



● Recent policy developments on energy-efficient products

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Directorate-General
for Energy



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- Key EU instruments to improve the energy efficiency of appliances and tyres

Energy labelling – performance standards:

- Energy labelling – pull the market by promoting the best-performing products, market transparency, incentives for innovation
- Mandatory performance standards – push the market by “taking out” the least-performing products
- Complemented by public procurement and incentive schemes set mainly at the level of EU Member States

● Energy labelling

- Energy Labelling of appliances: 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
 - » «framework» defining the «rules» for setting product-specific requirements/legislation
- Tyre labelling: Regulation (EC) No 1222/2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters

● Energy labelling

- Energy Star: Regulation (EC) No 106/2008 on a Community energy-efficiency labelling programme for office equipment
 - » governs the implementation of the EU-US Energy Star programme/agreement for common labelling of energy-efficient office equipment
 - » includes mandatory use of criteria for public procurement of EU Member State «central government authorities»

● Performance standards

- Ecodesign: Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products
 - » defines the «rules» for setting product-specific requirements/legislation on energy efficiency and further parameters
- Tyre type approval: Regulation (EC) No 661/2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor

● Further instruments

- Directive 2010/31/EU on the energy performance of buildings
- Regulation (EC) No 443/2009 setting emission performance standards for new passenger cars
- Directive 1999/94/EC relating to the availability of consumer information on fuel economy and CO2 emissions in respect of marketing new passenger cars
- Directive 2009/33/EC on the promotion of clean and energy-efficiency road transport vehicles
- Regulation (EC) No 66/2010 on the EU Ecolabel

● New Energy Labelling Directive

- Establishes a framework for harmonised end-user information on the consumption of energy and, where relevant, other essential resources during use (e.g. water)
- Recast version published in June
- Main new elements:
 - » extension of scope to energy-related products (e.g. windows)
 - » extension of scope to non-household products
- As before: product-specific energy labels are set out in product-specific acts

● New Energy labelling Directive

Further new elements include:

- Provisions on the format of the energy label
 - » new classes A+, A++, A+++
 - » no duplication of « green classes » etc.
- Provision to indicate energy efficiency class in advertisements when energy or price-related info is given
- Incentive schemes of EU Member States shall use energy labelling classes and aim at the highest class of energy efficiency
- Obligation for EU Member States to report on enforcement activities

● Adoption process

- Consultation of experts
- Assessment of impacts on environment, end-users and manufacturers, including SMEs
- WTO/TBT notification
- Adoption by European Commission
- No vote by EU Member States - “delegated acts” according to Article 290 of Lisbon Treaty
- Right of objection by European Parliament and Council
- No objection: publication in the Official Journal of the EU, entry into force
- Energy label and ecodesign are made consistent wherever possible (measurement standards, calculation formulae ...)

● Practicalities

- Suppliers of products have to provide labels together with their products when placing products on the market
- Dealers have to show the label on products offered for sale
- A set of information, including the energy efficiency class, has to be shown in advertisements, on websites (“distance selling”) etc.
- Transition period for manufacturers to provide the label: usually not less than 12 months - need for (re-) testing, documenting ...
- Transition period for providing the energy efficiency class in printed materials: usually 16 months - additional four months from start of obligations for suppliers

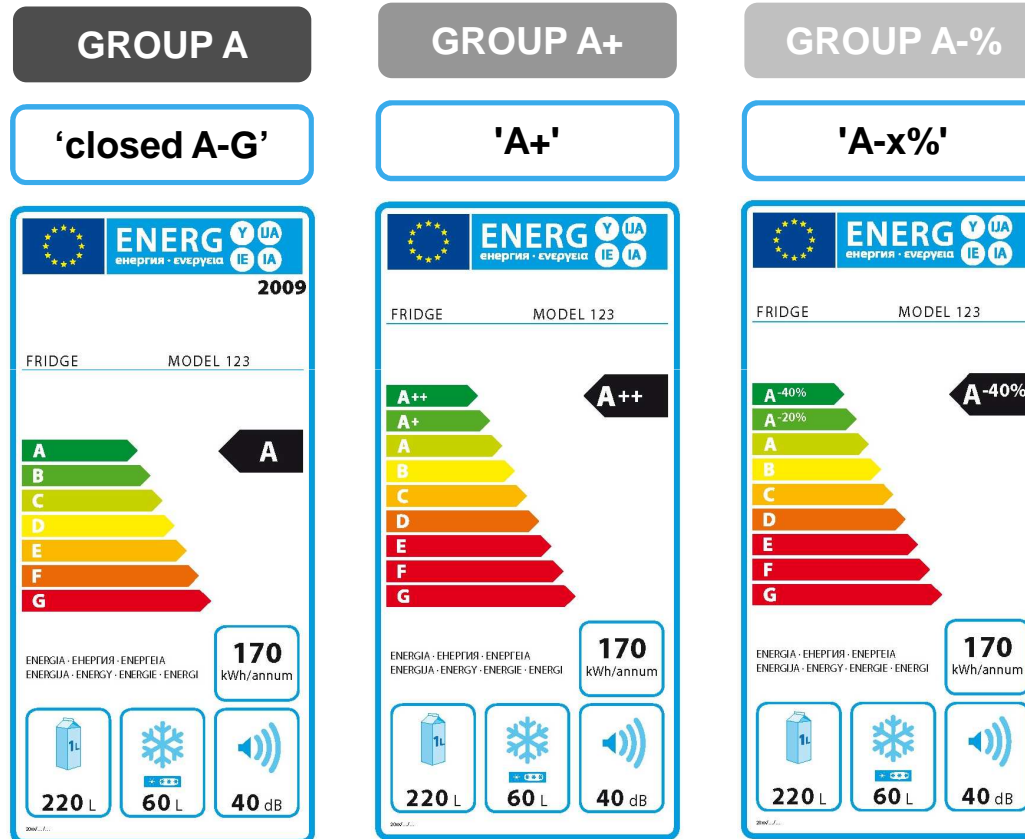
● Practicalities II

- Certification based on “self-assessment” by suppliers
- Market surveillance/checks is done by EU Member States
- Verification tolerances for market surveillance purposes are specified in the regulations with a view to improve the “accuracy” of declared values/reinforce confidence in the scheme
- Harmonised standards are used where available
- Interim methods are used where no harmonised standards are available, e.g. wine coolers, televisions (IEC 62087, Ed. 2)
- Interim methods are published in the Official Journal of the European Union

● Revision of energy labels

- Revalorisation - that is, downgrade e.g. energy efficiency class A (old) to energy efficiency class C (new)?
- Debated in EU during 2009
- Consumer survey carried out by European Commission during 2009 (8000 interviews in 8 EU Member States) on three options:
 - » “closed” A-G scheme with revalorisation and indication of validity period
 - » “A-x%” scheme without revolorisation
 - » “A+” scheme without revalorisation

● Formats tested:



● Provisions on format in the Directive

- Retain the letters A-G as basis for the classification
- Steps of classification shall correspond to significant energy and cost-savings for the end-user
- Additional classes A+, A++, A+++ may be added
- Limit the total number of classes to seven, unless more are populated; in the latter case duplicate only the colour red
- Review classification when significant proportion of products in the internal market achieves the two highest energy efficiency classes, and when additional savings may be achieved by further differentiating products
- “Significant proportion” - Commission statement: one third of sales and/or models is in A+++ or A++

● New labels

- First four labels under new Energy labelling Directive are ready:
 - » Household dishwashers
 - » Household refrigerating appliances
 - » Household washing machines
 - » Televisions
- OJ L 314 of 30.11.2010; p. 1, p. 17, p. 47 and p. 64, respectively

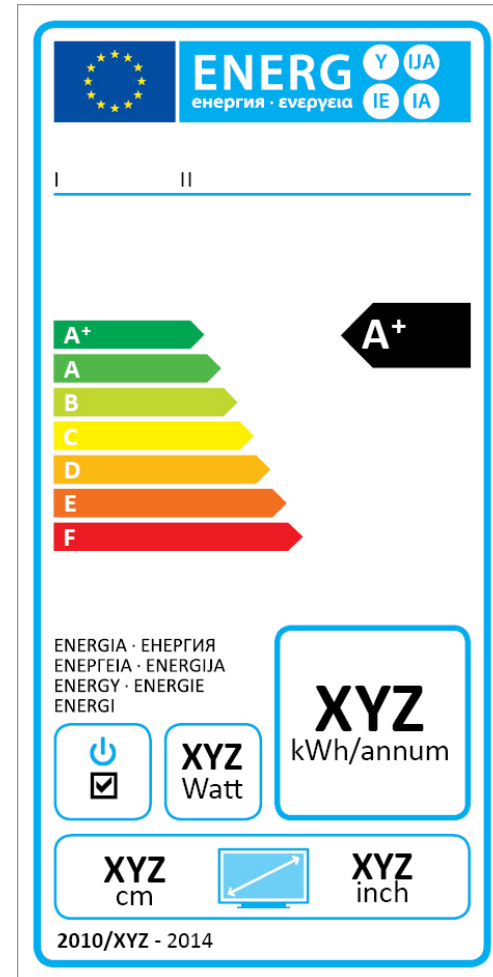
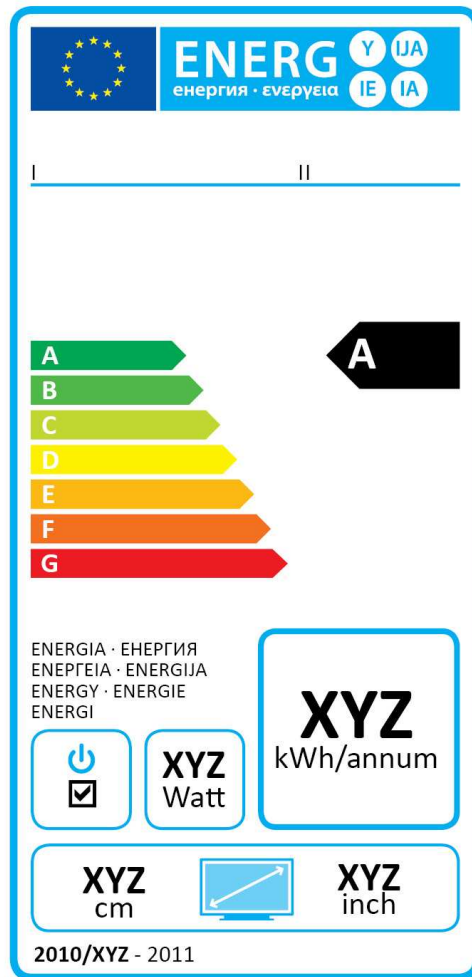
● Some features

- Fridges/freezers: class A+++ added, wine coolers and absorption type appliances included, verification tolerances reduced
- Washing machines: class A+++ added, new metric for calculating the efficiency class (including: 40°C cycle, low power modes and half loads / aim: better reflect real use), verification tolerances reduced
- Dishwashers: class A+++ added, verification tolerances reduced, new metric for calculating the efficiency class (low power modes, half loads)

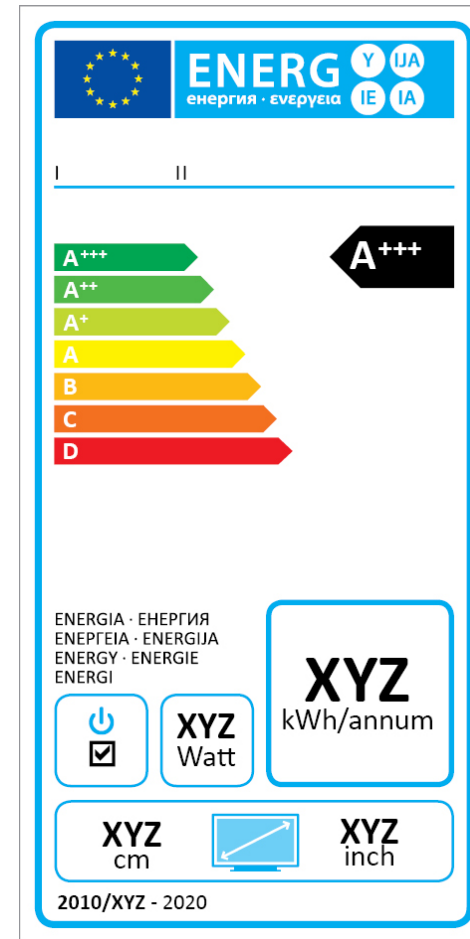
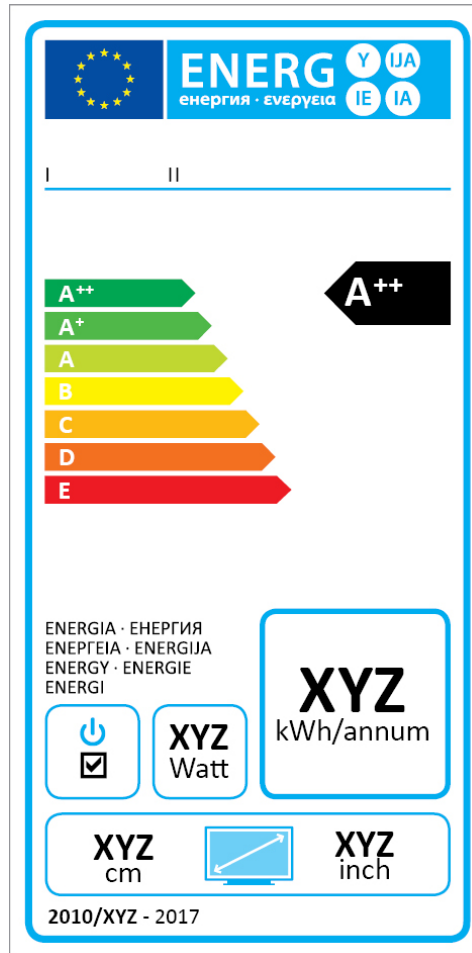
● Some features II

- Televisions: “dynamic” upgrade of label format until 2020 from class A to A+++, suppliers can use formats “better than A” as soon as a product achieves such classes – “race for innovation”
- Labels are language free: label comes in one piece instead of “base label” and “data strip” – smaller risk of incorrect labelling

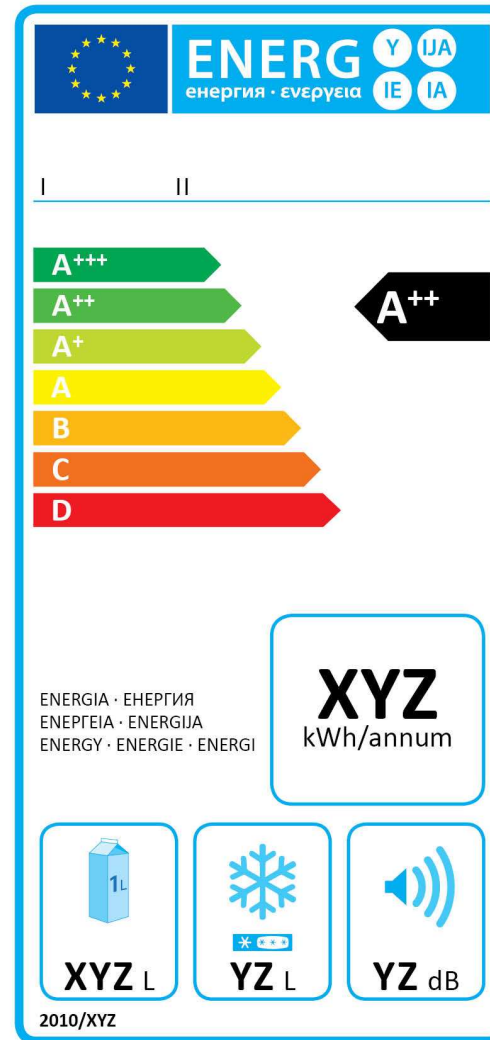
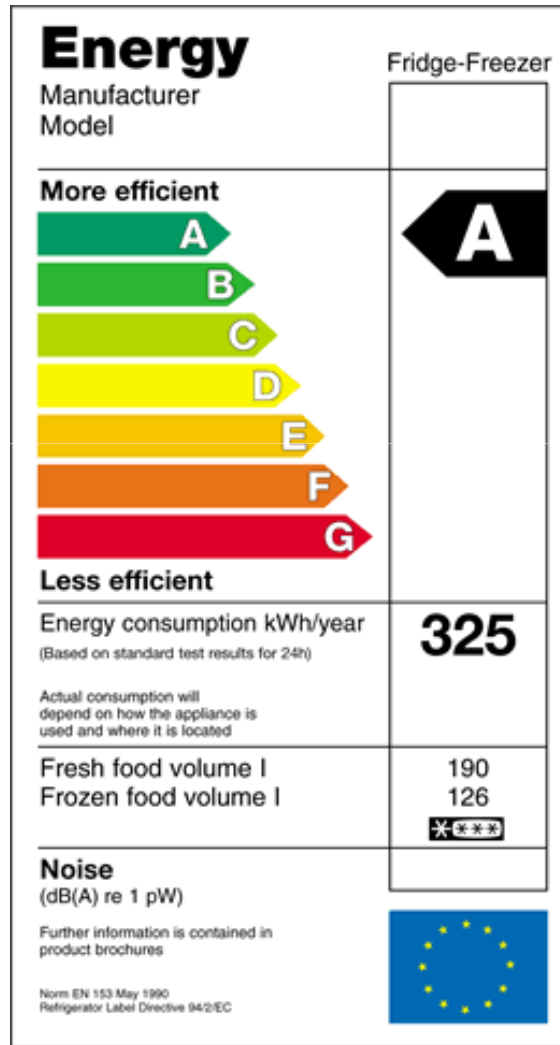
● Televisions: layout A and A+



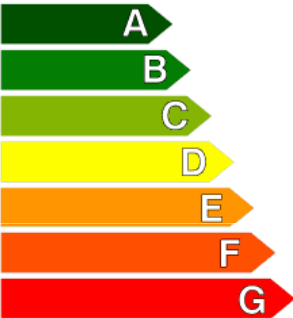

● Televisions: layout A++ and A+++



Refrigerator-freezers: old and new labels



● Washing machines

Energy	Washing machine
Manufacturer Model	
More efficient 	B
Less efficient Energy consumption kWh/cycle <small>(based on standard test results for 60°C cotton cycle)</small> <small>Actual energy consumption will depend on how the appliance is used</small>	1.75
Washing performance <small>A: higher G: lower</small>	A BCDEFG
Spin drying performance <small>A: higher G: lower</small> Spin speed (rpm)	A BCDEFG 1400
Capacity (cotton) kg	5.0
Water consumption	5.5
Noise (dB(A) re 1 pW)	Washing 5.2 Spinning 7.6
Further information contained in product brochure	



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Dishwashers

Energy		Dishwasher
Manufacturer		
Model		
More efficient		
	A	
	B	
	C	
	D	
	E	
	F	
	G	
Less efficient		
Energy Consumption kWh/cycle <small>(Based on test results for manufacturer's standard cycle using cold fill)</small>		
<small>Actual consumption will depend on how the appliance is used.</small>		
Cleaning Performance A: higher G: lower		
Drying Performance A: higher G: lower		
Standard Place Settings		
Water Consumption ℓ/cycle		
Noise (dB(A) re 1 pW)		
<small>Further information is contained in product brochures.</small>		
<small>Norm EN 50242 Dishwasher label Directive 97/17/CE</small>		

ENERG

енергия · ενεργεια

Y

IJA

IE

IA

I

II

A⁺

XYZ

kWh/annum

ENERGIA · ЕНЕРГИЯ · ΕΝΕΡΓΕΙΑ
ENERGIJA · ENERGY · ENERGIE
ENERGI

WXYZ
L/annum

ABCDEFG

xYZ

YZ
dB

2010/XYZ



- Next products for energy labelling include:

- Airco, incl. air-air heating (reversible)
- Water heaters – electric, gas, solar thermal, heat pump
- Boilers/combi boilers – gas/oil, heat pump, mCHP, solar thermal
- Household tumble driers

● Tyre labelling Regulation 1222/2009

● **General objective**

- » Reduce fuel consumption and related CO2 and pollutants emissions due to road transport

● **Specific objectives**

- » (1) Promote market transformation towards fuel efficient tyres
- » (2) Drive further investments in R&D towards environmental friendly tyres
- » (3) Do not downgrade other parameters (especially wet grip and rolling noise)

● **Operational objective**

- » Build an information system (i.e. a labelling scheme) which provides targeted and easy to understand information to consumers, companies and retailers

● Content of the tyre labelling Regulation

● **Scope:**

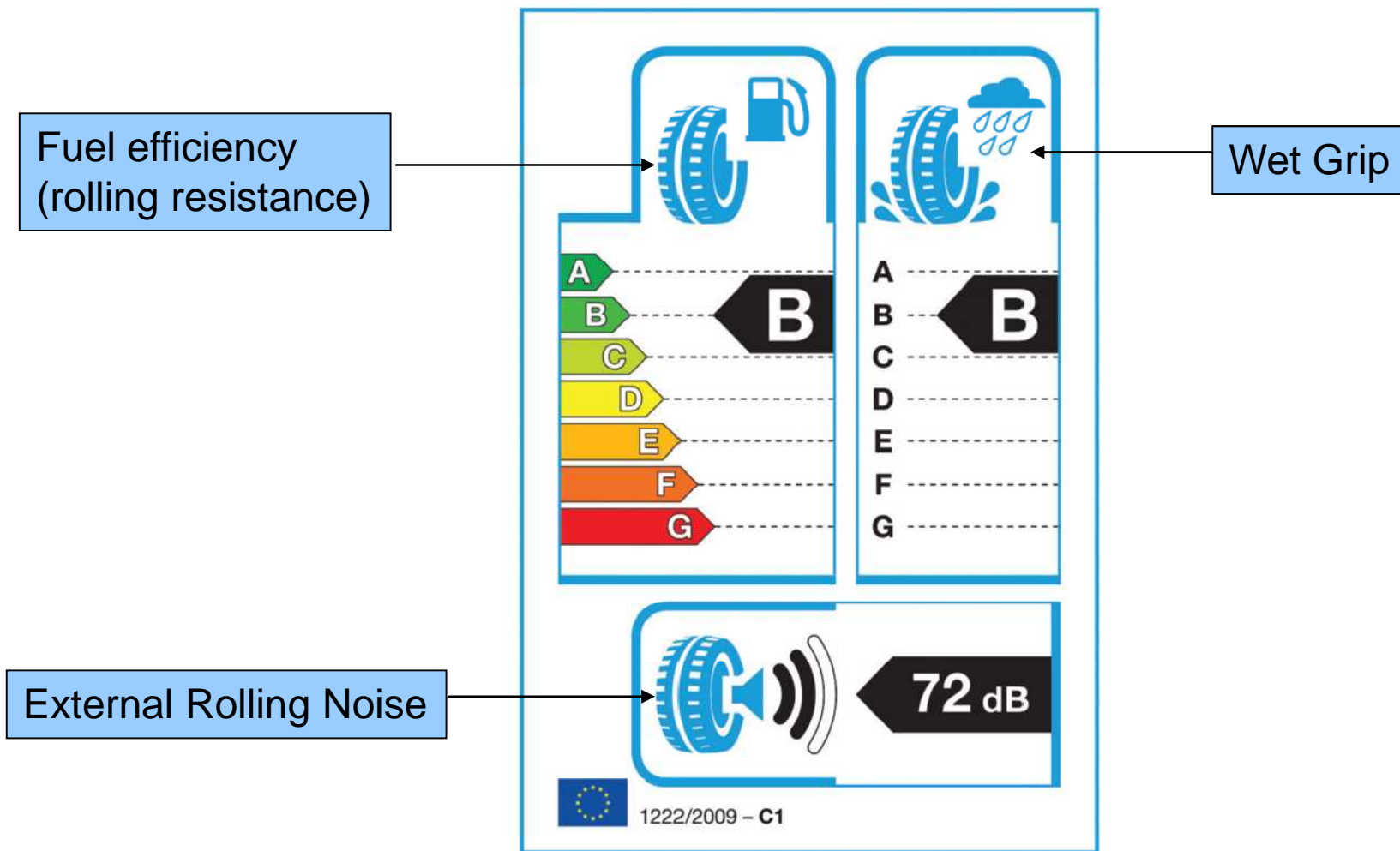
- » Almost all tyres included -C1, C2 and C3 tyres defined under Regulation 661/2009, i.e. tyre fitted on:
 - Passenger cars
 - Light duty vehicles
 - Heavy duty vehicles (n.b: retreaded tyres exempted)

● **Application date**

- » 1. November 2012
- » Possibility to use the label voluntarily before that date as soon as tests available

● **Directly applicable in all EU Member States**

Parameters included on the label



● Information requirements

- Label should be displayed at the point of sale:
 - » either on the tyre by means of a sticker
 - » or clearly displayed in the immediate proximity
- Where tyres are not displayed: the label shall be shown to the end-user before sale
- Information on tyre classes should be provided:
 - » in “technical promotional literature”
 - » “on or with” the bill

- Type approval Regulation 661/2009
 - Tyre labelling is complementary to type approval Regulation 661/2009
 - sets **minimum requirements** on:
 - » Tyre rolling resistance
 - » Tyre wet grip
 - » Tyre external rolling noise
 - Requires mandatory fitting of **Tyre Pressure Monitoring System** (TPMS) on new passenger cars
 - First application date: 1. November 2012

● Expected benefits

- Combined effect of both proposals (tyre labelling and minimum requirements + TPMS) → **5% fuel savings on the total EU fleet by 2020**
- Tyre labelling alone → **fuel savings between 2.4 and 6.6 Mtoe** at EU level in 2020 (depending on the speed of market-transformation towards fuel efficient tyres)
 - » exceeds the **annual oil consumption of Hungary**
- CO2 savings from all vehicle types → between **1.5 million tonnes and 4 million tonnes per year**
 - » equivalent to removing **0.5 million to 1.3 million passenger cars** from EU roads per year

● Ecodesign Directive 2009/125/EC

- Complementary to energy labelling
- Aims:
 - » to improve the environmental performance of energy-related products
 - » to harmonise “ecodesign requirements” across EU Member States/internal market
- Based on **Life-cycle approach**
- Ecodesign requirements for a certain product are set out in product-specific implementing measures
- Compliance is compulsory for placing on the market of products covered by an implementing measure – “CE marking”

● Ecodesign Directive 2009/125/EC

- Focus so far: products with high potential for cost-effective reduction of greenhouse gas emissions
- Each implementing measure is based on a technical, environmental and economic study – done by a consultant with participation of stakeholders from around the world
- Results of that study are used also for developing energy labelling, where appropriate



Ecodesign Implementing Measures 2008 - 2009

- Circulators – Commission Regulation (EC) No 641/2009 of 22 July 2009
- Electric motors - Commission Regulation (EC) No 640/2009 of 22 July 2009
- Refrigerators/freezers - Commission Regulation (EC) No 643/2009 of 22 July 2009
- Televisions – Commission Regulation (EC) No 642/2009 of 22 July 2009
- External power supplies – Commission Regulation (EC) No 278/2009 of 6 April 2009
- Lighting/non-directional household lamps – Commission Regulation (EC) No 244/2009 of 18 March 2009
- Lighting/fluorescent lamps w/out integrated ballast – Commission Regulation (EC) No 245/2009 18 March 2009
- Simple set-top boxes – Commission Regulation (EC) No 107/2009 of 4 February 2009
- Standby – Commission Regulation (EC) No 1275/2008 of 17 December 2008



Ecodesign Implementing Measures 2010

- Household Dishwasher – Commission Regulation (EU) No 1016/2010 of 10 November 2010
- Household Washing Machines – Commission Regulation (EU) No 1015/2010 of 10 November 2010



Regulations in force

Product	Estimated annual savings by 2020
Standby	35 TWh
Simple set-top boxes	6 TWh
Street & Office lighting	38 TWh
External power supplies	9 TWh
Domestic lighting	37 TWh
Electric motors	140 TWh
Circulators	27 TWh
Freezers/refrigerators, incl. energy label	6 TWg
Televisions, incl. energy label	43 TWh
Washing machines, incl. energy label	2 TWh
Dishwashers, incl. energy label	2 TWh
Total	about 350 TWh

● Regulations in force

- «Savings» are savings compared to «no ecodesign/energy labelling» scenario
- Savings correspond approx. to the annual electricity consumption of the UK
- Details are in the impact assessments done for each individual product group

● Regulations in force

Examples:

- Fridges/freezers have to be at least energy efficiency class A+ in 2012
- Televisions have to be at least energy efficiency class D in 2012, review foreseen for the same year
- Gradual «phase-out» of standard incandescent light bulbs

● Status: next measures under preparation

Fans, airco, boilers and water heaters, commercial refrigerators, computers/monitors, copiers/printers (possibly self regulation), pumps, complex set-top boxes (self regulation), vacuum cleaners, reflector lamps and luminaires, solid-fuel boilers, transformers, sound and imaging equipment, other refrigerating & freezing equipment, household tumble driers

ADOPTION OF MEASURES UNDER THE ECO-DESIGN AND ENERGY LABELLING FRAMEWORK DIRECTIVES

Indicative Planning for the Eco-design Regulatory Committee Vote

2011			
1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
<ul style="list-style-type: none"> • Air conditioners (Eco Design) 	<ul style="list-style-type: none"> • Domestic Laundry Driers (Eco Design & Labelling) • Personal Computer and Displays (Eco Design) • Electric Pumps (Eco Design) • Heating Boilers and Water Heaters (Eco Design & Labelling) 	<ul style="list-style-type: none"> • Domestic Lighting II: reflector lamps and luminaires (Eco Design & Labelling) • Vacuum Cleaners (Eco Design & Labelling) 	<ul style="list-style-type: none"> • Commercial Refrigeration (Eco Design & possibly Labelling) • Domestic ventilation (Eco Design & Labelling) • Street and Office Lighting: luminaires (Eco Design & possibly Labelling)



Impact

Estimated impact of ecodesign and energy labelling:

The measures in force and the upcoming measures on airco, heating/water heating ... could save

150 Mtoe

or more by 2020 compared to a business-as-usual scenario in the EU

(energy consumption EU-27 in 2007: 1806 Mtoe)

● Energy Star



- EU energy labelling scheme for office equipment – computers, monitors, printers, copiers
- Voluntary labelling
- Basis: EU-US Agreement of December 2006
- In preparation: possible extension beyond current Agreement expiring in December 2011
- In EU: Energy Star criteria are compulsory for procurement of office equipment by Member States' central government authorities

● More info

- Website of the European Commission's Directorate General for Energy, contains legislation, impact assessments, links to studies ...

http://ec.europa.eu/energy/efficiency/ecodesign/eco_design_en.htm

- Website of the Directorate for Enterprise and Industry (co chef de file for ecodesign)

http://ec.europa.eu/enterprise/policies/sustainablebusiness/ecodesign/index_en.htm