



Seminar on the Energy Efficiency of Buildings *Energy transition and buildings*

New requirements in the amended EPBD

Helsinki, 8 October 2019

European Commission



President-elect
**Ursula von der
Leyen**

- *Protecting our planet and our shared environment is our generation's defining task. It is an urgent moral, human and political obligation, which Europeans have resoundingly told us they want their Union to fulfil. It is also a long-term economic imperative: those who act first and fastest will be the ones who grasp the opportunities from the ecological transition.*
- *The **European Green Deal** should become Europe's hallmark. At the heart of it is our **commitment to becoming the world's first climate-neutral continent**. It will require collective ambition, political leadership and a just transition for the most affected.*

Kadri Simson

Commissioner-designate for Energy



Mission:

- Focus on the **rapid implementation** of energy-efficiency and renewable-energy legislation
- **Work closely with the Member States** to set out their National Energy and Climate Plans
- Given the increased ambition of the European Green Deal, there is a need to **review legislation**
- Ensure Europe follows the **energy-efficiency-first principle** across the board
- Look at how Europe can further **improve the energy performance of buildings and speed up renovation rates**

DG ENERGY



New Director-General – DG ENER
Ditte Juul-Jørgensen

Clean Energy for All Europeans

A major step towards completing the Energy Union and combatting climate change

2030 FRAMEWORK FOR CLIMATE AND ENERGY AGREED TARGETS

	GREENHOUSE GAS EMISSIONS	RENEWABLE ENERGY	ENERGY EFFICIENCY	INTER- CONNECTION	CLIMATE IN EU-FUNDED PROGRAMMES	CO2 FROM:
2020	-20%	20%	20%	10%	2014-2020 20%	
2030	≤ -40%	≥ 32%	≥ 32.5%	15%	2021-2027 25%	CARS -37.5% Vans -31% Lorries -30%

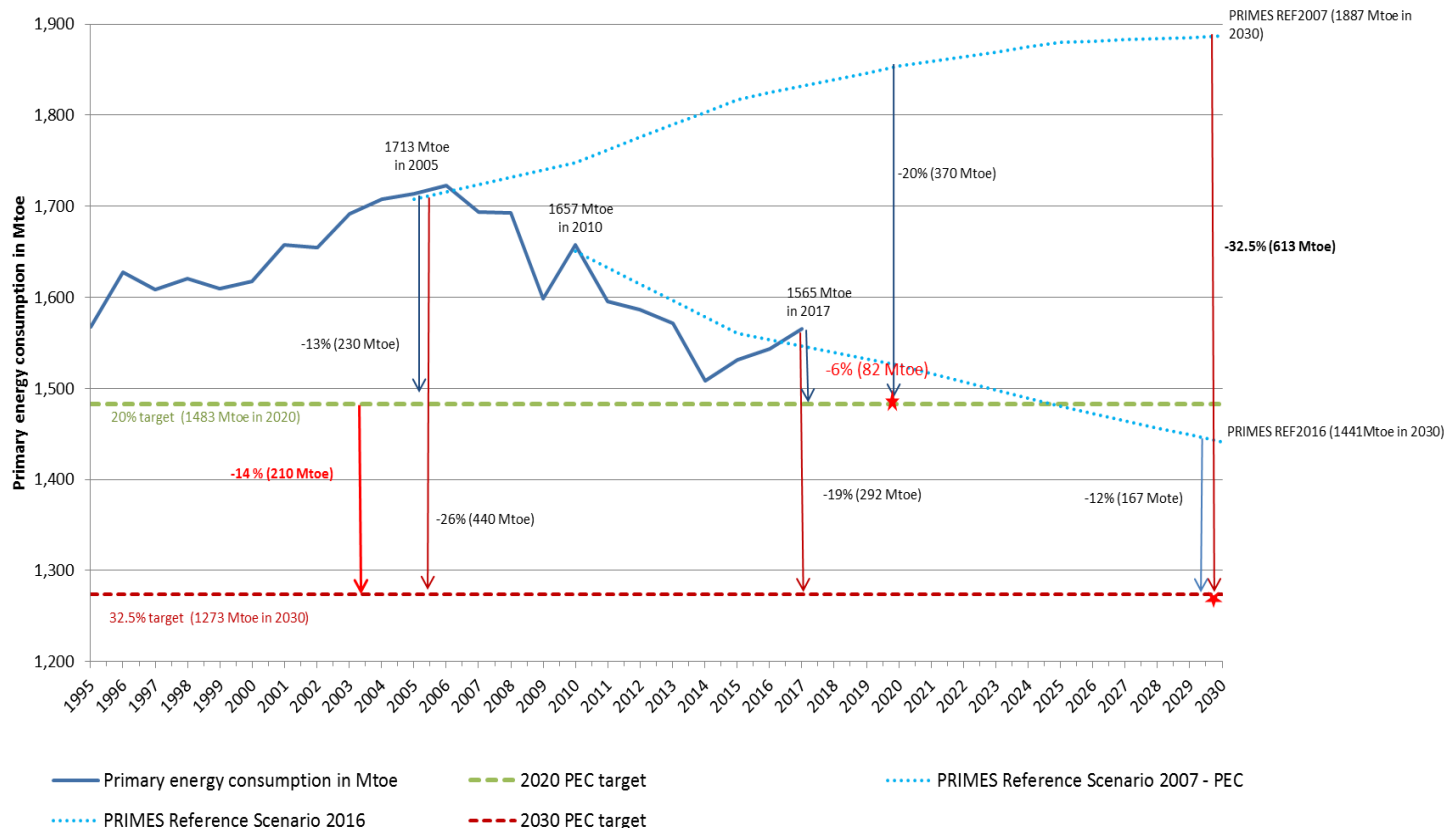
Upwards revision clause by 2023

Buildings:

- Increase renovation rates
- Enhance Smart technologies

<https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans>

The energy efficiency challenge for 2020 and beyond



Energy consumption is **rising since 2014**, following an extended period of declining or flat consumption.

The distance to the **EU 2020 energy efficiency target** has been increasing.

Some facts for the EU building sector

- Buildings responsible for 40% of energy consumption and 36% of GHG emissions in EU
- Buildings to contribute significantly to GHG emission reductions of around 90% compared to 1990 by 2050
- 75% of the housing stock is energy inefficient

Construction rates / worse economic conditions

- ✓ low demolition rates (0.1-0.2% per year)
- ✓ limited new construction activities (0.4-1.1% per year)
- ✓ very low refurbishment rates (0.4-1.2% per year)

Problems and drivers

- ✓ structural
- ✓ market failures
- ✓ regulatory failures

The overall architecture of the EPBD is working

- **Nearly Zero-Energy Buildings (NZEB)** sets a 'future-proof' vision for the sector and mobilise stakeholders accordingly
- **Cost-optimality** is an efficient approach to set energy performance requirements
- **Energy Performance Certificates** is a useful demand-driven market tool

There is still significant potential to be enhanced

Increase renovation of existing buildings

Modernisation in light of technological developments

Reap the wider benefits of high energy performance

- Health, comfort, indoor air quality, increased property value, increased productive (for offices), etc.

Strengthen **Energy Performance Certificates** (quality, creditability, usability, including as a tool for finance mobilisation)

Better data - upgrade EU buildings data and analytics, including through **big data approaches**

- Databases can be a key instrument for reinforced compliance

EPBD – main outcomes of the revised Directive

- ✓ **Supportive of building renovation by linking policy and financing**
- ✓ ***Smart* by ensuring the use of ICT and modern technologies**

Transposition deadline: 10 March 2020

- **Stronger long term renovation strategies** for Member States, aiming at decarbonisation by 2050 and with a solid financial component.
- Requirements for the deployment of **e-mobility infrastructure** in certain buildings' car parks.
- A **smart readiness indicator** (SRI) for buildings
- **Reinforcement of building automation**: additional requirements on room temperature level controls, building automation and controls and enhanced consideration of typical operating conditions.
- **Enhanced transparency** of national building energy performance calculation methodologies.

Commission Recommendation:
➤ Buildings Renovation
➤ Buildings Modernisation

Long-term renovation strategies (Article 2a)



Requirement for Member States to establish comprehensive strategies aiming at a highly efficient and **decarbonised building stock** by **2050** and at a cost-effective transformation of existing buildings into **nearly zero-energy buildings**

- More elements to be considered: **energy poverty**, market failures and barriers, split incentives, necessary skills, health and safety issues, wider benefits
- Set up a **roadmap** with measures, **measurable** progress indicators and indicative milestones for **2030, 2040** and **2050**
- Carry out a **public consultation**



Financial component: facilitate access to appropriate mechanisms (effective use of public funding; aggregation; de-risking)

Long-term renovations strategies must be submitted as part of the Nationals Energy and Climate Plans

Assessment of the draft Nationals Energy and Climate Plans

- The potential of efficiency measures that would achieve cost-efficient emission reductions, while reducing energy bills for households and increasing employment in the construction sector **could be exploited more rapidly in some Member States**
- The **long-term building renovation strategy will provide a comprehensive picture** of the planned actions to renovate the national stock of buildings in view of the cost-effective transformation of existing buildings into nearly zero-energy buildings

Electro-mobility (Article 8)



By 2025, Member States will set requirements for a minimum number of charging points in all non-residential buildings with more than 20 parking spaces.

- **Simplification** of the deployment of recharging points (including with permitting procedure).
- Requirement on the deployment of **ducting infrastructure** in new and major renovations of buildings of with more than 10 parking spaces
 - 1 in every 5 parking spaces for non-residential buildings
 - Every parking space in residential buildings.
- **1 charging point** per building for new and major renovation of non-residential buildings with more than 10 parking spaces.
- Targeted **exemptions** (e.g. for SMEs).

Smart Readiness Indicator (Article 8)

<https://smartreadinessindicator.eu/>



Optional scheme for rating the smart readiness of buildings through a Smart Readiness Indicator (SRI)

- ability of a building to manage itself
- interaction with its occupants
- take part in demand response



The SRI will be established through two legal acts:

- **delegated act** for the definition and calculation methodology
- **implementing act** for the technical modalities of implementation.



Progress towards ‘smarter’ building systems can support a more efficient implementation of the EPBD and result in additional benefits for building users, energy consumers and future grids.

LINKING TO THE EPBD & OTHER POLICIES



The SRI will supplement the instruments implemented under the current EPBD



The SRI in particular ensures the link with the Digital Single Market (DSM) Policy

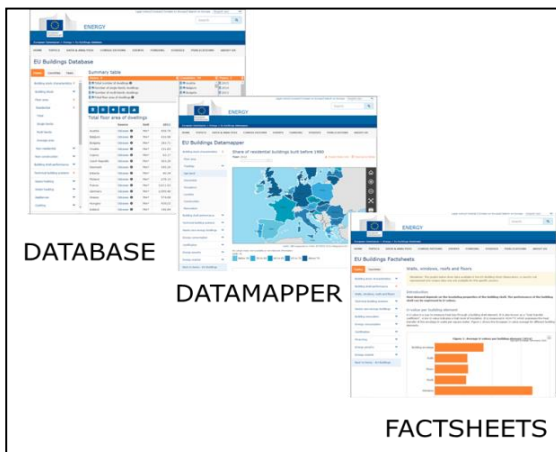


Inspections & building automation (Article 14&15, 8)

- **Thresholds** for inspections are set up at **70 kW** for both heating and air-conditioning systems.
- **Alternative measures** to mandatory inspections based on advice are kept, with ex-ante reporting to the Commission.
- Additional requirements on the installation of **building automation and control systems** by **2025** in large non-residential buildings.
- Additional requirements on the installation of **self-regulating devices** for room temperature level control in new buildings and when heat generators are replaced.

Towards better data (Article 10 and Article 8)

- Requirement for **EPC databases** to allow gathering data for the (measured or calculated) energy consumption of buildings
- This **data shall be made available** to building owners and for statistical and research purposes
- Requirement to **assess and document the performance** of technical building systems when they are installed, replaced or upgraded



Complementary with the **EU Building Stock Observatory**:

<https://ec.europa.eu/energy/en/eubuildings>

Towards more transparency (Annex I)



New obligation to describe national calculation methodology following the national annexes of the overarching standards (ISO 52000-1, 52003-1, 52010-1, 52016-1, and 52018-1 developed under mandate M/480)

<https://epb.center/>

- Considerations for the **calculations of Primary Energy Factors (PEFs)**
- National calculation methodologies must reflect the energy needs of a building in order to provide the **optimal comfort, indoor air quality and health conditions inside the building**
- Pursuing the **optimal energy performance of the building envelope**
- Treatment of **on-site and off-site RES on a non-discriminatory basis**

EPBD – Studies & Contracts

- **Feasibility study (Article 19a of the revised EPBD)**
 - Standalone ventilation systems
 - Optional building renovation passports
- **Smart Readiness Indicator**
 - Phase 1 Final report available (including summary version)
 - Phase 2 starting in December 2018
- **Support to use of CEN Standards on EPB**
- **Comprehensive study on renovation rates and NZEB uptake**
- **Energy Performance Certificates**
 - Quality, Visibility, Usability
- **Finance measures on energy renovations**
- **Big data**
- **Support for the EU Buildings Stock Observatory**
- **Explore other areas**
 - Sustainable mobility, indoor-air quality, mandatory requirements ...

The "Smart Finance for Smart building" Initiative



Smart Finance for Smart Building Initiative aims at unlocking investments and private financing through:



Effective use of public funding

- Making more use of financial instruments(to achieve higher leverage)
- Facilitate the use of Energy Performance Contracting for the public sector
- Flexible financing platforms at national level, mixing different strands of public financing (i.e. ESIF, EFSI)
- Sustainable Energy Investment Forums



Technical Assistance and Aggregation of projects

- Encourage local/regional one-stop-shops
- ELENA - Technical assistance to develop large-scale projects
- Project Development Assistance (bankable projects)



De-risking

- The De-risking Energy Efficiency Platform (DEEP) <http://deep.eefig.eu>
- EEFIF Underwriting toolkit <http://valueandrisk.eefig.eu>

Pilot phase in 5 EU Markets: MT, FR, ES, NL and PT (and preliminary discussions in PL and IE)

Going beyond energy savings

Wider
benefits of
NZEB and
highly
energy
performance
buildings

- Health
- Comfort
- Indoor air quality
- Lower bills
- Increased property value
- More demand
- Increased productive (for offices)
-

EU funding for sustainable energy investment after 2020



Increased mainstreaming
across EU budget (25%)

- Cohesion Funds
- Invest EU
- **Horizon Europe**
 - €15 bn to Climate, Energy, Mobility
- **LIFE**
 - € 1 bn to Clean Energy Transition
- Connecting Europe Facility
- Innovation Fund



ENERGY UNION



Thank you!

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<https://audiovisual.ec.europa.eu/lv/video/I-170870>