



- After the recast – EU policies for sustainable buildings

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# The new Europe 2020 strategy

- Successor to Lisbon strategy, agreed upon at EU Spring summit 2010
- Sustainability/Energy as one of the five headline **targets**: Reaffirmation of 20-20-20 target agreed in 2007
  - reducing greenhouse gas emissions by 20% compared to 1990 levels
  - increasing the share of renewables in final energy consumption to 20%
  - and moving towards a **20% increase in energy efficiency**
- Member States will set national targets to underpin headline targets

# The EPBD recast

- Recast endorsed by Council in April and EP plenary on 19th May
- Publication in Official Journal June 2010
- Implementation by MS two years after entry into force (second half of 2012)
- Next steps: cost-optimal methodology, voluntary EU labelling scheme in comitology, analysis on finance

# ● EPBD requirements

- Offers holistic approach towards more energy efficient buildings
- Member States to fix and implement:
  - A methodology to calculate and rate the energy performance
  - Minimum energy performance requirements for new and for existing buildings that undergo major renovation
  - Energy performance certificates
  - Regular inspections of heating and air-conditioning systems



# ● EPBD – Energy Performance Certificate

## Example for Member States' room for manoeuvre:

**Energieprestatie certificaat**

Energieprestatie utiliteitsbol

Berekening conform NEN 2916:2

zwee energiezijning

net energiezijning

$Q_{pres, tot} / Q_{pres, toelaatbaar}$

recreatieve energieprestatieoverzichten

verwarming	Q <sub>verwarming</sub>	41 142,822 MJ
verkoeling	Q <sub>verkoeling</sub>	23 721,311 MJ
warmtepomp	Q <sub>warmtepomp</sub>	1 894,723 MJ
gemaal	Q <sub>gemaal</sub>	5 054,825 MJ
verlichting	Q <sub>verlichting</sub>	7 774,372 MJ
beveiliging	Q <sub>beveiliging</sub>	1 345,211 MJ
verkeering	Q <sub>verkeering</sub>	28 943,943 MJ
comp. PV-panelen	Q <sub>comp. PV-panelen</sub>	-21 181,404 MJ
biogas	Q <sub>biogas</sub>	21 285,823 MJ
toelaatbaar	Q <sub>toelaatbaar</sub>	34 097,843 MJ

**Gegevens van het gebouw:**

Berlaymont gebouw te Brussel

Beschouwde gebruiksovervaktanten:

- Kantoorfunctie: 34.771,50 m<sup>2</sup>
- Bijeenkomstfunctie met alcohol: 6.120,90 m<sup>2</sup>
- Bijeenkomstfunctie overige: 24.191,10 m<sup>2</sup>
- Gemeenschappelijke ruimten: 64.339,20 m<sup>2</sup>

De parkeergarage, archiefnummers 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

**Gegevens o**

DOMR Broux  
Dr. J. M. Kulpke  
Poortbus 153  
4800 AD Am  
Nederland

In opdracht v  
ministerie va  
Den Haag, N

datum afgifte  
geëdig tot: 21

**ENERGIEAUSWEIS** für Wohngebäude  
gemäß den §§ 16 ff. Energieeinsparverordnung (EnEV)

Berechneter Energiebedarf des Gebäudes

Energiebedarf

CO<sub>2</sub>-Emissionen: 151,9 g/(m<sup>2</sup>·a)

Endenergiebedarf: 228,4 kWh/(m<sup>2</sup>·a)

Primärenergiebedarf: 227,6 kWh/(m<sup>2</sup>·a)

Primärenergiebedarf \* Gesamteffizient

Nachweis der Einhaltung des § 3 oder § 9 Abs. 1 EnEV<sup>7)</sup>

Primärenergiebedarf	Gebäude-Wert IC	227,6 kWh/(m <sup>2</sup> ·a)	Energetische Qualität der Gebäudehülle	Gebäude-Wert IC	1,30 W/(m <sup>2</sup> ·K)
EnEV-Anforderungswert	113,4 kWh/(m <sup>2</sup> ·a)		EnEV-Anforderungswert IC	0,65 W/(m <sup>2</sup> ·K)	

Endenergiebedarf

Energieträger	Menge bei Endenergiebedarf bei kWh/(m <sup>2</sup> ·a) (je kWh bei 100°C)	Wärmeleistung	Gesamt-Wert
Erdgas H	151,2	10,6	
Strom	0,0	0,0	12,3
Heiz-Öl/Heizgas	40,1	0,2	

Sonstige Angaben

Einbaufähigkeit alternativer Energieversorgungs-systeme

nach § 10 EnEV (Solarthermie) geeignet  
Alternativer Energieversorgungs-systeme werden gemäß Nr.:

Heizung  Warmwasser  Lüftung  Kühlung

Lüftungssystem

Die Lüftungsvorrichtung:

Fensterlüftung  Schieb- und Schwenklüftung  
 Lüftungseinheit über Wärmeaustauschsystem  Lüftungseinheit mit Wärmeaustauschsystem

Vergleichswerte Endenergiebedarf

**Erläuterungen zum Berechnungsverfahren**

Das verwendete Berechnungsverfahren ist dem in der Energieeinsparverordnung vorgeschriebenen, insbesondere wegen standardisierter Anordnungen erlaubten, angegebenen Werte keine Rolle bei dieser auf den tatsächlichen Energieverbrauch, die angegebenen Bedarfswerte sind spezifische Werte nach der EnEV pro Quadratmeter Gebäudemasse (m<sup>2</sup>).

<sup>7) Einzelige Angabe: 2) nur in der EN 15601-2 und der EN 15601-3; 3) gilt ohne Maßstab; 4) EN 15601-2; 5) EN 15601-3; 6) EN 15601-2; 7) EN 15601-3</sup>

**Energieausweis für Nicht-Wohngebäude**

gemäß den §§ 16 ff. Energieeinsparverordnung (EnEV)

Kategorie

Objektart:  E-Bau:

Objektname:  Gebäudetyp:

Struktur:  Baubestand:

VLA/Ver:  Energieart:

Objektfläche:  Baujahr:

SPZIFISCHER HEIZANFORDERUNG (je m<sup>2</sup> Gebäudemasse) ZWISCHENRAUM

Wärmeverlust

Heizleistung:  Wärmeverlust:

CO<sub>2</sub>-Emission:  CO<sub>2</sub>-Emission:

CO<sub>2</sub>-Emission:  CO<sub>2</sub>-Emission:

CO<sub>2</sub>-Emission:  CO<sub>2</sub>-Emission:



# Better Energy Performing Buildings

- Energy performance requirements for all new and existing (under major renovation) buildings
- Alternative systems to be considered for all new buildings
- Benchmarking of the requirements as set up by MS
- Aligning of all MS with the cost-optimal levels
- Gradual transformation to next generation buildings

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

- a) All new build “nearly zero energy buildings” as of end of 2020 (public sector: end of 2018). Remaining energy need mainly covered by RES
- b) Minimum energy performance requirements for all existing buildings that undergo an energy relevant renovation
- c) Level of minimum energy performance requirements for new buildings (until 2020) and renovations:  
Benchmarking to achieve cost-optimal levels
- d) Requirement for Member States to lay down min. energy performance levels for technical building systems and building elements when installed, replaced or upgraded



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

- e) **Display of Energy Performance Certificates in public buildings**  
(decrease of threshold to 500 m<sup>2</sup> and 250 m<sup>2</sup> after 5 years)
- e) **Strengthening the role and the quality of energy performance certificates – i.a. by quality checks and obligatory use of the performance indicator in all advertisements for sale or rent**
- f) **Strengthening the role and the quality of HVAC inspections**
- g) **Stimulating financing mechanisms for energy efficiency investments in the building sector**
- h) **Exemplary role of public authorities**

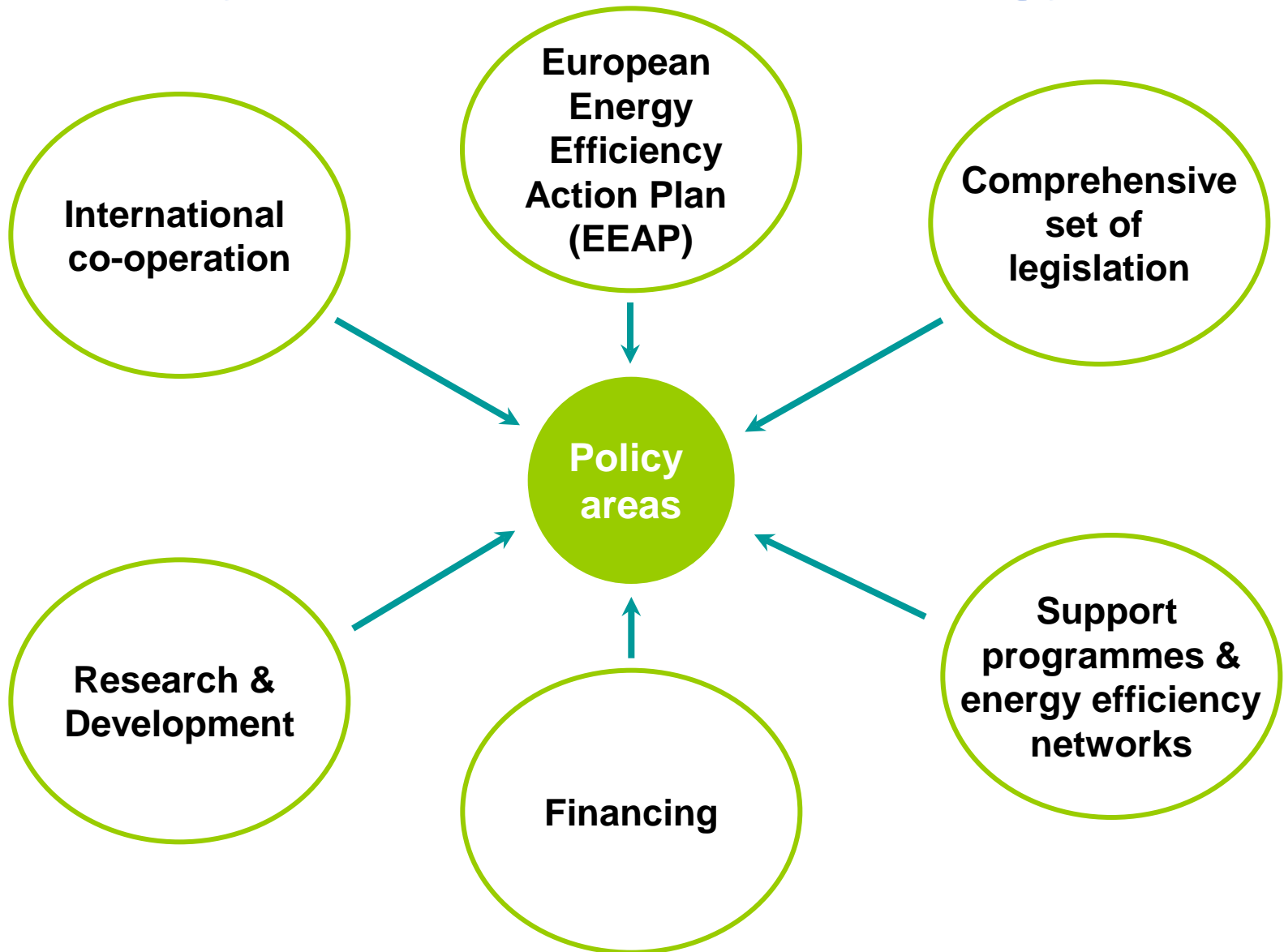




# Support with implementation

- (1) **Intelligent Energy Europe Programme (SAVE)**
- (2) European Commission's information service
  - “**BUILD-UP Initiative**“ ([www.buildup.eu](http://www.buildup.eu))
- (3) Holistic set of European Standards on energy performance of buildings and their components (**CEN standards**)

# Main policy action to achieve energy savings



# Other related initiatives

- **Lead market initiative** since 2007, to identify non-technical barriers
- **E2B** Public-private partnership for energy efficient buildings as part of the European Economic Recovery Programme (2 bln euro)
- **Smart Cities** initiative as part of SET-Plan
- Preparation to transfer uncommitted money from **EERP** to energy efficiency and renewables (115 mio Euro)
- **Public procurement** communication in support of Europe 2020
- Standardisation work of **CEN TC 350** to be finalised by 2012

# Upcoming

- **New Energy efficiency policy framework by end 2010/ beginning 2011**



Thank you!