



Needs stemming from the EU Energy Policy - *Buildings perspective*

Dimitris Athanasiou

***Buildings & Finance team – Energy Efficiency unit
European Commission, DG Energy***

Brussels, 12 October 2017



European Commission

EU Building Stock Observatory launched 30 November 2016

The screenshot shows the homepage of the EU Building Stock Observatory. It features the European Commission logo and the word 'ENERGY'. Below the navigation menu, there is a section titled 'EU Building Stock Observatory' with a 3D bar chart showing energy efficiency trends. A 'LATEST' section contains several news items, including 'Empowered consumers, advanced building materials and cutting carbon in transport - Thursday at EU Sustainable Energy Week 16 June 2016' and 'Opening ceremony, Energy Awards and more - Tuesday at EU Sustainable Energy Week 14 June 2016'. At the bottom, there are social media sharing options and a 'FOLLOW US' section.

The screenshot displays the 'EU Buildings Database' interface. It includes a search bar and a navigation menu. The main content area shows a 'Summary table' with filters for 'Building stock characteristics', 'Floor area', and 'Total'. A table lists various countries and their corresponding building stock data, such as Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, and Ireland.

DATABASE

The screenshot shows the 'EU Buildings Datamapper' interface. It features a map of Europe with a color-coded legend indicating different building stock characteristics. The interface includes a search bar, a navigation menu, and a 'Share of residential buildings built before 1980' section with a year selector.

DATAMAPPER

The screenshot displays the 'EU Buildings Factsheets' interface. It includes a search bar and a navigation menu. The main content area shows a section titled 'Walls, windows, roofs and floors' with an introduction and a horizontal bar chart. The chart shows the average U-value for different building elements: Walls, Floors, Roofs, and Windows.

FACTSHEETS

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

Objectives

- 1. To provide a snapshot of the energy performance of the EU building stock**
- 2. To set a framework / methodology for the continuous monitoring of the building stock**

Data sources

1. Horizontal data collection: Eurostat; JRC – IDEES, EC service contracts, CA EPBD, EU projects: ODYSSEE- MURE, ENTRANZE, ...
2. National data collection: official statistics, national registry (e.g. EPC), research projects,
3. Cooperation with stakeholders

Topics covered

- 1. Building stock & energy needs and consumption**
- 2. Technical building systems**
- 3. Certification**
- 4. Financing**
- 5. Energy poverty & social aspects**

Needs – data gaps

1. data gaps and limitations to the data collection, aggregation and comparison across EU Member States

- building renovation
- nearly zero energy buildings (NZEB)

Need to conduct a bottom-up statistical analysis to understand how the EU-28 building sectors are performing, in order to inform the design, monitoring and evaluation of energy efficiency policies

Need - Big data

The use of big data can be an opportunity to address these gaps and limitations.

The term "Big data" usually refers to datasets with sizes beyond the ability of commonly used software tools to collect, manage, and analyse it.

Need to create value from big data by informing building owners/managers, financiers, and practitioners in general to identify low performing buildings, and recognise improvements that will likely have a significant impact in terms of savings

Next steps

2nd Phase: New contract

- Maintenance and update of the website.
- **Data validation, quality control and gap filling.**
- **Acquisition of data.**
- Revamping the existing website.
- Feasibility study for launching an EU buildings **big data initiative.**

- 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**
- **Comprehensive study to define and collect data on building renovation, and the uptake of NZEB**

LUISA/Territorial Modelling Platform

JRC-REGIO Knowledge Centre for Territorial Policies database for ex-ante evaluation of EC policies that have a direct or indirect territorial impact

Territorial Dashboard (T-Board)

interactive tool for multi-sector policy planning that has indicators at NUTS-0, NUTS-2 and NUTS-3 level and thematic analysis useful for a variety of policy fields (i.e. education, employment, energy, environment and climate, social issues, etc.)

The pre-release version: <http://ec.europa.eu/jrc/en/territorial-policies/t-board>