

# Get Energy Efficiency First Implemented: Buildings

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MAKING THE ENERGY EFFICIENCY FIRST PRINCIPLE OPERATIONAL

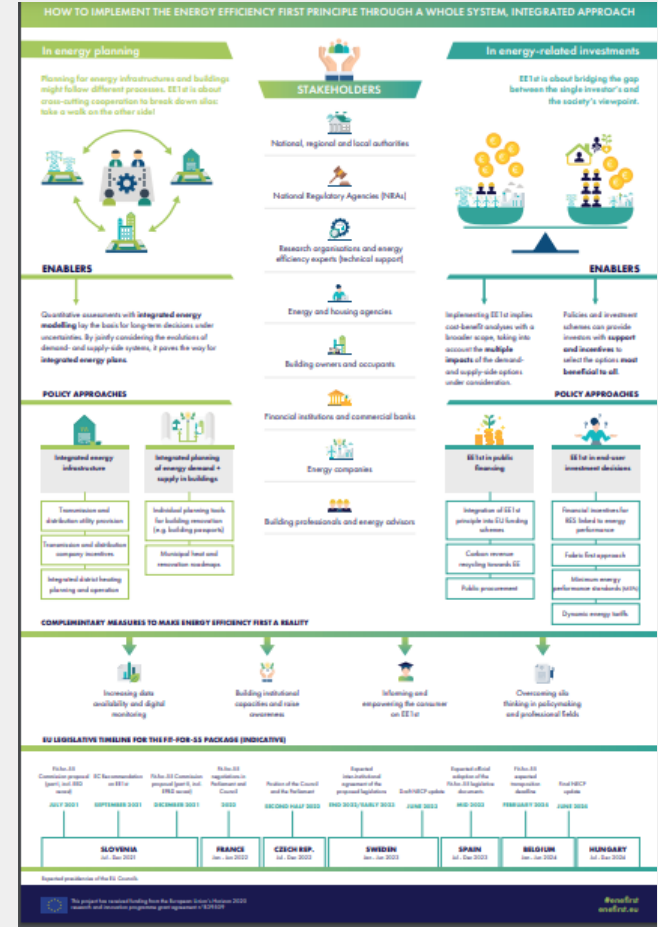


# Content

- ▶ Integrated approach to EE1ST in buildings
- ▶ Positive societal impacts
- ▶ Cross-cutting approach
- ▶ Is fit-for-55 fit for efficiency first ?
- ▶ Conclusions



*EE1st can be a way to promote integrated planning and investment decisions for the energy system where supply-side and demand-side resources are considered jointly to provide long-term benefits to society and the energy system as a whole.*



## Energy Efficiency First as a way to promote **integrated approaches...**

### ...in energy planning

Integrated energy modelling

Integrated **energy infrastructure** planning

Integrated planning of **energy demand & supply** in buildings

### ...in energy-related investments

Considering **multiple impacts** in investment decisions

EE1st in public financing

EE1st in end user investment decisions

Energy market regulations

Enable Energy Efficiency First through **complementary approaches**

# WHAT DOES AN INTEGRATED ENERGY PLANNING APPROACH LOOKS LIKE?

- Consideration of energy-efficient heat supply and renovation potential
- Individual planning tools for building renovation:
  - Building renovation passports + EPC
- Municipal heat and renovation roadmaps
  - Assess potential for energy-efficient and decarbonised heat supply given estimated demand
  - Demand reduction and upgrade of district or decentralized heating systems towards renewable heat supply
  - Update and strengthen the requirements of long-term renovation strategies and demand the development of municipal renovation strategies



## Integrating EE1st in energy-related investment decisions:

Considering **multiple impacts** in investment decisions

### EE1st in **public financing**

Integration of EE1st principle into  
EU funding streams

Carbon revenue recycling  
towards energy efficiency

Integration of EE1st in public  
procurement

### EE1st in **end-user investment** decisions

Financial incentives for RES linked  
to energy performance

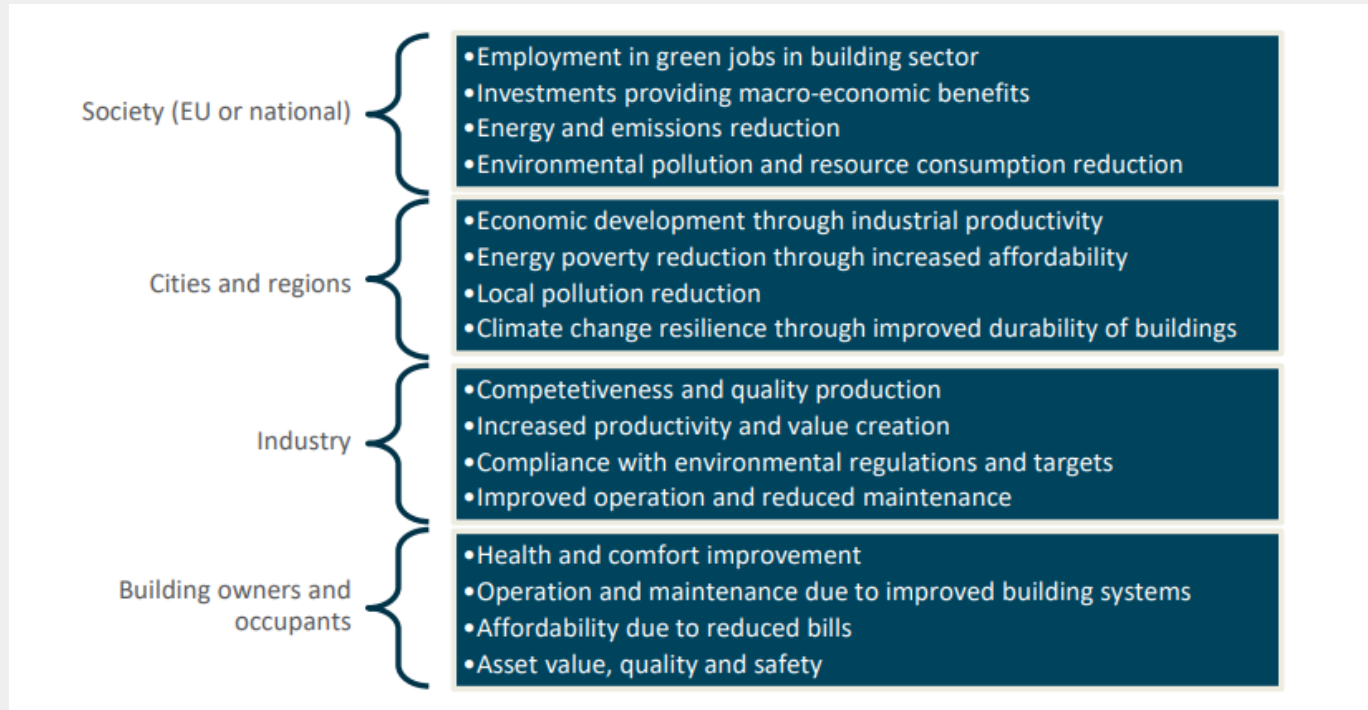
Fabric first approach

Minimum energy performance  
standards (MEPS)

Dynamic tariffs

*Consideration of multiple impacts should be part of the assessment of different scenarios of supply- and demand-side options to draw a comprehensive picture of the societal benefits of energy-related decisions.*

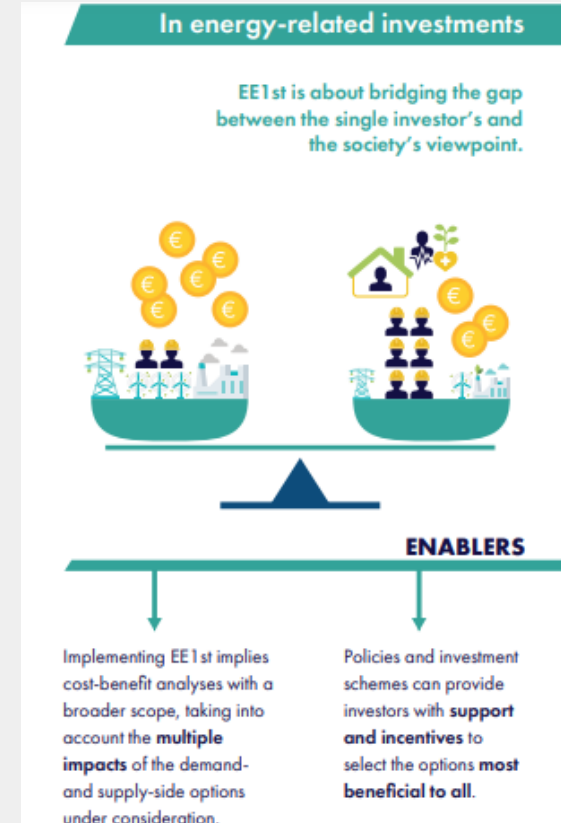
# POSITIVE IMPACTS





## HOW TO ACHIEVE IT?

1. Integration of EE1st principles into EU funding streams
2. Financial incentives for renewable energy linked to energy performance
  - Optimise supply- and demand-side investments: link renewable energy installations to a minimum energy performance level of the building
3. Fabric first approach
  - Maximize energy performance of components and materials of the building fabric to cost-effective level first





## CROSS-CUTTING APPROACHES

Complementary measures to make energy efficiency first a reality



Increasing data  
availability and digital  
monitoring



Building institutional  
capacities and raise  
awareness



Informing and  
empowering the consumer  
on EE 1<sup>st</sup>

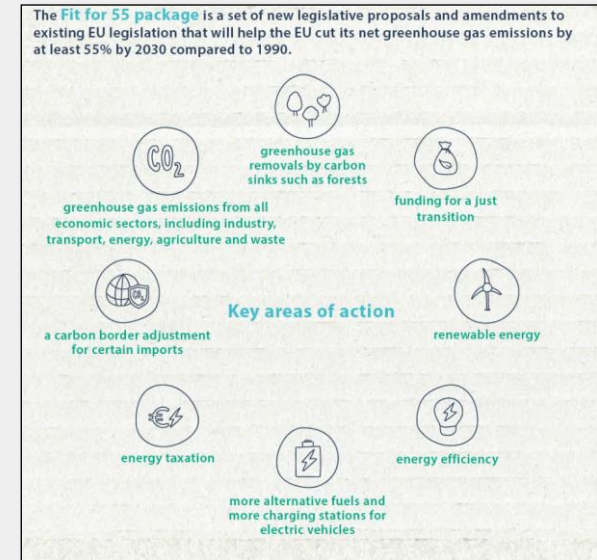


Overcoming silo  
thinking in policymaking  
and professional fields

# IS FIT-FOR-55 FIT FOR EFFICIENCY FIRST?

Improved interaction between EED, RED, EPBD and eco-design directives

- EED framework for planning of low-carbon H&C by identifying the energy efficiency and waste heat potential in each Member State
- RED requires assessment of RE potential and sets clear targets for increasing share of RE energy in heating and cooling
- First step to integrate planning of demand- and supply, as part of national energy and climate plans (NECPs).



## IS FIT-FOR-55 FIT FOR EFFICIENCY FIRST?

Integrated planning of energy demand and supply in buildings needed:

- Decarbonisation of buildings and distributed heating systems (e.g., gas and oil boilers, coal or peat stoves) often planned at local level.
- Article 3 EED (recast): EE1st principle should be taken into account in national and regional energy planning.
  - This could be **extended to local energy planning** when dealing with buildings and the related energy systems (i.e. Fabric First approach)

# IS FIT-FOR-55 FIT FOR EFFICIENCY FIRST?

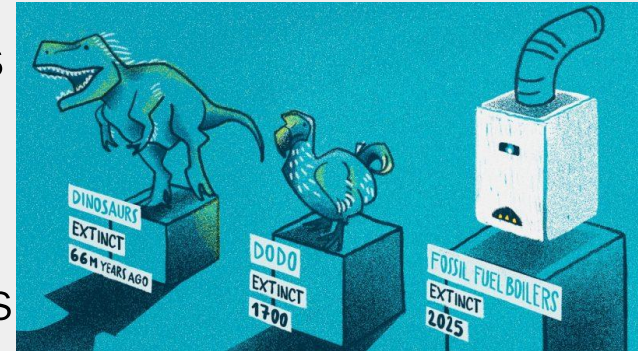
Opportunities to strengthen efficiency first in EPBD:

- good basis for improving the renovation ecosystem (planning, financing, information and advisory tools) but “energy efficiency first” principle not reflected
- MEPS: requirements by 2033 – no dynamic upgrade of performance requirements for all buildings after 2030/2033



# IS FIT-FOR-55 FIT FOR EFFICIENCY FIRST?

- Phase-out fossil fuels: no financial incentives for the installation of fossil fuel boilers from 2027
- National Building renovation plans - progress reports integrated into the NECPs:
  - energy efficiency targets and measures to align better with targets and planned measures for energy supply of buildings.



Source: <https://www.euractiv.com/section/energy/opinion/heating-our-homes-without-heating-up-the-planet>

## RePOWER EU & EU SAVE PLAN

- Plan to make Europe independent from Russian fossil fuels well before 2030
- Recognition of importance to save energy (increased EE target) and renewables
- Interventions to reduce final energy consumption in buildings via renovation
  - MEPS from G to D class
  - Tighten heating system requirements for existing buildings
- Increased EE target, more ambition from co-legislators
  - Push for fast increase of RES: speedy roll out of heat pumps, solar rooftop initiative
  - Stop to subsidies for fossil fuel-based boilers in buildings from 2027 to 2025

# BETTER INSULATION WOULD REDUCE USE OF FOSSIL FUELS FOR SPACE HEATING

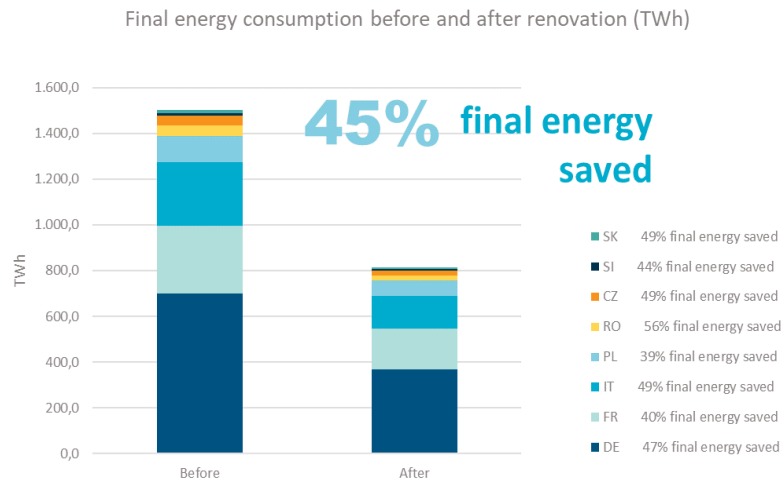


Fig. A Final energy consumption for space heating in buildings before and after renovation (in TWh) and final energy saved (%) in each country

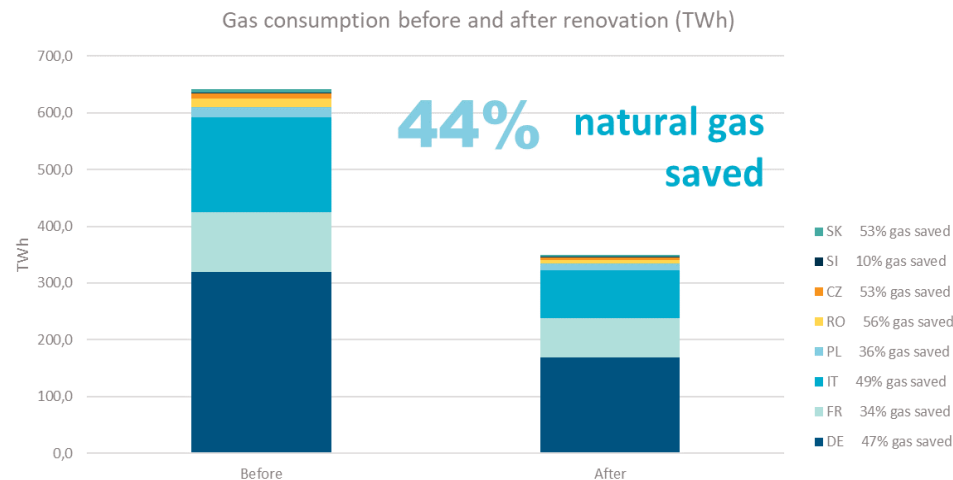


Fig. B Final gas consumption for space heating in buildings before and after renovation (in TWh) and gas saved (%) after renovation



## CONCLUSION

Buildings are part of EU's vital infrastructure

Holistic approach to EE1ST

- Pursue reducing demand to steady increase of renewable energy supply as alternative to fossil fuel
- Demand-side and supply-side resources considered jointly
- Integrated approach for planning, investment decisions and market regulations

Fit-for-55 great opportunity to make EE1ST operational



# Thank you

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 839509. The sole responsibility for the content of this presentation lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.