



Building decarbonisation in Europe

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- Context
 - Building sector characteristics
 - EU Climate objectives
- EU Green Deal proposals to reach 55% GHG emission reduction by 2030
 - Demand reduction
 - Heat decarbonisation
- National developments
 - New buildings
 - Highlights
- Impact of Russian invasion on all this



Buildings in Europe

- Over 200 million, app. 75% residential
- Diverse quality, type and ownership structure
- Responsible for 36% of energy-related GHG emissions
- 80% of energy for buildings is for space and water heating
- 75% of building energy use is fossil based
- Heating sources (wide differences between countries):
 - Gas 43%
 - Renewables 24%
 - Oil 13%
 - District heating 12%



EU climate objectives



- 55% GHG emission reduction by 2030 (compared to 1990)
- Climate neutrality by 2050
- 2020 target was 30% GHG emission reduction – achieved
- Building sector expected to achieve 60% GHG emission reduction via a combination of energy demand reduction and heat decarbonisation

EU proposals to reduce buildings emissions

Energy demand reduction



- All new buildings fossil free by 2030
- No EU public funding for fossil fuels from 2027
- Renovation of 30% of worst quality buildings by 2033
- 3% of public buildings have to be renovated annually to nearly zero energy buildings
- National building Renovation Action Plans, with a view to phase out fossil fuels for heating and cooling by 2040

EU proposals to reduce buildings emissions

Heat decarbonisation



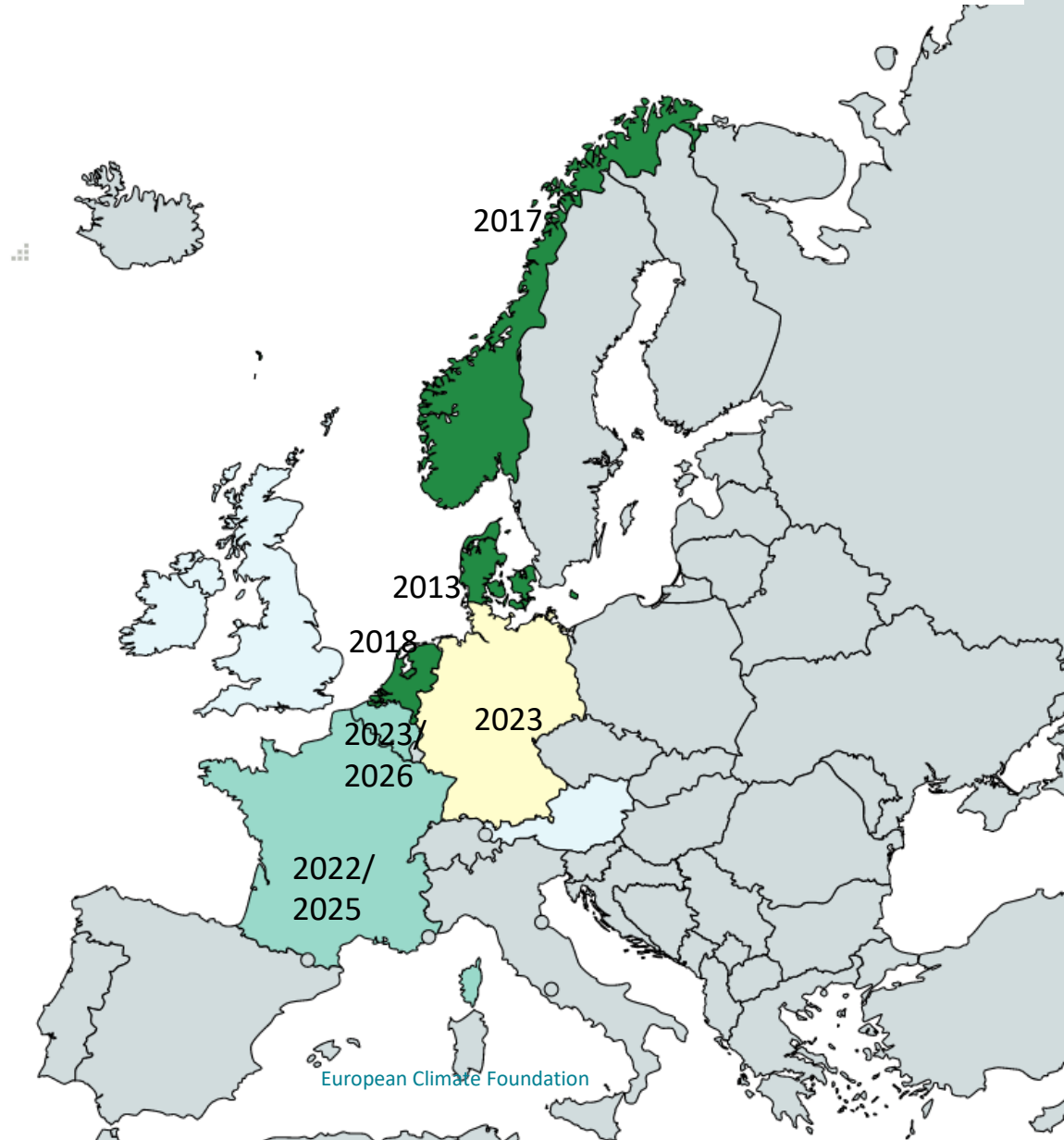
- Energy label: all fossil fuel heating boilers in the lowest energy label category
- Increasing shares of renewables in heating required
- Local heat planning for municipalities of over 50,000 people
- Carbon price for heating (& transport) fuels

National developments - new buildings



Ban on fossil fuels in new buildings

- Implemented
- In preparation
- Political announcement
- No ban, but new regulation limits fossil fuel heating (2023)



National developments - other



- Germany to introduce a requirement to use 65% renewables when replacing a fossil fuel boiler (2024)
- Denmark discussing a ban on fossil fuels for heating
- UK and NL discussing a requirement on suppliers of heating appliances to increasing share of heat pumps
- High heat pump ambitions in several countries

What does the Russian invasion of Ukraine mean for the EU buildings agenda?



- Energy security is at the top of the political agenda
- Political commitment to stop importing Russian fossil fuels asap (2027)
- Coal import embargo per August 2022, oil embargo still debated, gas embargo the most difficult (45% of EU gas imports from Russia)
- EU plan to reduce reliance on Russian gas & oil:
 - Diversification of imports
 - Behavioural change
 - Energy efficiency and renewable energy targets for 2030 increased
 - Increase ambition on renovation, heat pump deployment and district heating
 - Obligation to put solar panels on new buildings (2025 – 2029)
 - Possible phase out date of stand-alone gas boilers by 2029