International Collaboration to promote promoting Energy Efficiency in networked devices

Benoît Lebot, Executive Director IPEEC
Capetown, DUE, March 31st, 2015
G20 ENERGY EFFICIENCY ACTION PLAN

VOLUNTARY COLLABORATION ON ENERGY EFFICIENCY

16 NOVEMBER 2014
G20 ENERGY EFFICIENCY ACTION PLAN:
Networked Devices

Capetown | 31 March 2015
A brief recent history

- More Data, Less Energy Published, July 2014
A brief recent history

- Adopted as part of the G20 Energy Efficiency Action Plan in November 2014
  - IEA leading the work stream with the UK Department of Energy & Climate Change
  - Supported by IEA-4E Implementing Agreement and SEAD
  - Reporting through IPEEC

- Taken forward under the Turkish presidency from the start of 2015
Why we care about networked devices?

- Managing energy demand is key to secure sustainable energy systems.
- Information communication technology (ICT) electricity demand is growing at a faster rate than overall electricity demand.
- Devices (including appliances) in homes and offices are driving this demand.
- These provide valuable services, but there are significant energy efficiency opportunities.
- Policies can play an important role in creating the conditions needed to accelerate energy efficiency.
Growing electricity demand of ICT

Electricity demand of networks, PCs and data centres

World ICT energy demand reached 1560 TWh in 2013

- Networks
- PCs
- Data centres

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Networked devices are driving electricity demand

- ICT electricity demand by segment

- Networks 18%
- Data centres 21%
- Other 19%
The new age of information and communication technology

Standby power consumption of networked devices is >600 TWh p.a.
= More than Canada’s total annual electricity consumption for 2011.

By 2025, global standby power consumption is projected to nearly double.

The global energy footprint information and communication technology, 2013
Networked devices are driving electricity demand
How much could we save?

World

- Savings potential
- Remaining consumption

- 2010
- 2015
- 2020
- 2025

TWh

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Work stream deliverables

- Establish a forum for governments and industries representative of the value chain for connected devices to develop joint initiatives.
- Expand relevant research and share information amongst participants.
- 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 and make recommendations to the G20 Summit in Turkey.
Progress so far

- Government / Industry workshop at IEA in January
- Six themes proposed for further developments
  - Goal/vision
  - Awards
  - Protocols
  - IEA Principles for Energy Efficiency in Digital Devices
  - Centre of Excellence
  - Digital Energy Disclosure
- Industry invited to propose further themes by end Mar
- Web presence established to host outputs and provide information on the work stream
- Network of 300 government agency & industry contacts established
Timeline for 2015

- Joint Government/Industry workshop, January 19/20, IEA, Paris
  - Progress report to ESWG – February
- Government workshop, May 21, Copenhagen
  - Progress report ESWG – May
- Joint Government/Industry workshop, June 17/18, IEA, Paris
  - Progress report to ESWG – September
- Report to leaders, November
G20 Energy Efficiency Efficiency Action Plan

“Participating countries will work together to accelerate the development of new ways to improve the energy efficiency of networked devices”

“In 2015, this work will include consideration of options for goals for reducing the global standby mode energy consumption of networked devices”
Key Tasks

1. Co-ordinate governments, experts & industry to encourage innovative responses to energy consumed by network devices
2. Expand relevant research & share information
3. Accelerate standards for enabling devices to use less energy in network standby mode
Key Tasks (2)

4. Develop policy frameworks to reduce energy consumption in network standby mode

5. Consider goals for reducing global standby mode energy of network devices

6. Report on progress with these issues to the next G20 Summit in Turkey (via IPEEC)
Roles and Responsibilities

• Coordination:
  – UK (Dept of Energy & Climate Change)
  – International Energy Agency

• Resources being harnessed:
  – Energy Efficient End-Use Equipment Implementing Agreement (IEA-4E)
  – IEA-4E Electronic Devices and Networks Annex (EDNA)
  – Super Efficient Equipment and Appliance Deployment initiative (SEAD)
Working Groups

Joint industry/government groups to develop new initiatives on:

1. **Vision**
   
   Identify ambitious goal to focus government and industry attention on the issue of networked devices.

2. **Principles for Energy Efficiency in Digital Devices**
   
   Develop and promote a set of ‘guiding principles’ for the design of equipment and networks.

3. **Protocols**
   
   Identify gaps in the existing landscape of protocols with potential to enhance energy efficiency.
Working Groups

4. Digital Energy Disclosure
   Investigate how networked devices can communicate information on their own energy use.

5. Centre of Excellence
   Establish an open access repository for best practice in energy efficiency in network devices.

6. Awards
   Explore the use of awards to incentivise industry and standards making bodies.

7. Intelligent Efficiency
   Examine and quantify the benefits of intelligent efficiency.
### Workshops

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<td>19/20 January 2015</td>
<td>Joint Government/Industry workshop</td>
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<td>21 May 2015</td>
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### Further information

[http://www.iea-4e.org/projects/g20](http://www.iea-4e.org/projects/g20)
## Participants

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