



# **Come On Labels**

## **Common appliance policy – All for one, One for all – Energy Labels**

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# **EU-legislation related to energy labels on household appliances**

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with the support of: Come On Labels partners

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This document was prepared within the **Come On Labels project**, supported by the Intelligent Energy Europe programme. The main aim of the project, active in 13 European countries, is to support appliance energy labelling in the field of appliance tests, proper presence of labels in shops, and consumer education.

# 1 Summary

This document describes the European legislation related to the energy labelling of household appliances, focusing on recent legislative changes.

Council Directive 92/75/EEC which formerly governed energy labelling has been replaced by the new framework directive 2010/30/EU which is in force since June 2010. For individual product groups, the existing labels will gradually be replaced by new labels by means of product-specific implementing measures. So far, new labels have been introduced for three product groups that had the “old” label before (refrigerators and freezers, washing machines, dishwashers) and one product group that so far had not been labelled, TVs. More product groups will follow.

The paper lists the relevant EU legislation. It specifically describes the differences compared to the old energy label, the new content of the energy labels, and the responsibilities of the individual stakeholders.

In short, the main differences between the old and the new energy labelling scheme are:

- **No national implementation necessary:** the new labelling implementing measures are no more in the form of directives, that require the transposition into the national legislation, but in the form of “delegated regulations”, which are immediately applicable in all Member States. Only the organization of the monitoring and evaluation is left to the national Market Surveillance Authorities following the principle of subsidiarity.
- **The energy labelling will cover additional products:** the new labelling scheme may cover any product that uses energy or influences the energy use (“energy-related product”). Since October 2010, a label for TVs has been introduced (mandatory from November 2011). Other appliances will follow, such as boilers, water heaters, vacuum cleaners, range hoods etc..
- **Energy classes A+, A++ and A+++:** if technical development allows it for the specific product these new energy efficiency classes may be introduced to the label. Classes A+, A++ and A+++ exist already for refrigerators and freezers, washing machines and dishwashers. For TVs, they will be introduced at predefined points in time.
- **Seven energy efficiency classes:** as a principle, the energy label should show only seven energy efficiency classes. So, when A+++ is the highest class, the worst rating will be D, instead of G. The upper class must be always be green and the lowest one red.
- **New calculation methodology:** the calculation of the Energy Efficiency Index, which in general is used to determine the energy efficiency class of the appliance models, has been updated, to better reflect the actual use of the labelled products. For example, for washing machines it is now based on the energy consumption for both 40 and 60 °C cotton programmes at full and half load plus the consumption in low power modes.
- **New information on the labels:** the washing machine and dishwasher energy label does not contain the washing performance class any more: since all models on the market have

a washing efficiency of class A, this performance is now considered a specific minimum requirement for the placing on the market within the relevant ecodesign regulation. In addition, the electricity and water consumption is shown on the label in terms of annual consumption.

- **Language-neutral label:** the new labels are the same in all EU countries, without the need for national language versions. This improvement is achieved by presenting the information through pictograms rather than verbally. As consequence, there will be one single label instead of the former combination of a language specific coloured background label and a language neutral data strip.
- **Internet sales covered:** the legislation specifies which type of information has to be listed in the case appliances are sold through internet, catalogues or any other means that does not allow to the consumer to see the product displayed, and thus to see the label.
- **Energy efficiency class advertised:** as from 2012, all appliance advertisements listing the price and/or the energy consumption will also indicate the energy efficiency class.

**Schedule of the introduction of the new energy labels:** the mandatory application of the label is usually set one year after the entering into force of the relevant delegated Regulation. For refrigerators and freezers, washing machines and dishwashers a specific clause allows the voluntary use of the new energy labels during the year 2011. After this period all new models placed on the market or put into service in the EU will bear the new label at the point of sale.

## 2 Legal Documents / Acts

### 2.1 Framework directives and implementing regulations

The energy label for household appliances was introduced in the European Union in the 1990s. The framework Directive 92/75/EEC requires that appliances are labelled to show their energy and other resource consumption to allow the comparison of the models. The Directive provides a legislative framework for establishing product specific implementing measures setting the conditions for the labelling of the covered products: the label layout, the information to be declared on the label and in the technical fiche.

On 19 May 2010, the European Parliament and the Council adopted the new framework Directive 2010/30/EU, as recast of the former 92/75/EEC, and entered into force on 19 June 2010. The new energy labelling directive extends the scope beyond household appliances to include all energy-related products, defined as any product having a significant direct or indirect impact on energy consumption during the use phase. For each product fulfilling a specific set of criteria, the European Commission is entitled to adopt a delegated act that sets out the requirements for the information to be provided on the label and in the product fiche.

The new labelling scheme covers the following products:

- Household dishwashers
- Household washing machines
- Household refrigeration appliances
- Televisions

The old labelling scheme is still in force for all other products covered by Directive 92/75/EEC.

#### 2.1.1 Council Directive 92/75/EEC and implementing directives

*Council Directive 92/75/EEC of 22 September 1992 on the indication by labelling and standard product information of the consumption of energy and other resources by household appliances* requires that appliances be labelled to show their power consumption in such a manner that it is possible to compare the efficiency with that of other brands and models. The Energy Labelling Directive does not of itself specify any limits or performance levels. It provides a legislative framework into which other directives can be introduced to require marking and performance levels of particular types of domestic appliance. Under the subsidiary directives, appliances must be marked to show their energy consumption. Consumption figures are based on a series of equations given in the appropriate directive. The Directives are based solely on self-assessment by the manufacturer although supporting documentation will be required. The Directive applies to the following household appliances:

- Refrigerators, freezers and their combinations
- Washing machines, dryers and their combinations
- Dishwashers
- Ovens
- Lighting sources
- Air-conditioning appliances

Implementing directives under the framework directive are:

- Commission Directive 94/2/EC of 21 January 1994 (energy labelling of household electric refrigerators, freezers and their combinations) [Official Journal L 45 of 17.2.1994] (not in force any more)
- Commission Directive 2003/66/EC (energy labelling of household electric refrigerators, freezers and their combinations) [Official Journal L 170 of 9.7.2003]. (replaces Directive 94/2/EC)
- Commission Directive 2002/40/EC (energy labelling of household electric ovens) [Official Journal L 128 of 15.5.2002].
- Commission Directive 2002/31/EC (energy labelling of household air-conditioners) [Official Journal L 86 of 3.4.2002].
- Commission Directive 1999/9/EC (energy labelling of household dishwashers) [Official Journal L 56 of 4.3.1999]. (amending previous regulation of Commission Directive 97/17/EC)
- Commission Directive 98/11/EC (energy labelling of household lamps) [Official Journal L 71 of 10.3.1998].
- Commission Directive 97/17/EC (energy labelling of household dishwashers) [Official Journal L 343/19 of 13.12.1997].
- Commission Directive 96/60/EC (energy labelling of household combined washer-dryers) [Official Journal L 266 of 18.10.1996].
- Commission Directive 95/13/EC (energy labelling of household electric tumble dryers) [Official Journal L 136 of 21.6.1995].
- Commission Directive 95/12/EC (energy labelling of household washing machines) [Official Journal L 136 of 21.6.1995].  
Amended by Directive 96/89/EC – [Official Journal L 388, 28.12.1996].

## **2.1.2 Framework Directive 2010/30/EU and implementing delegated Regulations**

In June 2010 the Directive 2010/30/EU on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products came into force. The Framework Directive 92/75/EC was repealed with effect from 21 July 2011.

The most significant change is that its scope has been expanded from domestic appliances to energy-related products. The recast extends the labelling scheme to a wider range of products in the commercial and industrial sector. Energy labels are adopted on a product by product basis within the framework laid down by Directive 2010/30/10.

Several delegated Regulations for the different products have been already adopted under the new energy labelling framework directive:

- Commission Delegated Regulation (EU) No 1059/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household dishwashers

- Commission Delegated Regulation (EU) No 1060/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household refrigerating appliances
- Commission communication in the framework of the implementation of Commission delegated Regulation (EU) No 1060/2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household refrigerating appliances  
Publication of titles and references of transitional methods of measurement [1] for the implementation of Commission delegated Regulation (EU) No 1060/2010 and, in particular, Annexes VI and VII thereof.
- Commission Delegated Regulation (EU) No 1061/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household washing machines
- Commission Delegated Regulation (EU) No 1062/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of televisions.

### **2.1.3 Related legislation or standardisation documents**

- EN 153 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.
- IEC 60704-1 Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – General requirements.
- IEC 60704-2-14 Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Particular requirements for refrigerators, frozen-food storage cabinets and food freezers.
- IEC 60704-3 Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Procedures for determining and verifying declared noise emission values.
- Regulation (EC) No 1275/2008 Commission Regulation implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment.
- Regulation (EC) No 643/2009 Commission Regulation implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for household refrigerating appliances.

## 3 The new Framework Directive in brief

### 3.1 Basic elements

The new legislation so far covers the following products: refrigerators, freezers, wine storage appliances, washing machines, dishwashers and televisions.

The basic elements of the label remain in the new layout

- The initial A to G classification scale
- Colours from dark green (high energy efficiency) to red (low energy efficiency);
- Size of the label.

Additional elements have been introduced:

- Depending on the product group up to three additional classes (A+, A++, A+++ ) are added to the previous A-G classification scale. But the seven-class structure of the old labelling system will be preserved: the introduction of new classes above A will be accompanied by the removal of existing bottom classes, from G upward.
- The new label is language-neutral: this is achieved by replacing text with pictograms which inform consumers about the characteristics and performance of the given product.
- Each single product will be supplied with the full new label. The current practice in some countries to provide the basic label and the data strip separately will not be necessary any more.
- Where energy-related or price information is disclosed, any advertisement for a specific model will bear a reference to the energy efficiency class of the product.

### 3.2 Responsibilities of suppliers

Under the new framework directive suppliers shall ensure that:

- each household appliance is supplied with a printed label;
- a product fiche is made available;
- the technical documentation is made available on request to the authorities of Member States and to the Commission;
- any advertisement for a specific model contains the energy efficiency class, if the advertisement discloses energy-related or price information;
- any technical promotional material concerning a specific model which describes its specific technical parameters includes the energy efficiency class of that model.

The EU energy label is based on the principle of self-declaration which gives the suppliers full responsibility for the values declared on the label.



### ***3.3 Responsibilities of dealers***

Under the new framework directive dealers shall ensure that:

- each product, at the point of sale, bears the label provided by suppliers on the outside of the front or top of the household appliance, in such a way as to be clearly visible;
- household appliances offered for sale, hire or hire-purchase where the end-user cannot be expected to see the product displayed are marketed with the specific information to be provided by the suppliers;
- any advertisement for a specific model contains a reference to its energy efficiency class, if the advertisement discloses energy-related or price information;
- any technical promotional material concerning a specific model, which describes its specific technical parameters includes a reference to the energy efficiency class of that model.

### ***3.4 Verification procedure for market surveillance purposes***

It is the responsibility of the Member States to organize the surveillance of the market and of the labelling scheme enforcement. Each Member State has its own Market Surveillance Authority and enforcement body.

In general the product compliance verification procedure consists of a series of tests that use the relevant European standards. Suppliers make the technical documentation available for inspection by market surveillance authorities.

Every four years, Member States will submit a report to the European Commission including details about their enforcement activities and the level of compliance in their territory.

In addition, market surveillance is ruled by Regulation 2008/765/EC of the European Parliament and of the Council of 9 July 2008.

### ***3.5 Penalties for dealers and suppliers in case of non-compliance***

Each Member State is required to develop its own regime and take the necessary preventive measures and measures aimed at ensuring compliance within a precise time-frame and, in the case of persistent non-compliance, restrict or prohibit the placing on the market of a product.

In fact, according to Art 15 of Directive 2010/30/EU, Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant the framework directive and its delegated acts, including unauthorised use of the label, and shall take the necessary measures to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive.

Member States shall notify these provisions to the Commission by 20 June 2011 as well as any subsequent amendment affecting those provisions.

## 4 Product groups

### 4.1 Washing machines

#### 4.1.1 The energy labelling

The delegated Regulation No 1061/2010 of 28 September 2010 will be applied from 20 December 2011.

The new label for household washing machines includes the three additional classes A+, A++, and A+++.

The washing performance is no more declared on the label because it has been included among the specific ecodesign requirements of the Regulation 2010/1015/EU. The new label shows the annual energy consumption (kWh/year) instead of the consumption per cycle (kWh/cycle).

The models are classified on the basis of the Energy Efficiency Index (EEI), that includes the energy consumption of the 60°C cotton programme at full and partial load and of the 40°C cotton programme at partial load and the power consumption in two low power modes: the left-on mode and the off-mode.

The energy efficiency classes are based on the Energy Efficiency Index as in the following table:

Energy Efficiency Class	Energy Efficiency Index
A+++ (most efficient)	$EEI \leq 46$
A++	$46 \leq EEI < 52$
A+	$52 \leq EEI < 59$
A	$59 \leq EEI < 68$
B	$68 \leq EEI < 77$
C	$77 \leq EEI < 87$
D (least efficient)	$EEI \geq 87$

Timetable	
December 20, 2010	Entry in force
From December 20, 2011	Requirements on Label, product fiche and technical documentation
From April 20, 2012	Requirements on advertisement and technical promotional material

## 4.1.2 New and old label design

OLD LABEL	NEW LABEL
<p>I. Supplier's name or trade mark;</p> <p>II. Supplier's model identifier;</p> <p>III. The energy efficiency class of an appliance;</p> <p>IV. Without prejudice to any requirements under the Community eco-label scheme, where an appliance has been granted a 'Community eco-label' pursuant to Council Regulation (EEC) No 880/92 (1), a copy of the eco-label may be added here.</p> <p>V. Energy consumption in kWh per cycle using standard 60 °C cotton cycle in accordance with the test procedures of the harmonized standards referred to in Article 1 (2);</p> <p>VI. Washing performance class as determined by Annex IV;</p> <p>VII. Drying efficiency class as determined by Annex IV;</p> <p>VIII. Maximum spin speed attained for standard 60 °C cotton cycle in accordance with the test procedures of the harmonized standards referred to in Article 1 (2);</p> <p>IX. Capacity of appliance for standard 60 °C cotton cycle in accordance with the harmonized standards referred to in Article 1 (2);</p> <p>X. Water consumption per cycle of washing using standard 60 °C cotton cycle in accordance with the test procedures of the harmonized standards referred to in Article 1 (2);</p> <p>XI. Where applicable, noise during washing and spinning cycles using standard 60 °C cycle, in accordance with Council Directive (EEC) No 86/594 (2).</p>	<p>I. Supplier's name or trade mark;</p> <p>II. Supplier's model identifier, meaning the code, usually alphanumeric, which distinguishes a specific household washing machine model from other models with the same trade mark or supplier's name;</p> <p>III. The energy efficiency class determined in accordance with point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household washing machine shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;</p> <p>IV. Weighted annual energy consumption (AE C ) in kWh per year, rounded up to the nearest integer in accordance with Annex VII;</p> <p>V. Weighted annual water consumption (AW C ), in litres per year, rounded up to the nearest integer in accordance with Annex VII;</p> <p>VI. Rated capacity, in kg, for the standard 60 °C cotton programme at full load or the standard 40 °C cotton programme at full load, whichever is the lower;</p> <p>VII. The spin-drying efficiency class as set out in point 2 of Annex VI;</p> <p>VIII. Airborne acoustical noise emissions, during the washing and spinning phases, for the standard 60 °C cotton programme at full load, expressed in dB(A) re 1 pW, rounded up to the nearest integer.</p>

In particular the label includes:

- The calculation of the energy consumption in kWh per year: energy consumption “XYZ” kWh per year, based on 220 standard washing cycles for cotton programmes at 60°C and 40°C at full and partial load, and the consumption of the low-power modes.
- The calculation of the water consumption in litre per year: water consumption “VWXYZ” litres per year, based on 220 standard washing cycles for cotton programmes at 60°C and 40°C at full and partial load.

### **4.1.3 The ecodesign requirements**

The ecodesign requirements for washing machines are set in:

- Commission Regulation 2010/1015/EU of 10 November 2010 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household washing machines.
- Stand-by and off-mode losses: Commission Regulation 1008/1275/EC.

#### **4.1.3.1 Generic requirements**

Manufacturers need to provide instruction manuals including:

- information about the standard 60°C and 40°C cotton programmes
- the power consumption in the off-mode and left-on mode
- information about energy and water consumption, programme time and remaining moisture content for the main washing programmes
- recommendations for detergents suitable for various washing temperatures.

Household washing machines shall offer a cold wash (20°C) cycle from December 2011.

#### **4.1.3.2 Specific requirements**

Minimum requirements for washing machines are:

- ban on washing machines below the energy class A (EEI < 68) from December 2011. From 2013 there will be stricter requirements
- Washing Efficiency Index for washing machines with a rated capacity higher than 3 kg greater than 1,03 (for washing machines with a rated capacity ≤ 3 kg Washing Efficiency Index shall be greater than 1,00). This minimum washing performance corresponds to the current class A (or class B for washing machines with a maximum capacity of 3 kg)
- Limits for water consumption and power consumption in standby and off modes.

## 4.2 Dishwashers

### 4.2.1 The energy labelling

The delegated Regulation No 2010/1059/EU will be enforced from 20th December 2011.

The new label for dishwashers includes the classes A+, A++, and A+++.

In the new label there is no longer the declaration of the cleaning performance class, because it has been included among the specific ecodesign requirements of the Regulation 2010/1016/EU; the minimum cleaning performance corresponds to the current class A in order to allow appliances to be placed in the community market.

The new label shows the annual energy consumption (kWh/year) instead of the consumption per cycle (kWh/cycle).

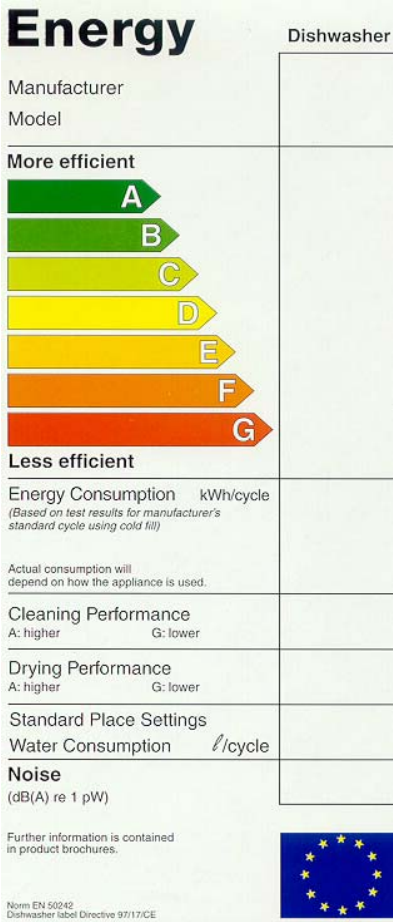

The models are classified on the basis of the Energy Efficiency Index (EEI). The EEI and the annual energy consumption value include the energy consumption in the standard cycle and the power consumption in two low power models: the left-on mode and the off-mode.

The energy efficiency classes are based on the Energy Efficiency Index as in the following table:

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)	$EEI \geq 90$

Timetable	
December 20, 2010	Entry in force
From December 20, 2011	Requirements on Label, product fiche and technical documentation
From April 20, 2012	Requirements on advertisement and technical promotional material

## 4.2.2 New and old label design

<p style="text-align: center;"><b>OLD LABEL</b></p>  <p style="text-align: center;"><b>Energy</b> Dishwasher</p> <p>Manufacturer Model</p> <p><b>More efficient</b></p> <p>A B C D E F G</p> <p><b>Less efficient</b></p> <p>Energy Consumption kWh/cycle <i>(Based on test results for manufacturer's standard cycle using cold fill)</i></p> <p>Actual consumption will depend on how the appliance is used.</p> <p>Cleaning Performance A: higher G: lower</p> <p>Drying Performance A: higher G: lower</p> <p>Standard Place Settings Water Consumption ℓ/cycle</p> <p>Noise (dB(A) re 1 pW)</p> <p>Further information is contained in product brochures.</p> <p>Norm EN 50242 Dishwasher label Directive 97/17/CE</p>	<p style="text-align: center;"><b>NEW LABEL</b></p>  <p style="text-align: center;"><b>ENERG</b> Y UA енергия · енергия · энергия IE IA</p> <p>I II</p> <p>A+++ A++ A+ A B C D</p> <p><b>A+</b></p> <p>ENERGIA · ЕНЕРГИЯ · ΕΝΕΡΓΕΙΑ ENERGIJA · ENERGY · ENERGIE ENERGI</p> <p><b>XYZ</b> kWh/annum</p> <p>WXYZ L/annum</p> <p>ABCDEFG</p> <p>xYZ</p> <p>YZ dB</p> <p>2010/1059</p> <p>I II III IV V VI VII VIII</p>
<p>I. Supplier's name or trade mark;</p> <p>II. Supplier's model identifier;</p> <p>III. The energy efficiency class of the model, determined in accordance with Annex IV. This indicator letter shall be placed at the same level as the relevant arrow;</p> <p>IV. Without prejudice to any requirements under the Community Eco-label scheme, where a model has been granted a 'Community Eco-label' pursuant to Council Regulation (EEC) No 880/92 (1), a copy of the Eco-label may be added here;</p> <p>V. Energy consumption in kWh per cycle using standard cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2);</p> <p>VI. Cleaning performance class, determined in accordance with Annex IV;</p> <p>VII. Drying performance class, determined in accordance with Annex IV;</p> <p>VIII. Capacity of appliance in standard place settings, determined in accordance with the harmonized standards referred to in Article 1 (2);</p> <p>IX. Water consumption, in litres, per complete cycle using standard cycle, determined in accordance with the test procedures of the harmonized standards referred to in Article 1 (2);</p> <p>X. Where applicable, noise during standard cycle, determined in accordance with Council Directive 86/594/EEC (2).</p>	<p>I. Supplier's name or trade mark;</p> <p>II. Supplier's model identifier, where 'model identifier' means the code, usually alphanumeric, which distinguishes a specific household dishwasher model from other models with the same trade mark or supplier's name;</p> <p>III. The energy efficiency class determined in accordance with point 1 of Annex VI; the head of the arrow containing the energy efficiency class of the household dishwasher shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;</p> <p>IV. Annual energy consumption (AE C) in kWh per year, rounded up to the nearest integer and calculated in accordance with point 1(b) of Annex VII;</p> <p>V. Annual water consumption (AW C) in litres per year, rounded up to the nearest integer and calculated in accordance with point 3 of Annex VII;</p> <p>VI. The drying efficiency class determined in accordance with point 2 of Annex VI;</p> <p>VII. Rated capacity in standard place settings, for the standard cleaning cycle;</p> <p>VIII. Airborne acoustical noise emissions expressed in dB(A) re 1 pW and rounded up to the nearest integer.</p>

In particular the label includes:

- the calculation of the energy consumption in kWh per year: energy consumption “XYZ” kWh per year, based on 280 standard cleaning cycles using cold water fill and including the consumption of the low power modes
- the calculation of the water consumption in litre per year: water consumption “WXYZ” litres per year, based on 280 standard cleaning cycles.

### 4.2.3 The ecodesign requirements

The ecodesign requirements for dishwashers are set in:

- Commission Regulation 2010/1016/EU of 10 November 2010 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for household dishwashers
- Standby and off-mode losses: Commission Regulation 2008/1275/EC.

#### 4.2.3.1 Generic requirements

Manufacturers need to provide instruction manuals including:

- information about the standard cleaning programme
- the power consumption of the off-mode and of the left-on mode
- instruction manuals with information about energy and water consumption and programme time for the main cleaning programmes

#### 4.2.3.2 Specific requirements

Minimum requirements for dishwashers are:

- ban of dishwashers below the energy class A ( $EEI < 71$ ) from December 2011 (except for dishwashers with 10 place settings and width equal or less than 45 cm), stricter requirements will apply from 2013
- The Cleaning Efficiency Index shall be greater than 1,12 for all household dishwashers
- Limits for the power consumption in standby and off modes
- minimum cleaning performance corresponding to class A of the old labelling scheme
- minimum drying performance corresponding to class A (except for dishwashers with 7 place settings and below).

## 4.3 Refrigerating appliances

### 4.3.1 The energy labelling

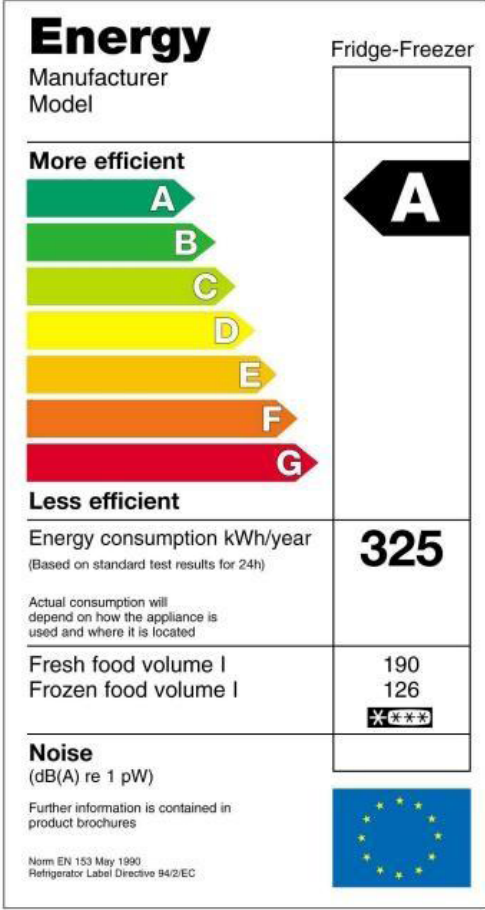

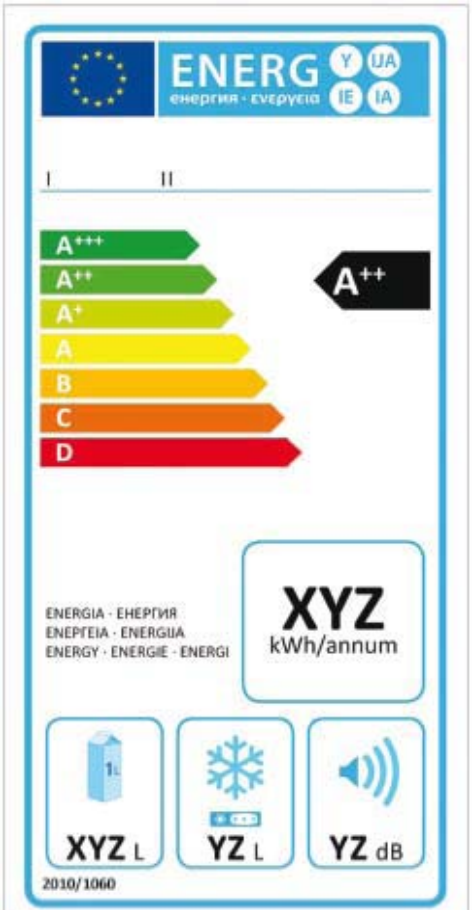
The delegated Regulation 2010/1060/EU relates to household refrigerating appliances with a storage volume between 10 and 1500 litres. The Regulation, applicable from 30 November 2011, covers not only the more traditional compression type refrigerators, but also absorption-type as well as wine storage appliances. The Regulation covers also appliances for non-household use or for the refrigeration of items other than foodstuffs, while refrigerating appliances whose primary function is not the storage of foodstuffs, such as stand-alone ice-makers or chilled drinks dispensers are excluded.

Energy Efficiency Class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 22$
A++	$22 \leq EEI < 33$
A+	$33 \leq EEI < 44$
A	$44 \leq EEI < 55$
B	$55 \leq EEI < 75$
C	$75 \leq EEI < 95$
D	$95 \leq EEI < 110$
E	$110 \leq EEI < 125$
F	$125 \leq EEI < 150$
G (least efficient)	$150 \leq EEI$

Timetable	
December 20, 2010	Entry in force
From November 30, 2011	Requirements on label, product fiche and technical documentation
From March 30, 2012	Requirements on advertisement and technical promotional material
From July 01, 2014	Energy efficiency class determination on new basis of EEI



### 4.3.2 New and old label design

<p style="text-align: center;"><b>OLD LABEL</b></p>  <p style="text-align: center;"><b>Energy</b> Fridge-Freezer</p> <p>Manufacturer Model</p> <p><b>More efficient</b></p> <p>A B C D E F G</p> <p><b>Less efficient</b></p> <p>Energy consumption kWh/year (Based on standard test results for 24h)</p> <p>325</p> <p>Actual consumption will depend on how the appliance is used and where it is located</p> <p>Fresh food volume I Frozen food volume I</p> <p>190 126 ***</p> <p><b>Noise</b> (dB(A) re 1 pW)</p> <p>Further information is contained in product brochures</p> <p>Norm EN 153 May 1990 Refrigerator Label Directive 94/2/EC</p> 	<p style="text-align: center;"><b>NEW LABEL</b> (LABEL FOR HOUSEHOLD REFRIGERATING APPLIANCES CLASSIFIED IN ENERGY EFFICIENCY CLASSES A+++ TO D)</p>  <p style="text-align: center;"><b>ENERG</b> енергия · енергійа · енергія · ενέργεια · ENERGIA</p> <p>I II</p> <p>A+++ A++ A+ A B C D</p> <p><b>A++</b></p> <p>ENERGIA · ЕНЕРГИЯ · ΕΝΕΡΓΕΙΑ · ENERGIA · ENERGI · ENERGIE · ENERGI</p> <p><b>XYZ</b> kWh/annum</p> <p>XYZ L YZ L YZ dB</p> <p>2010/1060</p> <p>I II III IV V VI VII</p>
<p>I. Supplier's name or trade mark.</p> <p>II. Suppliers model identifier.</p> <p>III. The energy efficiency class of an appliance shall be determined in accordance with Annex V. The appropriate letter shall be placed at the same level as the relevant arrow.</p> <p>IV. Without prejudice to any requirements under the Community Eco-label award scheme, where an appliance has been granted a 'Community Eco-label award' pursuant to Council Regulation (EEC) No 880/92 a copy of the Eco-award mark (the flower) may be added here.</p> <p>V. Energy consumption in accordance with standards referred to in Article 1 (2) but expressed in kWh per year (i.e. per 24 hours×365).</p> <p>VI. Sum of net storage volume of all compartments that do not merit a star rating (i.e. operating temperature &gt; - 6 °C).</p> <p>VII. Sum of net storage volume of all frozen food storage compartments which merit a star rating (i.e. operating temperature ≤ - 6 °C).</p> <p>VIII. Star rating of frozen food storage compartment, in accordance with standards referred to in Article 1 (2). Where this compartment does not merit any stars, this position shall be left blank.</p> <p>IX. Where applicable noise measured in accordance with Directive 86/594/ EEC.</p>	<p>I. Supplier's name or trade mark;</p> <p>II. Supplier's model identifier;</p> <p>III. The energy efficiency class;</p> <p>IV. Annual energy consumption in kWh per year;</p> <p>V. Sum of the storage volumes of all compartments that do not merit a star rating (i.e. operating temperature &gt; -6°C);</p> <p>VI. Sum of the storage volumes of all frozen-food storage compartments that merit a star rating (i.e. operating temperature &lt; -6°C);</p> <p>VII. Airborne acoustical noise emissions.</p>

**NEW LABEL** (LABEL FOR HOUSEHOLD REFRIGERATING APPLIANCES CLASSIFIED IN ENERGY EFFICIENCY CLASSES D TO G)<sup>1</sup> - Only for refrigerators belonging to energy efficiency classes from D to G a ten-class label - from A+++ to G will be used. This is due to the lower energy efficiency of absorption-type appliances



In particular the label includes the calculation of the energy consumption in kWh per year: energy consumption "XYZ" kWh per year, based on standard test results for 24 hours.

### 4.3.3 The ecodesign requirements

The ecodesign requirements for refrigerating appliances are defined by Regulation 2009/643/EC entered into force on 12 August 2009, repealing Directive 96/57/EC as per 01 July 2010.

The ecodesign regulation covers electric mains-operated refrigerators with a volume up to 1500 litres, that can also be battery-operated, even if for non-household use or for the refrigeration of items other than foodstuff.

#### 4.3.3.1 Generic requirements

From 1 July 2010:

- For wine storage appliances, the following information is displayed in the instruction booklet: *'This appliance is intended to be used exclusively for the storage of wine'*.
- For all refrigerating appliances information is provided in the instruction booklet concerning:
  - the combination of drawers, baskets and shelves that result in the most efficient use of energy for the appliance

<sup>1</sup> Absorption-type refrigerators only

- how to minimise the energy consumption of the appliance in the use-phase.

From 1 July 2013:

- The fast freezing facility, or any similar function achieved through modification of the thermostat settings is automatically reverted to the previous normal storage temperature conditions after no more than 72 hours. This requirement does not apply to refrigerator-freezers with one thermostat and one compressor which are equipped with an electromechanical control board.
- Refrigerator-freezers with one thermostat and one compressor which are equipped with an electronic control board and can be used in ambient temperatures below +16 °C shall be such that any winter setting switch or similar function guaranteeing the correct frozen-food storage temperature is automatically operated according to the ambient temperature.
- Household refrigerating appliances with a storage volume below 10 litres shall automatically enter in an operating condition with a power consumption of 0,00 Watt after no more than 1 hour when empty. The mere presence of a hard off switch is not considered sufficient to fulfil this requirement.

#### 4.3.3.2 Specific requirements

With regards to the Energy Efficiency Index (EEI), the requirements differ depending on the type of refrigerator:

Application Date	Compression-type	Absorption-type & others
01/07/2010	EEI < 55	EEI < 150
01/07/2012	EEI < 44	EEI < 125
01/07/2014	EEI < 42	-
01/07/2015	-	EEI < 110

## 4.4 Televisions

### 4.4.1 The energy labelling

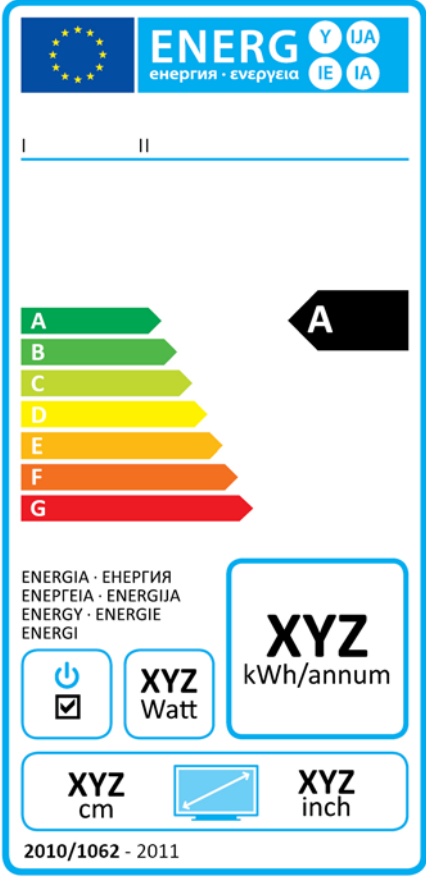
The delegated Regulation 2010/1062/EU will be enforced from 20 November 2011. This is the first time that televisions will require to bear energy labels when displayed for sale.

The energy efficiency classes are based on the Energy Efficiency Index as in the following table:

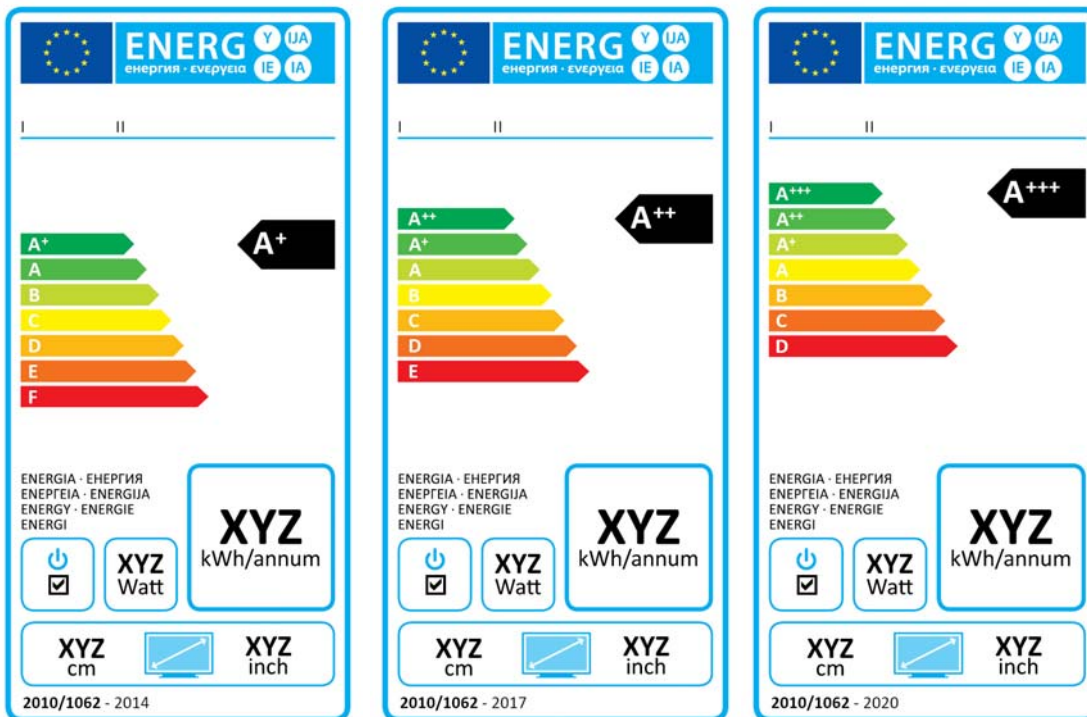
Energy Efficiency Class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 0,10$
A++	$0,10 \leq EEI < 0,16$
A+	$0,16 \leq EEI < 0,23$
A	$0,23 \leq EEI < 0,30$
B	$0,30 \leq EEI < 0,42$
C	$0,42 \leq EEI < 0,60$
D	$0,60 \leq EEI < 0,80$
E	$0,80 \leq EEI < 0,90$
F	$0,90 \leq EEI < 1,00$
G (least efficient)	$1,00 \leq EEI$

Timetable	
December 20, 2010	Entry in force
From November 30, 2011	Requirements on label, product fiche and technical documentation
From November 30, 2011	Energy efficiency classes: A, B, C, D, E, F, G  (see below label 1) or A+, A, B, C, D, E, F if manufacturers deem appropriate (see below label 2)
From March, 2012	Requirements on advertisement and technical promotional material
From January 01, 2014	Energy efficiency classes: A+, A, B, C, D, E, F or A++, A+, A, B, C, D, E if manufacturers deem appropriate (see below label 3)
From January 01, 2017	Energy efficiency classes: A++, A, B, C, D, E (see below label 3) or A+++, A++, A+, A, B, C, D if manufacturers deem appropriate (see below label 4)
From January 01, 2020	Energy efficiency classes: A+++, A++, A+, A, B, C, D (see below label 4)

#### 4.4.2 The new label design for TVs

<p style="text-align: center;"><b>OLD LABEL</b></p> <p style="text-align: center;">Has not been labelled to date</p>	<p style="text-align: center;"><b>NEW LABEL (1)</b></p> 
	<p>I. Supplier's name or trade mark;            II. Supplier's model identifier;            III. The energy efficiency class;            IV. On-mode power consumption in watts;            V. Annual on-mode energy consumption;            VI. Visible screen diagonal in inches and centimetres;            VII. For televisions with an easily visible switch, which puts the television in a condition with power consumption not exceeding 0,01 watts when operated to the off-position, the switch symbol defined may be added.</p>

From January 2014: Label 2    From January 2017: Label 3    From January 2020: Label 4



In particular the label includes the calculation of the energy consumption in kWh per year: energy consumption XYZ kWh per year, based on the power consumption of the television operating 4 hours per day for 365 days.

#### 4.4.3 The ecodesign requirements

The ecodesign requirements for televisions are set in Commission Regulation 2009/642/EC of 22 July 2009.

##### 4.4.3.1 Generic requirements

Product Information on televisions will be publicly available on free-access websites, which will include:

- on-mode power consumption in Watts;
- power consumption data for standby and/or off-mode
- the content of lead and mercury if present
- different ratios of peak luminance for TV with or without forced menu.

##### 4.4.3.2 Specific requirements

Specific requirements have been set for the power consumption in on-mode, to be applied from 20 August 2010 and 01 April 2012, and in the stand-by and off-mode that shall not exceed:

Power Consumption in the on-mode shall not exceed the limits as follows:

From 20 August 2010:

- Full HD resolution:  $20 \text{ W} + A \cdot 1,12 \cdot 4,3224 \text{ W/dm}^2$  for TV sets and  $15 \text{ W} + A \cdot 1,12 \cdot 4,3224 \text{ W/dm}^2$  for TV monitors
- All other resolutions:  $20 \text{ W} + A \cdot 4,3224 \text{ W/dm}^2$  for TV sets and  $15 \text{ W} + A \cdot 4,3224 \text{ W/dm}^2$  for TV monitors

From 01 April 2012:

- All resolutions:  $16 \text{ W} + A \cdot 3,4579 \text{ W/dm}^2$  for TV sets and  $12 \text{ W} + A \cdot 3,4579 \text{ W/dm}^2$  for TV monitors

Power Consumption in the stand-by and off-mode shall not exceed the limits:

From 07 January 2010:

- 1 W in off-mode and standby mode and 2 W in the standby-mode with information or status display

From 20 August 2011:

- 0,3 W or 0,5 W in off-mode and 0,5 W in the standby mode, 1 W for stand-by mode with information or status display, and an automatic power-down set as default.

## 5 Sources of info / links to legislation

[http://ec.europa.eu/energy/efficiency/labelling/labelling\\_en.htm](http://ec.europa.eu/energy/efficiency/labelling/labelling_en.htm)

<http://eur-lex.europa.eu/en/index.htm>

<http://www.newenergylabel.com/>

[http://ec.europa.eu/energy/efficiency/ecodesign/legislation\\_en.htm](http://ec.europa.eu/energy/efficiency/ecodesign/legislation_en.htm)

<http://ec.europa.eu/enterprise/policies/sustainable-business/ecodesign/>

<http://www.eceee.org/>

More information about the project activities and all of its results are published on:



























**[www.come-on-labels.eu](http://www.come-on-labels.eu)**

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## Come on Labels project members – contacts

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	<b>Belgium</b>	<b>Brussels Energy Agency</b> <a href="http://www.curbain.be">www.curbain.be</a>	
	<b>Croatia</b>	<b>ELMA Kurtalj d.o.o</b> <a href="http://www.elma.hr">www.elma.hr</a>	
	<b>Germany</b>	<b>Öko-Institut e.V.</b> , Institute for Applied Ecology <a href="http://www.oeko.de">www.oeko.de</a>	
	<b>Great Britain</b>	<b>Severn Wye Energy Agency</b> <a href="http://www.swea.co.uk">www.swea.co.uk</a>	
	<b>Greece</b>	<b>Center for Renewable Energy Sources and Saving</b> <a href="http://www.cres.gr">www.cres.gr</a>	
	<b>Italy</b>	<b>ENEA</b> – Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile <a href="http://www.enea.it">www.enea.it</a>	
	<b>Latvia</b>	<b>Ekodoma, Ltd</b> <a href="http://www.ekodoma.lv">www.ekodoma.lv</a>	
	<b>Malta</b>	<b>Projects in Motion</b> <a href="http://www.pim.com.mt">www.pim.com.mt</a>	
	<b>Poland</b>	<b>KAPE</b> , Polish National Energy Conservation Agency <a href="http://www.kape.gov.pl">www.kape.gov.pl</a>	
	<b>Portugal</b>	<b>QUERCUS</b> – Associação Nacional de Conservação da Natureza <a href="http://www.ecocasa.pt">www.ecocasa.pt</a>	
	<b>Spain</b>	<b>ESCAN, S.A.</b> <a href="http://www.escansa.com">www.escansa.com</a>	



This document was prepared within the Come On Labels project, supported by the Intelligent Energy Europe programme. The main aim of the project, active in 13 European countries, is to support appliance energy labelling in the field of appliance tests, proper presence of labels in shops, and consumer education.

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**More information about the project activities and all of its results are published on:**

[www.come-on-labels.eu](http://www.come-on-labels.eu)