

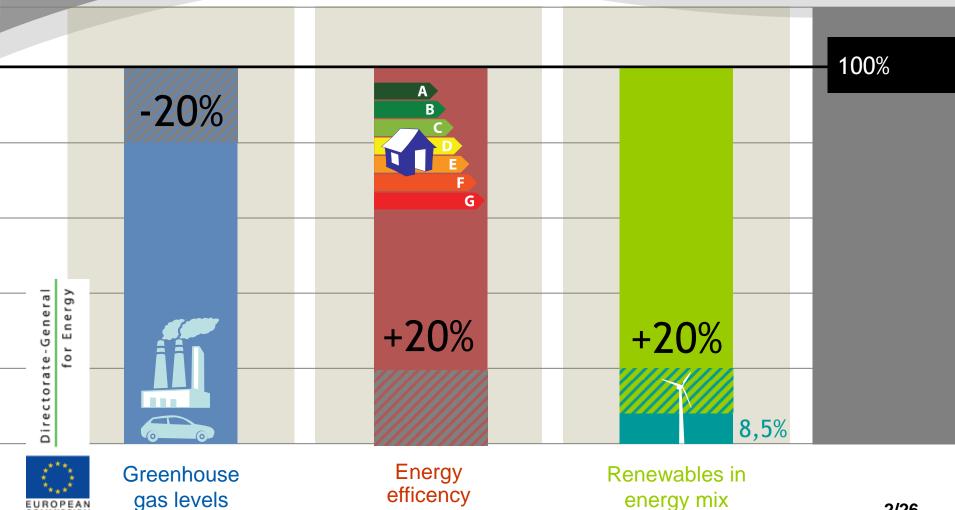
EU - Energy policies for buildings

IEA workshop on building envelope policies and technologies 18 November 2011

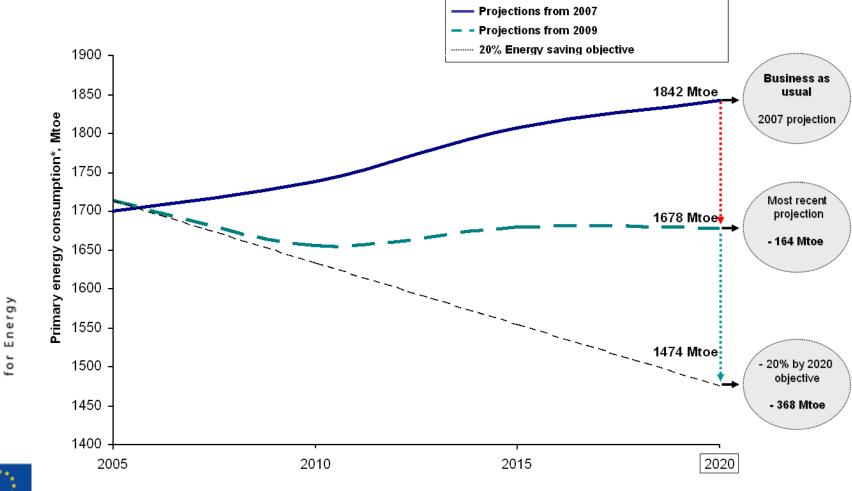
Emmanuel Cabau



The EU 20-20-20 targets by 2020



The EU 20-20-20 targets by 2020



* Gross inland consumption minus non-energy uses Source: Primes

Directorate-General

EUROPEAN

COMMISSION

Multiple needs for action



Face climate change



Face economic crisis





Care for affordability



Care for security

New strategies on EU level

Energy efficiency is key priority on EU level

- "Energy 2020" European Strategy for Energy
- Proposal of a new Energy Efficiency Plan (EEP) of 8 March 2011
 - Buildings also part of the proposal for a new Energy Efficiency Directive, adopted by the COM at 22 June 2011 (repealing Directives 2004/8/EC and 2006/32/EC)



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New Energy Efficiency Plan (EEP)

Policy concepts in the new EEP

- reach 20% objectives
- mainstream energy efficiency in all relevant policy areas
- build up commitment towards further energy efficiency up to and beyond 2020
 - EEP will address energy saving potential in all relevant sectors (buildings, transport, industry etc.)



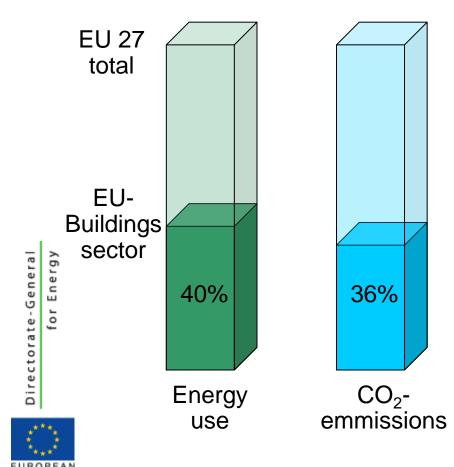
New Energy Efficiency Directive (EED)

Policy concepts in the new EED

- Energy efficiency obligation: MS make sure that an equivalent of 1.5% of annually energy sales are saved through energy efficiency measures
- Public sector: lead by example: annual renovation works covering at least 3% of total floor area of their buildings
- Consumers: individual metering for better energy management
- Industry: obligations for larger companies to undergo energy audits, incentives for small and medium sized companies
 - Energy generation: monitoring of new energy generation capacities
 - Energy transmission and distribution: national energy regulators should decide taking energy efficiency criteria into account



Energy efficiency – EU buildings sector



Buildings responsible for:

- ~40 % of EU-Energy use ~36 % CO_2 -emissions
- 9% of EU 27 GDP
- 8% der EU-employees
- Basic European framework: Directive on the energy performance of buildings (EPBD)

Energy efficiency – EU buildings sector

Energy savings potential in the buildings sector

- Energetical refurbishment of the building stock
- Higher renovation rates towards low-energy buildings would speed up
- Main barriers: high upfront investment costs, low level of professional training, lack of information
- Possible answers: exemplary role of public sector, more financial support and targeted professional training



EPBD: legislation on EE for buildings

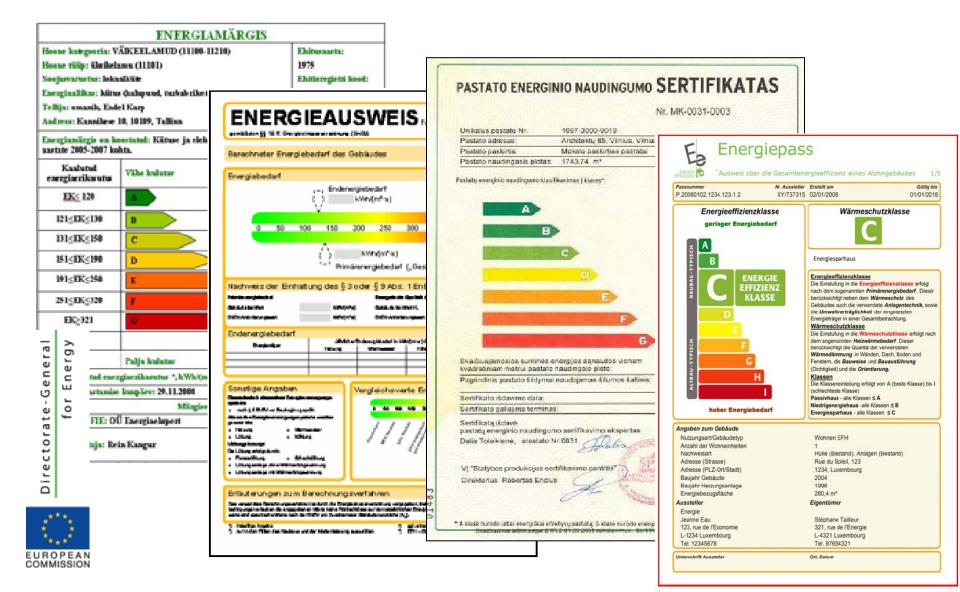
EPBD – Key elements (Directive 2002/91/EC)

- A methodology to calculate and rate the energy performance
 - Minimum energy performance requirements for new and existing buildings that undergo major renovation
 - Energy performance certificates



Regular inspections of heating and air conditioning systems

EPBD: legislation on EE for buildings



EPBD: legislation on EE for buildings

Recast EPBD (Directive 2010/31/EU)

 Directive 2010/31/EU = recast of Directive 2002/91/EC on the energy performance of buildings



- July 2010 Entry into force
- Implementation by Member States two years after entry into force (second half of 2012)



Recast EPBD - compared with Directive 2002/91/EC

The whole principle is still the same:

- General framework (principle of subsidiarity)
- Minimum energy requirements
- Integration of alternative systems from RES
- Energy Performance Certificates (EPC)
- Inspection of the efficiency of heating and cooling
- Independent experts for certification
- Exemplary role of public sector



New in the Recast EPBD

- introduction of "nearly zero energy buildings" 2021 (public sector 2019)
- Extension of minimum requirements to all buildings
- Methodology for calculating the cost-optimal level
- Strengthening Energy Performance Certificates (EPC)
- Independent control system for EPCs
- Publication of the EPCs in all commercial announcements
- Extension of display (>500m², 2015>250m²)



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Near to zero – buildings after 2019

"Nearly zero-energy" buildings from 2019/2021:

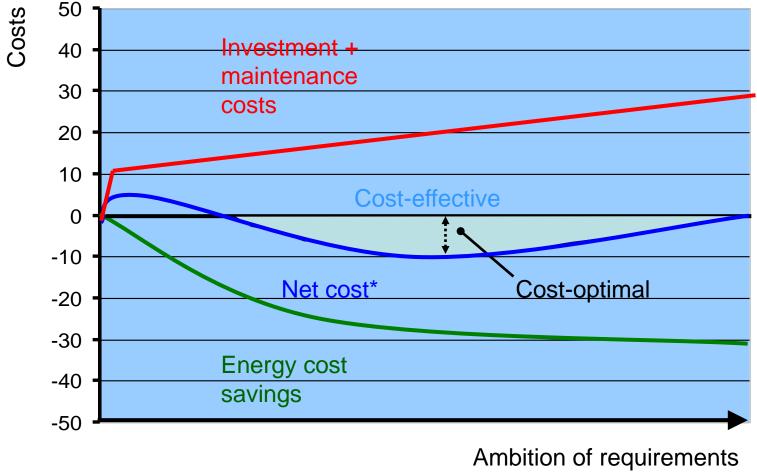
- Art. 9 (1): MS shall ensure, that
 - By 31 December 2020 all new buildings occupied are nearly zero-energy buildings and
 - after 31 Dezember 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings
 - MS shall draw up **national plans** for increasing the number of nearly zero-energy buildings



Methodology for calculating the cost-optimal level

- EPBD gives instruction on how to set minimum performance requirements
- Rationale: equivalent level of ambition but no harmonisation
- Aim: Shift focus from upfront investment costs to life cycle costs
- Based on CEN standards
- MS complete framework with national parameters and report calculations + input data to the Commission
- Comparison of result with current requirements and adjust building codes if needed







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e.g. Thickness of insulation and/or efficiency of systems

* = sum of Investment/maintenance costs + Energy cost savings

Tasks of the Commission in the Recast EPBD

- New mandate for second generation of CEN-standards
- Framework for calculation methodology on costoptimal levels (mid 2011)
- Voluntary EU labelling scheme
- every 3 years report of MS improvement of monitoring
- examination of measures set by MS



Financing and supporting measures

Promotion of energy efficiency at EU-level

- ERDF: since 2009 for EE/RES in retrofitting, since 2010 new financial instruments (JESSICA)
- ELENA: since 2009 grant for technical assistance for EE/RES on regional und local level
- EEE-F: New European Energy Efficiency Facility: ~200 Mio.€ in cooperation with EIB for technical assistance, investment facilitation, contracting
 - Impact assessment: financing instruments for EE
 - Analysis of the appropriateness of EU funding for the EPBD as requested by the EPBD



Support with Implementation

EPBD implementation support	 Committees Concerted Action EPBD 	• CEN EPBD standards	BUILD UP energy solutions for better buildings
Financial & fiscal instruments	 Cohesion policy funds ELENA EEE-F 	 Possibilities for State Aid VAT reduced rates 	 IEE programme Research FP EU CONCERTO initiative
Networks	Covenant of Mayors Committed to local sustainable energy	 Sustainable Energy Europe Campaign 	 ManagEnergy network

Thank you!

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