

Government and industry call for co-operation in addressing the “energy cost” of network-connected appliances

30 officials from IRHMA¹, 4E-EDNA² and Korean Government agencies met on 4 November 2014 in Jeju, Korea to discuss network-connected appliances. The following were agreed by the meeting attendees.

Sales of network-connected (“smart”) appliances are increasing, driven by trends towards home automation and home energy management systems. These represent significant opportunities to reduce energy consumption, however it was recognised that the “energy cost” of appliance connectivity should not be ignored. This refers to the energy used by smart appliances to remain connected to a communications network. This video contains a brief explanation: <http://edna.iea-4e.org/about>.

Seemingly, there are few technical barriers to manufacturing an appliance which uses minimal energy for network connectivity. Communications chipsets can emulate those of mobile phones, which use very little power in order to conserve battery life. However the challenges arise because of the sheer complexity of smart home systems and the desire to have all devices co-operating seamlessly. Furthermore, the business model for smart appliances is currently unclear and market participants are regularly entering this space - for example smart home platform providers.

The communications protocols, which allow appliances to connect and communicate, can also counteract energy efficiency. Many competing protocols exist and no global approach has yet been agreed. IRHMA are currently investigating the suite of existing protocols, with a view to identifying the best solution for harmonizing different protocols to smart appliances. At the completion of this investigation it is hoped that an approach can be recommended. The US Dept of Energy is also conducting a characterisation study for connected equipment³.

As a result of the meeting, participants from IRHMA and 4E-EDNA pledged to work together to address the “energy cost” of appliance connectivity. Participants acknowledged the need for continued dialogue among appliance manufacturers, regulators, standardization organisations and other stakeholders to ensure that the “energy cost” of network-connected appliances is considered. It is expected that dialogue between the parties will continue, as part of the work stream on networked devices agreed by the G20⁴.

Parties interested in contributing to or receiving updates on these efforts should send an email to info@edna.iea-4e.org.

¹ IRHMA is the International Roundtable of Household Appliance Manufacturer Associations. It is a global forum in which the appliance industry can discuss global challenges and issues. Refer <http://www.irhma.org>

² 4E-EDNA is the Electronic Devices and Networks Annex of the International Energy Agency’s Energy Efficient End-use Equipment Implementing Agreement (4E). EDNA aims to assist governments to reduce the “energy cost” of network-connected devices. Refer <http://edna.iea-4e.org/about>.

³ Refer <http://www.regulations.gov/#!documentDetail;D=EERE-2014-BT-NOA-0016-0022>

⁴ Refer page 5 of G20 Energy Efficiency Action Plan: https://www.g20.org/sites/default/files/g20_resources/library/g20_energy_efficiency_action_plan.pdf