

**REHVA Technical seminar
Annual meeting
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Major contents of recast EPBD

**Zoltan Magyar, Hungary
Vice-president of REHVA**

Role of the Building Sector

- **40 % of EU's energy use**
- **36 % of EU's CO2 emissions**
- **Cost-effective energy savings potential:
~30 % by 2020**
- **9 % of GDP, 8 % of employment and
€2 trillion annual turnover**
- **Key EU legislation: Energy Performance
of Buildings Directive
(EPBD, 2002/91/EC)**

The 20-20-20 EU policy by 2020

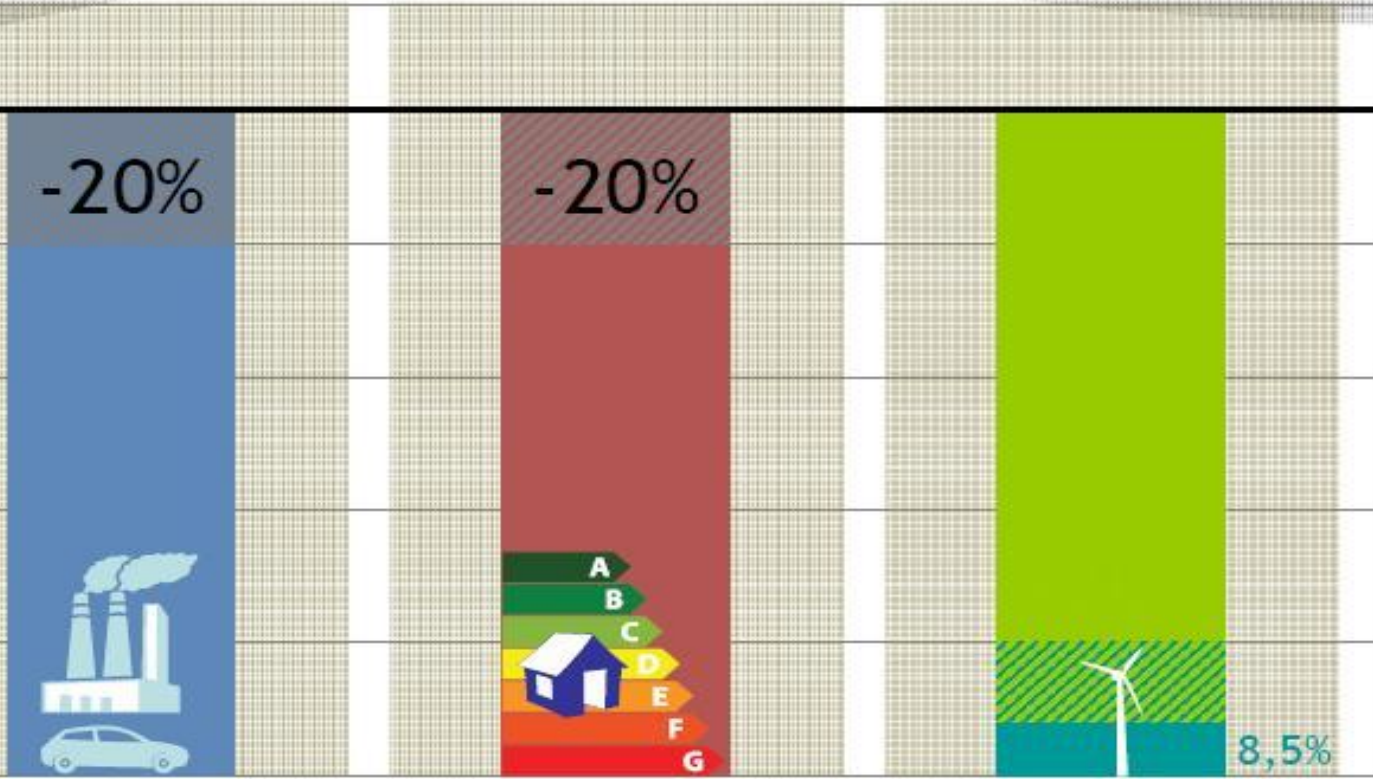
Directorate-General
for Energy
and Transport



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Greenhouse gas levels

Energy consumption

Renewables in energy mix

EPBD (2002/91/EC)

- **Requirements for Member States to specify and implement:**
 - 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 boilers 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.

Calculation of the cost-optimal levels of minimum energy performance requirements

- **Member states shall apply a methodology, at national or regional level, of calculation of the energy performance of buildings on the basis of the common general framework (CEN standards, Renewables Directive).**
- **Primary energy to be calculated.**

Setting of energy performance requirements

Cost effectiveness in focus

- **“Bench-marking” studies are encouraged.**
- **The measures to improve energy efficiency in each member country must be cost-optimal, minimizing the life cycle cost.**
- **The commission promises to develop “cost-optimized” guidelines by the year 2010 before the directive is approved.**

New buildings

Consider and take into account for all new buildings:

- **decentralised energy supply system based on energy from renewable sources;**
- **cogeneration;**
- **district/block heating or cooling – energy from renewable sources;**
- **heat pumps.**

Existing buildings

**All buildings under major renovation
(1000 m² limit removed) :**

- **same requirements as for new buildings;**
- **technically, functionally and economically feasible;**
- **requirements can be set also at component level.**

Technical building systems

Optimising the energy use of technical building systems (heating, cooling, ventilation, lighting, DHW):

- **set system requirements in respect of the overall energy performance;**
- **proper installation;**
- **appropriate dimensioning, adjustment and control (commissioning).**

Energy Performance Certificates

- The directive tries to improve the quality and impact of energy certificates, including the inspections related to the certificates.
- The certificate shall include recommendations for the cost-optimal or cost-effective improvement of the energy performance of the a building.
- Certificates should be displayed in all buildings with public access and a floor area more than 250 m².
- Member countries should organize an independent review process to control the quality of the energy certificates.

Example for Member States' room for action: EPCs

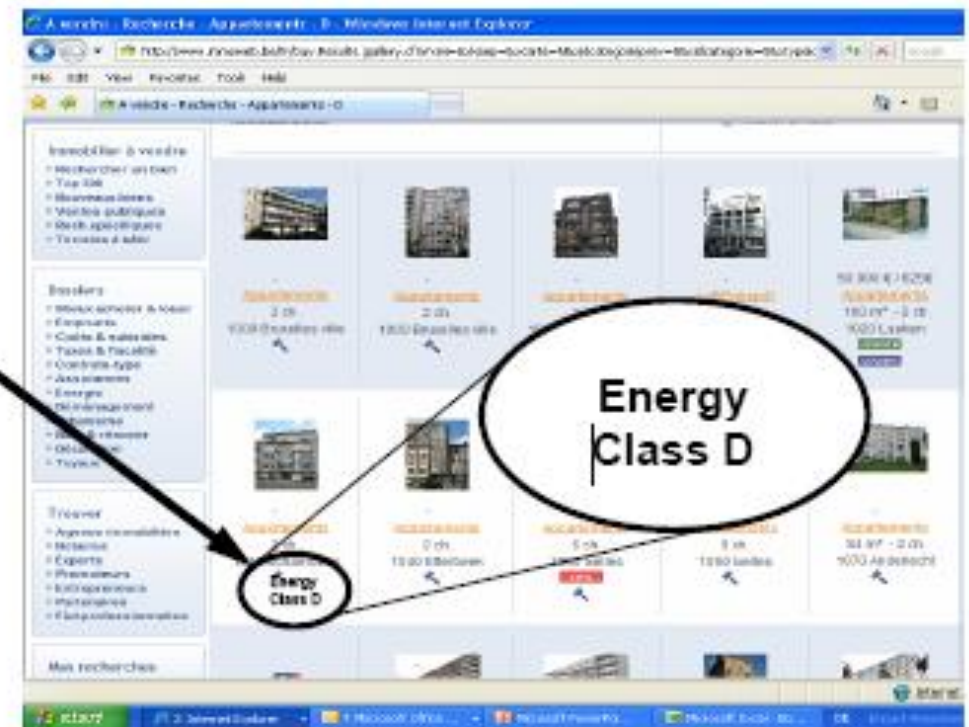
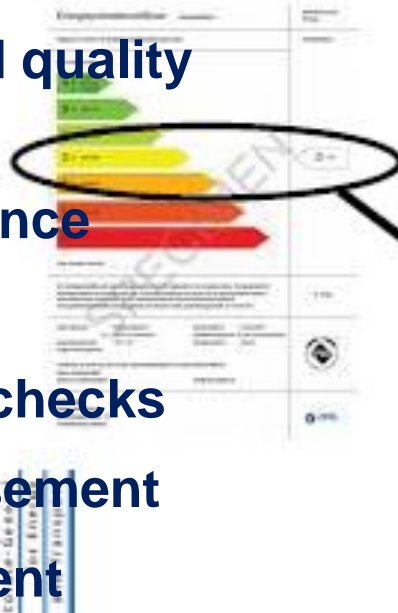


Energy Certificates

**Strengthening
the role and quality
of energy
performance
certificates**

- quality checks
- advertisement
for sale or rent

Energy Performance Certificate



**Strengthening the role and quality of inspectors
Closer connection between the EPBD and Cx**

Inspections of heating and air-conditioning systems

- The boiler inspections are expanded to include inspections of heating systems and the required heating demand.
- Measures to establish a regular inspection of the accessible part of air-conditioning system of an effective rated output of more than 12 kW.
- The air conditioning inspections also should have more emphasis on the reduction of cooling loads, and the need for cooling. It should contain recommendations for the cost-effective improvement of the energy performance of the inspected system.

Inspections of heating and air-conditioning system



Air-conditioning systems/equipment with effective output more than 12 kW

Omitting the 1000 m² limit

- **For the existing building, the current floor area limit of 1000 m² is omitted which means that the requirements for new buildings have to be applied.**
- **Alternative systems have to be considered for all existing buildings going through major renovation, when the cost of renovation is more than 25% of the value of the building, irrespective of the size of the building, including single family houses.**

Road map towards nearly zero-energy buildings

- An important element is that the directive also requests the Member States to make a plan (a road map, 2011) on how to increase the share of the very low energy buildings and nearly zero energy buildings in the national building stock.
- Ensure that by 31 December 2020 all new buildings are nearly zero-energy buildings.
- Ensure that after 31 December 2018 new buildings occupied and owned by public authorities are nearly zero-energy buildings.

Impact and support instruments of the EPBD recast

- **5 - 6 % saving of EU's total energy consumption**
- **5 % saving of EU's total CO₂ emissions**
- **280,000 – 450,000 potential new jobs**
- **Low/zero, predominantly negative CO₂ abatement costs**

www.buildup.eu



Improve the energy performance of buildings by **gathering** building professionals, local authorities and citizens on **THE** portal for energy efficient building.



Public authorities



Building occupants



Building professionals

► 2 main goals:

- Transfer best practices of energy savings measures to the market.
- Keep the market updated about the energy legislation for buildings.

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Conclusion

- Obviously, to reach a high environmental quality we need a more integrated design of buildings, more care should be given to the integration of the building in its environment, to the selection of materials, ventilation, heating and air-conditioning strategies in order to improve the use of renewable sources and limit the environmental impacts.
- Member States shall take the necessary measures to ensure that the minimum energy performance requirements for buildings or building units are set with a view to achieving cost-optimal levels.
- REHVA is strongly involved in this policy and will have a key role in accompanying measures and dissemination of information to his members and partners.

**Thank you for your
attention**

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