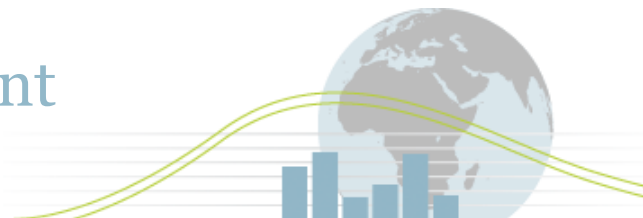


4E

Mapping Document



Country: Republic of Korea

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:

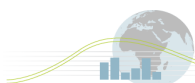
- Combination products (i.e. with integrated DVD player, VCR player / recorder, hard drive).
- Screen sizes over 60" and under 11"
- Television monitors and computer displays

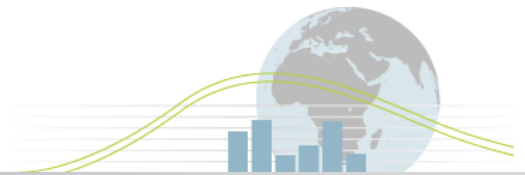
The detailed product definitions can be found at the Annex website:

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

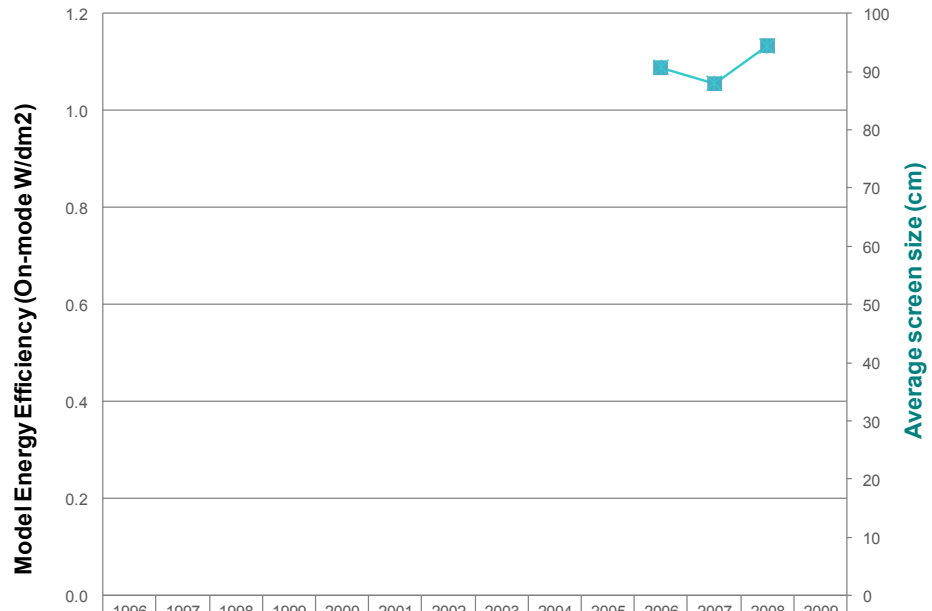
Issue date: October 10

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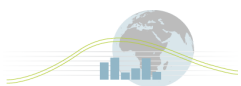
Energy Efficiency of New Televisions Republic of Korea

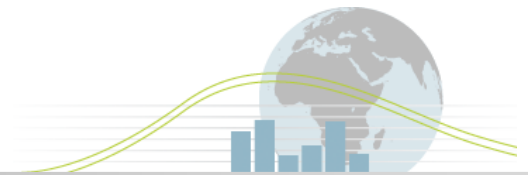


	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Worst product														
Product Weighted Average														
Sales Weighted Average														
Best Product														
Sales weighted average screen size (cm)											91	88	94	

Key notes on Graph (see notes section 1)

- Data is from the Korean e-Standby Programme database, which does not yet collect on mode power, but has collected sales data since August 2008.
- For the products for which sales figures were available for 2008, the sales-weighted screen technology distribution was:
 CRT: 23% LCD: 47% Plasma (PDP): 30% Other (including OLED): 0%

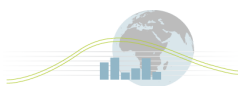


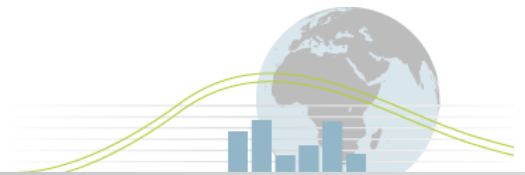


Energy Consumption of New Televisions Republic of Korea

Key notes on Graph (See notes section 2)

- No data were available for on mode consumption so this could not be calculated.
- Hours spent in on-mode for Korea are estimated as 6.9 hours per day average, for 351 days per year.



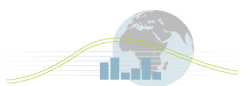


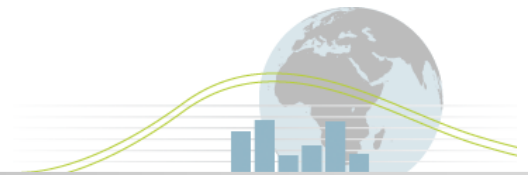
Energy Efficiency in the Installed Television Stock Republic of Korea



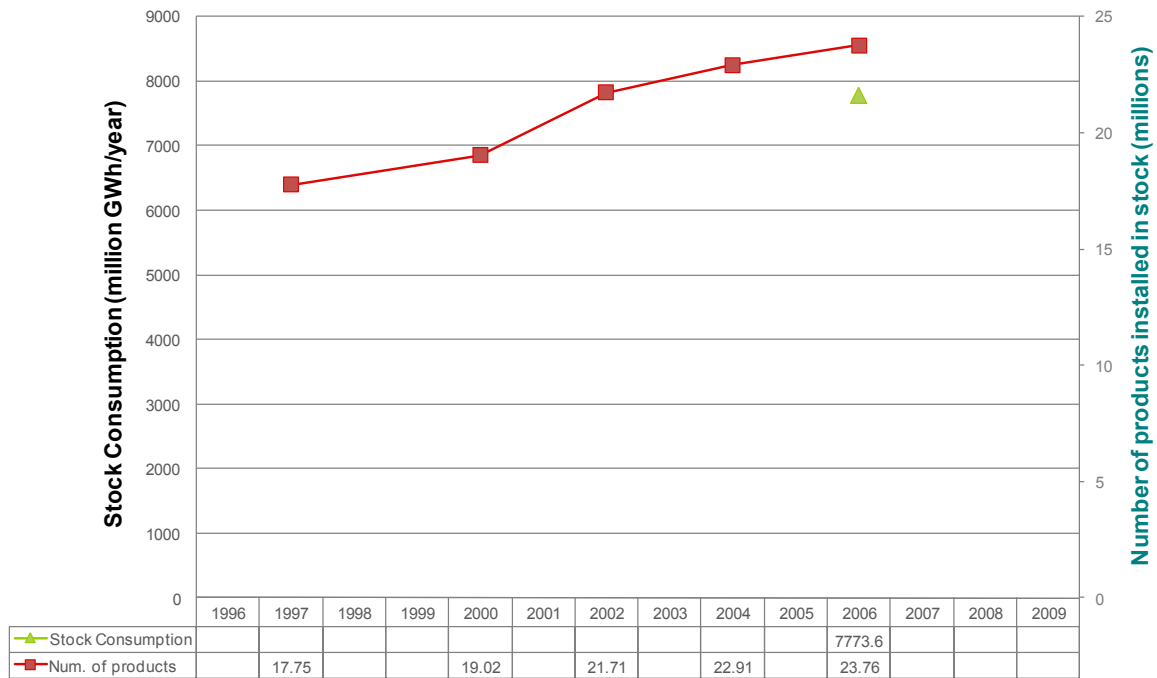
Key notes on Graph (See Notes Section 3)

- Stock efficiency is calculated from an estimated average power consumption in on mode for the stock, divided by an estimated stock average screen area.



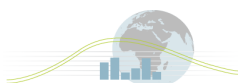


Energy Consumption in the Installed Television Stock Republic of Korea



Key notes on Graph (see Notes Section 4)

Stock consumption calculated from an average on mode consumption of the stock, multiplied by hours of use and stock total.



Major Policy Interventions (See notes Section 5)

Korea has had a focus on reducing standby power since 1999 when they introduced their eStandby programme¹. This was at first a voluntary product registration programme for 20 product categories including televisions.

A mandatory warning label for products exceeding a certain standby power (first in the world) was introduced in August 2008 for televisions. In this scheme, every manufacturer and importer of target products must register their products with a test report. A warning label must be attached to any products that do not meet the standby power standards. The mandatory scheme was expanded to cover six other products such as computers, monitors and set-top boxes from July 2009. Twelve more products such as copiers and DVD players were added to the list from July 2010.



Voluntary

For products that meet standby power standard



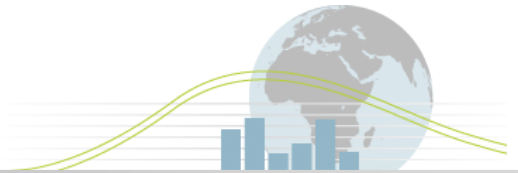
Mandatory

For products that don't meet standby power standard

The aim is that all products will consume less than 1W in standby by 2010 in line with the long-term road map 'Standby Korea 2010'.

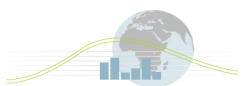
To improve the energy efficiency of televisions, the Republic of Korea will introduce mandatory energy efficiency labels (labelled 1 to 5), and MEPS (maximum on mode consumption limits) for televisions in 2012. At that point televisions will be excluded from the e-Standby Programme.

¹ See <http://www.kemco.or.kr/new%5Feng/pg02/pg02100300.asp>



Cultural Issues (See Notes Section 6)

LCD televisions with LED back lighting have been launched in spring of 2009, and the market share of them is rapidly increasing. These offer significantly lower on-mode and standby power consumption than previous technologies.



Notes on data

Section 1: Notes on Product Efficiency

1.1 Test methodologies, Performance Standards and Labelling Requirements

Test methodology for (passive) standby is KS C IEC 62301(Household electrical appliances - Measurement of standby power : IEC 62301:2005, IDT).

Future policies to address on mode power of televisions will use KS C IEC 62087(Methods of measurement for the power consumption of audio, video and related equipment : IEC 62087:2002, IDT), in line with the most likely global test method for televisions.

1.2 Product Efficiency Graphic

No on mode data by product was available so product efficiency has not been calculated.

Usage assumptions:

Hours per day in on mode	6.9
Hours per day in standby mode	17.1
Days per year on mode usage	351

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

Proportion of data set included:

Some of the data in the database was not used due to the omission of information necessary to undertake the analysis (in this case no sales data for some models to allow calculation of sales weighted average screen size and screen technology):

Used: 562 (31%)

Not used: 1,237 (69%)

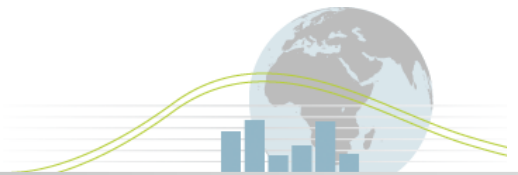
Section 2: Notes on Product Consumption

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**

Efficiency for stock was calculated from a figure provided for the average power consumption of the stock televisions in 2006 (135.1 W), combined with an estimate of the average screen size for stock for 2006 (27.8"). No data for other years were available.

Stock power consumption and screen size were sourced from: Survey on Electricity Consumption Characters of Home Appliances (KPX (Korea Power Exchange), 2006).

Section 4: Notes on Consumption of Stock

Consumption of stock was calculated from the average on mode power consumption multiplied by the estimated stock multiplied by the usage per year (6.9 hours per day, 351 days per year).

Section 5: Notes on Policy Interventions

None.

Section 6: Notes on Cultural Issues

None.

