



REHVA Brussels Summit

Zero emission buildings- how to decarbonise heating and cooling

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ambitious revision of the Energy Performance of Buildings

- **Climate Target Plan:** by 2030 the EU should reduce buildings' GHG emissions by 60%, their final energy consumption by 14% and energy consumption for heating and cooling by 18%.
- **Renovation Wave**

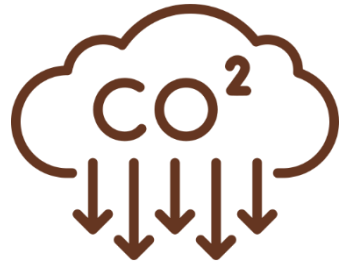


Twofold objective:

→ Contribute to **reducing buildings' GHG emissions and final energy consumption by 2030**

→ Provide a long-term vision for buildings and ensure an adequate contribution to achieving **climate neutrality in 2050**

What are the priority areas



Renovation

- National Building Renovation Plans
- Minimum Energy Performance Standards
- Energy Performance Certificates
- Renovation passports for individual buildings

Decarbonisation

- Zero-emission buildings as new standard for new buildings and 2050 vision for building stock
- Consideration of whole life cycle carbon
- Phasing out of incentives for fossil fuels and new legal basis for national bans

Modernisation & system integration

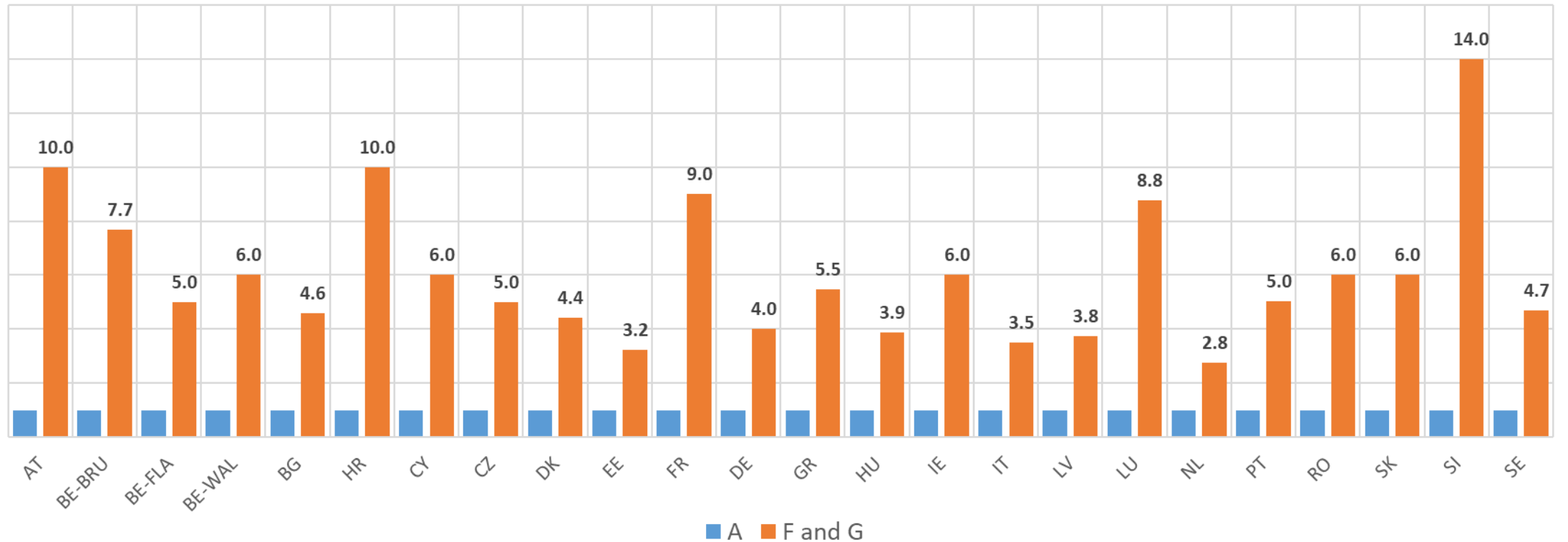
- Infrastructure for sustainable mobility
- EPC digitalisation & databases
- Smart Readiness Indicator

Financing

- Public and private financing & technical assistance
- Deep renovation standard
- Priority to vulnerable households and people affected by energy poverty

G class buildings consume 3 to 14 times more than an A class and this shows in the energy bills

Aproximate ratio between A and F&G classes in the EU residential sector



A new vision for Zero Emission Buildings

From Nearly zero energy to zero emission buildings

- Update based on benchmarks per climatic zones, to be applied by 2030 (2027 for public buildings)
- Stronger incentive to on-site renewables, efficient district heating and energy communities
- Zero-emission buildings become the level to be attained by a deep renovation as of 2030 and the vision for the building stock in 2050
- Indoor air quality requirements



The life-cycle Global Warming Potential (GWP) of new buildings will have to be calculated as of 2030 in accordance with the Level(s) framework, informing on whole life-cycle carbon emissions (2027 for large buildings)

Strengthened requirements for recharging of e-vehicles, and mandatory bicycle parking in new buildings

Beyond the operational phase to the whole life-cycle carbon

- First steps towards addressing carbon emissions over the whole life-cycle of a building
- National building renovation plans must include **policies on reduction of whole life-cycle greenhouse gas emissions** in buildings & **the uptake of carbon removal** - Annex II, point c, left column, point h
- Mandatory **calculation of life-cycle global warming potential** for new buildings as of 2030 and new large buildings as of 2027 - Article 7(2), Annex III section II
- EPCs: yes/no indication and calculated value of GWP = voluntary elements Annex V, point 2 (c), (d) + information on carbon removals associated to the temporary storage of carbon in or on buildings

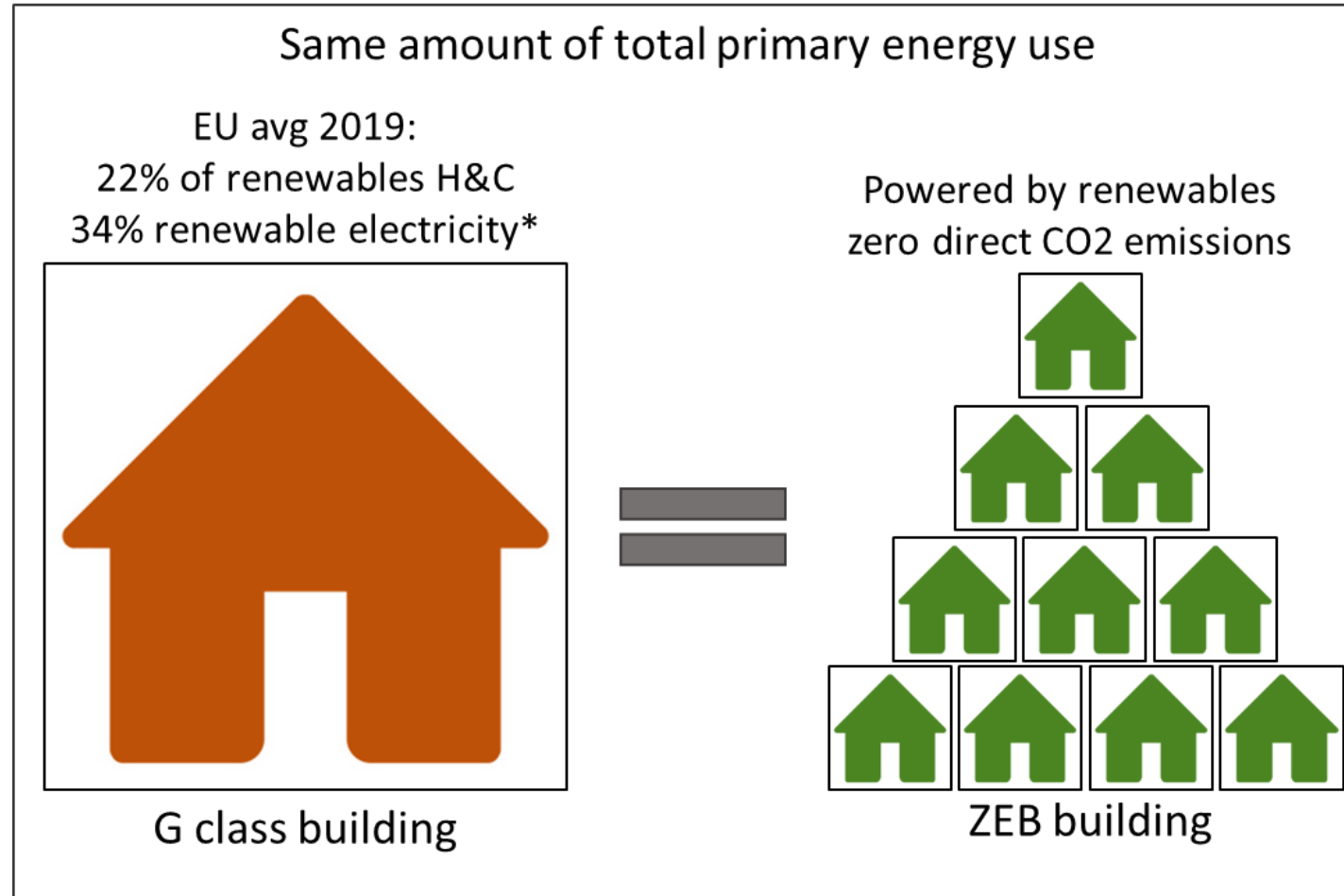


Solar energy in buildings- Article 9a *REPowerEU* amendment

- New buildings to be designed to optimise their solar energy generation potential
- Solar energy installations are required:
 - (a) by 31 December 2026, on all **new** public and commercial buildings with useful floor area larger than 250 sqm;
 - (b) by 31 December 2027, on all **existing** public and commercial buildings with useful floor area larger than 250 sqm; and
 - (c) by 31 December 2029, on **all new residential buildings**.



significantly transforming how buildings perform



* Assuming 400-500 kWh/(m2.yr) for a G class and 40-50 kWh/(m2.yr) for a ZEB

**according to Eurostat SHARES 2019



Thank you