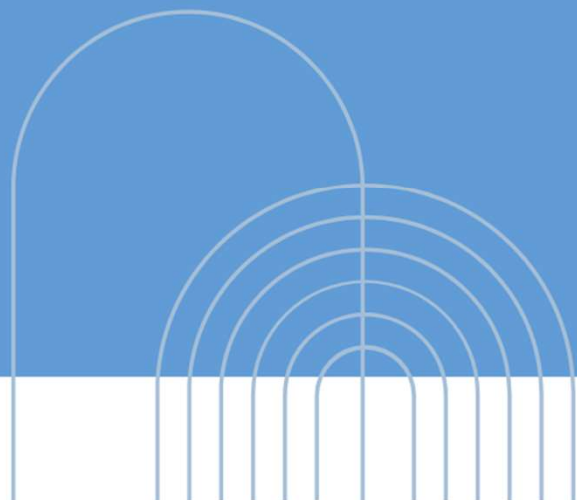




Policy Recommendations and Good Practices



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01.

THE CLIMATE FRAMEWORK FOR 2030

Current EU policies to achieve the 2030 climate targets

02.

PRIORITIES FOR 2040

Policy priorities for the EU climate framework for 2040

03.

GOOD PRACTICES

National legislation and best practice examples





EU policy framework 2030

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The EU's climate framework for 2030

- In July 2021, the **EU Climate Law** set a legally binding target to reduce GHG emissions by 55% by 2030 and achieve climate neutrality by 2050
- The '**Fit for 55**' package is a comprehensive set of proposals to align EU legislation with the 2030 target
- Several relevant pieces of legislation were introduced or revised, including the **Renewable Energy Directive**, the **Energy Efficiency Directive**, and the **Energy Performance of Buildings Directive**.



Renewable Energy Directive

- The **EU-wide RES target for 2030** was raised from 32% to 42.5%, aiming for an indicative target of 45%
- A **binding target for RES in H&C** was introduced, as well as indicative **sub-sectoral targets** for RES in buildings, district heating and industry
- Several measures were introduced to **streamline permitting** procedures for RES projects, such as Renewables Acceleration Areas.



Energy Efficiency Directive

- New obligation to carry out **local heating and cooling plans** in municipalities with more than 45 000 inhabitants
- **New criteria for efficient district heating and cooling** networks, which shall increase their share of RES and/or waste heat up to reach 100% by 2050 (or 0 grams of GHG emissions/kWh)
- New measures aim at **decarbonising the data centres sector**, which are cooling-intensive, for which geothermal energy is a renewable, efficient and cost-competitive source



Energy Performance of Buildings Directive

- **National Buildings Renovation Plans** shall be submitted every 5 years, indicating inter alia the share of RES in buildings for different uses and roadmap to increase it, and the measures to decarbonise H&C
- **National databases for energy performance of buildings**, to facilitate the drafting of local H&C plans, and other measures to improve the availability, accessibility and exchange of data
- New buildings shall be optimized to generate solar energy and Member States shall require the **installation of solar technologies**, such as solar thermal, on certain types of buildings by different deadlines



Fit for 55: Recap for H&C: Opportunities for RES heat sources

Let's make the most of its implementation!

Energy Efficiency Directive	Renewable Energy Directive	Energy Performance of Building Directive
Adopted 09/2023, into force 10/10/23	Adopted 10/2023, into force 20/11/23	Adoption upcoming (Q1 2024)
11.7% reduction of energy consumption by 2030 (vs 2020) (art. 4)	42.5% target for RES in 2030 (art. 3) Binding target for RES in H&C (art. 23)	Solar Mandate (art. 10), requiring that rooftops above a certain surface be equipped with solar technologies (photovoltaic, solar thermal or PVT) by specific dates as from Dec. 26
National comprehensive assessments for efficient Heating & Cooling (H&C) (art. 25)	Indicative sub-sectoral targets for: • buildings (art. 15a): 49% RES by 2030 • for industry, • and district heating (art., 22a, 24)	Minimum energy performance standards (MEPS)
Mandatory H&C plans for cities above 45,000 inhabitants (art. 25)		Phase out financial incentives for stand-alone fossil boilers by 31/12/2024
Efficient District Heating & Cooling criteria (art. 26) for new or substantially refurbished systems	Streamlined permitting procedures for renewable acceleration areas (art. 15c); and provisions for the installation of solar energy equipment and co-located energy assets (art. 16c)	One-stop-shops for the provision of information to citizens and relevant local actors
EU Emissions Trading System (ETS) 2023 revision including Buildings		

Fit for 55: Recap for H&C: Opportunities for RES heat sources

Let's make the most of its implementation!



Solar mandate- Article 10 of EPBD

A mandate for all solar technologies:
PV
Solar Thermal
PVT



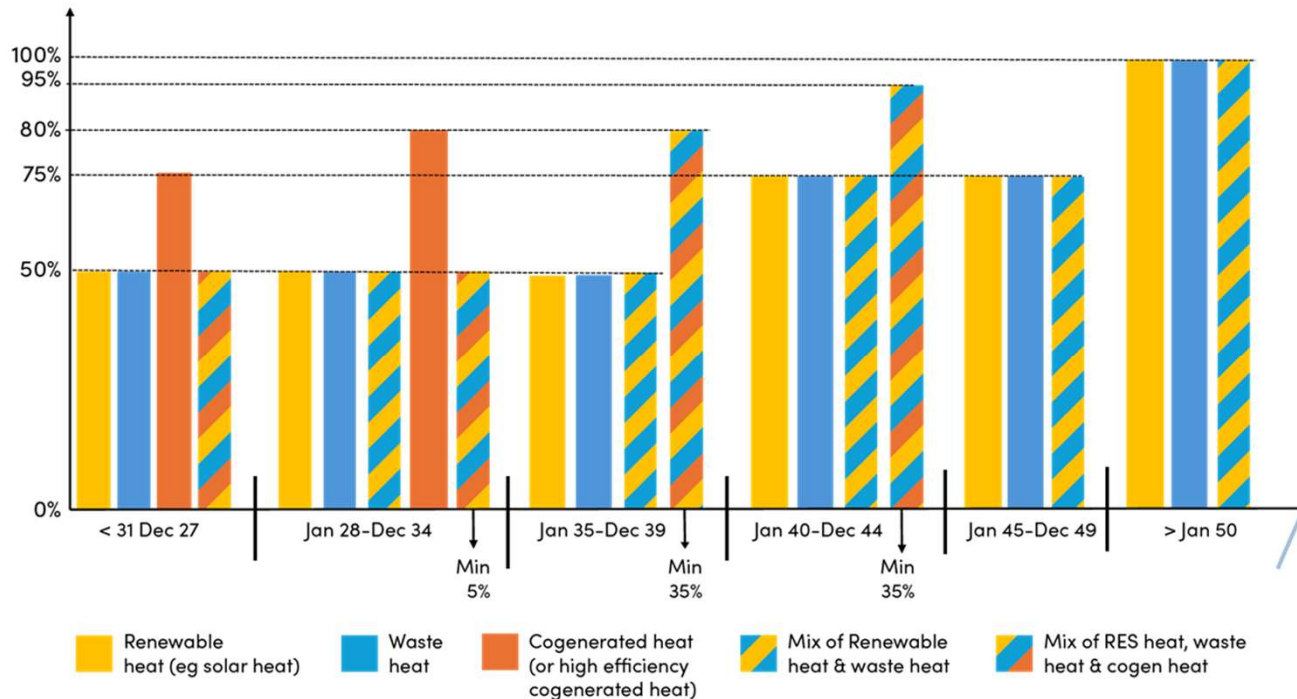
*in case of major renovation, action requiring a permit, works on the roof, or installation of a technical building system (i.e. heating system)



Fit for 55: Recap for H&C: Opportunities for RES heat sources

Let's make the most of its implementation!

The path towards “efficient district heating”, as per the requirements of the 2023 Energy Efficiency Directive



By specific deadlines, district heating networks will need to comply with any of the above options i.e. containing an increasing minimum share of RES heat (or others), reaching 100% in 2050



Recommendations for 2030

Ensure a timely transposition:

- Member States must timely transpose the many provisions on heating and cooling, e.g. the binding target for RES H&C, the uptake of RHC in DHC, data centres, buildings, etc.

Adequate financial, technical, and staffing resources for implementation:

- Financial resources, technical expertise and information, and sufficient workforce will be key to a successful implementation, e.g. for local H&C plans

Bridge the data gap:

- The availability, accessibility and exchange of reliable data is critical to decarbonise H&C and must become a priority for EU, national, and local policymakers



Priorities for 2040

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Towards 2040

- The EU must adopt the **2040 target** for GHG emissions reduction, and adapt its climate and energy framework accordingly
- **Grid congestion and stability** are rapidly becoming an urgent issue since electrification is a key driver for the climate transition
- **Energy affordability** is at the top of the EU agenda given its impact on **industrial competitiveness** and affordable **housing**



The 2040 target

- The EU Climate Law requires to set an intermediate **target for 2040**, similarly to the 55% reduction target set for 2030
- The **Commission recommended a 90% reduction target** but must put forward a legislative proposal to enshrine it in the Climate Law
- The Commission must then **adapt the climate framework** accordingly; to promote RES cooling, it is crucial to maintain and enhance the current architecture with targeted measures for H&C



Grid congestion and stability

- As electrification of end uses progresses, it becomes more urgent to **tackle grid congestion and peaks in demand**, for example due to cooling demand during heatwaves
- The 2023 EU Action Plan for Grids estimates **€584 billion in investments by 2030** to modernise and expand the grid
- RES H&C solutions like **geothermal and solar thermal offer a cost-effective way to reduce investment needs** and avoid oversizing the power grid



New priorities

- Affordable **energy prices** are key to industrial competitiveness and housing affordability in Europe
- These are top priorities for the new Commission, which is working on a **Clean Industrial Deal** and an **Affordable Housing Action Plan**
- RES H&C solutions like **geothermal and solar thermal offer stable and competitive energy prices** in the long-term and already have an established manufacturing base in Europe



Recommendations for 2040

EU climate target and framework for 2040:

- Set an ambitious reduction target of at least 90%
- Prolong the current climate framework, notably the targeted measures for H&C

Grid congestion and stability:

- Promote geothermal and solar thermal H&C to alleviate the burden on the grid and ensure a cost-effective modernisation of the power network

Affordable energy for citizens and businesses:

- Promote geothermal and solar thermal as EU-made technologies providing stable and competitive energy prices to EU households and industry



Good practices

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Key elements and common practices of legislation affecting renewable cooling

- Local and Regional Regulations
- State Building Codes
- Local Climate Protection Plans
- Incentive Programs
- Planning and Zoning Regulations
- Energy Efficiency Initiatives
- Cooperation with Energy Providers
- Permitting Processes
- Monitoring and Reporting Requirements



An example: Summer comfort, the DH indicator (degrés-heures d'inconfort)

French RE 2020 legislation introduces two discomfort thresholds, based on the DH indicator in °C.h:

- High threshold: beyond this, the building is not compliant (excessive discomfort).
- Low threshold: below this, the building is compliant. No penalty to encourage to reach this low level of discomfort is necessary.
- Between these 2 thresholds, the building is compliant with the regulatory requirement but in order to encourage to increase building comfort during the summer period, a cooling charge is added to energy consumption (if the building is already air-conditioned, the air conditioning consumption is taken into account instead of this flat rate).



Renewable cooling in the new Euronext data centre in Bergamo

- In 2022 Euronext, the pan-European market infrastructure, has completed the migration of its Core Data Centre and related services from Basildon, UK, to the Aruba Global Cloud Data Centre IT3 in Bergamo, Italy.
- The migration has given Euronext better control over the sustainability of its operations, boasting the fact that the complex is 100% renewable energy powered.
- It sources its energy mainly via hydropower from a nearby river.
- As data centres are gluttons for energy, requiring an immense amount of power not only to generate the computers, but also to cool them down, geothermal energy and dynamic free cooling are the solutions chosen to this purpose.



