



Mr. Joseph Hangerman
U.S. Department of Energy
Building Technologies Program
Sixth Floor
950 L'Enfant Plaza SW.
Washington, DC 20024

September 29, 2014

Re: Physical Characterization of Grid-Connected Commercial and Residential Building End-Use Equipment and Appliances

Docket Number: **EERE-2014-BT-NOA-0016**

Dear Mr. Hangerman,

Thank you for the opportunity to comment on the Framework for Characterizing Connected Equipment. Northeast Energy Efficiency Partnerships (NEEP) strongly supports the Department's efforts to develop physical characterization procedures for smart/utility ready appliances. NEEP works to promote efficiency throughout the Northeast and Mid-Atlantic United States and the Smart and Grid-connected device category is one that holds great potential for improving device-level, as well as grid-level efficiency in our region. While smart meter/grid deployment in this region is still in its early stages, the longstanding focus on efficiency and understanding of the potential that connected and smart equipment and appliances may provide is a high priority for regional stakeholders and efficiency program administrators.

NEEP wants to comment on the following:

Items 2-3: How can these terms be better defined? Additional terms to be defined?

NEEP feels that the current definitions provided in this framework document are murky regarding smart vs. grid connected. Smart and Grid Connected are similar terminologies, but there is a key distinction. It is implied that "smart" equipment is able to change or make decisions based on information that the equipment collects (i.e. adjusting the temperature because it senses it is too hot, reporting a malfunction because it senses irregular functioning). Grid Connected equipment, on the other hand, has the ability to receive signals from the smart grid and adjust behavior accordingly, but may not be measuring anything or processing actions on its own (for example a water heater kicking on when it receives a demand response signal—the water heater itself did not necessarily sense that it should switch on at this time and may not have monitored anything, but was able to change based on the signal it received from the grid).

Would defining these appliances as "connected" mean that they must include intelligent features? Generally the terminology for "connected" does not mean that the equipment itself necessarily has intelligence or can process/recalibrate (though it certainly can), but it must be connected to another "brain" and can receive signals from the brain to react. NEEP recommends that DOE does not limit the scope of equipment to just that with internal processing power, but also include equipment that can be dynamic based on signals received from an external processor.

NEEP Supports Characterization Protocol Framework

NEEP supports the direction that the DOE is moving to link performance metrics with the services they provide. NEEP feels that this will yield the best results.

NEEP also supports the DOE in the desire to use existing test method elements when possible. This should be the most effective approach.



Items 5-6: Eligibility requirements

NEEP proposes the following eligibility requirements for connected equipment: MUST have 2-way digital communications, AS WELL AS AT LEAST 1 OF: Load management functions, executive diagnostic functions, and/or communicate status/alert consumers to performance deviations.

Item 14: Process for developing characterization protocol

NEEP supports DOE's suggested approach for DOE to develop a straw man characterization that the group can adjust rather than develop the characterization through a consensus process. NEEP feels this approach is more likely to yield success in a timely fashion.

NEEP and our stakeholders across the Northeast/Mid-Atlantic are very excited about the DOE's prioritization of these products and services and are very hopeful of the efficiencies to be gained from these devices and equipment at both an end-use level and grid level. Through NEEP's continued leadership of the Home Energy Management System Working Group, as well as our ongoing efforts in Appliance Standards, we hope to be active participants in this process as it unfolds. We welcome any questions, comments, or clarifications that you might have. Thank you again for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Susan E. Coakley".

Susan E. Coakley, Executive Director