

WORKSHOP

ENERGY LABELLING OF BUILDINGS AND COST-OPTIMAL LEVEL CALCULATIONS

22 April 2025 - Astana, Kazakhstan

The European Union's experience in energy efficiency and certification of buildings

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General information on SECCA

Sustainable Energy Connectivity in Central Asia (SECCA):

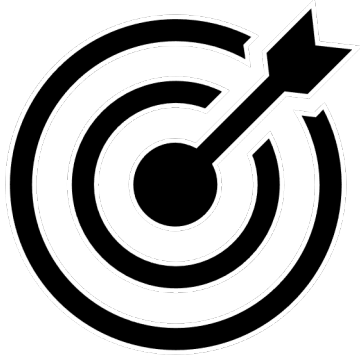
EU-funded regional cooperation project between the European Union and its partner countries in Central Asia in the field of sustainable energy

Partner countries:

Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan



Project objective and outputs



Overall Objective:

to promote a more sustainable energy mix in the Central Asia region in line with EU best practices



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the European Union

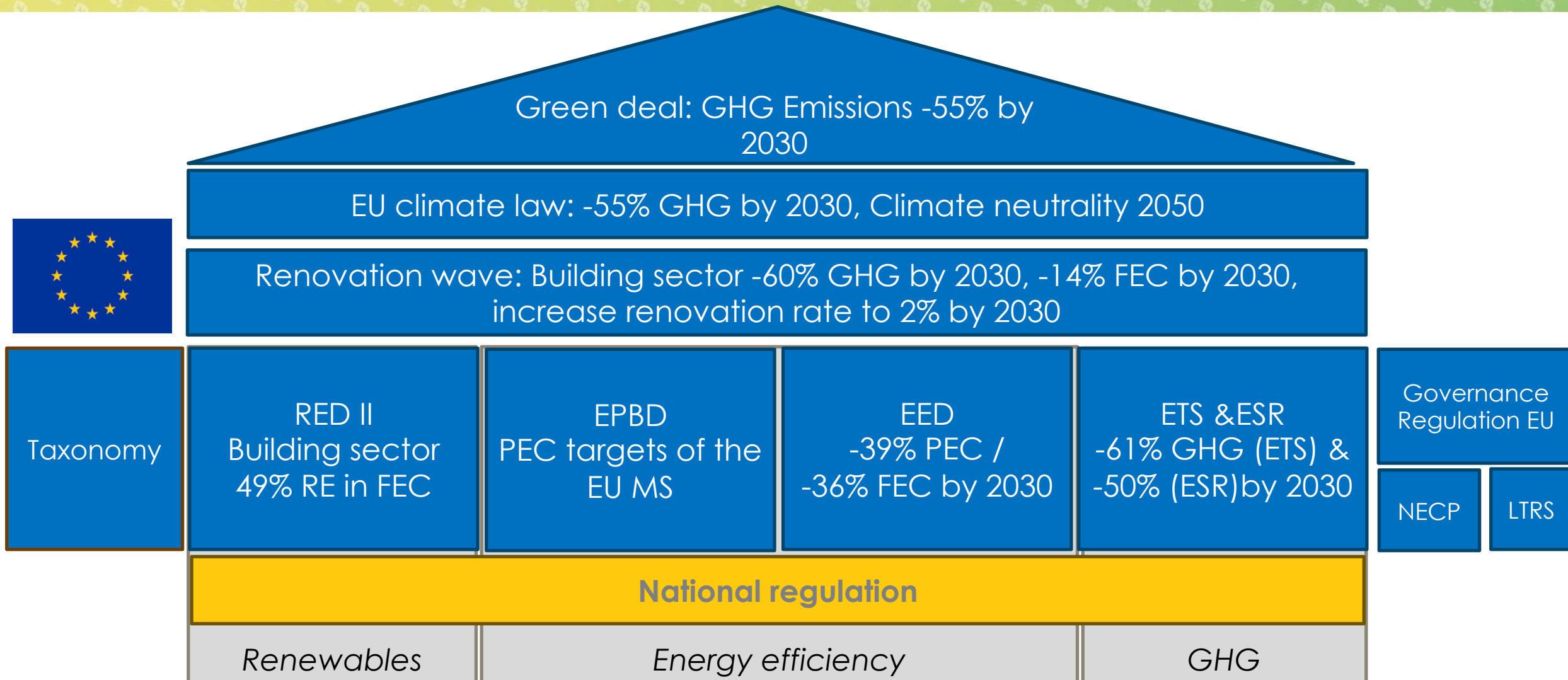


EUROPEAN UNION'S EXPERIENCE IN ENERGY EFFICIENCY



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EU policy framework for integrated Energy and Climate planning



Energy Efficiency first principle

- **Energy Efficiency** is **one of the key pillars** not only **to meet EU's climate objectives** but also to **reduce dependence on fossil fuels** and **increase security of supply** and the **use of renewable energy**
- **Energy Efficiency first (EE1st) principle** is generally understood as a **guiding principle for energy-related policymaking, planning, and investments**
- The principle aims **to treat energy efficiency as a source of energy** in its own right in which the public and the private sector can invest ahead of other more complex or costly energy sources
- This includes **giving priority to demand-side solutions** whenever **they are more cost-effective** than investments in energy infrastructure to meet policy objectives

Role of Building stock

- Buildings account for approximately **40% of final energy consumption**
- Investing in EE measures in buildings can yield **substantial energy savings**, while **supporting economic growth, sustainable development** and **creating jobs**
- Greater use of **energy-efficient appliances** and **technologies**, combined with **renewable energy**, are cost-effective ways of enhancing **the security of energy supply**

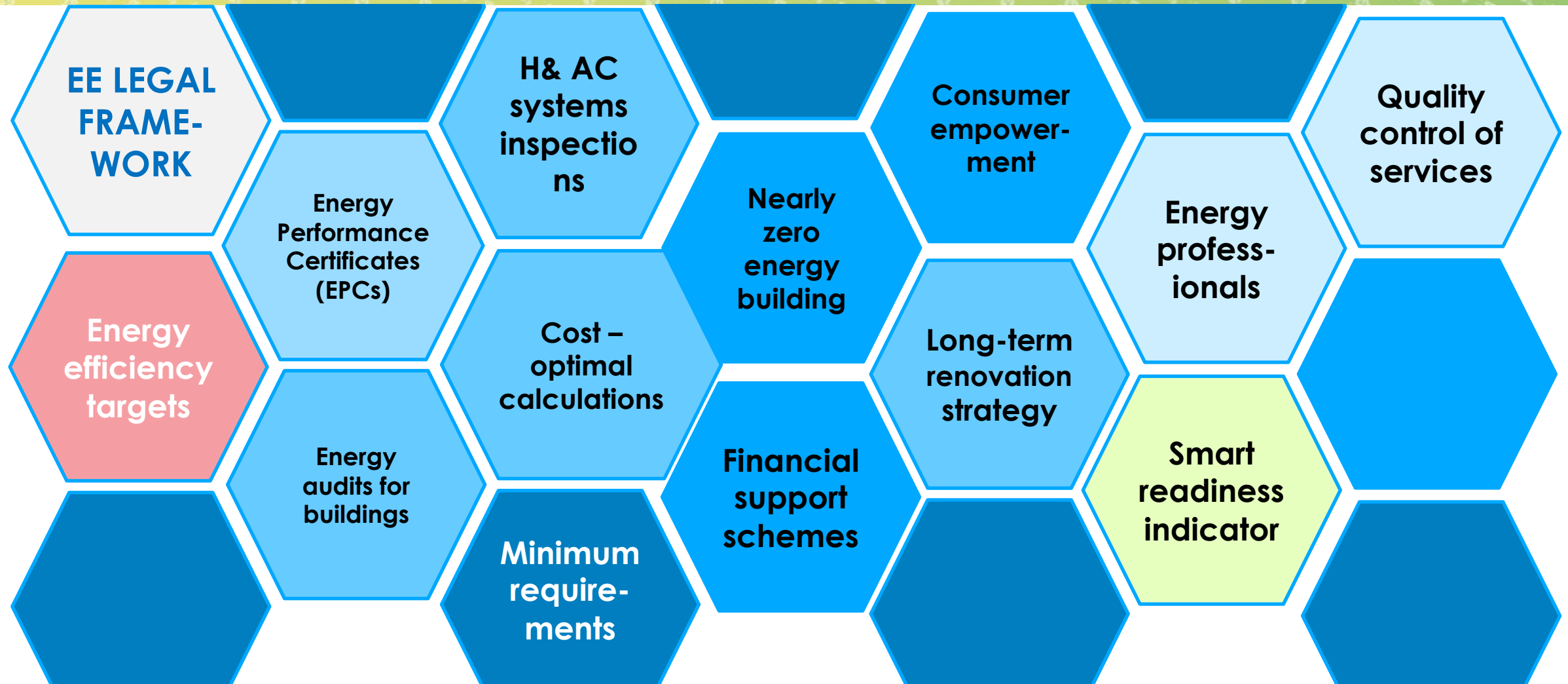


EUROPEAN UNION'S EXPERIENCE IN CERTIFICATION OF BUILDINGS



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Policy elements and instruments/ tools for EE in Buildings



Evolution of Energy Performance Certification of Buildings concept

2002

Directive 2002/91/EC – EPBD 2002

- Introduced EPCs for buildings when constructed, sold, or rented
- Emphasized improving energy performance of buildings
- Mandated regular inspection of boilers and air-conditioning systems

2010

Directive 2010/31/EU – EPBD Recast

- Introduced "nearly zero-energy buildings" (NZEB) concept
- All new buildings to be NZEB by end of 2020
- Enhanced user-friendliness of EPCs and promoted wider dissemination

2018

Directive (EU) 2018/844 - EPBD Revision

- Aims to decarbonize building stock by 2050
- Promotes smart technologies and e-mobility
- Encourages use of financial tools for energy efficiency improvements
- Stresses the use of EPC for the Long-term renovation strategy

2023



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The revised Building Energy Performance Directive introduces various changes

2020

All new buildings in EU must be **Near Zero Energy Buildings** (NZEB)

2025

Energy performance certificates (EPCs) must be based on a **harmonised energy performance scale** by 2025

2030

All buildings must have a **smart readiness indicator** (SRI) by 2026 to assess their ability to integrate smart technologies

All new buildings in the EU must be **zero-emission buildings** (ZEBs) from 2030

2050

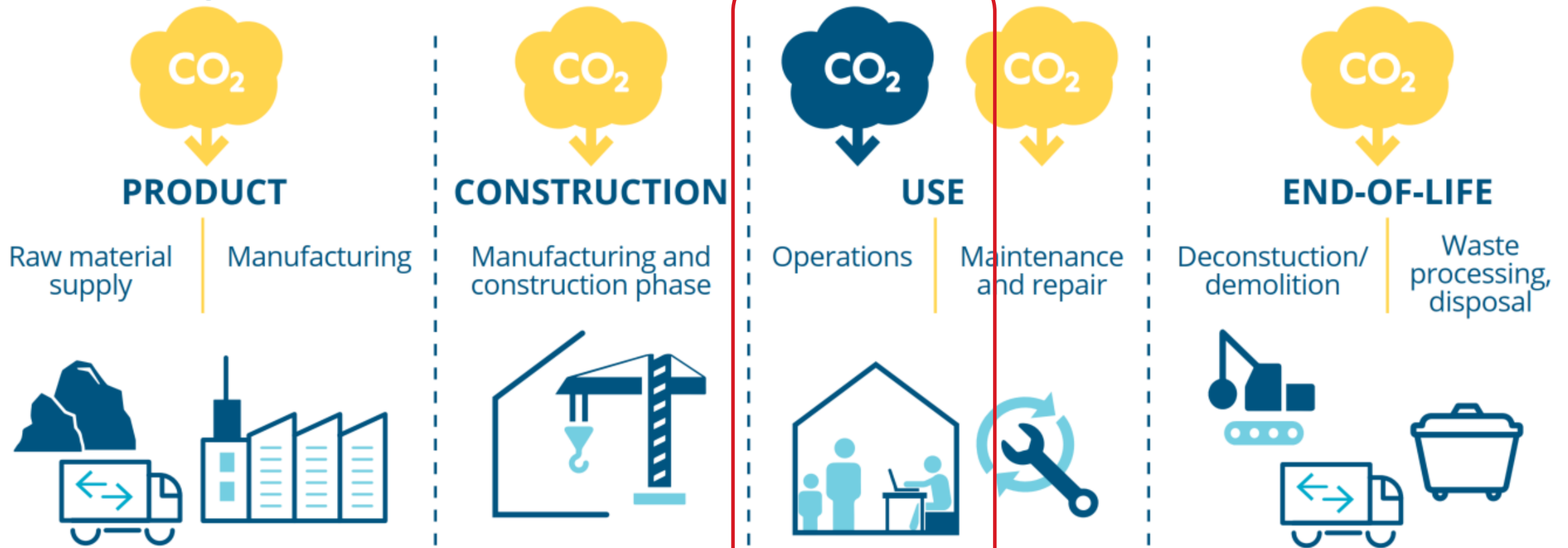
Existing PUBLIC buildings must be **renovated to a high energy performance level**, with minimum energy performance standards set at the EU level

Building **life cycle carbon emissions calculation** will be introduced

All new **PUBLIC** buildings must be **zero-emission buildings** (ZEBs from 2027)

**DECARBONIZED
BUILDING STOCK IN
2050**

Zero-emission buildings are a new aim for making buildings more climate friendly



**The current
scope of
Performance
evaluations**

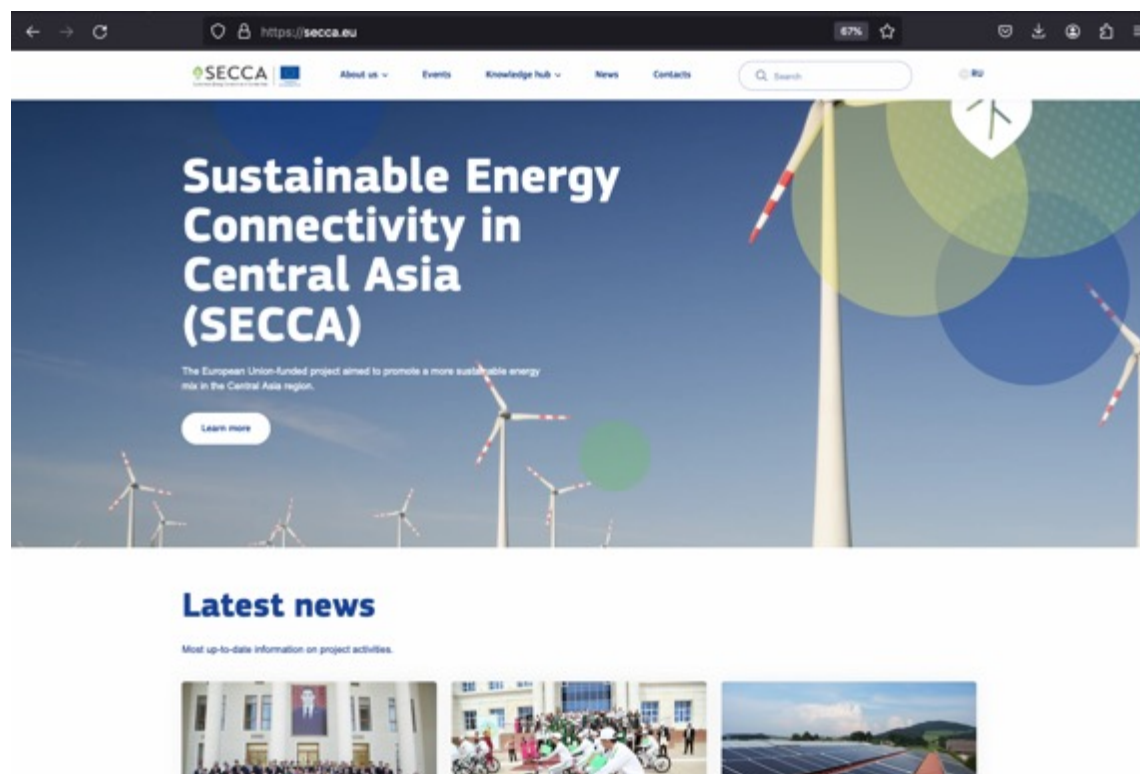


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HE-related section on the SECCA website

Latest News and Events

[www.secca.eu](https://secca.eu)



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