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Don't Just Standby

Today, the world's 14 billion online electronic devices – such as set-top boxes, modems, printers and game consoles – waste around 80 billion dollars each year! This is according to a report by the International Energy Agency (www.iea.org, July 2014 press release).

The biggest reason for all this waste is that the technology is very inefficient. Right now, the best thing you can do is unplug or turn them off! Best to get in the habit now, as according to estimates from the IEA - by 2020 the problem will worsen, with \$120 billion likely to be wasted. The IEA's report points to some better options, identifying simple measures manufacturers could do now to improve energy efficiency in networked devices. Implementing these improvements could result in "massive savings of energy and money".

The IEA report, "More Data, Less Energy: Making Network Standby More Efficient in Billions of Connected Devices", shows that electricity demand of our increasingly digital economies is growing at an alarming rate. The energy demand of billions of networked devices continues to grow as more and more of the world's population joins the digital age, and as network connectivity spreads to devices and appliances that were previously not connected, such as washing machines, refrigerators, lights and thermostats.

"The proliferation of connected devices brings many benefits to the world, but right now the cost is far higher than it should be," said IEA Executive Director Maria van der Hoeven. "Consumers are losing money in the form of wasted energy, which is leading to more costly power stations and more distribution infrastructure being built than we would otherwise need – not to mention all the extra greenhouse gases that are being emitted."

But it doesn't need to be this way. Van de Hoeven concluded, "If we adopt best available technologies we can minimize the cost of meeting demand as the use and benefits of connected devices grows."

As the report explains, much of the problem boils down to inefficient "network standby" – that is, the maintaining of a network connection while in standby. In many devices, standby is a misnomer: it suggests that the device has gone to sleep and is almost off. In reality, most network-enabled devices draw as much power in this mode as when activated to perform their main tasks!

“The problem is not that these devices are often in standby mode, but rather that they typically use much more power than they should to maintain a connection and communicate with the network,” said Van der Hoeven. “Just by using today’s best available technology, such devices could perform exactly the same tasks in standby while consuming around 65% less power.”

The report describes technologies and technical solutions as well as a range of policy options that are available to reduce energy waste. It projects that if better energy efficiency measures were applied to online devices in the coming years, the energy saved, would be like shutting 200 standard 500MW coal-fired power plants, which would cut emissions by 600 million metric tons of CO₂.

In the report, the IEA calls on policy makers, standards development organizations, software and hardware developers, designers, service providers and manufacturers to work together to reduce energy demand. To achieve this, the agency urges an international initiative to enhance standards, as the issue is global.

In the meantime we can all reduce standby power waste by unplugging products that are rarely used. The best example is a second television and DVD/VCR in, for example, a guest room.

More importantly, use a smart power strip with a switch to control clusters of products. The most likely targets are computer clusters (PC, display, printer, scanner, speakers, wireless transmitter, etc.), video clusters (TV, DVD player, powered speakers, game consoles, etc.), and so on. Be sure to keep any set-top box or modem on a separate circuit to avoid loss of connection. Buy your smart strips through the rebate available from the RMLD. These actions will save wasted energy, saving you money.

By Reading Climate Committee members Gina Snyder and Michele Benson