



CELEBRATING
20 YEARS OF
ENERGY STAR



Product Retrospective: Standby Power

Many appliances and electronic devices that appear to be off are actually in standby mode—not providing their primary function, but enabling features such as “instant on,” digital clock displays, remote control and preserved user program settings. While each device may consume only a small amount of energy for these features, the environmental impact and costs really add up when one considers that the average U.S. household now owns nearly 24 electronic products.¹ It is estimated that standby power accounts for more than 100 billion kilowatt-hours (kWh) of annual U.S. electricity consumption and \$11 billion in annual energy costs.² While standby power can deliver a range of worthwhile functions, it also can be unnecessarily wasteful because of poor product design, including the use of inefficient components and power supplies.

The U.S. Environmental Protection Agency (EPA) issued its first energy efficiency specification for standby power in 1998 for televisions, VCRs and combination units. By 2000, France, the Netherlands, Japan and Australia had identified standby power as an energy concern; it was clear that standby power was a global issue that would require multilateral coordination on a test standard, mode definitions and data analysis. The International Energy Agency (IEA) began promoting international efforts to reduce standby power, relying heavily on ENERGY STAR measurements and policies.³



EPA worked with representatives from industry and from other countries to develop and later revise the International Electrotechnical Commission’s (IEC) standby test standard, IEC 62301. This test procedure provides a common technical basis for the formal and accurate determination of standby power in appliances and equipment around the world. Today, it has been adopted and is in use in many countries. For example, the Chinese government informally adopted the ENERGY STAR TV specification, which includes this standard, in 2002, leading to a five watt per unit reduction in standby power across 40 million TVs.

Standby power is currently addressed for 10 ENERGY STAR product categories, either directly (often with a not-to-exceed requirement of one watt or less) or as part of a total energy consumption metric that simultaneously evaluates standby and active power to ensure overall energy efficiency. The program encourages seamless integration of efficient standby power in ENERGY STAR qualified products. Technological innovation in this area prevents billions of pounds of greenhouse gas emissions every year. With the help of ENERGY STAR, electronics manufacturers across the globe have increased consumer choice while reducing standby power losses in a wide array of residential and commercial products.

ENDNOTES

¹ Consumer Electronics Association. (2008, March). Market Research Report: Trends in CE Reuse, Recycle and Removal.

² Anglade, A., Lebot, B., and Meier, A. (2000). Global Implications of Standby Power Use (LBNL-46019). Published in the 2000 *Proceedings of ACEEE Summer Study on Energy Efficiency in Buildings*.

³ International Energy Agency. (2001). *Things That Go Blip in the Night: Standby Power and How to Limit It*. Paris, France: International Energy Agency. Retrieved from <http://people.trentu.ca/rloney/files/blipinthelight01.pdf>.



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