

Efficiency + decarbonization of heating and cooling, LUXEMBOURG



New Regulation “Energy performance of buildings”

- Transposition of new EPBD and EED
- Efficiency + decarbonization of heating and cooling
- Energy performance requirements:

1. Component-specific technical requirements:

- Insulation of the building envelope (Limits on the U -Values of components)
- Heat protection in summer (Limitation on the transmission level of sun light)
- Airtightness (Limits on the envelope)
- Requirements on technical systems

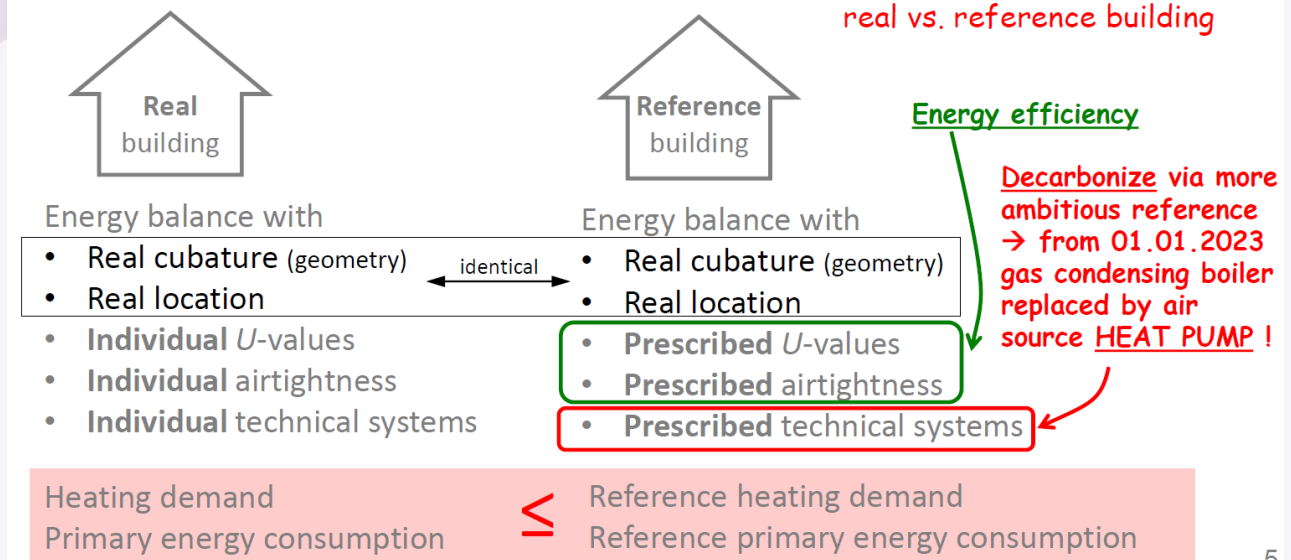
2. Building-specific limitation of the energy demand:

- Heating demand (→ Thermal insulation class)
- Primary energy consumption (→ Energy efficiency class)

New reference building methodology:

- *Reference building sets the reference for energy demand*
- *Heat pumps reference system in reference building from 2023*

Idea: compute two energy balances and compare





Advantages of the reference building methodology:

- **become independent from building cubature** (geometry) → don't limit architectural creativity and freedom,
- **become independent from the buildings future location** (“neutralize” for example exposure to wind and sun),
- **the influence of “external factors”** (wind, sun, ...) **increases with higher energy efficiency standards** → reference building methodology guarantees buildability even under “bad” external conditions.

Decarbonization: HEAT PUMP in reference building from 2023:

- **fossil free heating set as reference** (“electricity based buildings”),
- fossil based heatings **not “forbidden”, but practically impossible** to reach the reference energy performance without heat pump.

Further information



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Energy performance of buildings



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Énergie et de
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Further information

Complete presentation *Energy performance of buildings regulation in Luxembourg* available at:

www.ca-eed.eu

For more information contact:

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