



- **EU Energy Policy for Buildings  
- Recast Directive proposed -**

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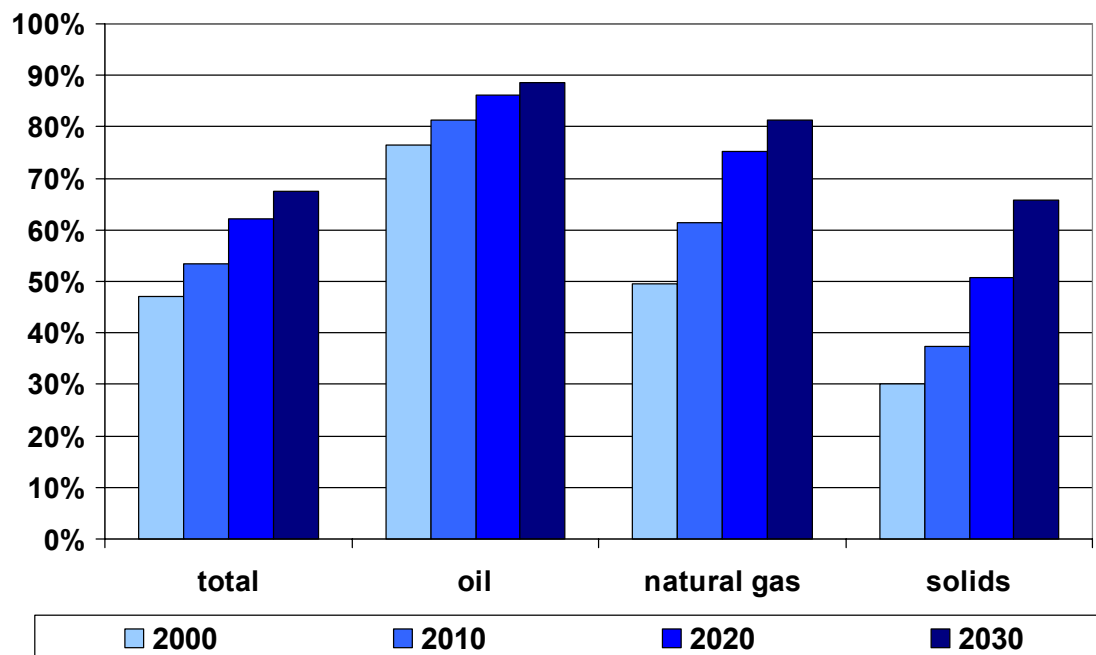
**Unit D4 - Energy Efficiency, DG TREN**

**European Local Authority Network**

**Brussels 15/12/2008**

# ● Political and Economical Motivation

- **Environment:** Climate change: up to +6.4°C in 2100 (IPCC)
- **Financial and Economic Crisis:** EC's Economic Recovery Plan
- **Social & Economic:** Recent energy prices and their volatility
- **Security & Economy:** EU Energy Import Dependency - Forecast:



# ● Political and Economical Motivation

➔ EU's integrated Package 'Energy Policy for Europe' of March 2007:  
20 % Greenhouse Gas reduction  
20 % Energy savings  
20 % Share of renewables  
by 2020 (base year: 1990)



**Energy** is a vital part of our lives in Europe and we have come to rely on it. But the debt of scarce, cheap energy we owe and we are actually facing the consequences of climate change, increasing import dependence and higher energy prices, in order to ensure a sustainable, secure and competitive energy supply to current European consumers is tested. A new European Energy Policy must be ambitious, effective and long lasting - and include objectives.

**Tackling climate change**  
Energy is the main factor in climate change, accounting for some 80% of EU's greenhouse gas emissions. It has been estimated that, without further efforts to reduce emissions, there is a real chance that global temperatures will rise by several degrees, dramatically altering the world's landscape and the way we live.

The EU is committed to reducing greenhouse gas emissions, both to prevent energy prices from rising and to reduce them by 1% by 2020. The EU's current energy and transport policies are not sustainable. Acting now to face the climate change is essential.

**Ensuring security of supply**  
Energy, stable prices, standards and efficiency in supply have all fluctuated the most of being mostly dependent on oil and gas. With global need on the up, this pattern is set to continue. The International Energy Agency expects worldwide demand for oil alone to increase by well over a third by 2020 - so how will this be met?

Energy trends and policies remain in flux. The EU's relations on imports will jump from half to almost two-thirds in 2020. 80% of gas would have to be imported, at about 50% of its 2007 price. While oil and gas prices are expected to rise, the EU's Member States are essentially dependent on one single gas supplier and have to be sure of a more liquid market between countries. The EU's growing **renewability** is a must.

There is also a need to **increase capacity**. Electricity demand continues to rise by around 1.5% each year, but existing infrastructure and capacity plans are reaching the end of their useful life.

Over the next 25 years, around 4000 billion will be needed to meet in new coal and gas-fired power plants, along with wind turbines. Can it be possible to use energy efficiently to limit growth in demand, to get investment in renewable to rise?



# ● Role of the Buildings Sector

- 40 % of EU's energy is used in the residential/tertiary sectors
- 36 % of EU's CO<sub>2</sub> emissions are caused by the buildings sector
- Cost-effective energy savings potential in the building sector:  
28 % by 2020
- Key EU legislation:  
**Energy Performance of Buildings Directive**



# ● Energy Performance of Buildings Directive – EPBD (2002/91/EC)

## Requirements:

- **An integrated methodology to rate the energy performance of buildings**
- **Minimum energy performance standards for new and for existing buildings that undergo major renovation**
- **Energy performance certificates for buildings**
- **Regular inspections of heating and air-conditioning systems**



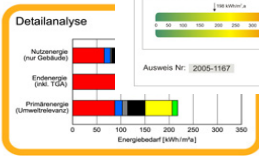
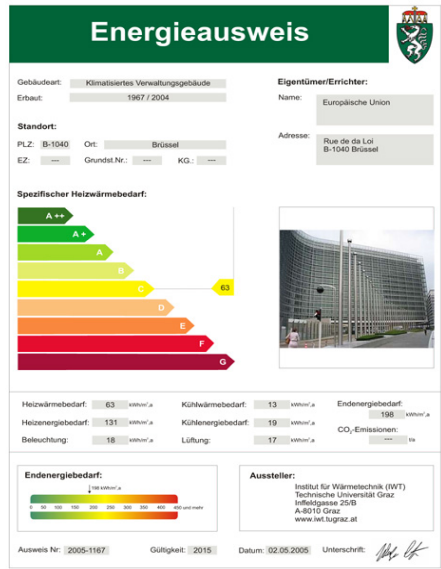
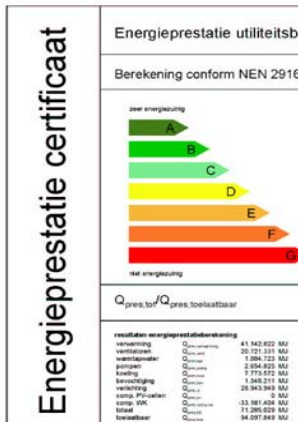
# ● EPBD recast – What are the changes?

- Principles of existing EPBD requirements are **KEPT** – but **CLARIFIED** and **IMPROVED** in their effectiveness
- Several ways of implementing details of the EPBD by Member States exist **AND SHALL BE UPHELD** – full respect of subsidiarity principle and of economic feasibility



# Energy Performance of Buildings Directive - recast

Example for MSs' room for maneuver to implement EPBD:



**Gegevens van het gebouw:**

Berlaymont gebouw te Brussel

Beschouwde gebuikslooppervlakten:

- Kantoorfunctie: 24 771,50 m<sup>2</sup>
- Bijeenkomstfunctie met alcohol: 8 120,90 m<sup>2</sup>
- Bijeenkomstfunctie overige: 24 191,10 m<sup>2</sup>
- Gemeenschappelijke ruimten: 64 339,20 m<sup>2</sup>

De parkeergarage, archiefkelder en het station zijn, in overeenstemming met NEN 2916:2001 en het Bouwbesluit, buiten beschouwing gelaten.

**Aanbevelingen tot verbetering van de energieprestatie:** niet van toepassing

**Gegeven:**

DGMR B v. I. M. K. v. Postbus 6500 AD Nederland

In opdracht van: ministerie van Binnenlandse Zaken

datum afgifte: 2 november 2004 geldig tot: 2 november 2014



# ● Energy Performance of Buildings Directive – recast(1)

- Elimination of the 1000 m<sup>2</sup> threshold for existing buildings when they undergo a major renovation

Eliminating/lowering of the threshold also for

- Display of Energy Performance Certificates in public buildings
- Assessment on installation of alternative systems for new build
- Minimum energy performance requirements for new buildings and major renovations:  
Benchmarking to achieve cost-optimal levels



# ● Energy Performance of Buildings Directive – recast(2)

- Strengthening the role and the quality of energy performance certificates – i.a. quality checks and use of the performance indicator in advertisements for sale or rent
- Strengthening the role and the quality of inspections (HVAC)
- Addressing the public sector to act as leading example
- Stimulating the market entry of low/zero carbon and energy buildings, such as passive houses
- Clarification/simplification of provisions and definitions



# ● EPBD recast – What shall happen?

## Energy Performance Certificate



The screenshot shows a real estate website interface. The browser title is 'A vendre - Recherche - Appartements - D - Windows Internet Explorer'. The URL is 'http://www.immoweb.be/fr/buy.Results.gallery.cfm?xmi=&keep=&carte=N&idcategorieprev=5&idcategorie=5&xtypelc'. The page displays a grid of apartment listings. A callout bubble highlights the text 'Energy Class D' in the listings. The listings include details such as 'Appartements 2 ch.', '1000 Bruxelles ville', and '1070 Anderlecht'. The browser's taskbar at the bottom shows 'start', 'Internet Explorer', 'Microsoft Office ...', 'Microsoft PowerPoi...', 'Microsoft Excel - Bo...', and 'DE Impact Assessme'.

- **Impact and support instruments of the EPBD recast**
  - **5 - 6 % saving of EU's total energy consumption**
  - **5 % saving of EU's total CO<sub>2</sub> emissions**
  - **280,000 – 450,000 potential new jobs**
  - **Low/zero, predominantly negative CO<sub>2</sub> abatement costs**
  - **Support to pave the way for recast's implementation:**
    - (1) Intelligent Energy Europe Programme (SAVE)**
    - (2) European Commission's Buildings Platform – key element of Commission's "Build-up Initiative" (2009)**
    - (3) EC's Economic Recovery Plan**





7 litres of oil or cubic metres of gas consumption per square metre and year, so 25 litres of oil or cubic metres of gas consumption per square metre and year, so about 15 € annual energy bill per square metre (total 4500 €) energy bill costs annually cut by two third!