

4E

Mapping and Benchmarking Newsletter



Issue 4, January 2011

Welcome to the fourth issue of the 4E Mapping and Benchmarking newsletter

In this issue, we provide information on:

- The policy issues highlighted by the televisions benchmarking exercise;
- The overall progress of the Annex; and
- The new members of the Annex and the benefits of membership.

We encourage you to pass the newsletter on to anyone you think may find it of use. Should they wish to subscribe directly, they can do so by via our website at

<http://mappingandbenchmarking.iea-4e.org/newsletter>

Putting Televisions in the Picture

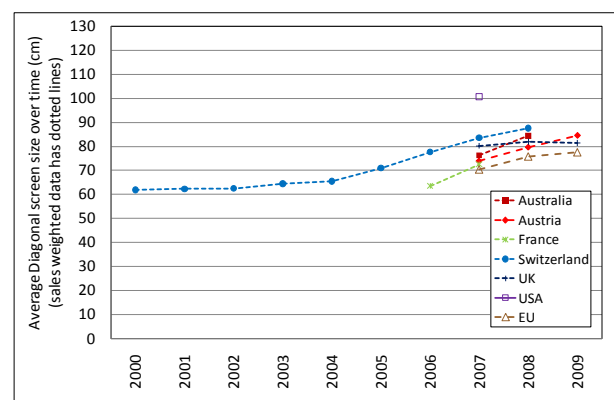
October 2010 saw the public issue of the full Benchmarking Report for televisions. This follows the release of a draft for Annex members only in March 2010, which was updated subsequent to the supply of significant additional data in March/April 2010.

The report summarises the analysis and conclusions on the nature and performance of new televisions from six countries (Australia, Austria, France, Republic of Korea, Switzerland, UK and USA), plus data for the EU15 as a whole (providing information on 12 countries in addition to Austria, UK and France), and compares trends and performance in the countries mapped.

The report reveals that:

- The trend for increasing screen size appears to have slowed significantly in recent years. The average size across all

screen types for participating countries was 82cm (diagonal) in 2009. The Republic of Korea appears to have the largest average screen size at 94cm (2008).



Trend in Screen Size Over Time

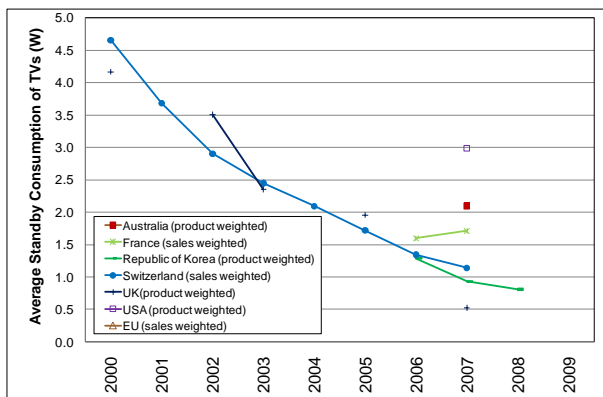
- CRT (cathode ray tube) screens represent less than 5% of sales in UK, USA, Switzerland, Austria and Australia in 2008/09, but remain at just under 25% in the Republic of Korea. LCD (liquid crystal display) was the dominant technology in 2009, accounting for half (Republic of Korea) to just over 90% (Austria) of new sales across the different countries.
- Overall average efficiency appears to be improving slightly from 2008 to 2009, with efficiency improvement evident for both LCD and plasma screens (although plasma technology appears to have an Energy Efficiency Index (EEI) over 35% poorer than LCD for 2009). The overall average EEI for all technologies for 2009 was 0.95.
- Average on mode consumption (which provides the most appropriate indicator of

likely national consumption) by technology for new televisions is:

- 74W (2007) for CRT;
- 134W (2009) for LCD;
- 287W (2009) for plasma.

The average across the three countries with data for 2009 was 145W for new sales.

- Standby consumption is falling, with Austria, Switzerland, the UK and Republic of Korea likely to achieve less than 1 W standby in 2010 (others may reach the same level but this cannot be proven by available data). However, much higher consuming (non-default) standby modes are becoming available, for example to enable rapid start (examples of over 17W consumption for this mode were found).



Trend in Standby Consumption Over Time

The report highlights that the key issues for policy makers are:

- **Growth in screen size**, where, although the growth of diagonal has slowed to around 4% from 2007 to 2009 for new sales, this would still add some 7% to energy consumption for the same usage and efficiency.
- **Market share of large plasma screens**, where, due to the poorer efficiency and double on mode power rating compared to LCD screens, a trend towards more plasma screens would seem likely to significantly increase consumption.

- **New and emerging technologies** (most notably LED back-lit LCD screens and OLED screens, but also modulating backlit LCD, and SED screens) which are improving energy efficiency could offset the impact of increasing screen size and should enable the setting of ambitious MEPS.

The report makes recommendations for areas that policy makers might consider investigating, including:

- Ensuring availability of **better quality performance data**, including on mode power as well as an efficiency metric such as EEI matched with sales data to facilitate market monitoring and emissions forecasting (EEI is proposed for use in Europe for energy labelling of televisions from 2011).
- Monitoring the availability and prevalence of **high consumption alternatives to standby mode**, such as 'rapid start', and ensuring that they do not fall outside the scope of policies.
- Monitoring consumption of **emerging functionalities**, such as Internet enabled televisions, televisions with multiple tuners etc., and ensuring that these do not inflate national emissions nor fall outside the scope of policies.
- Considering policy based on **on mode power caps**, or efficiency thresholds, becoming significantly more demanding at higher screen sizes. This could help constrain overall consumption in the face of rising screen sizes (as the control of viewing hours is unlikely to be possible!).
- Ensuring an appropriate level of consistency in policies that impact television efficiency compared to policies that impact computer displays and television monitors (i.e. screens sold without television tuners).

The full report is now available at <http://mappingandbenchmarking.iea-4e.org/matrix?type=product&id=2>.

Annex Progress: Current, Present and Future Products...

The Annex continues to make significant progress in the mapping and benchmarking of new products. The first step in the process is the development of the product definitions that set the parameters for data collection and analysis of the products. Eight product definitions are now available on the Mapping and Benchmarking website:

- Domestic air conditioners
- Domestic cold appliances
- Domestic lighting products
- Laundry dryers
- Notebook computers
- Televisions
- Vending machines
- Washing machines

TVs and domestic cold appliances have now completed the full mapping and benchmarking process, with the country mappings and benchmarking reports in the public domain. The air conditioning country mappings are also published, with the benchmarking report under-review by participants.

Data collection and mapping is complete for domestic lighting products and laundry dryers, with draft mappings open for review by participants. Publication is expected in March/April 2011.

Washing machine, lighting and laundry dryer benchmarking reports will be sent for review in February/March 2011 and data collection on notebook computers and refrigerated vending machines is ongoing.

New products to be investigated in the near future include:

- Water heaters
- Integral refrigerated retail display cabinets
- Desktop PCs
- Computer displays

- Complex set-top boxes
- Dishwashers

It is interesting to note that water heaters were originally scheduled in the first batch of products. However, given the diversity and complexity of the sub-groups within the product category, and the extreme dissimilarity in test methodologies and regulations across participating countries, it has so far proved impossible to define water heaters in such a way as to allow meaningful benchmarking across countries. Thus, work on this product is on hold pending further discussions.

As they become available, all the outputs of the Annex can be accessed on the Mapping and Benchmarking website at <http://mappingandbenchmarking.iea-4e.org/matrix>.

Mapping and Benchmarking Welcomes New Member Countries

Since our last newsletter, we have been pleased to welcome two new members to the Annex: Japan and South Africa. Sweden is also in the processes of joining, which will bring the Annex Membership to 13 countries.

Contact points for the new members are:

Japan

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South Africa

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And soon... Sweden

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These countries begin their involvement in the Annex by contributing data to the upcoming data collection processes for the commercial refrigeration products. They may also contribute data retrospectively for the products that have already been analysed this year which, once mapped this will allow comparison of products in their domestic markets to the existing benchmarking spreadsheets.

This ability to access benchmarking spreadsheets to manipulate data/graphics to explore potential policy options is just one of the benefits participant countries receive. Clearly, members benefit from being able to benchmark the performance of products within *their* country with the performance of

products elsewhere. But members are also involved in the selection of products to benchmark; have exclusive access to provisional outputs months before the material is made public; and take part in quarterly management meetings where outputs are discussed.

Dates for your diary...

Annex Management Committee Quarterly Video Conference

16 February 2011

Mapping and Benchmarking Annex Management Committee and 7th 4E Executive Committee Meetings

16-20 May 2011 – Zurich, Switzerland

International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL)

24-26 May 2011 – Copenhagen, Denmark

European Council for an Energy Efficient Economy (ECEEE) Summer Study

6-11 June 2011 – Toulon/Hyères, France

Vienna Energy Conference 2011: Energy for All – Time for Action

21-23 June 2011 Vienna, Austria



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More information on the IEA 4E Implementing Agreement, including links to the other Annexes, can be found at www.iea-4e.org.

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