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INOGATE New ITS Project – Sustainable Energy

BUILDING PARTNERSHIPS FOR ENERGY SECURITY

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European Experience on Energy Labelling

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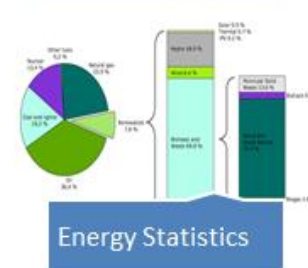


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Content



1. Energy labelling objectives
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Why do we need energy labelling?



Households & business

- To make long term savings
- To incentivise manufacturers to enhance EE
- **To make our planet cleaner**

European Union

- To contribute to the “20-20-20” target
- **To make our planet cleaner**

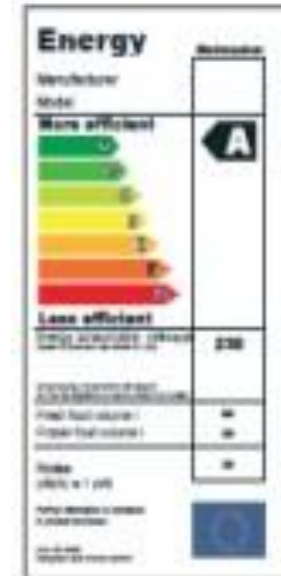


EU experience in labelling



- Energy labels have been in place for more than 20 years (1st Directive adopted in 1992)
- Energy labels are adopted on a product by product basis (**9 appliances**)
- Expert Group “EDCO” includes representatives of 31 countries (since July 2011)
- From 800-1500 compliance tests are conducted in the EU annually

Old Label...



New Label...

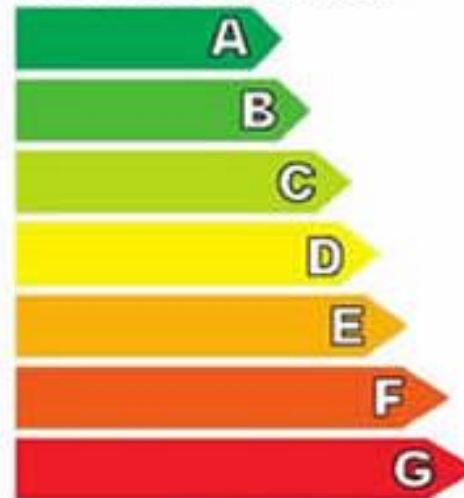


EU experience in labelling



- Products are ranked according to their energy efficiency /consumption on **A** to **G** scale.
- Today, 90% of these appliances in EU market comply with class A requirements and higher.
- Technology improvement resulted in review of labelling.

More efficient



Less efficient



List of appliances mandatory for EU energy labelling



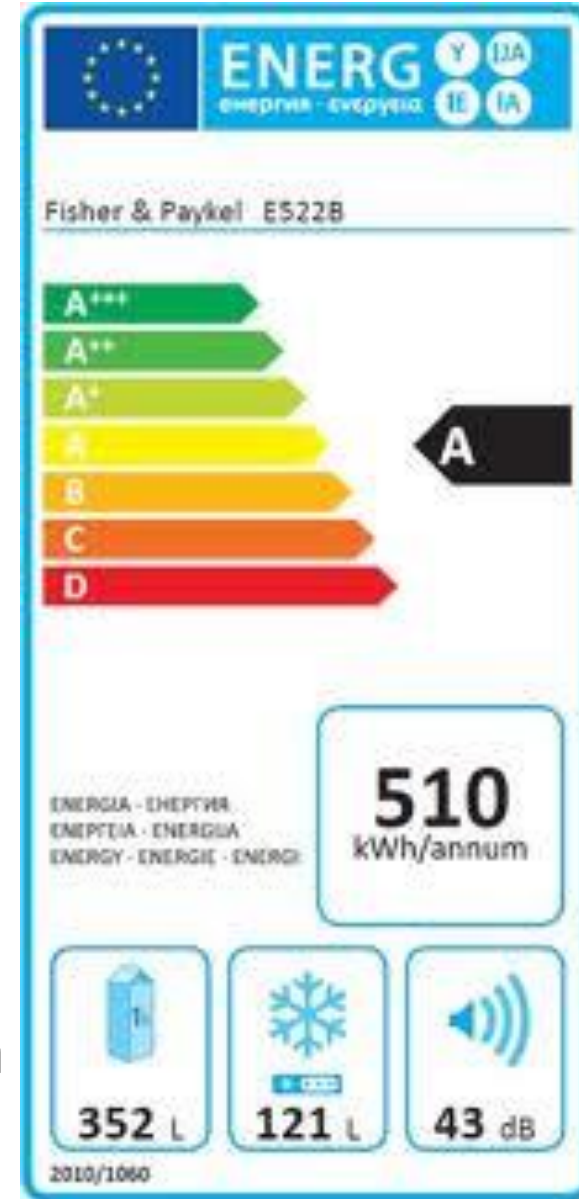
1. Refrigerators & freezers
2. Washing machines
3. Electric tumble dryers
4. Combined washer-dryers
5. Dishwashers
6. Lamps (bulbs & luminaries)
7. Electric ovens
8. Air conditioners
9. TV sets



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1. Refrigerators and freezers

- The energy efficient refrigerator uses 30% of the energy to perform the same work as a 10-year-old model.
- In the EU the number of A-class refrigerators grew from less than 10% in 2000 to 75% in 2005.
- The annual energy consumption in kWh is based on standard test results for 24 hours a day.
- Actual consumption depends on how and where appliance is used.



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2. Washing machines



- Weighted annual energy/water consumption based on 220 standard washing cycles (standard 60 °C cotton at *full / partial load* & standard 40 °C cotton at *partial load*)
- Other indicators:
 - Capacity (cotton), kg
 - Spin-drying efficiency class
 - Noise

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4. Combined washer-dryers



- Energy consumption is calculated in kWh per cycle according to the harmonized EU standards (washing, spinning and drying).
- Other indicators (washing & drying):
 - Capacity (cotton), kg
 - Water consumption
 - Noise

Thinking of open Electrolux Energy		Washer-dryer
Manufacturer		ZANUSSI
Model		ZWT71201WA
More efficient		C
Energy Consumption kWh <small>(to wash and dry a full capacity wash load at 60°C)</small>		6.51
Washing (only) kWh <small>Actual energy consumption will depend on how the appliance is used</small>		1.05
Washing Performance <small>A: higher G: lower</small>		A B C D E F G
Spin Speed (rpm)		1200
Capacity (cotton) Kg	Washing Drying	7 4
Water Consumption (total) l		125
Noise (dB(A) re 1 pW)	Washing Spinning Drying	56 72 62
Further information is contained in product brochures		
Norm EN 60229 Washer-dryer Label Directive No. 96/60/EC		

5. Dishwashers



- Annual electricity and water consumption are calculated based on 280 standard cycles
- Other indicators:
 - Drying efficiency class
 - Capacity of standard place settings
 - Noise



6. Lamps (bulbs & luminaries)



- Luminous flux of bulb in lumens
- Input power (wattage) of the lamp
- Average lamp life length in hours

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I II

This luminaire contains built-in LED lamps and has sockets for bulbs of the energy classes:

A ⁺⁺	} LED
A ⁺	
A	
B	
C	}
D	
E	

The luminaire is sold with a bulb of the energy class: **C**

874/2012

ENERGY Y IJA IE IA
енергия · ενεργεια

I II

A ⁺⁺	} A⁺⁺
A ⁺	
A	
B	
C	
D	
E	

XXX kWh/1000h

ενεργεια Energy

A	} A
B	
C	
D	
E	
F	
G	

570 Lumen
11 Watt
10000 h

7. Electric ovens



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- Electricity consumption is calculated based on standard load, determined by harmonized EU standards.
- Other indicators:
 - Usable volume
 - Size
 - Noise

Energy		Electric oven
Manufacturer		BOSCH
Model		HBC36D754B
More efficient		
Less efficient		
Energy consumption (kWh)		
Heating function		
Conventional		
Forced air convection		0.60
<i>(Based on standard load)</i>		
Usable volume (litres)		35
Size		
Small	—	
Medium	—	←
Large	—	
Noise (dB re 1 pW)		
Further information is contained product brochure		
New EN 6004 Electric Oven Weather-Other Label Division No. 2003/080/C		



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8. Air conditioners

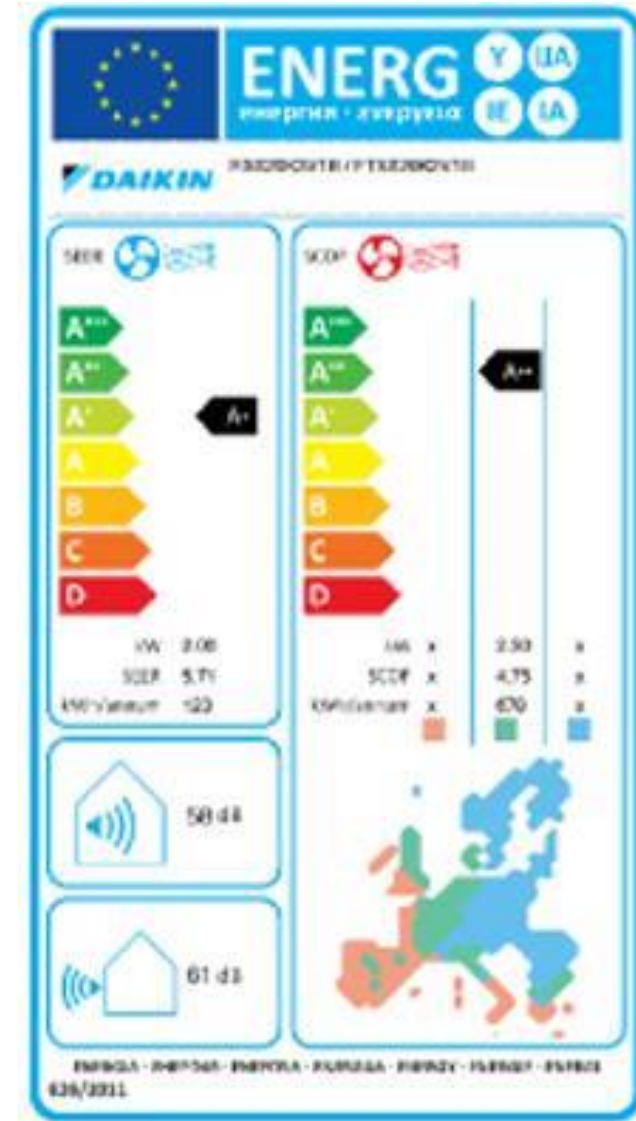


- Annual electricity consumption based on standard test results
- Other indicators:
 - Design load,
 - Seasonal energy efficiency ratio (SEER) - *cooling*
 - Seasonal coefficient of performance (SCOP) - *heating*
 - Map of Europe (3 indicative heating seasons)
 - Noise

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9. TV sets

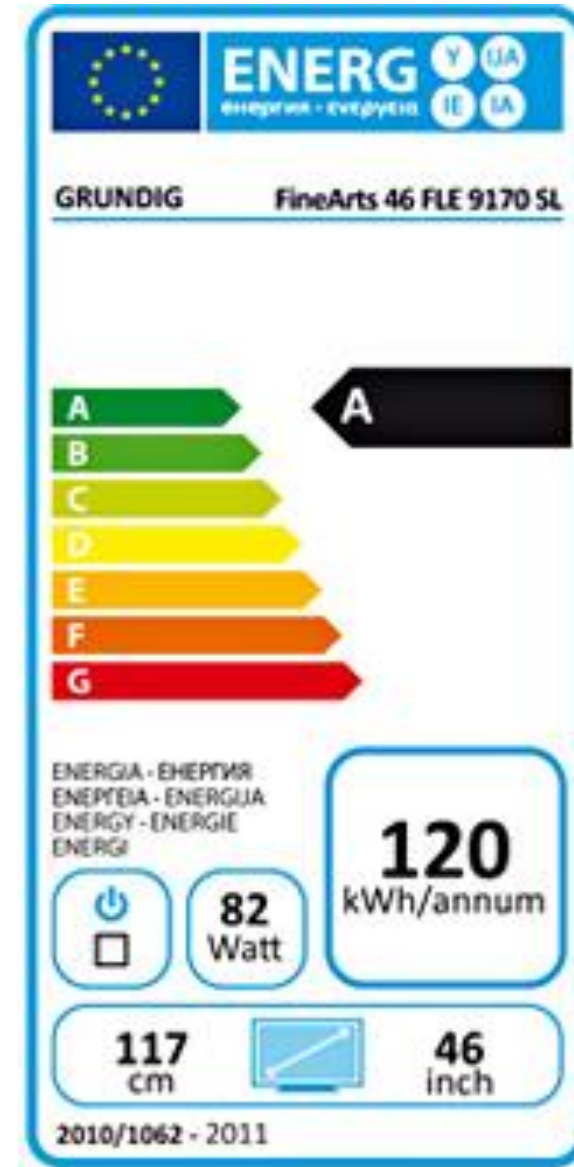


- Annual on-mode electricity consumption based on on-mode power consumption of a TV set operating 4 hours per day, 365 days per year
- Other indicators:
 - the on-mode power consumption in Watts
 - Easily visible switch on/off (0,01 Watts)
 - Visible screen diagonal in inches and centimetres

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Advantage or need?



- Legislation on Labelling is a part of the EnC.
- Labelling: 10 out of 12 EnC Acquis on energy efficiency
- Draft Law of Moldova « On energy labelling» - Directive 2010/30/EU



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Labelling in Moldova (perspective)



- All suppliers and dealers have to fulfil the obligations on labelling.
- Any labels, signs, symbols or inscriptions which do not comply with the requirements are prohibited for adopted appliances.
- Suppliers need to develop technical documentation to provide accurate information on the label.

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Labelling in Moldova (perspective)



- Dealers shall display labels properly, in a visible and legible manner.
- If products are sold by mail, catalogue or through the internet, customers should be provided with the information specified on the label before buying the product.
- Governmental organisations must purchase only products that meet the highest standards of energy efficiency class.

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Labelling in the Czech Republic



- Legislation: **Energy law**
 - Surveillance authority: **State energy Inspectorate**
 - Shop visits: **2010-4, 2011-18, 2012-300**
 - Results: **64 % match**
 - Penalties: **only in individual cases**
 - Tests: **6 Refrigerators in 2011 (only electric consumption)**
 - Result: **Compliance with labelling**

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Source: *Come On Labels, 2013*

Labelling in Latvia



- Legislation: **Regulation of the Cabinet of Ministers**
- Surveillance authority : **Consumer Rights Protection Centre**
- Shop visits :-
 - Result:-
 - Penalties:-
- Testing:-
 - Result:-

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Source: *Come On Labels, 2013*

Labeling in Belgium



- Legislation: **Energy law**
- Surveillance authority : **State Inspectorate**
- Shop visits: **2011 - 2012**
 - Result: **83% compliance**
 - Penalties: **only in individual cases**
- Testing: **25 lamps in 2010; 12 refrigerators in 2010-2011; 5 dishwashers in 2012.**
 - Result: **Non-compliance: 22 lamps; 1 fridge**
 - Penalties: **No**

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Source: Come On Labels, 2013

Other useful labels



European Ecolabel

- Voluntary label promoting environmental excellence
- Reduced environmental impact throughout life cycle (from extraction of raw material to disposal)

<http://ec.europa.eu/environment/ecolabel/>



Energy Star

- Only used on office equipment
- Shows that a product meets energy efficiency standards set by the EU

<http://www.eu-energystar.org/en/index.html>



Thank you for your attention

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