

Mapping & Benchmarking of standby power

The IEA's 4E Mapping and Benchmarking Annex provides policy makers with evidence-based comparisons of the performance of products sold in various national markets. This allows benchmarking of the success of national policies in managing product energy consumption and efficiency and enables identification of opportunities to further encourage the uptake of energy efficient products.

This briefing describes the outcomes of an international comparison of standby power for ten categories of household appliance that account for around three-quarters of global domestic standby consumption. It covers Australia, EU, USA, Canada, Republic of Korea and India.



Observations for Policy Makers

- **The average standby power has improved over time** in all of the ten product categories analysed, except for microwave ovens (below 3 W in all datasets) and set top boxes (highly variable, up to 25 W average - see below).
- **Average standby power has been less than 3 W** since 2007 in countries for which data is available, with the exception of set top boxes and home audio (and for televisions in India).
- **Evidence suggests that regulation**, and the early signalling of regulation in particular, has pushed markets further and faster than market-driven efforts alone. For example, the Republic of Korea announced 2010 performance targets in 2005 backed up by comprehensive supporting measures, and has achieved television average standby power between 20% and 50% lower than most other countries. This is closely matched in California which has had regulations for television standby since 2006.
- **It appears that 'horizontal' standby policy measures** applicable to many or most product types, as already adopted by the EU and Australia, are most appropriate to tackling the constant proliferation and evolution of products and would be appropriate in markets where the legal framework makes it possible.
- **Specific product challenges for policy makers include set top boxes** with average standby rates up to 25 W; home audio with average standby rates up to 5 W; also the complex issue of implementing network standby.¹ Policy initiatives are underway in several regions to ensure that networked devices default to low power states and reactivate if/as required (see <http://standby.iea-4e.org/tasks/task-d-network-standby>).

¹ A low-power condition that allows products to be reactivated via the network by an external trigger.

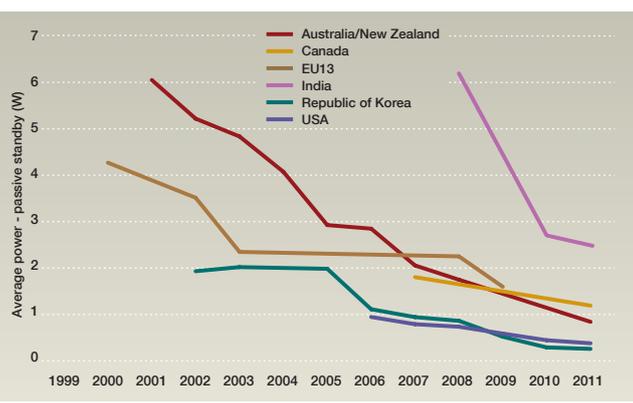
More Information

All publicly available Annex mapping and benchmarking outputs are available on the Annex website at <http://mappingandbenchmarking.iea-4e.org>. Further information on standby issues is available from the IEA 4E Annex on Standby Power at <http://standby.iea-4e.org>

For further information email: contact@mapping.iea-4e.org

Key Findings

NOTE: On the graphs, points joined by lines are the average of at least 25 product measurements; points without lines are derived from between 6 and 24 measurements.

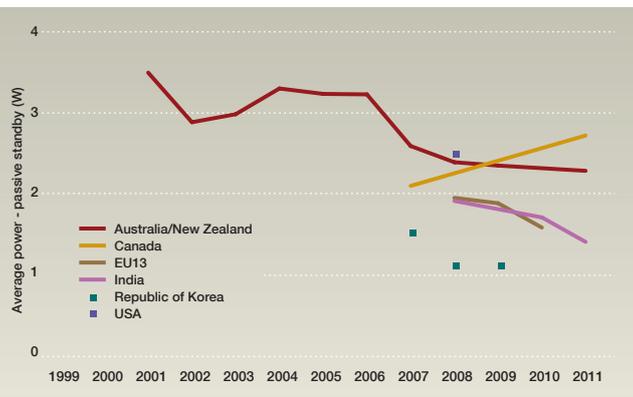
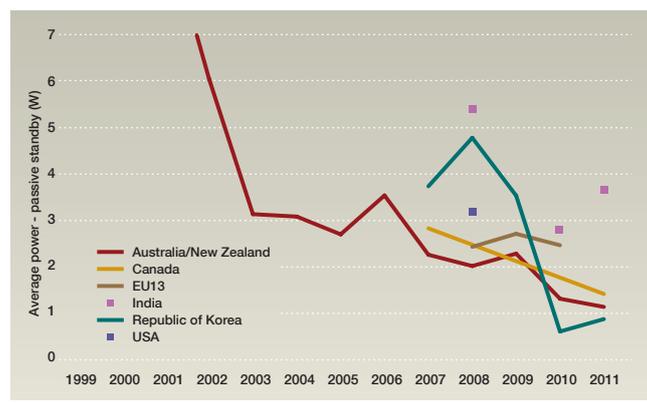


Significant drop in standby power for televisions

The average standby power for the local mix of CRT, LCD and plasma screen television types has fallen consistently and significantly for all countries and regions from over 4 W in 2000 to under or around 1 W by 2011 - except in India which improved to just over 2 W. 99% of televisions were at or below 1 W standby power in Australia by 2011.

Highly variable passive power for home audio products

The standby power of home audio products has fallen in all regions. Since this category includes 18 product types (radios, CD/cassette decks, integrated stereos, etc.) the variation in average standby between regions and over time probably reflects the uptake of different product types in each market. In Australia, trend data shows the average standby consumption has improved from just over 9 W in 2001 to just above 1 W by 2011.

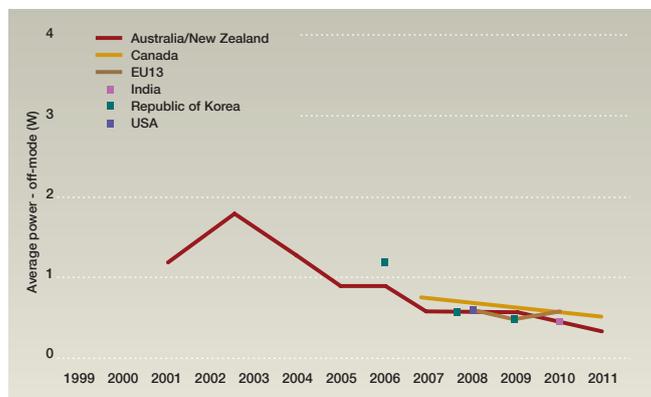


Stable passive standby power for microwave ovens

The average standby for microwave ovens, when the clock/display is on, has shown little change between 2007 and 2011 and persists at around 2 W for most countries, with the Republic of Korea lower at 1 W.

Globally uniform off mode power for computer displays

Off mode performance for computer displays, where no image is displayed, is stable at around 0.5 W for all regions examined, and has been at less than 1 W since at least 2008.



Product categories covered in the main report: Televisions, home audio, washing machines, microwave ovens, DVD and Blu-ray players/recorders, computer displays, notebook PCs, external power supplies, multifunction devices (printer/scanners) and set top boxes. Data is drawn from various government sponsored projects including 19,000 measurements taken in shops.