

Guiding Principles for Energy Efficiency in Networked Products

In 2007 IEA Digital Networks Workshop developed some “guiding principles” that both could underpin both the network design and policy objectives future network designs. These principles can be used to evaluate existing and proposed network technologies and designs. At the 4E-APP technical expert network standby workshop in Paris April 2010, these principles were updated with some minor revisions. Since then the APP Standby Project, the 4E Standby Annex and the APEC standby Power Conference all accepted these principles as the basis for future work in this field.

Network Connected Devices – Initial Hardware Objectives

- A. Digital network technologies should actively support power management and should follow standard (international) energy management principles and designs.
- B. Connection to a network should not impede a device from implementing its own power management activities.
- C. Networked devices should not impede power management activities in other devices connected to the network.
- D. Networks should be designed such that legacy or incompatible devices do not prevent other equipment on the network from effective power management activities.
- E. Network connections should have the ability to modulate their own energy use in response to the amount of the service (level of function) required.

Network Connected Devices – Initial EE Policy Objectives

- F. Governments should ensure that electronic devices enter low-power modes automatically after a reasonable period when not being used (power management).
- G. Governments should consider limits on energy consumption in low-power modes for networked products and develop technically feasible options.
- H. Governments should ensure that network-connected electronic devices minimise total energy consumption, with a priority placed on the establishment of industry-wide protocols for power management.
- I. Energy efficiency specifications should require specific particular hardware or software technologies only after careful consideration. Open source and non proprietary technologies are generally preferred.
- J. Requirements for networked products need to be generic and performance based.