



European
Commission



INSPIRE Conference 2018
Make it work together

**Update on energy efficiency policy: the revised
Energy Performance of Buildings Directive and
the EU Building Stock Observatory**

Antwerp, 20 September 2018



Some interesting facts

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

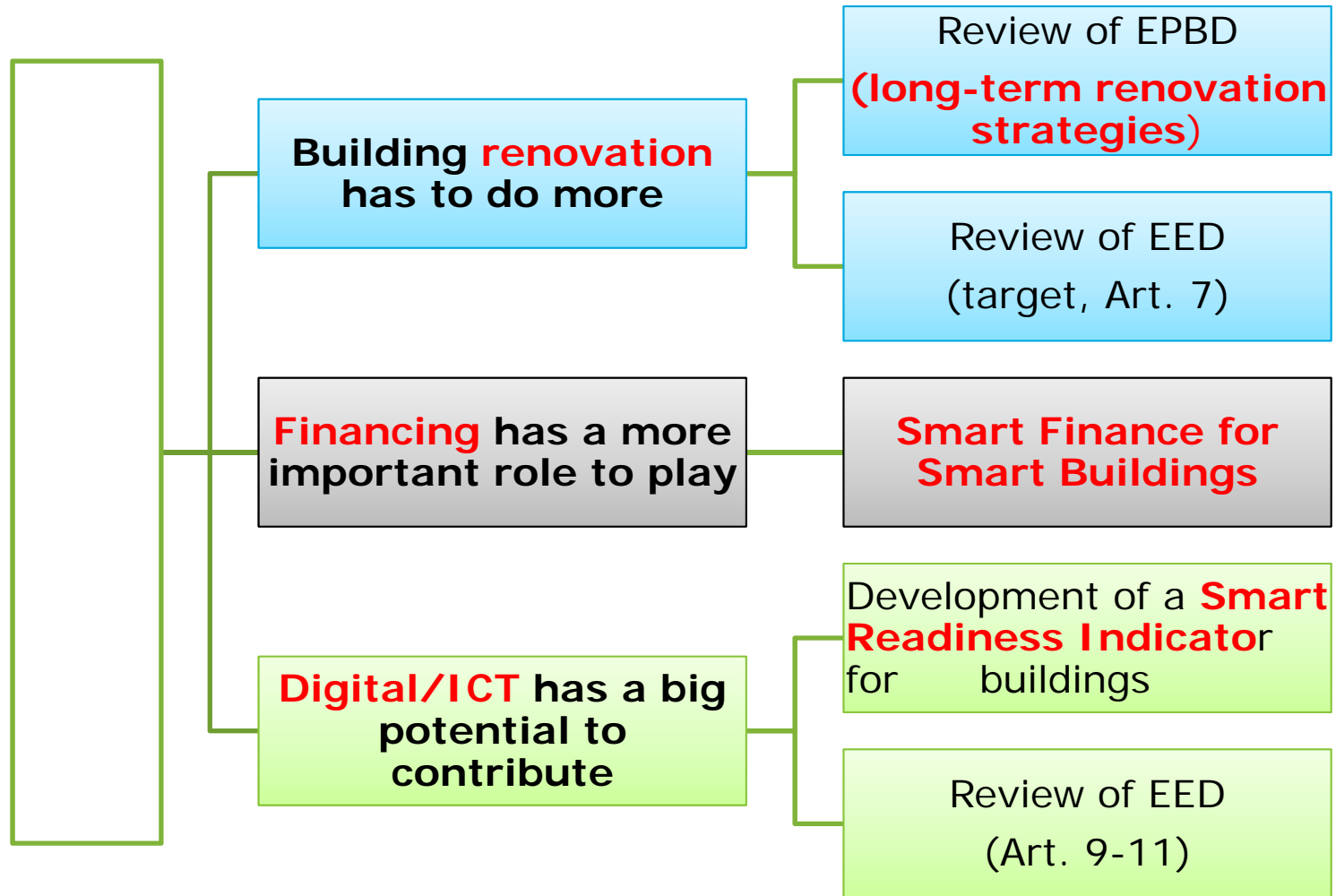
Construction rates / worse economic conditions

- 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

Policy Conclusions for 2030



Evaluation of the EPBD

EPBD is effective (will deliver the 60-80 Mtoe energy savings by 2020)

The overall architecture is working (especially for new buildings)

The NZEB sets a 'future-proof' vision for the sector and mobilise stakeholders accordingly

Cost-optimality is an efficient approach to set energy performance requirements

EPCs is a useful demand-driven market tool

Relatively limited regulatory failures

Opportunities for simplification

Decarbonisation of buildings in the long-term strategy

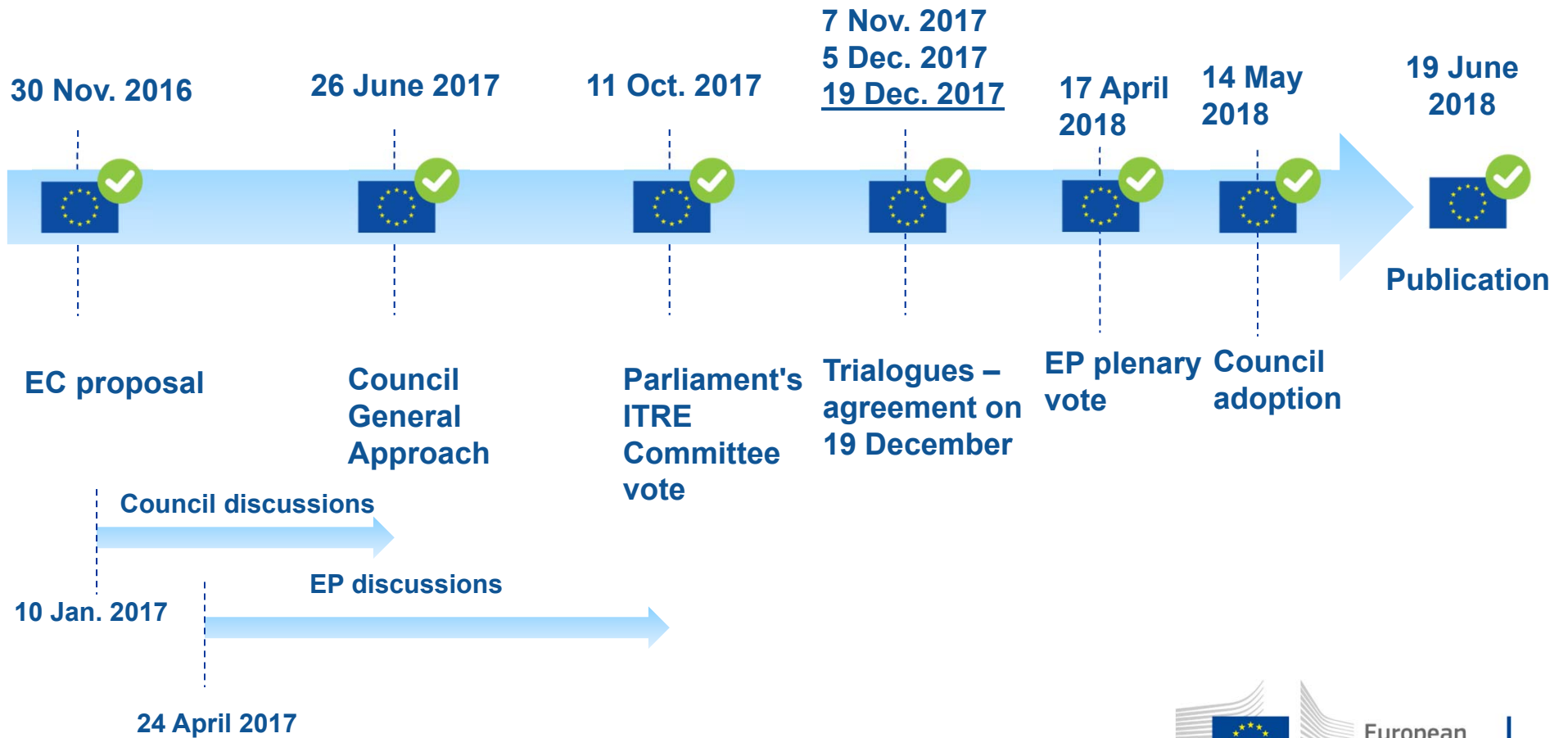
Modernisation in terms of technological progress towards 'smarter' buildings

Better linking them with financial support systems

Databases can be a key instrument for reinforced compliance

EPBD review: the process

FROM EC PROPOSAL TO PUBLICATION



Main outcomes of the revised EPBD

Supportive of building renovation by linking policy and financing

Smart
by ensuring the use of ICT and modern technologies

Stronger **long term renovation strategies** for Member States, aiming at decarbonisation by 2050 and with a solid financial component.

Targeted support to e-mobility infrastructure deployment.

Higher thresholds for **inspections** of heating and air conditioning systems and reinforced provisions on **building automation**

A **Smart Readiness Indicator** for buildings.

Strengthened **data requirements**.

Enhanced **transparency** of national building energy performance calculation methodologies

Focus on long-term renovation strategies

A MAJOR INSTRUMENT FOR RENOVATION IN THE EU



Long term building renovation strategies (Article 2a)

- ✓ Stronger reference to **energy poverty** and **solid financial component** (effective use of public funding; aggregation; de-risking).
- ✓ 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
 - Set up a roadmap with measures, **measurable** progress indicators and indicative milestones for **2030, 2040** and **2050**.
 - Carry out a **public consultation**

Focus on electro-mobility

AN IMPORTANT CONTRIBUTION TO TRANSPORT DECARBONIZATION



Additional provisions to support the deployment of the EU infrastructure for 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).

Focus on smartness

Smartness Indicator



New article advocates the introduction of an **optional common Union scheme** for rating the smart readiness of buildings through a **Smart Readiness Indicator (SRI)**

- Will characterize the ability of a building to manage itself,
- To interact with its occupants,
- And to take part in demand response and contribute to smooth, safe and optimal operation of connected energy assets.



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**. By 31 Dec. 2019.



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.



Motivation: recognition of progress towards smart building systems and their added value for building users, energy consumers and energy grids.

Focus on inspections & building automation

A GREATER ROLE FOR AUTOMATION



Inspections on heating & air-conditioning systems are updated (Articles 14 and 15) – new provisions on self-regulating devices (Article 8(1))



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.

Focus on building data collection

TOWARDS BETTER DATA



Steps towards better data both in existing databases for Energy Performance Certificates (Article 10) and on Technical Building Systems performance documentation (Article 8(9))

- ✓ 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.

Strong complementary with initiatives launched by the Commission to support the collection of data on the EU building stock.

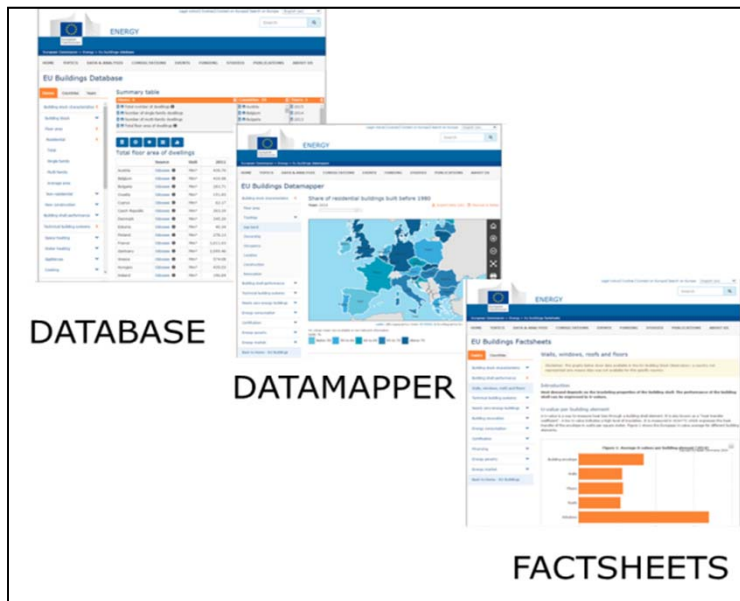
See e.g. EU Building Stock Observatory:

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

EU Building Stock Observatory

Towards better data

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



Topics covered

- Building stock
- Building shell
- Technical building systems
- NZEB
- Building renovation
- Certification
- Financing
- Energy poverty

Provide a
**snapshot of the
energy
performance of
the EU building
stock**

Set a **framework
/ methodology
for the
continuous
monitoring** of the
building stock

2nd phase

2nd Phase:
New 38-
months
contract and
New
Consortium
formed by
RICS, BSRIA
and LuxSoft:

- **Task 1:** Maintenance and update of the EU Building Stock website.
- **Task 2:** Data validation, quality control and gap filling.
- **Task 3:** Acquisition of data.
- **Task 4:** Revamping the existing website and database.
- **Task 5:** Feasibility study for launching an EU buildings big data initiative.

Next steps

Enhanced cooperation with CA EPBD, Member States and industry,

Enhanced cooperation with Eurostat,

Further development and potential additional features:

- Regional breakdown of EU buildings data
- Modelling of building stock
- Big data
- Etc.

A New contract to define and collect data on building renovation, and NZEB

THE "SMART FINANCE FOR SMART BUILDINGS" INITIATIVE

MAJOR GOALS

More effective use of public funds

- Deploying **Financial Instruments** and flexible energy efficiency and renewable financing platforms
- Building on EFSI II blending with ESIF funds



Assistance and aggregation

- Supporting the project pipeline at EU and local level
- **Project Development Assistance** facilities
- "One-stop-shops"
- **EIB ELENA**



De-risking

- Understanding the risks and benefits for financiers and investors
- **The De-risking Energy Efficiency Platform**
- Commonly accepted underwriting framework



**Sustainable Energy Investment Forums
(SEI Forums)**

CLEAN ENERGY FOR ALL EUROPEANS



- Key figures
- Data overview
- View charts
- Add and Manage Projects
- Analysis Toolbox
- Benchmark your Projects

De-risking Energy Efficiency Platform

Logged in as **cag2**

Key figures

Key figures for energy investments in the platform

Category	Value	Unit
BUILDINGS	5.152	Projects
MEDIAN PAYBACK - BUILDINGS	5,0	Years
MEDIAN AVOIDANCE COST - BUILDINGS	2,5	Eurocent/kWh
INDUSTRY	5.014	Projects
MEDIAN PAYBACK - INDUSTRY	2,0	Years
MEDIAN AVOIDANCE COST - INDUSTRY	1,2	Eurocent/kWh

Map of Europe with zoom controls (+, -)

Focus on wider benefits

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)
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Thank you!

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