

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



OFFICE OF
AIR AND RADIATION

January 14, 2014

Dear Pool Pump Manufacturer or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) welcomes your input on the attached Draft 1 ENERGY STAR Criteria for Pool Pump Connected Functionality. While meeting such criteria is not required for qualification, ENERGY STAR pool pumps that meet the final connected criteria would be identified on the ENERGY STAR Qualified Product List (QPL) as having 'connected functionality.' Stakeholders are encouraged to submit comments on the criteria no later than **February 24, 2014**. EPA will hold an ENERGY STAR stakeholder webinar on **February 10, 2014** to discuss the proposal and answer stakeholder questions. Details on this meeting are provided below.

This proposal is a culmination of discussions with numerous stakeholders over the last year. EPA's intent with developing connected criteria for ENERGY STAR products is to help advance the market for products with intelligent features that can offer immediate energy savings and convenience for consumers and smart grid capabilities that will support a low-carbon, reliable, secure and more affordable electric grid over the long-term. The Draft 1 builds upon feedback received on the Discussion Document released during the Version 1.0 specification development process. The proposal also reflects learnings from related specification development efforts where stakeholders have worked with EPA to define connected functionality for other ENERGY STAR products. All pool pump comments received to date are posted on the ENERGY STAR [Pool Pump Specification Development Page](#).

In Draft 1, EPA is proposing a set of optional connected criteria in order to define pool pump products with connected functionality. EPA is interested in highlighting products with connected functionality on the ENERGY STAR QPL so that consumers, rebate program administrators and other interested stakeholders are better able to identify and advance those products into the marketplace.

Key elements of the proposal include:

Emphasis on open standards: Consistent with the Discussion Document, the Draft 1 reinforces EPA's intent to help advance interoperability and open access by requiring open standards be used and that technical documentation (e.g., APIs/ICDs) for select connected features, be released. Considering the nascent stage of market deployment of pool pumps with connected functionality, the standardized modular control interface (MCI) included in the Discussion Document as a possible requirement, is not specified. EPA is also not aware of any pool pumps that are using an MCI.

During related connected specification development efforts, utilities expressed concerns with communication architectures that do not provide open standards based communication access in the consumer's home (e.g., an open standards-based grid interconnection is only possible in the internet/cloud with proprietary signaling to/from a pool pump). However, EPA is aware that several recent pool pump demand response (DR) utility pilots do not appear to use open standards on the premises. Considering this, EPA believes it is currently in the consumers' interest for the market to continue to test a range of options. Balancing this with the needs that have been expressed by some utilities, the Draft 1 encourages, but does not require, that pool pumps use open standards on the consumer premises.

Inclusion of consumer-oriented functionality: Given the value proposition ENERGY STAR represents for consumers, EPA continues to believe the connected functionality in an ENERGY STAR qualified product should support smart grid interconnection as well as more consumer-oriented functionality. To this end, EPA is proposing a number of consumer-oriented features for connected pool pump. The Agency believes that these support an important opportunity to empower consumers with new information and enhanced control of the product and their energy costs. The proposal includes a set of features including alerts/messages, energy consumption feedback, and remote management, intended to enable new energy savings and convenience opportunities for consumers.

New demand response capabilities: EPA is proposing to define three minimum DR capabilities of connected pool pumps. The first capability involves small load reduction over a longer duration, the second capability provides a larger load reduction (i.e., turning the pump off) but over a shorter period. The third response would allow for load balancing (i.e. provide for a temporary increase offset by a later decrease in pumping duration and/or speed/flow). The proposed definitions have been informed by research and initial pool pump stakeholder outreach. The intent of creating this specific set of capabilities is to encourage new demand response functionality that enables grid benefits while also ensuring a positive consumer experience with these new capabilities. To this end, the criteria provide consumers with full control, by being able to override a DR response at any time.

Modifications to peak period avoidance: EPA has included a revised peak avoidance period in the Draft 1, that would require connected pool pumps to, by default, avoid pumping between 12 Noon and 6pm. As with our DR capabilities, consumers would have the ability to modify or enable/disable this capability.

Test Method

The U.S. Department of Energy (DOE) will develop an ENERGY STAR test method that outlines the procedures and conditions to be used for testing products to the connected criteria. The test methodology will focus on validating the DR capabilities and will be developed in parallel with the criteria.

ENERGY STAR Stakeholder Web-based Meeting

Stakeholders are invited to participate in a web-based stakeholder meeting on **February 10, 2014 at 1:00 PM Eastern Time** to discuss the Draft 1 Connected Criteria. **You may register to participate by visiting the following Go To Webinar link [here](#).** EPA encourages manufacturers, utilities, and other stakeholders to participate in order to gain a well-rounded representation of the concerns and interests of all parties involved in the pool pump market place.

Submittal of Written Comments

Comments on the Draft 1 Criteria for Pool Pump Connected Functionality be submitted via email by **February 24, 2014** to poolpumps@energystar.gov. All comments received will be posted to the ENERGY STAR Product Development Web site, unless the submitter specifically requests that his or her comments remain confidential.

The exchange of ideas and information between EPA, DOE, industry, and other interested parties is critical to the success of ENERGY STAR. Please feel free to contact me at (202) 343-9046 and kent.christopher@epa.gov or Erica Porras, ICF International, at (202) 862-2972 and erica.porras@icfi.com with any questions or comment on the Draft specification. For questions relating to the test method, please contact Bryan Berringer at (202) 586-0371 or bryan.berringer@ee.doe.gov.

Sincerely,



Christopher Kent,
Product Manager for Pool Pump Equipment
ENERGY STAR Program