

European Commission

System Approaches in Product Policies

ECEEE Seminar
4 February 2014
Brussels

Robert Nuij
Directorate-General for Energy
Energy Efficiency of Products

Energy

Legislative framework

Ecodesign Directive (EDD)
Energy labelling Directive (ELD)
Energy Efficiency Directive (EED)
Energy Performance of Buildings Directive (EPBD)

EU Ecolabel
Green Public Procurement

Ecodesign/Energy labelling

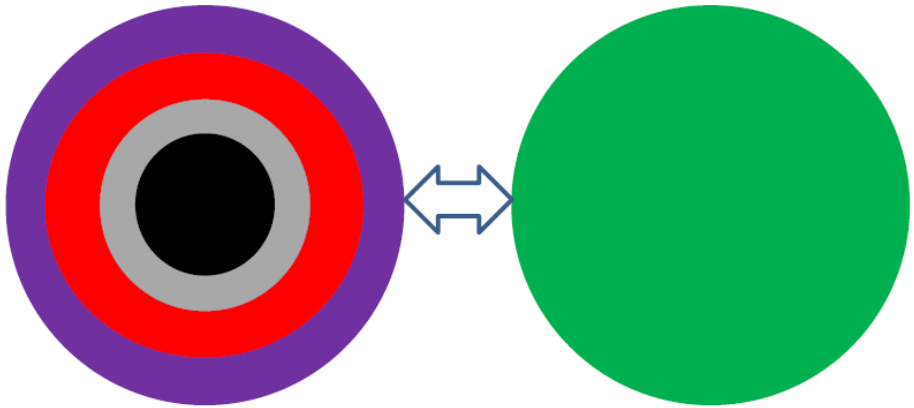
MEErP methodology already accommodates for an extended products and systems approach:

- **A strict product approach**
- **An extended product approach**
- **A technical system approach**
- **A functional system approach**

Addressed on a case-by-case basis

Ventilation: from product to system

- Motor
- Drive + Motor
- Fan + Drive + Motor
- Central Ventilation Unit: Casing, Filters, Unit Controls, Heat exchanger (recovery), Fan(s) +Drive(s) +Motor(s)
- Mechanical Ventilation System: Central Ventilation Unit(s) + Ductwork + Terminals + Distribution controls + possibly additional functionality (pre-heat, humidification, etc.)
- Natural Ventilation (or hybrid) Systems ←→ Mechanical ventilation systems

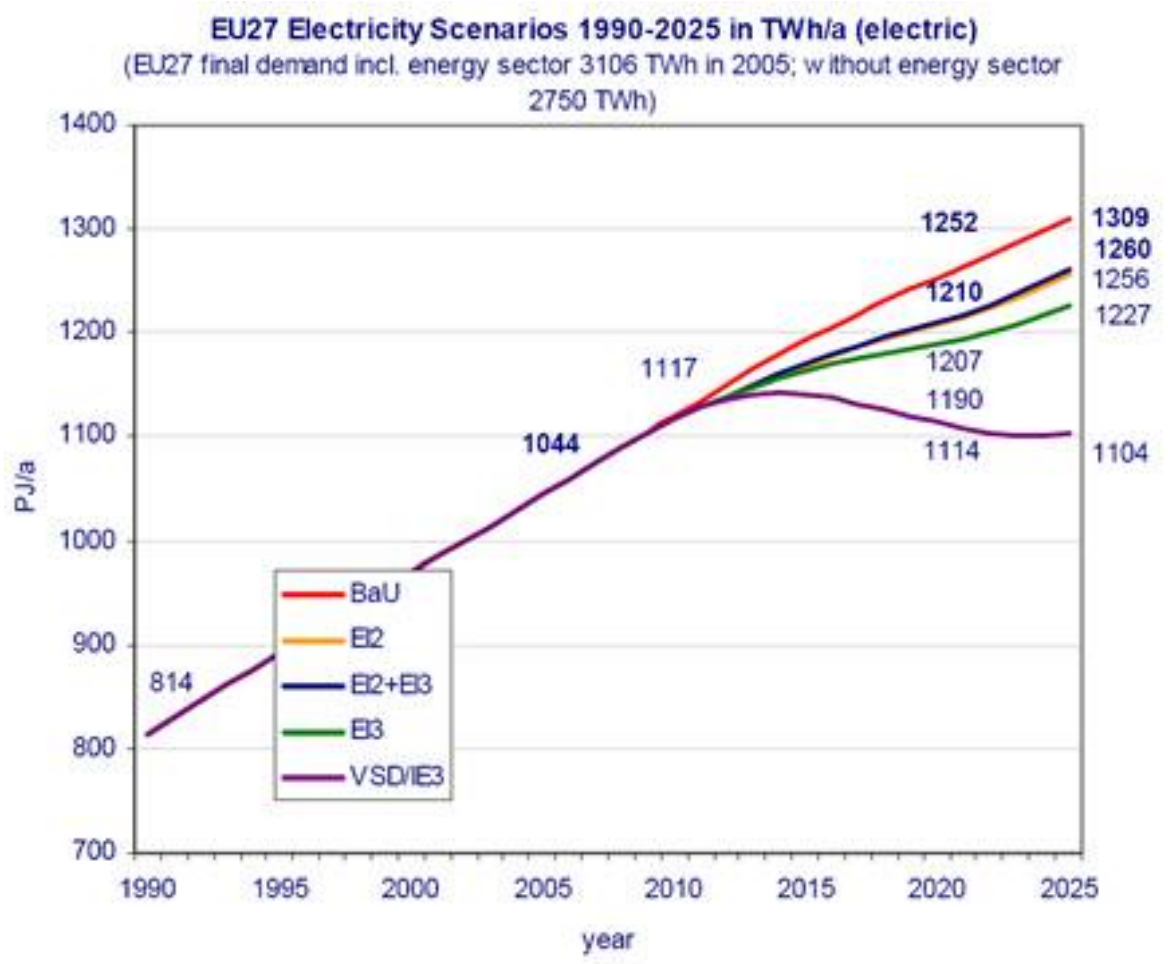


Motor systems

Compared savings for:

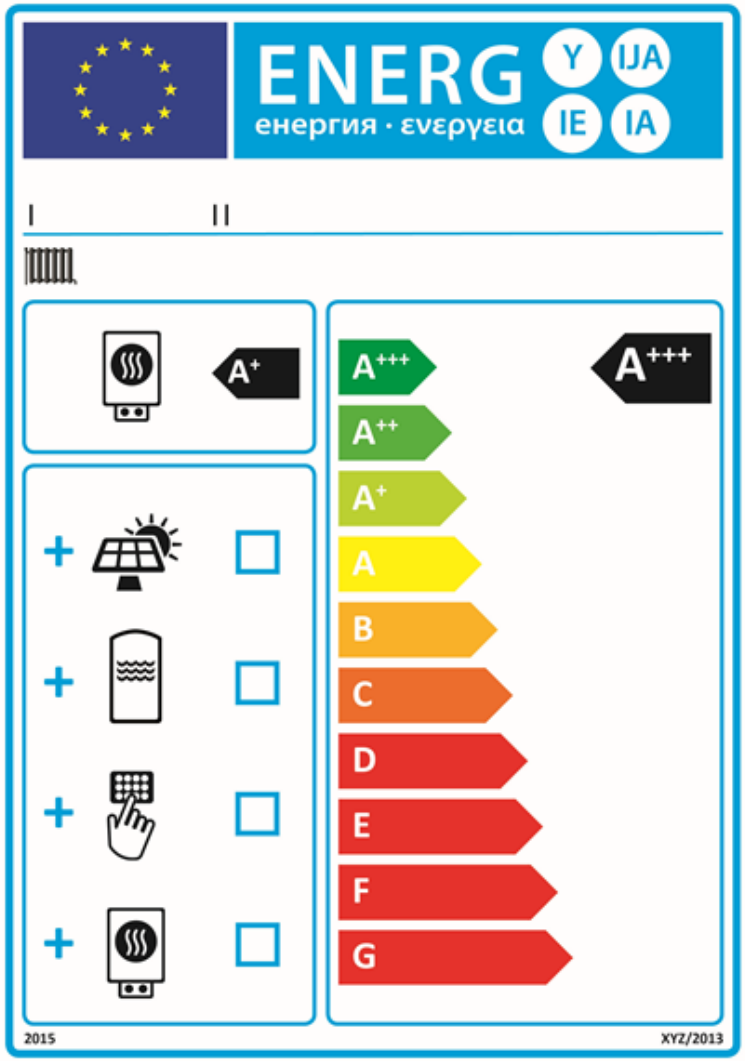
- **IE3 (green); and**
- **IE2+VSD/IE3 (purple)**

scenarios



'Installer label'

- Label for 'packages' of heaters, temperature controls and solar devices
- Based on 'simple' calculations
- Entry into force: September 2015



EPBD: Technical building systems

Member States to set system requirements in respect of;

- **Overall energy performance;**
- **Proper installation;**
- **Appropriate dimensioning, adjustment and control**

for;

- **new;**
- **replacement; and**
- **upgrading**

of technical building systems

EPBD: Technical building systems

Including at least:

- **Heating systems**
- **Hot water systems**
- **Air-conditioning systems**
- **Large ventilation systems**

- **or combinations of such systems**

Example: the Netherlands

Technical building system	System performance
heating system for residential function, not local	0.71
heating system for other function, not local	0.65
local heating system	0.63
Hot tap water system	0.29
Cooling system	0.75
ventilation system with ventilation capacity > 5000 m^3/h, expressed in $W/(dm^3/s)$	2.50

Calculation necessary except for e.g.:

- Room heating systems consisting of HR 100 boilers with a high-temperature release system and insulated piping;
- Air-conditioning systems with compression coolers;
- Hot tap water systems consisting of a gas boiler, a high-yield combination tap, an indirectly fired boiler connected to an HR 100 boiler or a decentralised electrical boiler with tap points within 3 m.

Example: Hungary

4. Requirements applicable to heating systems

4.1. Temperature control by rooms

- **When installing a new heating system or modernising an existing heating system it is recommended to implement per-room temperature control, based on economy calculation. If parts of the building are owned by more than one party, calorimetric measurement by building parts is recommended.**

Energy Efficiency Directive

Central governments that purchase products, services or buildings, insofar as this is consistent with cost-effectiveness, economical feasibility, wider sustainability, technical suitability, as well as sufficient competition, shall:

- **purchase only the products belonging to the highest energy efficiency class possible under ELD;**
- **purchase only products that comply with energy efficiency benchmarks specified in relevant implementing measure under the EDD;**
- **purchase only tyres that comply with the criterion of having the highest fuel energy efficiency class**

The example of lighting

EDD:

- **Requirements for non-directional and directional lamps, fluorescent lamps, ballasts and luminaires**

ELD:

- **Labelling of electrical lamps and luminaires**

EPBD:

- **Lighting systems to be taken into account in national calculation methodology and for determining cost-optimal levels for requirements on technical building systems including lighting for non-residential buildings**

EED:

- **Lighting systems to be included in building renovation roadmaps and NEEAPs**

The example of lighting (ctd.)

Green Public Procurement:

- **Commission establishes (non-binding) benchmark criteria for procurement of lighting systems, including indoor and street lighting systems:**
  - a) for purchasing of resource and energy efficient lamps
  - b) design of a new lighting system or renovation of the existing lighting system
  - c) installation work

EU Ecolabel

- **Requirements for light bulbs focused on energy performance, hazardous substances and functionality (e.g. lifetime)**

(some) Challenges

Where does the product stop and where does the system begin?

Where does the internal market stop and where do national markets begin?

Who is responsible for the placing on the market and/or the putting into service?

How to undertake market surveillance on (bespoke) systems?

What are the most suitable legal instruments to address system efficiency?

Outlook

Mid-2014 review of energy efficiency Directive

End 2014 – early 2015 review of energy labelling and certain elements of ecodesign

By 2017 review of energy performance of buildings directive

Thank you for your attention



Robert Nuij

Tel: +32.2.29.86183
Email: robert.nuij@ec.europa.eu
Website: http://ec.europa.eu/energy/efficiency/index_en.htm