

Bioenergy Europe's Position on the Revision of the EU Heating and Cooling Strategy

Bioenergy Europe welcomes the revision of the EU Heating and Cooling Strategy and stresses the importance of prioritising clean heat as a cornerstone in the energy transition.

Heat accounts for nearly half of the EU final energy consumption, making this sector one of the largest contributors to energy demand and yet one of the most overlooked. While much attention has been placed on electrification, the defossilisation of this sector—especially in buildings and industry—remains critical to the achievement of the EU's energy and climate objectives. The revised Strategy is an opportunity to lay down a clear, ambitious pathway to defossilise heat and fully tackle the potential of renewable solutions like sustainable bioenergy. In this context, other strategies such as the Bioeconomy Strategy also play a key role and should actively contribute to the defossilisation of the heating sector.

In this context, Bioenergy Europe would like to put forward 4 key issues that should be addressed in the upcoming EU Heating and Cooling Strategy.

SYNERGIES BETWEEN RENEWABLE HEAT AND ELECTRIFICATION

The future of heating in Europe must be flexible, decentralised, and resilient. While electrification is a key component of decarbonisation, it cannot stand alone.

Dispatchable and storable solutions are needed to enhance the flexibility of the energy system

Bioenergy contributes to electricity generation (via combined heat and power plants) and complements the electrification objective of the EU, thanks to its flexibility and storability. On the latter, it is important to note that the use of biomass improves system stability, as biogenic systems are not volatile and therefore make an important contribution to energy security.

Dispatchable, around-the-clock renewable heat sources like bioenergy are vital to balancing seasonal variations, supporting peak electricity and heat demands, and ensuring continuity during periods of low electricity supply. Moreover, the storability of biomass allows it to provide an additional layer of security by delivering extra heat during extreme cold weather, when demand is highest and other

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systems may be strained. Therefore, strategically combining the electricity and heating sectors enhances system resilience and accelerates decarbonisation.

The hybridisation of renewables can improve the resilience of the energy system

Bioenergy integrates seamlessly with other renewable solutions. Hybrid systems can combine bioheat with solar, electric heat pumps, and waste heat. Encouraging such synergies through supportive EU legislation and financial mechanisms will unlock innovation and enhance the overall resilience of Europe's energy system.

A cost-optimal approach should guide the EU toward the defossilisation of heat

Bearing in mind the long-term EU decarbonisation objective, the revised Strategy should promote a cost-optimal approach to decarbonisation, weighing the benefits of reducing energy demand against the deployment of renewable heat technologies. In this context, flexible bioenergy will remain indispensable for achieving system efficiency and reliability, especially in colder climates or off-grid areas.

REPLACEMENT OF OUTDATED HEATING SYSTEMS

European heating equipment is often outdated, inefficient and polluting. A large share of existing appliances not only underperform in terms of energy efficiency but also contribute significantly to greenhouse gas emissions and poor air quality.

Modernising the heating stock with renewables is a must

The revised Heating and Cooling Strategy should establish a concrete framework to replace and modernise the existing stock, prioritising renewable solutions, such as sustainable bioenergy. New systems are highly efficient, capable of producing more heat using less feedstock, therefore reducing emissions and costs for consumers.

Financing the modernisation of heating systems guide towards renewable heat

A dedicated EU fund to support the replacement of obsolete appliances would deliver rapid emissions reduction while driving industrial innovation and job creation across the EU renewable heating value chain. For instance, research, innovation, and manufacturing of biomass appliances is entirely taking place in the EU.

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The fund should be complemented by effective policy instruments for the energy renovation of existing building stock. Only by addressing both infrastructure and heating systems simultaneously can the EU truly achieve a climate-resilient and socially fair heat transition.

DEFOSSILISE HEAT: END FOSSIL FUEL DEPENDENCY

Fossil fuels still account for 73% of heating in the EU, generating approximately 1.5 billion tonnes of CO₂ emissions per year¹. This situation is incompatible with the EU's long-term climate targets.

End subsidies to fossil fuels to give a clear signal to investors and consumers

The Heating and Cooling Strategy should explicitly commit to a gradual but definitive phase-out of fossil fuels in the sector. This means not only ending new and already existing subsidies for fossil sources, especially fossil gas, but also implementing a timeline for their complete exclusion from the EU energy mix. A clear strategy to transition away from fossils will enable Europe to boost the development of renewable solutions, while generating economic benefits and improving social aspects.

Focus on reliable, scalable solutions to accelerate the defossilisation of heat

The Strategy should promote solutions that are ready at scale, and capable of delivering carbon savings today.

Sustainable bioenergy offers a reliable, carbon-neutral, and cost-effective alternative to fossil heat. Beyond its climate benefits, bioenergy produced in the EU comes from local feedstock and trusted trading partners, reinforcing the EU's energy security by reducing dependence on volatile fossil imports and strengthening commercial ties.

It is time for the full life-cycle emissions assessment of fossil fuels

To ensure transparency and better inform energy choices, a robust EU-wide traceability system for fossil fuels should be established and linked to full life-cycle emissions assessment. This would highlight the true environmental and social costs of fossil heating and provide a level playing field for clean alternatives such as bio-based heat.

Unlike fossil fuels, biogenic carbon from bioenergy can substitute carbon intensive materials, and can also deliver negative emissions when stored permanently (Bio-CCS and biochar).

¹ Considering buildings and industrial heat (Eurostat)

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UNLOCK FINANCING AND TACKLE ENERGY POVERTY

Accelerating the deployment of renewable heat requires a supportive investment environment, especially to sustain the upfront costs for replacing old heating systems.

Redirect financial flows from fossils to renewables

The Strategy should unlock blended public and private finance mechanisms to scale up clean heating solutions. This includes redirecting existing financial flows away from fossil fuels and towards renewables.

Moreover, investing in renewables and energy efficiency leads to lower and less volatile energy prices: supporting the upfront investment will help reduce the energy cost for households and industries alike in the long term.

The strategy should pragmatically support the most vulnerable consumers

Addressing energy poverty should also be at the heart of this Strategy. Millions of European households, particularly in rural or mountainous regions, struggle to afford reliable heating. Bioenergy offers an affordable and accessible solution to this challenge. Supporting its deployment and modernisation in vulnerable areas would not only reduce emissions but also contribute to greater social cohesion and territorial equity.

To effectively support this shift, the European Commission must broaden its analysis on costs and prices of energy and fully understand the benefits of a shift to a clean heat sector.

CONCLUSIONS

The upcoming revision of the EU Heating and Cooling Strategy is a critical opportunity to recognise heat as a central pillar of the energy transition. The security of basic supply is to be strengthened through the massive expansion of renewable energy sources, in particular homegrown renewable energy.

The EU will not meet its climate goals without defossilising its heat supply and cannot do so without fully tapping into the potential of sustainable bioenergy, which is storable, dispatchable, and reliable. This makes it an essential driver towards climate neutrality.

Bioenergy Europe calls on policymakers to adopt a pragmatic and inclusive approach that drives the deployment of clean, renewable heat while strengthening the EU's energy security and competitiveness.

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