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:

<table>
<thead>
<tr>
<th>Under Counter/ upright Refrigerators</th>
<th>Refrigerator with freezer (ice) compartment</th>
<th>Side-by-Side and Freezer top/ Refrigerator bottom and Freezer bottom</th>
<th>Chest/Under Counter/Upright Freezer</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Single Grouping – collect data only)</td>
<td>(Single grouping – collect data only)</td>
<td>(Collect data on proportion of each type of unit in the market)</td>
<td>(Collect data on proportion of each type of unit in the market)</td>
</tr>
</tbody>
</table>

Where units are:

- 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 ≥ -15°C (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

- 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/
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 Efficiency of New Freezers
Switzerland

Insufficient data available for analysis.
The information and analysis contained within this summary document is developed to inform policy makers. Whilst the information analysed was supplied by representatives of National Governments, a number of assumptions, simplifications and transformations have been made in order to present information that is easily understood by policy makers, and to enable comparisons with other countries. Therefore, information should only be used as guidance in general policy—it may not be sufficiently detailed nor robust for use in setting specific performance requirements. Details of information sources and assumption, simplification and transformations are contained within the document.

**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.

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**Issue date: August 2010**
Energy Efficiency in the Installed Freezer Stock
Switzerland

Insufficient data available for analysis.
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**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

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

The following European policy intervention influences as well the Swiss actions

<table>
<thead>
<tr>
<th>Policy name</th>
<th>Period in force</th>
<th>Description</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC MEPS (EuP)(^2)</td>
<td>1999 – (July) 2010</td>
<td>Limit sales to A, B, C class, plus D &amp; E for chest freezers</td>
<td>All cold appliances - improvement in the average efficiency over time</td>
</tr>
<tr>
<td>EC Energy Label (^3)</td>
<td>2004-2010</td>
<td>Defines A+ and A++ classes</td>
<td>All cold appliances - improvement in the average efficiency over time</td>
</tr>
<tr>
<td>Industry Commitment (^4)</td>
<td>2002 - 2010</td>
<td>CECED commitment: only B or better (except chest freezers) on market by end 2004</td>
<td>Improvement in the average efficiency over time</td>
</tr>
</tbody>
</table>

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\(^2\) [www.opsi.gov.uk/si/si1997/19971941.htm](http://www.opsi.gov.uk/si/si1997/19971941.htm)

\(^3\) [www.opsi.gov.uk/si/si2007/uksi_20072037_en_1](http://www.opsi.gov.uk/si/si2007/uksi_20072037_en_1)


**Issue date: August 2010**
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.

<table>
<thead>
<tr>
<th>Test Standard name</th>
<th>Date in force</th>
<th>Description</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 153:2005</td>
<td>2005</td>
<td>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</td>
<td>Supersedes EN 153:1995 (withdrawn 30 June 2008). Although there is some debate as to which test standard is currently valid under UK law.</td>
</tr>
<tr>
<td>EN ISO 15502: 2005</td>
<td>2005</td>
<td>Defines characteristics and test methods</td>
<td>Prior to this standard there were four test standards for each of the main refrigerating appliance types</td>
</tr>
</tbody>
</table>
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### 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


### Section 3: Notes on Efficiency of Stock

None.

### Section 4: Notes on Consumption of Stock


### 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