

Country: Switzerland

Technology: Dishwashers

Sub Category: with a capacity of between six and sixteen place settings

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. 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:

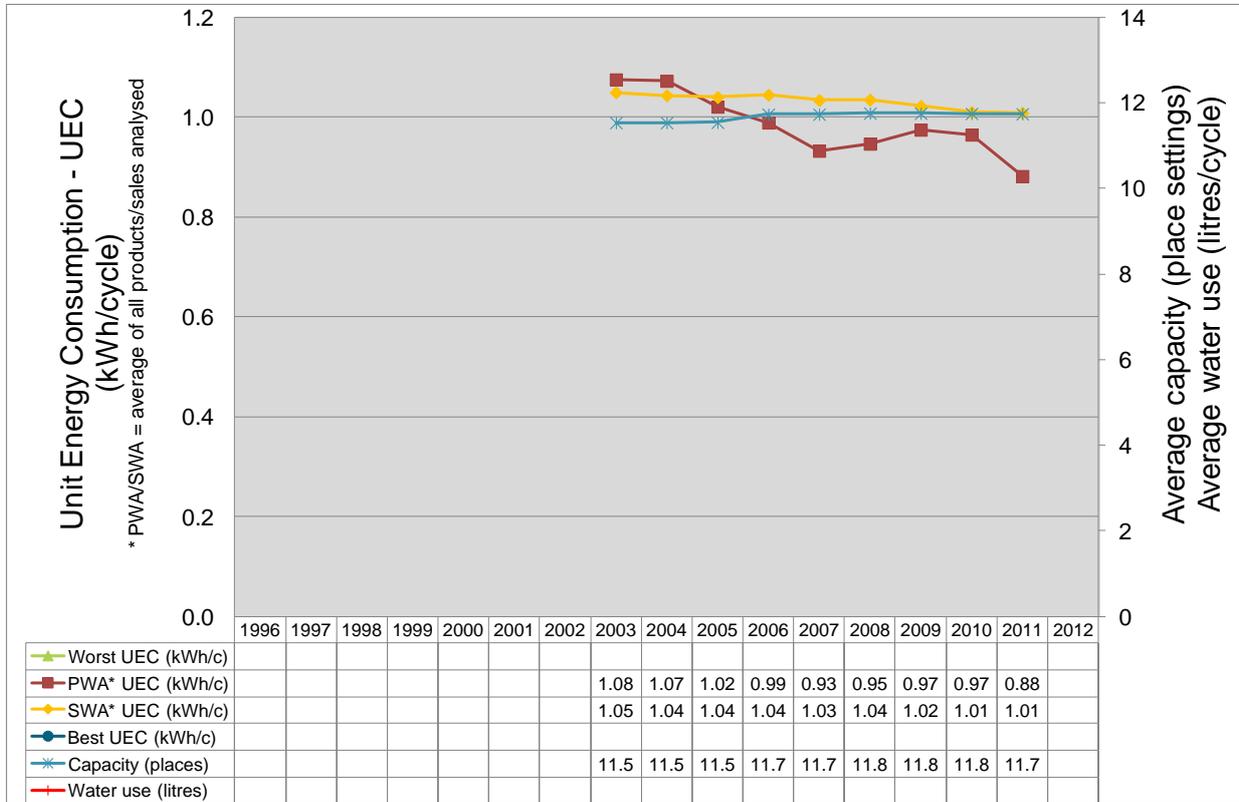
M&B Category	Description
Definition and Scope	<p><i>A machine which cleans, rinses, and dries dishware, glassware, cutlery, and, in some cases, cooking utensils by chemical, mechanical, thermal, and/or electric means, normally through the use of water and detergent. The machine may or may not have a specific drying operation at the end of the programme.</i></p> <p>The scope is to primarily include:</p> <ul style="list-style-type: none"> • Single door built-in (this includes freestanding units in European definitions), portable and drawer-type dishwashers; • Both non-soil-sensing and soil-sensing unit. <p>The scope will <i>exclude</i>:</p> <ul style="list-style-type: none"> • Table top dishwashers (with fewer than 6 place settings)
Rated Capacity	6-16 place settings
Other characteristics to be noted	<p>Wash Cycle Time</p> <p>Cleansing Performance</p> <p>Drying Performance</p> <p>Standby Functionality and Power Levels (Delayed Start, End of Cycle and Off)</p> <p>Load Type</p>

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

<http://mappingandbenchmarking.iea-4e.org/matrix?type=product&id=11>

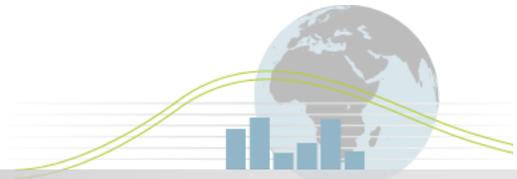


Unit Energy Consumption (UEC) of dishwashers in Switzerland

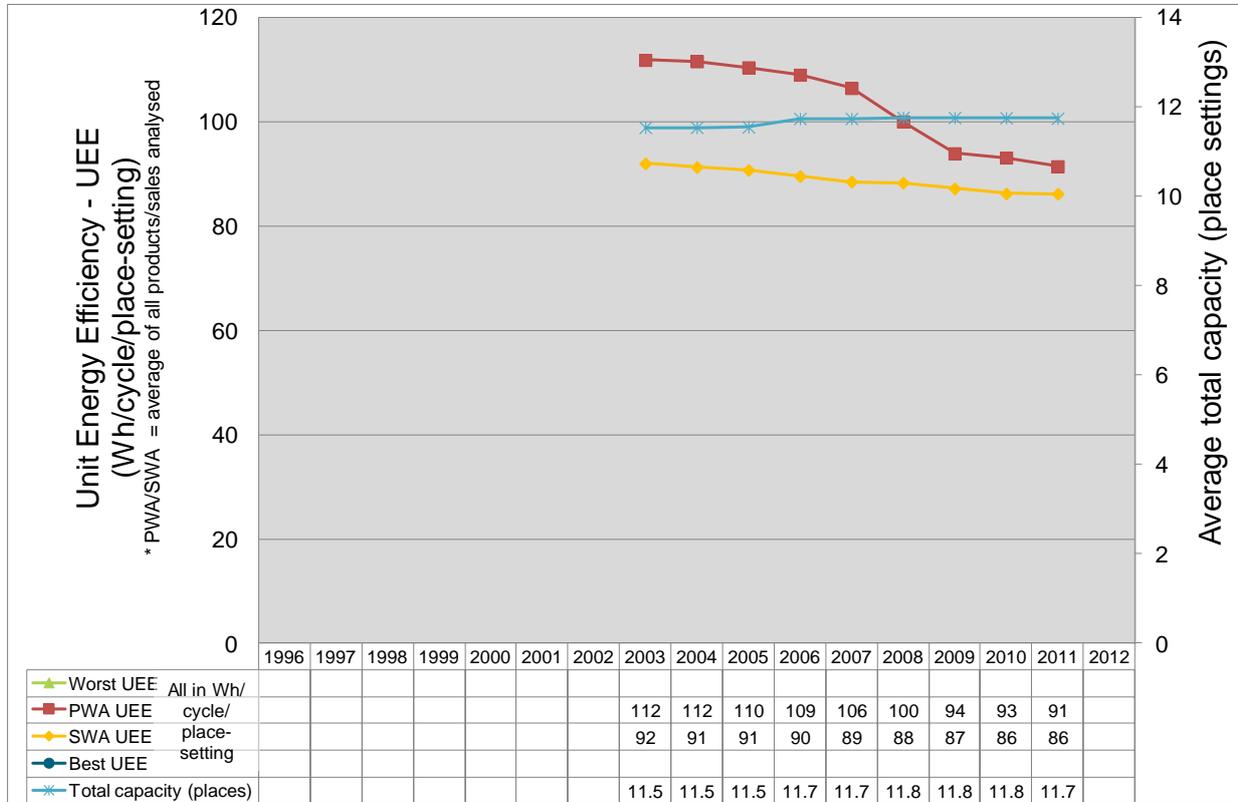


Key notes on Graph (see notes section 1)

- All data is based on aggregated sales figures by energy label category for five different product types; stand-alone, built-in 45cm, built-in 55 cm, built-in 60 cm and small devices. Assumptions are necessary to calculate averages from this data and therefore, results are only approximate and should be viewed with caution.
- All capacity values listed are sales weighted averages.
- No data on Best or Worst performing products was available.



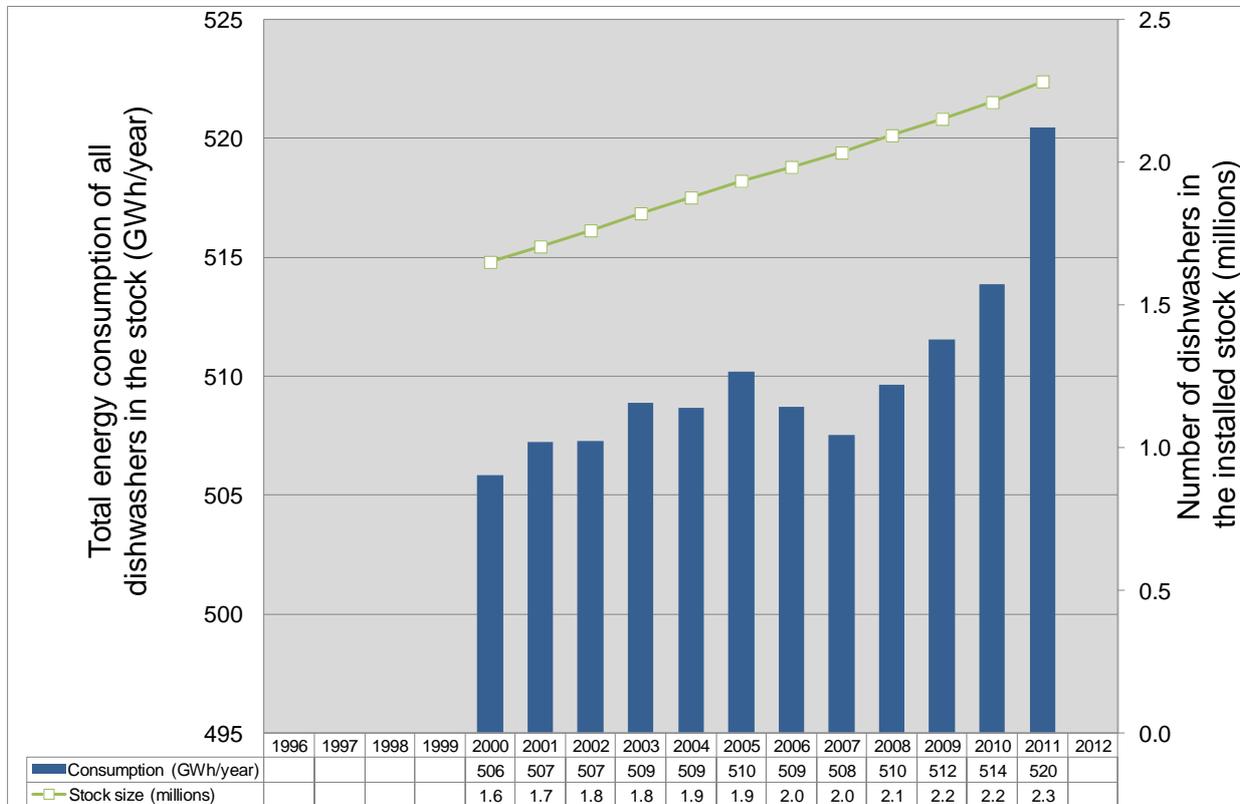
Unit Energy Efficiency (UEE) of dishwashers in Switzerland



Key notes on Graph (see notes section 1)

- All data is based on aggregated sales figures by energy label category for five different product types; stand-alone, built-in 45cm, built-in 55 cm, built-in 60 cm and small devices. Assumptions are necessary to calculate averages from this data and therefore, results are only approximate and should be viewed with caution.
- All capacity values listed are sales weighted averages.
- No data on Best or Worst performing products was available.

Energy Consumption of the installed stock of dishwashers in Switzerland



Key notes on Graph (see notes section 2)

- This data is based on a simple model for which a number of assumptions had to be made (see notes for details). Absolute values should be treated with caution but trends are believed to be representative of the market.





Major Policy Interventions (see notes section 3)

Swiss actions:

The following policy interventions are the primary Swiss actions on dishwashers:

- **Minimum Efficiency Performance Standards (MEPS):** Switzerland will regulate dishwashers from August 2014. At that time the regulation will be in line with the EU regulation.
- **Mandatory Labelling:** The current Swiss labelling of dishwashers is in line with the EU labelling. It was introduced January 1, 2012, with the allowed transition time until Jun 30, 2012.

The European Union has two primary EU wide regulations related to dishwashers that impact on the Swiss market:

- **Minimum Efficiency Performance Standards (MEPS):** the Commission Regulation (EU) No 1016/2010 of 10 November 2010 defined a two-tier minimum Energy Efficiency Index (EEI) requirement of 71 for "*large*" units and 80 for "*small*" units. These minimum requirements are strengthened from 1st December 2013 to 63 and 71 respectively with an EEI of 63 applying to all units from 1st December 2016. A two-tier minimum requirement for drying efficiency also comes into force on 1st December 2013.
- **Mandatory Labelling:** current EU labelling requirements were established by Commission Delegated Regulation (EU) No 1059/2010 of 28 September 2010. They show Energy Efficiency Index (EEI) by label categories A+++ through to a lowest level of D. The EEI boundaries do not align with previously used method of measured energy consumption for a full cycle corrected for water usage.



Cultural Issues (see notes section 4)

There are some very specific observations around the dishwashers in Switzerland:

- Although Switzerland is at the moment without regulation, the Swiss market in reality is very similar or even equal to the new EU regulated market of December 2013. The Swiss market already has a very high penetration of efficient devices. In fact, the dishwashers which are forbidden by EU regulations within the EU are not available to purchase in the Swiss market.

Due to the extremely diverse range of cultures within countries the EU (eg household sizes, building types and sizes, national and local income levels, etc), it is impossible to provide any meaningful cultural information other than large scale observations:

- Household numbers are rising in almost all member states, but the number of individuals within households is falling.
- Average buying power of households rose in all member states between 1996 and 2008.
- Dishwasher sales across the whole EU are increasing from approximately 6 to 7 million between 2006 and 2012.
- There is evidence from the Denmark dataset (and anecdotally elsewhere) that that longer cycle times are becoming more common during testing and this may be contributing to the improvement in dishwasher efficiency. Any energy savings from these longer cycle times will not be delivered if consumers do not use the same cycle as the manufacturers used during the test. This is being addressed in the new ecodesign measure (Regulation 2010/1016/EU) for dishwashers which requires in Annex I, under point 1(1), that the standard cycle shall be clearly identifiable on the programme selection device of the dishwasher.

Section 1. Unit Energy Consumption and Unit Energy Efficiency Graphics

1.1 Test methodologies

Switzerland uses the EU test methodology for dishwashers. Sections 1.1 and 1.2 of this report describe the key aspects of this EU test methodology.

1.1.1 Regulations

The testing methodology summarised below refers to EN 60436:2008 (and the associated national derivatives). This methodology is largely based on IEC 60436:2004 with some additional specific direction/ clarification added for application related to the EU directive requirements.

EN 60436:2008 supersedes EN 50242:1999 which was withdrawn on 1 September 2010. However, these standards are very similar with the following exceptions:

- 1) EN 60436:2008 includes methodologies to measure standby power
- 2) EN 60436:2008 introduces the option for use of the AHAM defined load (although this is excluded from use in the EU labelling process)
- 3) EN 60436:2008 includes methodologies for the measurement of units using non15°C inlet water (although this is excluded from use in the EU labelling process)
- 4) Introduces additional options for detergent specification

Performance and Labelling Requirements:

The performance and labelling requirements prior to 30 November 2011 are set out in COMMISSION DIRECTIVE 97/17/EC of 16 April 1997 implementing Council Directive 92/75/EEC with regard to energy labelling of household dishwashers

For machines entering this market after 1 December 2011, they must comply with:

- For labelling: the requirements established by COMMISSION DELEGATED REGULATION (EU) No 1059/2010 of 28 September 2010
- Minimum performance standards for energy and cleaning efficiency (and from 2013 drying efficiency): the requirements established by COMMISSION REGULATION (EU) No 1016/2010 of 10 November 2010 implementing DIRECTIVE 2009/125/EC. (Note that this regulation also sets increasingly stringent performance requirements that come into force in 2013 and 2016, with a mandatory review no later than 2014).

Summary details of both the test methodology and the performance and labelling requirements are included below:

1.1.1.1 Test Conditions:



General approach: The test methodology defines how to establish the energy consumption (including standby power consumption); the washing and drying performance, and the water consumption of the dishwasher.

The specification requires at least 5 cycles to be performed on a single machine with the average of resulting values used for declarations.

Note that the requirement to measure standby power was only introduced in regulation 1059/2010 and inclusion of standby power in product declarations was not required until 2011.

Rated Capacity: The rated capacity of the dishwasher is defined as the whole number of place settings together with the serving pieces stated by the manufacturer, which can be cleaned and dried when loaded in accordance with the manufacturer's instructions.

A place setting (a set of crockery, glass and cutlery for use by one person) and the associated serving pieces are defined .

Test load: The test load consists of the whole number of complete place settings plus the corresponding serving pieces which together comprise the manufacturer's rated capacity. While the test methodology specifies two load options (referred to Annex A and Annex B which correspond to the "IEC" and "AHAM" loads), for compliance with the EU labelling requirements, only the Annex A IEC load can be used in the test.

(NOTE The reference machine always uses a 12 piece IEC load irrespective of the load used on the test machine).

Soiling Agent: The make-up of the soiling agents includes the following:

The following soiling agents are required:

Dinner plates: Quarter sections of egg yolk, mashed potatoes, ground beef/tomato paste mix, and red raspberry preserves with coffee grounds

- milk
- tea
- minced meat
- egg;
- oat flakes

The standard prescribes the specific preparation of these material, and method of application and drying.

Cycle, Programme and Time: A cycle is defined as a complete washing, rinsing, and drying process consisting of a series of operations as defined by the programme selected

The test the programme to be used is the programme recommended by the manufacturer for a normally soiled load (a programme for normal use, using normal table ware, excluding cooking utensils).



The cycle time is broadly defined as the time measured from the initiation of the program (excluding any user programmed delay) until all activity ceases. Activity is considered to have ceased when the power consumption reverts to a steady state condition that persists indefinitely without user intervention. If there is no activity after the end of the program, the cycle time is equal to the program time.

Cleansing Performance: The test method for cleansing performance of the dishwasher under test is based on a comparison of the performance of the unit under test with the performance of the reference unit, and is conducted in conjunction with the energy performance test. Algorithms are provided to allow the calculation of an index for the measurement of wash performance (PC).

Under Directive 97/17/EC wash quality was required to be declared on an A-G scale on the product label.

The table below gives the A-G rating for a given wash performance index from Directive 97/17/EC.

Table 2

Cleaning performance class	Cleaning performance index P_c as defined in the harmonized standards referred to in Article 1 (2), using a standard cycle
A	$P_c > 1,12$
B	$1,12 \geq P_c > 1,00$
C	$1,00 \geq P_c > 0,88$
D	$0,88 \geq P_c > 0,76$
E	$0,76 \geq P_c > 0,64$
F	$0,64 \geq P_c > 0,52$
G	$0,52 \geq P_c$

However, under the more recent delegated regulation 1059/2010, there is no longer a requirement to declare the wash quality on the energy label, but Regulation 1016/2010 requires a minimum “cleaning efficiency index” (redefined and denoted by I_C) of 1.12 (equating to A performance under the previous labelling requirements).

Drying Performance: The drying performance test is conducted separately from the wash performance/energy test/water consumption test but uses the same cycle and load size. An unsoiled load is used for the drying test.

The drying performance¹ is calculated (as an index) based on the number and size of droplets of water remaining after the test relative to the reference machine. An algorithm is then used to determine drying index to be declared.

The calculation methodology and declaration requirements remain unchanged between Directive 97/17/EC and delegated regulation 1059/2010. Both require drying performance to

¹ Note that both 2010 regulations define drying performance as a “drying efficiency” defined by a value I_D . However, the methodology for calculating I_D is identical to that for calculating the preceding drying performance index P_D and the actual labelling bands remain identical.

be declared on an A-G scale on the product label (although the actual label differs). The table below gives the A-G rating for a given drying performance index.

Table 3

Drying performance class	Drying performance index P_D as defined in the harmonized standards referred to in Article 1 (2)
A	$P_D > 1,08$
B	$1,08 \geq P_D > 0,93$
C	$0,93 \geq P_D > 0,78$
D	$0,78 \geq P_D > 0,63$
E	$0,63 \geq P_D > 0,48$
F	$0,48 \geq P_D > 0,33$
G	$0,33 \geq P_D$

From 1 December 2013, delegated regulation 1059/2010 places a minimum drying efficiency requirement of 1.08 for units with rated capacity of 8 settings or above and 0.86 for units with rated capacity of less than 7 settings.

Stand-by: The performance and labelling requirements set out in 97/17/EC do not require the measurement or declaration of any aspect of stand-by power.

However, regulation 1059/2010 requires the measurement of two stand-by power modes:

- **off-mode:** a condition where the household dishwasher is switched off using appliance controls or switches accessible to and intended for operation by the end-user during normal use to attain the lowest power consumption that may persist for an indefinite time while the household dishwasher is connected to a power source and used in accordance with the supplier's instructions; where there is no control or switch accessible to the end-user, 'off-mode' means the condition reached after the household dishwasher reverts to a steady-state power consumption on its own;
- **left-on mode:** the lowest power consumption mode that may persist for an indefinite time after completion of the programme and unloading of the household dishwasher without any further intervention by the end-user

Both modes are then incorporated in the energy consumption and efficiency calculation.

However, the measurement of neither mode is specified in EN 60436:2008 and the regulation 1059/2010 simply requires that they "shall be obtained by reliable, accurate and reproducible measurement methods, which take into account the recognised state-of-the-art measurement methods". However, EN50564 (the EU version of IEC standby measurement standard) can be used for this purpose.

Water consumption: The measurement of total water consumption is taken during the energy consumption test. For labelling regulations, all water consumption is based on cold water supply.

Declaration of annual water consumption is required on the energy label (where annual consumption = cycle consumption x 280 cycles per Annum).

Embodied Water Energy/ Nominal Water Inlet Temperature: While the test methodology provides for several water inlet temperatures, in the European energy labelling test, the nominal cold water inlet temperature is 15 °C. Adjustments for embodied energy in the water are made for supplies that vary from this temperature.

Water Hardness: For energy label purposes only water of 2,5 +/- 0,5 mmol/l shall be used.

Detergent/ Rinse Agent/Water Softener: The quantity and formula of the detergent, rinse aid and (if required) water softening salt is proscribed.

Noise: Airborne acoustical noise measurement is required for declaration under both new and old regulations. However, two further standards are referenced for measurement (EN 60704-2-3) and determination (EN 60704-3).

Ambient Temperature: The ambient temperature and the relative humidity measured during the tests shall be reported in the test report.

- Ambient temperature of the room: (23 ± 2) °C
- Relative humidity: (55 ± 5) % RH

Order of Tests: The methodology specifies that cleaning performance test is performed first, followed by the drying performance. The determination of energy, water and cycle/program time is done in conjunction with a cleaning performance test.

No specification is yet included on how or when the standby consumption is measure.

Energy Consumption:

Total energy consumption for a cycle is the sum of electrical consumption for the full cycle, plus embodied water energy (pre 2011, this value was referred to as C, but now referred to as E_t)

The energy consumption and water consumption are measured for each complete cycle.

Energy consumption and declarations are then calculated as follows:

From 1 March 1999 to 30th December 2010.

Total energy consumption to be declared is as per cycle.

Calculation of label class E_t is:

$$E_t = C/Cr$$

Where

$$Cr = 1.35 + (0.025 * \text{place settings}) \text{ [for 10 or more place settings]}$$

$$Cr = 0.45 + (0.09 * \text{place settings}) \text{ [for 9 or less place settings]}$$

Labelling class is then defined from the following table:

Table 1

Energy efficiency class	Energy efficiency index E_i
A	$E_i < 0,64$
B	$0,64 \leq E_i < 0,76$
C	$0,76 \leq E_i < 0,88$
D	$0,88 \leq E_i < 1,00$
E	$1,00 \leq E_i < 1,12$
F	$1,12 \leq E_i < 1,24$
G	$E_i \geq 1,24$

From 1st January 2011.

E_i = Measured energy consumption for a full cycle corrected for embodied water energy

The Annual Energy Consumption (AE_c) is calculated by:

$$AE_c = E_i \times 280 + \frac{\left[P_o \times \frac{525\,600 - (T_t \times 280)}{2} + P_l \times \frac{525\,600 - (T_t \times 280)}{2} \right]}{60 \times 1\,000}$$

Where:

- 280 washes is the assumed washes/year.
- P_l is standby “left-on mode”
- P_o is standby “off mode”
- T is cycle time

(note that there is a separate but similar algorithm for units with a power management system).

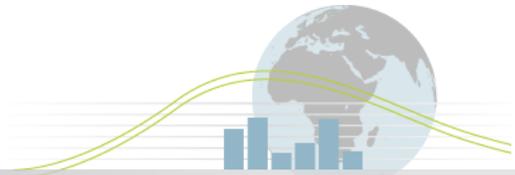
The standard energy consumption (SAE_c) is

$$SAE_c = 378 + (7 * \text{place settings}) \text{ [for 10 or more place settings]}$$

$$SAE_c = 126 + (25.2 * \text{place settings}) \text{ [for 9 or less place settings]}$$

The Energy Efficiency Index (EEI) is the derived by





$$EEI = (AE_c / SAE_c) \times 100$$

The labelling category is then allocated based on the following table (NOTE. The new label introduces three new bands, A+, A++ and A+++ with the lowest level being D. *EEI* values used in new regulations do not align with the previously used E_t values).

Energy efficiency classes

Energy efficiency class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 50$
A++	$50 \leq EEI < 56$
A+	$56 \leq EEI < 63$
A	$63 \leq EEI < 71$
B	$71 \leq EEI < 80$
C	$80 \leq EEI < 90$
D (least efficient)	$EEI \geq 90$

Regulation 1016/2010 requires units to meet the following minimum efficiency levels:

From 1st December 2011.

- a) Units with rated capacity of 10 settings and a width equal to or less than 45cm are required to have an EEI of less than 80
- b) All units not specified in a) above are required to have an EEI of less than 71

From 1st December 2013.

- a) Units with rated capacity of 10 settings and a width equal to or less than 45cm are required to have an EEI of less than 71
- b) Units with a rated capacity of 11 settings or greater, or with 10 settings and a width greater than 45cm are required to have an EEI of less than 63

From 1st December 2016.

Units with rated capacity of 8 or 9 settings, and units with a rated capacity of 10 settings and a width equal to or less than 45cm, are required to have an EEI of less than 63.

1.2 Product Classifications

The test methodology applies to electric dishwashers for household use that are supplied with hot and/or cold water (although only the cold water supply can be used within the context of EU MEPS and labelling).



Definition

A dishwasher machine which cleans, rinses, and dries dishware, glassware, cutlery, and, in some cases, cooking utensils by chemical, mechanical, thermal, and electric means. A dishwasher may or may not have a specific drying operation at the end of the programme.

The MEPS regulations apply only to units designed for domestic use.

1.3 Data sources

UEC data Source: SwissEnergy: Project Report Energy efficient statistics, Period 2002-2011, from the energy agency electrical appliances eae (published in December 2012). The datasets submitted are reported to cover 90% of sales in the Swiss market. The numbers of sales included by product category are presented in the tables below.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sales in dataset	159.3	162.3	172.5	178.6	185.3	192.5	196.0	196.4	210.5	210.6
"stand-alone"		7.2	6.9	6.6	7.2	7.1	8.1	8.4	8.6	6.4
built-in, 45 cm		8.0	9.2	9.7	9.9	10.6	11.3	10.8	11.8	12.3
built-in, 55 cm		80.8	82.9	82.5	83.6	84.0	84.5	84.9	87.1	83.3
built-in, 60 cm		62.5	69.9	76.2	80.7	87.1	89.1	89.0	99.5	104.9
small devices, max.9 IMG*		3.7	3.6	3.6	3.8	3.8	2.9	3.2	3.6	3.7
Sales analysed	159.3	162.3	172.5	178.6	185.3	192.5	196.0	196.4	210.5	210.6
% sales included	~90%	~90%	~90%	~90%	~90%	~90%	~90%	~90%	~90%	~90%

* IMG: number of place settings

1.4 Data manipulations and specific limitations

1.4.1 Overview of the mapping and benchmarking process

There are essentially 4 stages to the mapping and benchmarking process for dishwashers as detailed below:

Stage:	Description
1. Data Cleaning and Pre-processing	<ul style="list-style-type: none"> Removal of duplicate entries Pre-processing to align all terminology and reported test values to be consistent between countries Assigning of local, mapping and benchmarking and EU categories Etc
2. Production of mapping outputs	<ul style="list-style-type: none"> Production of mapping outputs based on local test methodologies
3. Normalisation of test data	<ul style="list-style-type: none"> Calculation of full cycle Unit Energy Consumptions Normalisation for test temperature differentials
4. Production of Benchmarking outputs	<ul style="list-style-type: none"> Post processing of benchmarking results Production of benchmarking report

The details of this process are described in two supporting documents that accompany this mapping report:

1. The **product definition** describes the exact characteristics of the product being analysed; the energy metrics that will be calculated; the technological, usage and other



- characteristics that will be considered; and any other policy or cultural information that will be collected
2. The **summary of approach** provides an overview of the mapping and benchmarking process for analyzing dishwashers for all countries and regions.

These documents can be found at the annex website:

<http://mappingandbenchmarking.iea-4e.org/matrix?type=product&id=11>

Aspects of the Swiss analysis that are specific to the local dataset or regulations are described below.

1.4.2 Specific cautions for the Swiss data

1.4.2.1 Data cleaning

No data cleaning was necessary for the Swiss data as it was provided as market averages.

1.4.2.2 Data processing specific to the Swiss dataset

The Swiss data was pre-processed before delivery to the Annex. The following steps were undertaken by the provider:

The data is not based on data for single products, but on aggregated sales figures. The sales figures consider 5 different product categories: stand-alone, built-in 45cm, built-in 55 cm, built-in 60 cm and small devices. For each of these 5 categories the sales are specified per label category, and from this market shares by label category can be calculated. For example, the table below shows the percentage of sales of built-in dishwashers (60 cm) for the years 2002-2011.

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
A	%	93.0	96.3	98.5	99.1	99.3	99.4	99.7	99.8	100.0	100.0
B	%	5.7	3.2	1.2	0.9	0.7	0.6	0.3	0.2	0.0	0.0
C	%	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E,F,G	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
unknown	%	120%	30%	20%	0%	0%	0%	0%	0%	0%	0%

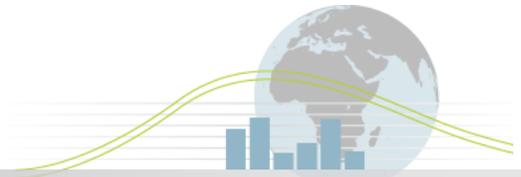
For each dishwasher category we assumed the average capacity (number of IMG: place settings) and the annual number of washes (approximately 220 per year). Combining the information on the energy label class (E_i) and the assumptions on capacity and number of washes we calculated the average yearly energy consumption of each dishwasher category by label class. Thereby we used the (old) formulas

energy consumption = $E_i \cdot (1.35 + 0.25 \cdot \text{number of IMG}) \cdot \text{number of washes}$ (for $\text{IMG} \geq 10$) and

energy consumption = $E_i \cdot (0.45 + 0.09 \cdot \text{number of IMG}) \cdot \text{number of washes}$ (for $\text{IMG} < 10$).

We assumed that a typical dishwasher in the A label category has an energy efficiency index of 0.64 (according to the old notation E_i). Typical machines in the labels B-D have an energy





efficiency at the mid-point of corresponding label range. From this, the average UEC/UEE for each category could be calculated.

The indicated “typical energy performances (UEC/UEE)” are then calculated as sales weighted average across all five dishwasher categories.

1.4.2.3 Test methodology details used in the analysis

The EU test methodology was used as the benchmarking methodology and so no normalisation was necessary



Section 2. Energy Consumption of the installed stock of dishwashers graphic

The estimation of the energy consumption of the installed stock of dishwashers is based on a multiplication of the number of all dishwashers in the installed stock with the average yearly consumption of a dishwasher in the installed stock. A number of assumptions were necessary for this estimate:

1. The number of dishwashers is derived by combining the number of households (or dwellings) with the percentage of households with dishwashers.
2. There is no official data on the percentage of households with a dishwasher and so it is assumed that the percentage was around 52.5 % in 2000 and has risen to 63.4% in 2011.
3. The average yearly consumption of a dishwasher in the installed stock is calculated with a cohort model. Inputs for the cohort model are the yearly sales, the average yearly energy consumption of the sales and an assumption on the lifetime of the dishwashers.
4. The number of yearly sales and the average energy consumption of the yearly sales are taken from the "Project Report Energy efficient statistics", Period 2002-2011, from the energy agency electrical appliances (eae). The sales before 2002 were based on expert assumptions on sales during that time.
5. The lifetime of the dishwashers was implied from a Weibull-distribution; the average lifetime is assumed to be around 11.5 years.

Section 3. Major Policy Interventions

3.1 Swiss Actions:

Labelling in Switzerland is in line with the EU regulation. Concerning the regulation itself, Switzerland will be formally in line from August 2014. No other specific action has been made.

3.2 Pan-European Policy

Swiss products are heavily influenced by the regulations in Europe. These regulations are as follows:

3.2.1 Minimum Energy Performance Standards

Regulation 1016/2010 requires units to meet the following minimum efficiency levels:

From 1st December 2011.

Units with rated capacity of 10 settings and a width equal to or less than 45cm are required to have an EEI of less than 80

All units not specified in a) above are required to have an EEI of less than 71

From 1st December 2013.

Units with rated capacity of 10 settings and a width equal to or less than 45cm are required to have an EEI of less than 71

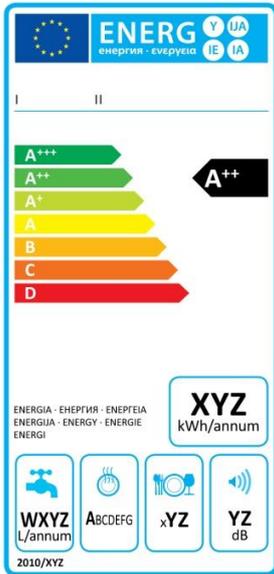
Units with a rated capacity of 11 settings or greater, or with 10 settings and a width greater than 45cm are required to have an EEI of less than 63

From 1st December 2016.

Units with rated capacity of 8 or 9 settings, and units with a rated capacity of 10 settings and a width equal to or less than 45cm, are required to have an EEI of less than 63



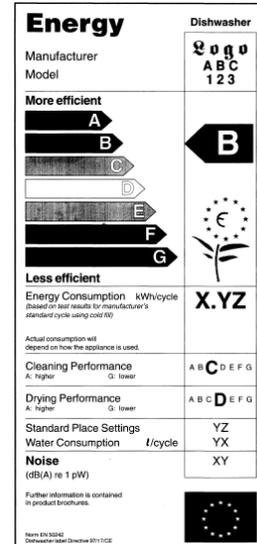
3.3 Mandatory Labelling

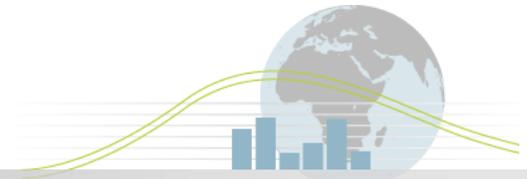


The labelling requirements is defined in the “Commission Delegated Regulation (EU) No 1059/2010 of 28 September 2010 supplementing Directive 2010/30EU with regard to Household Dishwashers”

It requires that new dishwashers shall display labels at the point of sale that comply with the new regulations from 20 December 2011 (with some limited transitional arrangements not coming into effect until 20 April 2012). The defined label is shownto the left.

Previous labelling requirements are shown right (note the label itself is in colour).





Section 4. Cultural Issues

No additional notes.

