ENZA's Recommendations for the EU Heating and Cooling Strategy

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Introduction

In light of the upcoming EU Heating and Cooling Strategy, the European Net Zero Alliance (ENZA) advocates for a multi-energy, multi-technology and multi-sector approach. We need to support all viable clean solutions that help cut emissions from housing, businesses, district heating and industry. This should be tailored to local needs and infrastructure, including for rural and off-grid communities and industries, while maintaining local energy security, customer affordability, and economic competitiveness.

The upcoming EU Heating and Cooling Strategy should actively create a clear system that:

- Helps increase uptake of different clean technologies and efficient heating and cooling appliances.
- Remains technology-neutral and supports the deployment of locally optimal renewable heating and cooling solutions, including district heating, waste heat, CHP, heat pumps, solar thermal, solid biomass, renewable gases, geothermal energy, and hybrid systems.
- Encourages technology integration and sector coupling to enhance system flexibility and resilience.
- Protects consumers while allowing for local authorities, communities and businesses to identify the most suitable and cost-efficient ways to cut emissions.

ENZA Priorities and Recommendations

1. Adopt a multi-energy, multi-technology and multi-sector approach

Today, about 70% of energy used in the EU for heating and cooling comes from fossil fuels. Cutting Europe's heating and cooling emissions has never been more urgent, and will depend on how quickly we can deploy a diverse mix of clean technologies, solutions

and energy carriers at scale, adapted to local and sectoral needs. Assessing how ready and scalable different technologies are will help ensure the EU focuses on those that can make the biggest difference in reaching its climate and energy goals.

The EU Heating and Cooling Strategy can help by recognising the complementary role of renewable and low-carbon gases (biomethane, renewable liquid gases, hydrogen and derivatives), renewable and fossil-free electricity, and direct renewable heat (solar thermal, geothermal, solid biomass, waste heat). It should also support hybrid and integrated systems, including hybrid heat pumps, high-efficiency cogeneration, and district heating and cooling optimisation, allowing a combination of technologies to meet both residential and industrial needs efficiently. It should also include storage technologies like thermal energy storage.

The Strategy must acknowledge that there is no one-size-fits-all approach. It should promote local optimisation and sector coupling, allowing municipalities and regional authorities to define the most efficient mix for their territories, including practical solutions for rural and off-grid areas where grid expansion may not be feasible or cost-effective. It should also recognise the role of SMEs operating across the value chain. As manufacturers of components, developers of innovative solutions, installation and maintenance providers, and energy consumers, they have a significant part to play in implementing the Strategy on the ground.

The Heating and Cooling Strategy should:

- Encourage the installation of the most cost-effective, technically appropriate and locally suitable heating technology, while ensuring coherent and grid-efficient system planning.
- Integrate district heating and cooling networks with waste heat, renewable energy sources and energy storage.
- Encourage cross-sectoral dialogue and raise awareness of available technologies to industrial users, including by showcasing first-of-a-kind projects.
- Support infrastructure and investment by streamlining permitting and simplifying regulations, namely for district heating and waste-heat integration
- Provide EU/national funding, guarantees, and de-risking mechanisms for long-term projects.
- Encourage consumer uptake and installer readiness by providing stable support schemes for heating and cooling appliances, training installers, and setting up advisory platforms. At the same time, technology bans should be avoided as they stifle innovation or market development.
- Create a level playing field by ensuring that financial mechanisms and public funding treat all technologies contributing to the system's decarbonisation fairly,

accounting for CAPEX/OPEX differences, supporting hybridisation to maximise flexibility and efficiency, and extending eligibility to distribution-level investments and local flexibility tools that enable system optimisation. These mechanisms can take the form of EIB-backed loans, tax incentives, or similar support measures.

This multi-energy, multi-technology and multi-sector approach will help to ensure we are reducing heating and cooling emissions in a flexible, affordable, way that works for local communities. It will also help to create a more resilient energy system resilience, reduce overall energy costs for European businesses, industry and consumers, and ensure security of supply, particularly during seasonal peak demand.

2. Apply the Energy Efficiency First principle

Efficiency, both system and cost-efficiency, must be the guiding principle for the EU Heating and Cooling Strategy. That means considering the potential trade-offs of using one technology versus another for end consumers and weighing up how effectively each would interact with and support local networks, generation, and consumption.

The Heating and Cooling Strategy should:

- Support consumer demand for the most efficient heating technologies by encouraging both system-level opportunities, and individual solutions that together improve efficiency and make the best use of local resources and existing energy infrastructures
- Promote high-efficiency cogeneration and hybridisation of renewable-based installations to increase overall system performance, in coordination with integrated planning of local energy networks, as included in the Energy Efficiency Directive, to ensure grid efficiency and stability.

3. Set clear and measurable pathways

Translating EU ambition into practical action requires transparent national and local strategies for heating and cooling decarbonisation. The EU Heating and Cooling Strategy should guide Member States to define national and regional trajectories with measurable targets, covering both efficiency improvements and renewable energy deployment, in line with the Energy Efficiency Directive and the Renewable Energy Directive.

Local authorities must be empowered to implement these plans in collaboration with local energy companies, industrial users and consumers. Cross-border collaboration

should be encouraged to optimise infrastructure and system integration in border regions.

By establishing clear, measurable pathways with effective oversight, the Strategy can ensure that mature and scalable technologies drive tangible progress, local actors are empowered to act, and consumers benefit from a reliable, affordable, and decarbonised heating and cooling system.

4. Promote European-made clean technologies

Cutting heating and cooling emissions represents a major industrial opportunity for Europe, by offering the chance to strengthen the EU's energy independence, create jobs and support innovation. The EU Heating and Cooling Strategy should therefore actively prioritise EU-made technologies in public procurement and funding calls, promoting a "Made in Europe" preference while ensuring all clean technologies are treated equally.

The Heating & Cooling Strategy should:

- Strive for a true EU Single Market for heating and cooling systems and energy efficient solutions in buildings to ensure both the industry and consumers can benefit from economies of scale, resulting in lower costs for both.
- Support innovation and efficiency in manufacturing processes across Europe.
- Reduce administrative burdens and harmonise product requirements across the EU to control compliance costs and enable economies of scale for industry and consumers.

Coordinate market surveillance at EU level to ensure consistent enforcement of EU requirements and streamlined compliance across Member States.

5. Integrate heating and cooling into system planning

Effective decarbonisation requires coordinated planning across relevant energy infrastructures, while supporting decentralised renewable heating solutions that contribute to system flexibility and resilience. ENZA therefore calls for a Strategy that fosters integrated local and regional energy planning, aligning infrastructure development with heating and cooling demand, resource availability, and sector-specific needs. Connecting different energy carriers, technologies and sectors will be critical for improving efficiency, resilience, and affordability.

The Strategy also presents an opportunity to support heat-sharing and industrial symbiosis models. By connecting nearby users and producers of waste heat, and encouraging use of district heating networks, it could further help reduce emissions and

ultimately the costs of industrial processes. Streamlining the permitting process will be key to accelerating deployment, and proximity to heat users should be prioritised in project planning.

The Heating & Cooling Strategy should:

- Consider integrated planning by potentially reusing or adapting existing energy infrastructure networks, where cost-effective, to deliver clean heating in regions where new grid expansion is not feasible or economically viable.
- Foster cross-sectoral collaboration through EU-wide initiatives, such as a Strategic Dialogue on Heat Decarbonisation, to share best practices, coordinate infrastructure planning, and drive investment.
- Link heating and cooling decarbonisation to national building and social housing plans, ensuring installation of efficient appliances in renovations and new affordable housing projects.
- Simplify, harmonise, and digitalise permitting, enabling faster uptake of innovative projects while maintaining safety and regulatory compliance, while respecting local planning autonomy and citizen participation in project approval processes.

Conclusion

Cutting Europe's heating and cooling emissions is both an environmental necessity and an industrial opportunity. To meet climate and energy security objectives, the EU Heating and Cooling Strategy must enable a multi-energy, multi-technology and multi-sector transition that values all viable clean solutions according to their local potential.

By applying the efficiency-first principle, promoting EU-made technologies, and integrating heating and cooling into broader energy system planning, the Strategy can accelerate deployment, reduce costs, and strengthen Europe's competitiveness. It should empower local authorities and businesses to act, supported by clear national pathways and simplified permitting.

A coherent framework rooted in technological openness, affordability, and coordination across energy carriers, will drive a resilient and efficient heating and cooling transition across Europe.

About ENZA

The European Net Zero Alliance (ENZA), is a coalition of 26 European associations, representing a myriad of economic and industrial sectors – from manufacturing to energy infrastructure, building and construction, mobility, and agriculture – and different energy vectors – namely liquid and gaseous fuels, heat and cold, as well as electricity. The alliance was born from the commitment to deliver climate neutrality by 2050 based on a multi-energy approach combining sectors and energy vectors for a cost-efficient, speedy decarbonisation.

https://netzeroalliance.eu/

Members