



## GUIDING PRINCIPLES FOR GOVERNMENT AND INDUSTRY REGARDING ENERGY EFFICIENT NETWORKED DEVICES

1. Government and industry should support voluntary and market-oriented programs and initiatives, including international and industry-led standardization of terminology and test procedures. Emphasis should be on initiatives that support continued innovation, expanded consumer choice, enhanced product functionality and data security.
2. Government and industry should pursue harmonized policy approaches that benefit the global marketplace for consumer and commercial technology products and services and the enhanced productivity and efficiencies achieved via networked systems.
3. Policy objectives and actions should recognize and promote, and not hinder or negate, the positive effects of using consumer electronics and information and communication technology (ICT) to enable energy savings, in the U.S. often referred to as “Intelligent Efficiency.”<sup>1</sup>
4. Networked device design should follow standards-based communication and power management protocols to ensure compatibility and interoperability.
5. Policy measures must not impede the functionality of the networked device or efficiency of the network, nor the implementation of standards for enabling device or network security.
6. Consumers should be informed about and have control over device power management, when applicable, including networked device low power modes that may affect the user experience.
7. Power management should not impede efficient operation across the network or inject bottlenecks or faults into the network.
8. Networked devices should not be subject to a horizontal, one-size-fits-all power management or power scaling approach based on a tiered mandatory wattage limit. Instead, policies and programs should focus on vertical product approaches that account for the different needs, capabilities, network interface standards and power management potentials of networked devices.
9. Networking and networked infrastructure devices should never autonomously go to sleep since their primary function is dependent on persistent connectivity. When appropriate, these devices should support network power scaling, such as switching from active mode to a low power mode.

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<sup>1</sup> ACEEE definition: Intelligent Efficiency is "a systems-based, holistic approach to energy savings, enabled by information and communication technology and user access to real-time information. Intelligent efficiency differs from component energy efficiency in that it is adaptive, anticipatory, and networked."

[https://www.energystar.gov/ia/partners/prod\\_development/downloads/Neal%20Elliott%20EPA-ITI%20Workshop%20on%20EE%20Systems%206-12-14.pdf?9f71-8b97](https://www.energystar.gov/ia/partners/prod_development/downloads/Neal%20Elliott%20EPA-ITI%20Workshop%20on%20EE%20Systems%206-12-14.pdf?9f71-8b97)

10. Connection to a network should not impede a device from implementing its own power management activities, when appropriate.
11. Networked devices should not impede power management activities in other devices connected to the network.
12. Networks should be designed such that legacy or incompatible devices do not prevent other equipment on the network from effective power management.
13. Networks and devices should have the ability to scale energy use in response to the amount of the service or level of functionality required.
14. Networked devices intended to operate primarily or solely on battery power (such as smart phones and remote IoT sensors, respectively), or operate on energy harvesting technology, already employ highly effective power management techniques. Therefore, these devices should not be subject to a mandatory networked standby mode.