that consumers will expect seamless interoperability and builds off new non-energy amenity and convenience to deliver a clean energy solution.

## Addressing Energy Management Services Could Lay the Groundwork for a **Future** Smart Home Identity

We believe that the current SHERMS proposal represents Energy Management Services enabled by connected home devices and has the potential to deliver new energy savings to customers. We suggest that EPA deliver on consumer expectations of ENERGY STAR and connected devices, with the intent of supporting the longer-term vision developed by CEE members. If in the future, the scope of the home energy management systems is broadened and can collectively address energy efficiency, load management, interoperability, and a minimum set on non-energy amenity expected by consumers across all the major end uses in the home, it may become appropriate for EPA to make use of phrase “Smart.”

## With the Current Emphasis on Energy Savings, it is Incumbent that an ENERGY STAR Labeled Service Demonstrate Cost-Effective Energy Savings to the Consumer Above Currently Labeled Products and Services

Many studies have been conducted which demonstrate potential benefits derived from energy efficiency, load management, and behavior change enabled by smart, connected products and associated management services. While the results of these studies are promising, there is a wide range in the savings documented and each study comes with its own set of limitations and caveats. CEE members that have administered pilots for

home energy management have cautioned CEE that cost-effective energy savings may not be realized in all applications or user scenarios, especially in instances where initial results are based on a single, non-statistically significant study. It appears possible that energy savings will need to be paired with load management and energy saving behavior measures in order to represent a viable, cost-effective option for voluntary programs.

Given the complexity of variables that factor in to savings for any given home energy management system, the confidence associated with claimable savings relies on vetted studies that demonstrate in-field performance of such systems. To conclusively demonstrate cost-effective energy savings potential, additional studies and data will be critical. As this is a remaining challenge, CEE members are eager to work with EPA to identify and support new research and pilots as well as data reporting requirements that will help credibly document the associated savings. Ideally, these pilots would begin to incorporate time-dependent valuation of energy saved.

We believe it would be premature to move forward with a draft home energy management specification, unless the necessary rigor and data can be provided to demonstrate an incremental energy savings benefit to the consumer over a currently labeled product or service, such as communicating thermostats. CEE believes there are alternative strategies to enable EPA collection of data with reduced risk to the ENERGY STAR brand and we would be happy to support EPA in the development and implementation of these data collection efforts.

## CEE Members Are Increasingly Tasked With Meeting Integrated Demand Side Management Objectives

While meeting energy efficiency regulatory goals remains a crucial, well-funded, and common purpose for providing consumers with energy management solutions, many CEE members indicate that kwh and therm savings independent of time and location may not warrant, by themselves, continued program investment. This evolution is driven by new regulatory objectives, such as deployment of distributed energy resources that are clean, but create new grid considerations. CEE members increasingly seek to serve a broader range of objectives related to societal, utility system, and customer focused objectives. CEE's members have determined that an integrated approach to the home (products and services, traditional efficiency, interoperability and open platforms for communication, demand response, actionable information to change energy-related behaviors) is required to fully realize the opportunity afforded by connected devices.

EPA's current approach of applying three different approaches to device and system connectivity, 1) thermostats, lighting, and appliances, 2) home energy management systems, and 3) large load products, could inhibit CEE members from being able to consistently leverage the portfolio of ENERGY STAR products within integrated demand side management (IDSM) programs. Some members have discovered that while ENERGY STAR thermostats serve their energy efficiency objectives, they are insufficient in enabling customers to participate in demand response programs and in at least one instance, have contributed to increased system peak in communities with TOU rates. As programs become increasingly integrated, members are likely to

support products and systems that can serve multiple objectives. For these reasons, CEE members are very supportive of the philosophy contained in the recently released *ENERGY STAR Connected Criteria for Large Load Products Discussion Guide* as it would likely serve multiple IDSM objectives. If EPA has interest in expanding the philosophy proposed in the *Large Load Products Discussion Guide* to all ENERGY STAR labeled products, CEE would welcome the opportunity to support EPA in this endeavor. To proceed, CEE supports hosting a stakeholder meeting to discuss the use of ENERGY STAR connected criteria and product finder as a behind-the-scene tool for IDSM programs.

CEE would once again like to thank EPA for the opportunity to comment on ENERGY STAR® Smart Home Energy Management Systems Discussion Guide and Work Group Summary. As the voice for the US and Canadian Program Industry, CEE will continue to inform ENERGY STAR and its stakeholders of the progress on our member's IDSM framework and would willingly participate in an all stakeholder discussion to map out the Program's future in service to public purpose and in light of the new digital economy. Please contact CEE Senior Program Manager Eileen Eaton at 617-337-9263 with any questions about these comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ed Wisniewski".

Ed Wisniewski  
Executive Director