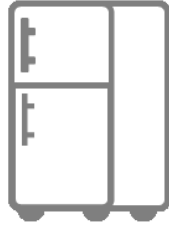
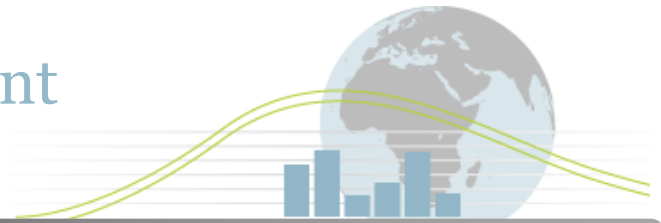


4E

Mapping Document



Country:

Switzerland

Technology:

Domestic Cold Appliances

Sub Category:

Freezers and Refrigerator/
Freezers Combinations

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.

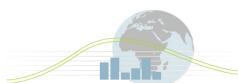
The summary definition for this product is:

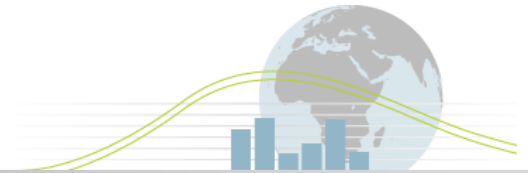
Under Counter/ upright Refrigerators (Single Grouping – collect data only)	Refrigerator with freezer (ice) compartment (Single grouping – collect data only)	Side-by-Side and Freezer top/ Refrigerator bottom and Refrigerator top/ Freezer bottom (Collect data on proportion of each type of unit in the market)	Chest/Under Counter/Upright Freezer (Collect data on proportion of each type of unit in the market)
Where units are:			
<ul style="list-style-type: none"> From all climate classes (but collect data on specific climate class that may be useful for later analysis) Have freezer compartments with rated temperatures between -12 to \geq-15C (all temperature ratings to refrigerator with freezer (ice) compartment) Differentiated (if possible) between units with peripheral water coolers and ice makers 			
Do not differentiate between			
<ul style="list-style-type: none"> Defrost Cycles including Manual/Cyclical/Automatic (although collect data in case normalisation is required) Controls mechanisms including manual, automatic and cyclical Built in and stand-alone units (but where differentiated in market, collect data to enable normalisation) Volume (but collect data on gross volumes as base metric) Climate class (but collect data on climate class in case future analysis required, plus data on related local test conditions for climate classes) 			

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

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

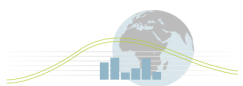
Issue date: August 2010

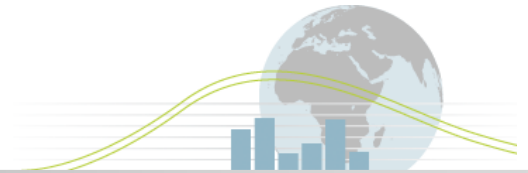




Energy Efficiency of New Fridge Freezers Switzerland

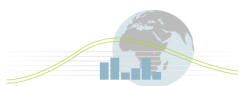
Insufficient data available for analysis.

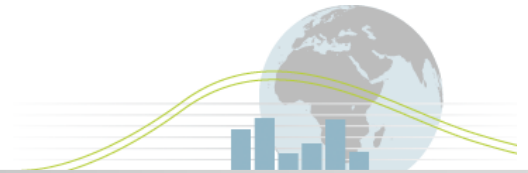




Energy Consumption of New Fridge Freezers Switzerland

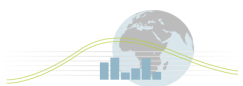
Insufficient data available for analysis.

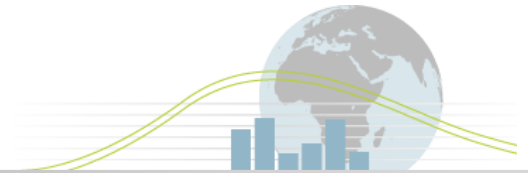




Energy Efficiency in the Installed Fridge Freezer Stock Switzerland

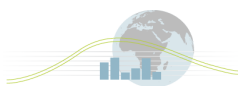
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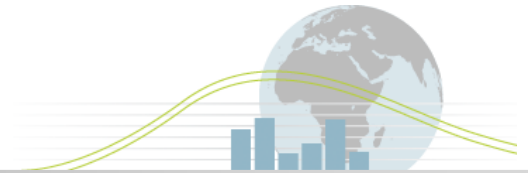




Energy Consumption in the Installed Fridge Freezer Stock Switzerland

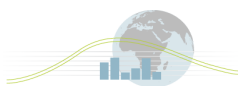
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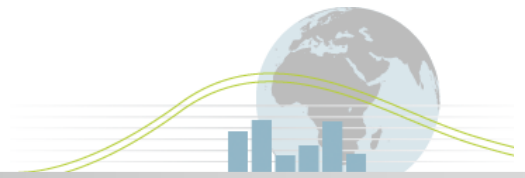




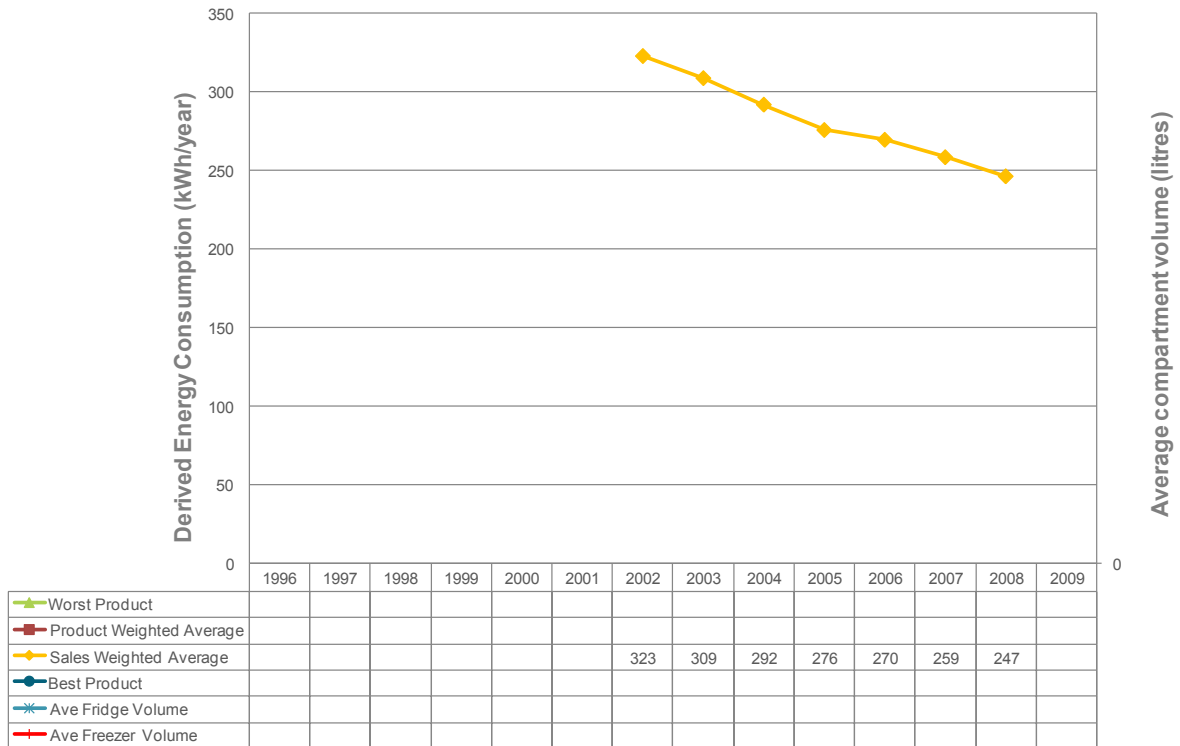
Energy Efficiency of New Freezers Switzerland

Insufficient data available for analysis.



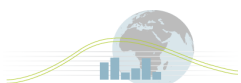


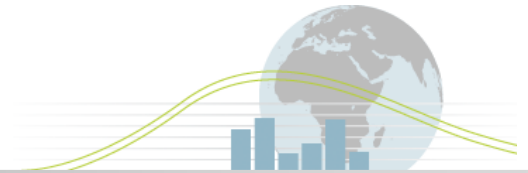
Energy Consumption of New Freezers Switzerland



Key notes on Graph (See notes section 2)

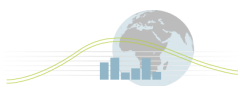
- This data is taken directly from the SwissEnergie report of the period 2008 (published in December 2009) and has not been processed specifically for this IEA 4E-Report.
- The figures include upright and under counter models. Included are deep-freeze cabinets 13% share sold in 2008, upright freezers 87% share sold in 2008. 97% of the upright freezer are standing alone, 3% are for installation.

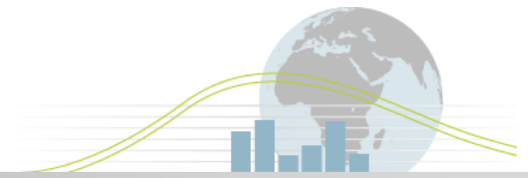




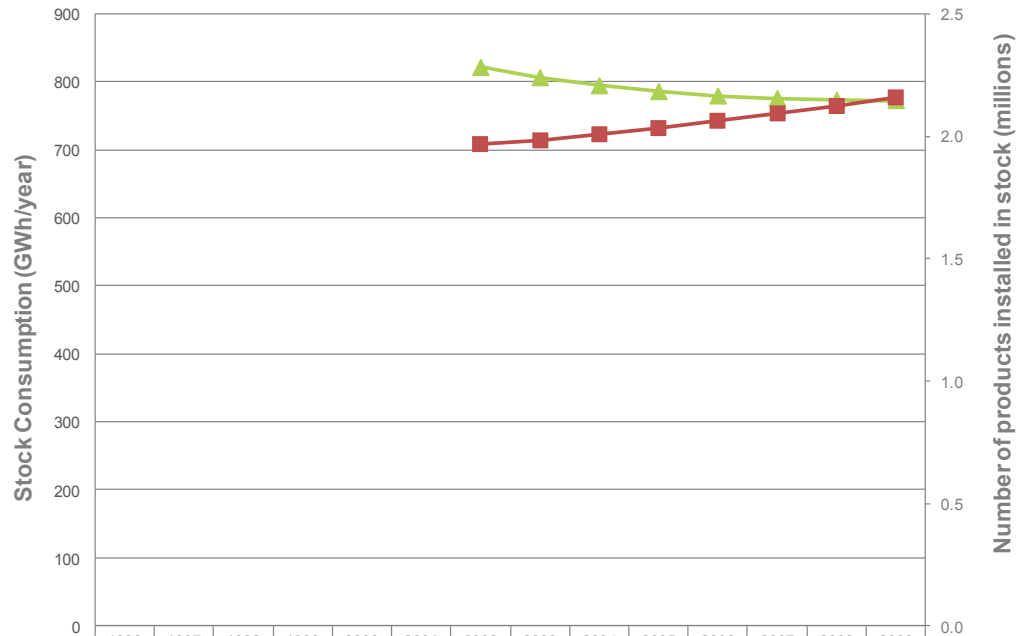
Energy Efficiency in the Installed Freezer Stock Switzerland

Insufficient data available for analysis.





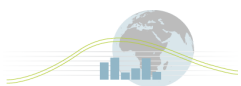
Energy Consumption of the Installed Freezer Stock Switzerland

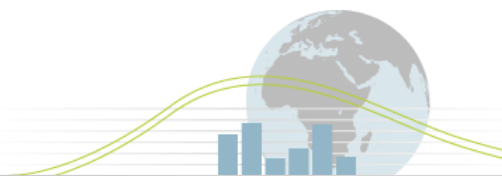


—▲— Stock Consumption	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
—■— Products in stock (millions)							1.97	1.98	2.01	2.03	2.06	2.09	2.12	2.16

Key notes on Graph (see Notes Section 4)

- This data is taken directly from the SwissEnergie report of the period 2008 (published in December 2009) and has not been processed specifically for this IEA 4E-Report.





Major Policy Interventions (See notes Section 5)

Swiss actions

Policy name	Period in force	Description	Impact <i>Relative impact of policy</i>
Introduction of EC Energy Label ¹ in Switzerland	2002	Defines A to G efficiency classes	All cold appliances to be labelled – improvement in the average efficiency over time
Fondation of Swiss Energy agencies	2002	Swiss Energy agency for electrical appliances	The agency supports actions for promoting the efficiency in electrical household appliances
Introduction of MEPS for cold appliances	January 2010	Efficient class A	All cold appliances with an efficiency less than A cannot be sold anymore
Introduction of MEPS for cold appliances	January 2011	Efficient class A+	All cold appliances with an efficiency less than A+ cannot be sold anymore

The following European policy intervention influences as well the Swiss actions

EC MEPS (EuP) ²	1999 – (July) 2010	Limit sales to A, B, C class, plus D & E for chest freezers	All cold appliances - improvement in the average efficiency over time
EC Energy Label ³	2004-2010	Defines A+ and A++ classes	All cold appliances - improvement in the average efficiency over time
Industry Commitment ⁴	2002 - 2010	CECED commitment: only B or better (except chest freezers) on market by end 2004	Improvement in the average efficiency over time

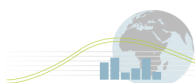
¹ www.legislation.hmso.gov.uk/si/si1994/Uksi_19943076_en_1.htm.

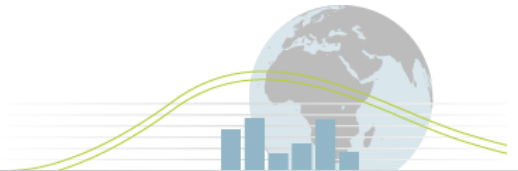
² www.opsi.gov.uk/si/si1997/19971941.htm

³ www.opsi.gov.uk/si/si2007/ukxi_20072037_en_1

⁴ "Voluntary commitment of reducing energy consumption of household refrigerators, freezers and their combinations (2002-2010)" 31st October 2002.

http://www.ceced.eu/ICECED/easnet.dII/ExecReq/Redirection?eas:oldfilename=/community/files/296/phpXLy1ow/UICCOLD20_02.pdf

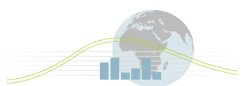


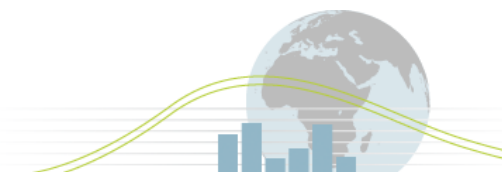


Cultural Issues (See Notes Section 6)

The selling of freezers is stable since about 2004 on a level of about 105'000 to 110'000 units. The share of larger units (volume of over 300 l) is about 25%.

The change of freezer in the direction of A/A+/A++ is evident over the last few years. In 2007 the percentage of A-, A+ or A++-Upright models was around 92,3%. In 2006, this percentage was 80,8% and in 2005 only 78,5%.





Notes on data

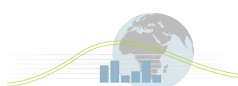
Section 1: Notes on Product Efficiency

1.1 Test methodologies, Performance Standards and Labelling Requirements

Energy consumption is claimed according to the requirements of the EC energy label and the appropriate energy efficiency class allocated according to the calculations given in the energy label directives.

The test standard for EC energy labelling is EN 153 which calls upon the EN ISO 15502.

Test Standard name	Date in force	Description	Comments
EN 153:2005 Methods of measuring the energy consumption of electric mains operated household refrigerators, frozen food storage cabinets, food freezers and their combinations, together with associated characteristics.	2005	Energy, temperature and volume of all types of domestic cold appliances are measured in accordance with test standard (BS) EN 153 and used for energy label declarations. EN 153 refers to EN ISO 15502:2005	Supersedes EN 153:1995 (withdrawn 30 June 2008). Although there is some debate as to which test standard is currently valid under UK law.
EN ISO 15502: 2005 Household refrigerating appliances, refrigerator freezers – characteristics and test methods.	2005	Defines characteristics and test methods	Prior to this standard there were four test standards for each of the main refrigerating appliance types



Specific information:

External/ambient test temperature	25 ± 0.5°C (Deviations from 25°C within ± 0.5°C are corrected in accordance with EN 153:2006 Clause 15.2.1.)
Internal temperatures for the appliances	
Fridge compartment	Mean temp of +5°C (no tolerance because in general, the energy consumption at this temp is obtained by interpolation.)
Freezer compartment (3 or 4 star compartment)	-18°C or colder

1.2 Product Efficiency Graphic

None.

Section 2: Notes on Product Consumption

2.1 Test methodologies, Performance Standards and Labelling Requirements

Refer to section 1.1

2.2 Product Consumption Graphic

Source Freezers: SwissEnergy: Project Report Energy efficient statistics, Period 2007, from the energy agency electrical appliances eae (December 18, 2008)

Section 3: Notes on Efficiency of Stock

None.

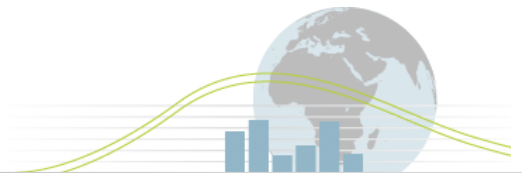
Section 4: Notes on Consumption of Stock

Source Freezers: SwissEnergy: Project Report Energy efficient statistics, Period 2007, from the energy agency electrical appliances eae (December 18, 2008)

Section 5: Notes on Policy Interventions

Description:

Switzerland took over in 2002 the energy labelling which then became mandatory.



In 2008 the Swiss energy law was revised and the following regulation is now in force:

- from 1.1.2010: only freezer with class A can be sold
- from 1.1.2011: only freezer with A+ (EEI<42) can be sold

