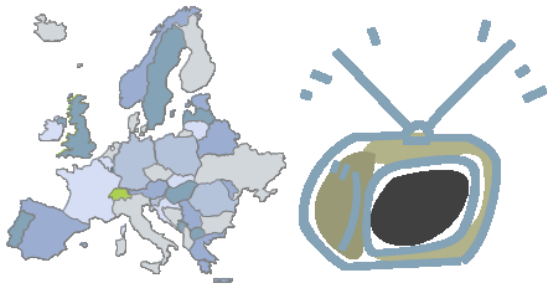
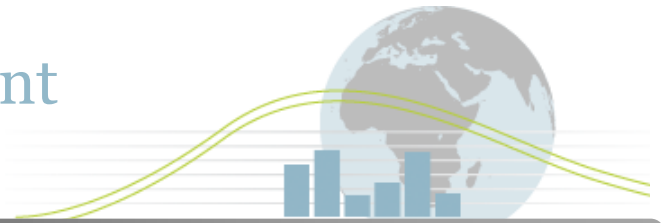


4E

Mapping Document



Country: Switzerland

Technology: Televisions

Sub Category: All Televisions

Introduction

The first stage in the Mapping and Benchmarking process is the definition of the products, i.e. clearly setting the boundaries that define the products for use in data collection and analysis. Doing this ensures that comparison between the participating countries is done against a specific and consistent set of products.

The summary definition for this product is:

Television sets, defined as:

'A commercially available and mains electricity powered product consisting of a display and one or more tuner(s)/receiver(s) combined in a single housing. It is designed to receive, decode and display audiovisual signals and reproduce sound from analogue sources and/or digital sources that are decoded directly broadcast via satellite, cable or antenna signals. In the case of digital sources, decoding may be via any external adaptor or receiver.'

Data will be analysed based upon actual screen size, but may be presented if necessary in three size 'bins':

Screen size category
Small (11" to 26")

Screen size category
Medium (27" to 39")

Screen size category
Large (40" to 60")

For which segregation and analysis will done through data requested on:

- Screen size
- Aspect ratio (used to calculate screen area and so consumption per unit screen area)

And for which additional later analysis may be planned using data requested on:

- Screen technology
- Analogue or integrated digital
- HD or not

Exclude:

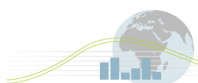
- Combination products (i.e. with integrated DVD player, VCR player / recorder, hard drive).
- Screen sizes over 60" and under 11"
- Television monitors and computer displays

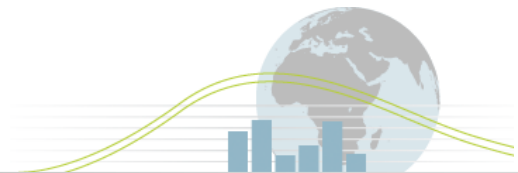
The detailed product definitions can be found at the Annex website:

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

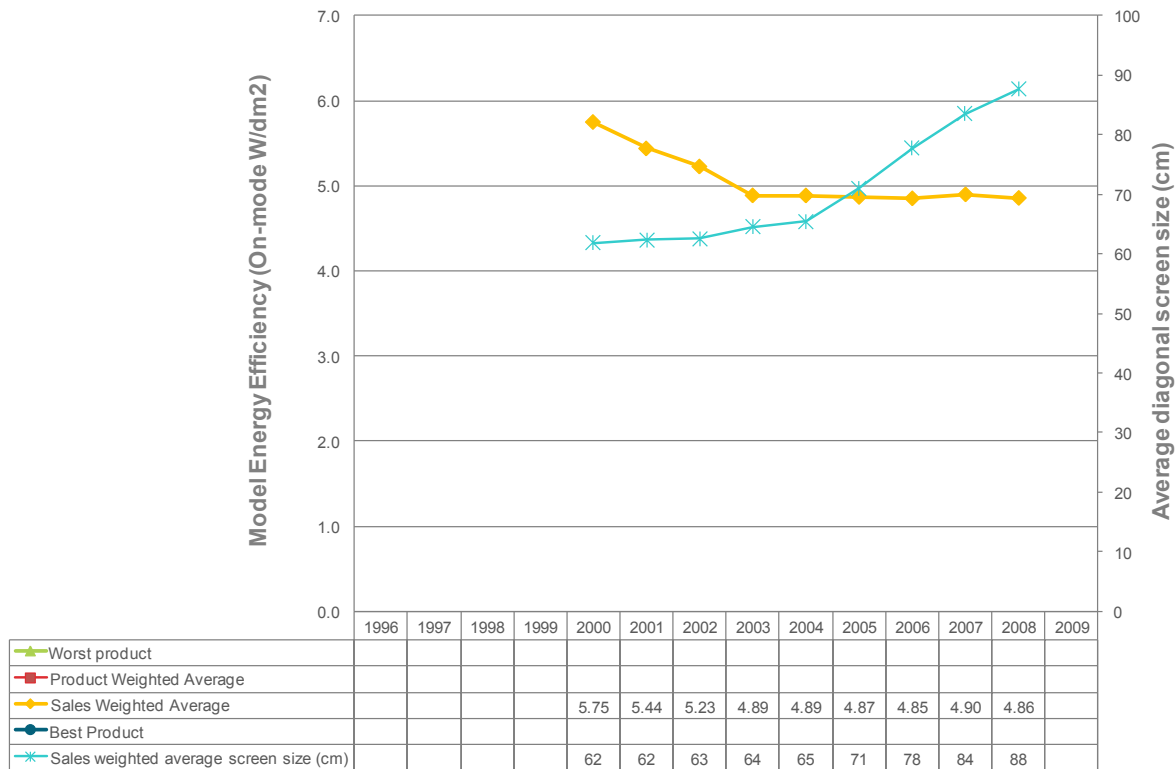
Issue date: October 10

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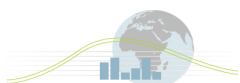


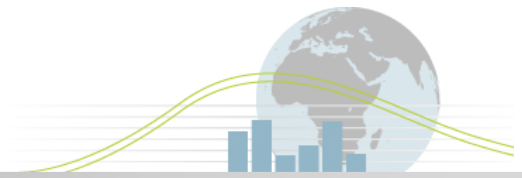
Energy Efficiency of New Televisions Switzerland



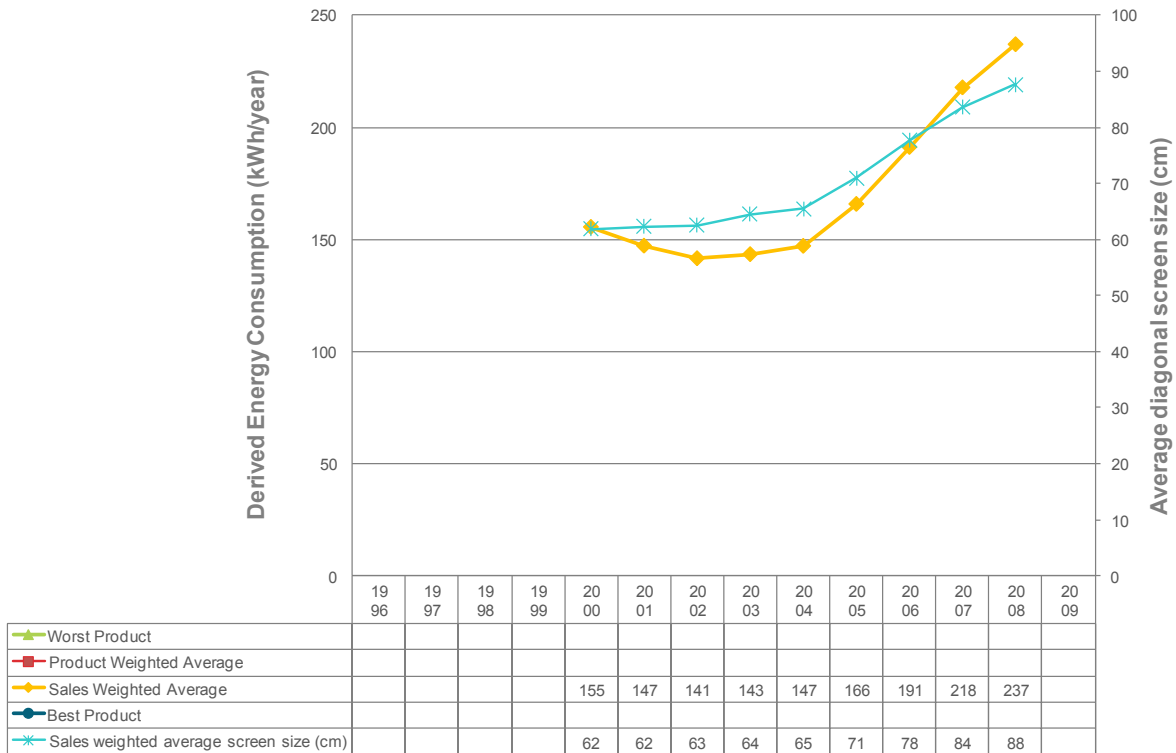
Key notes on Graph (see notes section 1)

- Graph is based upon on-mode consumption only per unit screen area (W/dm^2) – not standby.
- In this dataset plasma is not distinguished from LCD screens – all are together as flat displays.
- The data used shows average power consumption and sales for a number of technologies and screen size ranges but does not include Best and Worst performance levels and so these cannot be plotted.
- In the 2008 dataset, the screen technology distribution was:
CRT: 1.5% LCD and Plasma: 98.5% Other (including rear projection): 0%
- Note: Analysis of product efficiency in the benchmarking part of this analysis (comparison between different countries) was based upon an Energy Efficiency Index (EEI), in preference to W/dm^2 . This was to enable fair comparison of efficiencies, since W/dm^2 data is highly dependent upon average screen size which varies between countries.



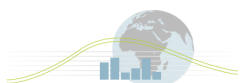


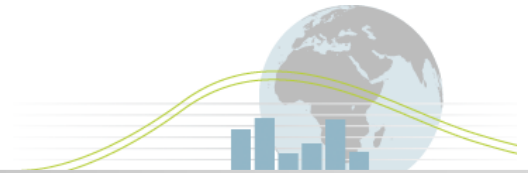
Energy Consumption of New Televisions Switzerland



Key notes on Graph (See notes section 2)

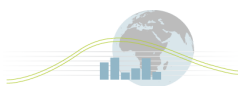
- Annual consumption is calculated based on data provided for hours per day in on mode and standby/off-modes for 365 days per year (45% standby. 55% off). On mode is slowly increasing from 3.5 hours per day in 2000 to 3.7 hours in 2008.
- The data used shows average power consumption and sales for a number of technologies and screen size ranges but does not include Best and Worst performance levels so these cannot be plotted.

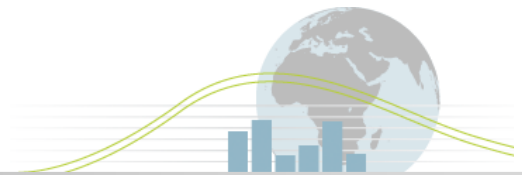




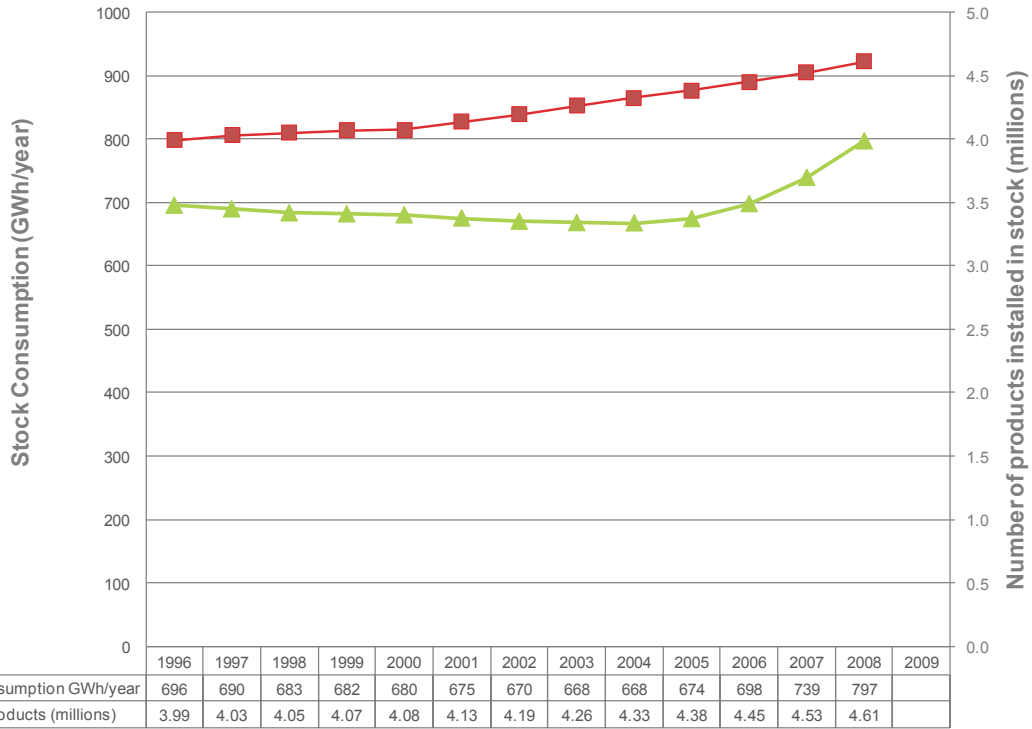
Energy Efficiency in the Installed Television Stock Switzerland

Insufficient data available to plot.



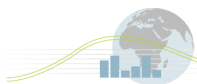


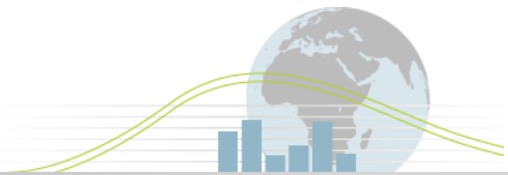
Energy Consumption in the Installed Television Stock Switzerland



Key notes on Graph (See notes section 4)

- Based on compiled statistics from trade association.





Major Policy Interventions (See notes Section 5)

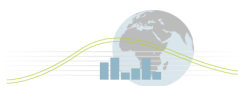
Swiss actions

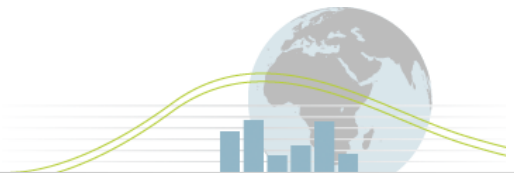
Policy name	Period in force	Description	Impact <i>Relative impact of policy</i>
Fondation of Swiss Energy agencies	2002	Swiss Energy agency for electrical appliances	The agency supports actions for promoting the efficiency in electrical household appliances

Cultural Issues (See Notes Section 6)

The following trends have been recognized:

- Replacement of CTR-TV by Flatscreen-TV
- More TV sets per household
- Tendency to sets with larger screens
- Tendency to higher resolution
- New generation with low standby-values





Notes on data

Section 1: Notes on Product Efficiency

1.1 Test methodologies, Performance Standards and Labelling Requirements

The data provided quoted no test methodology. Its comparison with known sources should therefore be treated with caution.

1.2 Product Efficiency Graphic

Source: Compiled statistics for 2000-2008 collated by an independent consultancy in Switzerland (Prognos AG), with at energy data provided by the Swiss Consumer Electronics Association (SCEA). The data consists of sales figures and consumption figures broken down into screen size bins, and broken down separately by screen technology. Both plasma and LCD screens are lumped together as 'flat displays'. Estimated hours in mode per day and total stock are also given in the data set.

Key calculations undertaken:

Calculating screen areas: Firstly, convert diagonal screen size inches to dm ($\times 0.254$ for inches), square the number, then multiply by the factor below. If no aspect ratio, an assumed ratio is used (based on statistical profile of TVs at 2008)

Aspect Ratio	Factor
16:9	0.427
16:10	0.449
4:3	0.48
Unknown	0.427

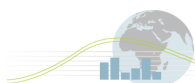
Usage assumptions:

Hours in use data was provided in the data set for all years. Each value of consumption (W) is multiplied by hours per day $\times 365$ to get Wh per year, divided by 1000 to get kWh per year.

Hours in use:	2000	2001	2002	2003	2004	2005	2006	2007	2008
On mode:	3.5	3.5	3.5	3.6	3.6	3.7	3.7	3.7	3.7
Standby:	20.5	20.5	20.5	20.4	20.4	20.3	20.3	20.3	20.3
TV in standby (%)	45	45	45	45	45	45	45	45	45

Efficiency (kWh/dm²) is W in on mode, divided by screen area in square dm

Sales Weighted Energy Efficiency of New Models: (Sum of (Model Energy Efficiency by size and technology multiplied by sales volume of Model by size and technology in year) for all Models) divided by (Sum of sales volume of all Models in year)



Model Weighted Energy Efficiency of New Models. This was not used for this data set as no product specific data were available

Proportion of data set included:

All of the data in the database was used. The total sales represented were as follows:

Sales:	2000	2001	2002	2003	2004	2005	2006	2007	2008
CRT	419580	460800	363550	307950	268000	174000	75000	17500	10000
Plasma and LCD	0	2700	17450	49000	107000	262500	414000	553000	648000
Other	0	0	1000	2500	2500	1000	1000	100	0
Total	419580	463500	382000	359450	377500	437500	490000	570600	658000

Section 2: Notes on Product Consumption

2.1 Test methodologies, Performance Standards and Labelling Requirements

Refer to section 1.2

2.2 Product Consumption Graphic

Refer to section 1.2

Section 3: Notes on Efficiency of Stock

Refer to section 1.2

Section 4: Notes on Consumption of Stock

Refer to section 1.2

Section 5: Notes on Policy Interventions

None.

Section 6: Notes on Cultural Issues

None.

