

# Mapping & Benchmarking of set top boxes

The IEA's 4E Mapping and Benchmarking Annex provides policy makers with evidence based comparisons of the performance of products across international boundaries. This allows benchmarking of the success of national policies in managing product energy consumption and efficiency and enables identification of opportunities to further improve product energy usage.

This briefing describes the outcomes of an analysis of the energy consumption of set top boxes in Australia, EU and USA.



## Observations for Policy Makers

- **Management of set top box energy consumption varies by type and region:**
  - Mandatory Minimum Energy Performance Standards (MEPS) set maximum on mode power in Australia for both simple and complex set top boxes, and in the EU for simple set top boxes.
  - Mandatory MEPS are in place for standby mode power for complex set top boxes in Australia and Korea, and for both complex and simple set top boxes in the EU.
  - The highest efficiency levels for complex set top boxes are set by voluntary codes of conduct in the EU, Australia and in the USA, and by MEPS in Switzerland.
  - Premium efficiency products are differentiated in the USA and Canada through ENERGY STAR certification.
- **Set top boxes do not generally benefit from the same technology-based efficiency improvements seen in computers**, mainly due to pressure for low unit prices.
- **Internet Protocol TV (IPTV) set top boxes inherently use less power than boxes fed by other signal types** since they do not include a modem. Improved overall energy efficiency will therefore be available in markets that can develop the infrastructure needed for IPTV (mainly achieved through cable networks to date).
- **The television service markets differ across each country/region studied.** Each has a unique mix of:
  - **Type:** simple versus complex set top boxes (complex set top boxes enable conditional access to fee-paying channels; simple boxes cover free access channels only);
  - **Signal:** cable; satellite; terrestrial; Internet Protocol (IP) signal types; and
  - **Functionality:** high definition; recording; playback; home networking interface, etc.

Due to these variations, direct comparisons of average set top box energy consumption across countries/regions have the potential to be easily misinterpreted. For future analysis, the similarity of equivalent product types in the different markets should enable comparison of performance by product category and functionality, rather than by national average as is normal for Mapping and Benchmarking studies.

## More Information

All publicly available Annex mapping and benchmarking outputs are available on the Annex website at <http://mappingandbenchmarking.iea-4e.org>.

For further information email: [contact@mapping.iea-4e.org](mailto:contact@mapping.iea-4e.org)