G20 ENERGY EFFICIENCY ACTION PLAN:
Networked Devices

Text

In November 2014, G20 leaders endorsed a United Kingdom led initiative on networked products as one of the six work streams of the G20 Energy Efficiency Action Plan: Voluntary Collaboration on Energy Efficiency.

THE ISSUE

More and more consumer electronics and household appliances are being sold with "smart" features that require being connected to a network. This network connectivity increases opportunities for energy management, such as controlling the temperature setting of one's air conditioner by smart phone, but also adds to energy consumption as appliances use 'network standby' power just to remain connected to the network. This short **video** explains the issue.

The "internet of things" is expanding the number of 'connected devices' rapidly. In **"More Data, Less Energy"**, the International Energy Agency (IEA) estimates that the current annual standby power consumption of networked devices is over 600 billion kilowatt-hours, which is greater than Canada's 2011 annual electricity consumption. With up to 50 billion devices forecasted to be connected to networks by 2020, global standby power consumption is projected to nearly double by 2025.

However technical solutions exist to improve energy efficiency in network-connected devices by allowing devices to power down, scale power demand to the activity that is performed, and maintain network connectivity with very low power consumption. IEA assessments indicate that the demand of network-enabled devices could be cut by 65% by using best available technologies and solutions.

THE G20 INITIATIVE

The initiative will co-ordinate governments, experts and industry to encourage innovative responses to the challenge of energy consumed by network devices. In recognition of the global trade in networked devices, the initiative will bring together interested parties to:

- Expand relevant research and share information.
- Accelerate the development of product standards for technologies that would enable devices to power down and use less energy when in standby mode.
- Develop policy frameworks to reduce energy consumption of networked devices when in standby mode.
- Consider goals for reducing the global standby mode energy consumption of networked devices.
- Report on progress with these issues to the next G20 Summit in Turkey.

The initiative will develop a platform for international cooperation through the IEA's Energy Efficient End-use Equipment (IEA-4E) Implementing Agreement and the Super-efficient Equipment and Appliance Deployment (SEAD) initiative. This will include workshops for invited participants on the following dates:

| 19–20 January 2015, IEA, Paris | 21 May 2015, Copenhagen | 17–18 June 2015, IEA, Paris |

BACKGROUND

The Energy Efficient End-use Equipment (IEA-4E) Implementing Agreement is part of the energy technology network established by the IEA to share information and transfer experience in order to support good policy development in the field of energy efficient appliances and equipment.

The Super-efficient Equipment and Appliance Deployment (SEAD) initiative of the Clean Energy Ministerial (CEM) and the International Partnership for Energy Efficiency Cooperation (IPEEC) brings together governments to work together to turn knowledge into action to save energy.

In 2012 and 2013, the IEA, the IEA-4E Standby Power Annex and SEAD organized workshops in Stockholm, Toronto and Paris to discuss the issue of network standby with key stakeholders including governments and industry. These formed part of the development process for "More Data, Less Energy", which was jointly published by the IEA and IEA-4E.

In 2014, the IEA-4E also published **"Beyond Network Standby: A Policy Framework and Actions for Low Energy Networks"** which elaborates a path forward for efficiency policy in the area of networks and complements "More Data, Less Energy".

In 2014, IEA-4E launched the Electronic Devices and Networks Annex **(EDNA)**, which will continue international collaborative work on efficient connected devices and networks.

4E Energy Efficient End-use Equipment International Energy Agency · iea · International Energy Agency · ipeec International Partnership for Energy Efficiency Cooperation · SEAD Super-Efficient Equipment and Appliance Deployment