

2024 - 2029

MINERAL

WOOL

INSULATION

Fit for 2050

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A European Journey

In the next legislature of the European Union, newly elected and incumbent policymakers, civil society, and industry will have the responsibility of maintaining an ambitious course towards a competitive, strategically autonomous, and climate-neutral Europe.

The mineral wool insulation industry will continue to facilitate Europe's sustainable transition and local industrialisation through products that deliver strategic energy savings in buildings, all while improving living comfort and safety at home. At the same time, the mineral wool industry acknowledges its responsibility to decarbonise its production processes whilst closing the loop with circular mineral wool.



The next stepping stones of the net-zero industrial age will be framed by how the EU's competitiveness, decarbonisation, and governance objectives are addressed in the next five years.

In approaching these areas, a proactive and well-coordinated effort from policymakers, industry, and civil society, rooted in a coherent, future-proof EU policy framework, will prove more effective than reacting to each situation individually.

In this context, Eurima believes that coordinated efforts are especially needed in the following areas:

Construction



Recognising the construction sector's role as a key contributor to the energy transition by establishing a dedicated EU-level policy framework for construction.

Industry



Consolidating an industrial policy that provides stable and transparent business conditions and supports the decarbonisation of industrial processes.



Product

Establishing a product policy framework that champions material neutrality based on a level playing field for all construction products.

Buildings



Ensuring that regulation and policy measures continue to maximize the contribution of buildings and the built environment to Europe's energy transition and decarbonisation objectives.

End of Life



Developing a waste policy framework that addresses existing regulatory, economic and technological bottlenecks to the recycling of construction and demolition waste.

An Enabling Policy for an Enabling Industry

Through close collaboration with the policymakers that set Europe's overall industrial roadmap and targets, we believe European industries are well-positioned to help determine which policies are most effective in enabling their success. Thus, to incentivise forward-looking investments, future industry policy should be coherent with the decarbonisation levers and roadblocks identified at the industry level.

With over 70 production plants across Europe, the mineral wool insulation industry is markedly **local**, contributing to European industrialisation through every step of the value chain.

With its well-established production processes, the mineral wool insulation industry is a **scalable** and cost-effective sector positioned to meet the growing demands of the energy transition.

Mineral wool insulation is **resource-sufficient**, relying on widely available local raw materials. This not only reduces the need for long-distance transportation but also minimizes the carbon footprint associated with sourcing.

Only by combining coherent and consistent EU policy instruments with industrial decarbonisation levers such as continued energy efficiency, fuel-transitioning, and circularity, will we be able to maintain the path to absolute carbon neutrality by 2050. Not all of these levers are in our own hands, however, and we will require EU and national authorities to step in where needed.

*Eurima's [decarbonisation roadmap](#) highlights our commitment as an industry to decarbonise our production processes and identifies the levers that will help us get there. Among these, **access to clean energy is a critical step for European industries to achieve a competitive and climate-neutral business environment** in the coming decades. Simply put, industry will not be able to decarbonise its production processes without steady access to affordable and abundant green energy.*

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JAN TE BOS, DIRECTOR GENERAL

The industries of the future will also be called on to go beyond decarbonisation, embracing a broader commitment to climate change mitigation, adaptation, and bio-diversity. The same goes for policymakers, who will be expected to balance economic competitiveness and climate neutrality with emerging sustainability principles.

A drive towards a more sustainable industrial environment needs to take into consideration all relevant parameters, their interactions and trade-offs, to ensure that putting in place measures addressing one issue does not cause negative cross-media effects in other areas of the industrial process.

How can the EU help?

- 1 Provide energy-intensive industries with a concrete roadmap for accessing cost-effective green energy solutions.
- 2 Expand the European Innovation Fund to include financing opportunities for mature and scalable solutions enabling the cost-effective integration of innovative net-zero technologies.
- 3 Ensure long-term certainty on the future of the Emissions Trading Scheme and the newly established Carbon Border Adjustment Mechanism to facilitate companies' investments in long-term decarbonisation measures.
- 4 Ensure a quick and simplified route to environmental permits for installations manufacturing energy efficiency technologies and products enabling the integration of net-zero solutions.
- 5 Establish transparent processes for the definition of feasible industrial Best Available Technique (BAT) conclusions by accounting for all relevant parameters and cross-media effects.

The European Construction Sector

Given the integral role that construction plays in Europe's economic and sustainability objectives, achieving climate neutrality by 2050 is unattainable without suitably addressing the European construction sector as a whole.



Over **3 million** European construction enterprises



Employing **12 million** workers



Making up **over 10%** of Europe's annual GDP

For this reason, the mineral wool industry views a holistic approach to the EU construction sector, characterised by a comprehensive and integrated strategy that addresses the sector's economic, social, and environmental aspects at every level of the value chain, as the most promising solution to guide the sector towards 2050.

To acknowledge the key role construction plays in Europe's objectives of climate neutrality and global competitiveness this approach should be facilitated by the establishment of a dedicated EU-level Construction 2050 policy framework. The framework's work programme and strategy could be set under the coordinating responsibility of an ad-hoc Commissioner. Such a role would simplify processes and provide a unified vision for the construction sector beyond only information exchange and gathering, to promote a more attractive and stable environment for businesses operating in the construction industry.

The Skills Dilemma

A crucial by-product of increasing the construction sector's attractiveness and stability for European businesses will undoubtedly be the increase of skilled workers willing to participate in its value chain. However, the sheer number of skilled workers needed to achieve the transition, estimated to be over 2 million, and the urgency with which we must achieve our objectives means that we cannot solely rely on long-term training programs.

In the short term, supporting innovative pre-fabrication, digitalisation, and automation techniques emerge as the most promising alternatives to reduce labour needs and improve productivity as more skilled workers enter the market.

How can the EU help?

- 1 Establish a dedicated EU-level Construction 2050 policy framework to enable holistic guidance and ensure that the construction value chain can maximise its contribution to the transition pathway.
- 2 Establish harmonised building codes for the construction sector at the EU level to promote business certainty and reduce administrative burdens for businesses in all member states.
- 3 Speed up the deployment of pre-fabrication, digitalisation, and automation techniques in the Transition Pathway for Construction as an opportunity for sectoral collaboration and a response to skill shortages.
- 4 Ensure that the reskilling of workers foreseen by the Pact for Skills initiative reflects a holistic view of construction by offering practical skills of how all building components interact in sustainable buildings.

A Level Playing Field

It will be economically crucial to foster a construction product environment that champions material neutrality, ensuring a level playing field that encourages a wide array of solutions to flourish. **The EU should focus on establishing sound, harmonised methodologies to ensure distinctions between construction products remain science-based** and recognize the importance of low-maintenance, long-lifetime materials to Europe's climate ambitions.

As we navigate this path, policymakers should acknowledge the role of certain tried-and-true materials that have consistently demonstrated their effectiveness in enhancing Europe's energy efficiency and sustainability practices.

While initiatives like the New European Bauhaus signal a commitment to advancing sustainable practices, there is a risk of jeopardizing our 2050 goals by favouring specific materials over others. The transition in the construction and built environment sectors needs to be truly inclusive and initiatives like the NEB need to stimulate the needed investments in all solutions and materials, following the principle of material-neutrality and an approach that fairly reflects their environmental performance.

Did you know?

The first method of making rock wool was patented in 1870 by John Player.

The technique mirrored the natural formation of strands of volcanic slag by blowing a stream of air across a descending flow of liquid iron.

The discovery of glass wool was instead completely accidental!

While attempting to make weatherproof walls, a stream of compressed air hit the molten glass Dale Kleist was using as sealant, creating a shower of tiny glass fibres.

Safety first

Decades of scientific studies have demonstrated that there is no increase in work-related illnesses due to regular contact with mineral wool insulation products. The safety of mineral wool insulation stems from the fact it is man-made, meaning producers can control its chemical composition, bio-solubility, and diameter of fibres. Managing exposure, dimension and durability of fibres, particles, and dust enables quick, natural clearance by the body if and when exposed.

The health and safety profile of mineral wool fibres and products is now well understood, grounded in rigorous science, and firmly reflected in related rules and regulations.

How can the EU help?

- 1 Guarantee a level-playing field for construction materials by always applying a material-neutral/science-based approach when assessing and disclosing a product's environmental footprint.
- 2 Establish transparent scenarios and more uniform Product Category Rules (PCR) for the environmental declarations of construction products.
- 3 Safeguard the reliability and accuracy of declarations of a product's performance on essential characteristics (such as e.g. thermal performance) by establishing more stringent assessment and verification methods.
- 4 Expand new European Bauhaus initiatives to include wider array of contributors and products committed to supporting the decarbonisation of Europe's building stock.

Building the Energy Transition: Part 1

The energy transition is not knocking on our doors; it has already kicked them wide open. As we face the most significant years for the future of our energy system, we must uphold the very solution that catapulted Europe into global leadership in energy efficiency in the first place: the Energy Efficiency First principle.

A **50%** reduction in energy use in the European building stock would reduce CO2 emissions by **18%** by 2030.

Energy efficient buildings can cut capital cost requirements in the power sector between **€89** and **€153** billion by 2050.

A well insulated building envelope can save an inefficient house up to **€1,350** a year in energy bill savings

In Europe's ambitious Renovation Wave, keeping energy efficiency first is paramount. **By adopting a strategic approach that emphasizes a building's efficiency before integrating renewables and demand-side flexibility measures, we can achieve superior performance and cost savings throughout the energy value chain.**

In addition to enabling their integration, an efficient building also enhances the performance of renewable energy sources. When a building is well-insulated and airtight, the demand for heating and cooling is minimized, allowing renewables and local heating sources to operate more effectively.

Energy Security: Beyond diversification

As global energy trends evolve and the urgency of climate action intensifies, energy-efficient buildings are transforming from passive contributors to active solutions. Energy security has traditionally been associated with diversifying energy sources to mitigate the risks of supply disruptions. Beyond diversification, there is an increasingly recognized need to emphasize energy efficiency as a cornerstone of decentralised energy security.



Energy-efficient buildings reduce Europe's dependence on energy imports from foreign suppliers and contribute to the decentralization of energy systems, enhancing the strategic resilience of the energy grid. In times of natural disasters, oil embargos, and cyberattacks, localized energy generation can ensure that critical facilities remain operational.



In our day-to-day lives, energy-efficient buildings **provide relief to our electrical grids during moments of peak demand.** As electricity demand continues to rise, this relief will become increasingly significant to reduce the likelihood of grid failures and blackouts.



Renewable energy sources depend on rare metals such as lithium, cobalt, and neodymium for their production and operation. This means any disruption in the supply of these imported metals could affect the EU's ability to meet its climate targets. **Energy efficient buildings reduce Europe's energy generation needs and, consequently, its reliance on foreign actors for the rare metals needed to generate decarbonised electricity.**

Building the Energy Transition: Part 2

How we calculate the emissions of buildings is equally as important as the measures taken to decarbonise their construction.

This makes self-evident the importance of taking a harmonised Whole Life Carbon (WLC) approach to assessing and disclosing carbon emissions from a building's design phase to the end of life.

Utilising a harmonised performance-/science-based approach to carbon accounting encourages businesses to decarbonise every step of their value chain and disincentivizes the use of products that only temporarily store carbon, passing down emissions to future generations.



How can the EU help?

- 1 Recognize the pivotal role energy-efficient buildings play in strengthening Europe's energy security, integrating renewable energy sources, and reducing citizens' energy bills by maintaining Energy Efficiency First as the key principle guiding the European Renovation Wave.
- 2 Support Member States in the implementation of the recast EED and EPBD by developing detailed implementation guidelines, providing technical assistance, and coordinating the exchange of best practices.
- 3 Enhance the commitment to the Renovation Wave and Energy Efficiency First principle in the forthcoming revision of the Multiannual Financial Framework, notably through the introduction of a dedicated European Renovation Loan and by establishing an expanded EU Renovation Fund.
- 4 Strengthen Energy Union Governance provisions by introducing a more robust process of reporting, reviewing and issuing recommendations to ensure that National Energy and Climate Plans are aligned with the EU's energy and climate targets.
- 5 Establish an ambitious EU 2040 energy efficiency target to provide Europe's renovation industry with business certainty post-2030.
- 6 Update the PRIMES Energy System Model to include seasonal and daily peak electricity demand metrics to reflect the benefits energy efficiency measures in buildings can have on increasing Europe's energy generation capacity.
- 7 Integrate building renovation considerations in energy system planning to account for the impact of energy efficient buildings on the resilience and capacity of the European energy grid.
- 8 Reduce VAT or introduce a building tax exemption for renovation projects that lead to higher energy performance following the Energy Efficiency First Principle.
- 9 Use a front-runner-first approach to progressively introduce the Whole Life Carbon dimension to the EU building stock, starting with reporting, moving on to benchmarking, and ending with setting limit values.

End of Life, Start of Another

Accounting for approximately 25-30% of waste generated in the EU, the construction sector offers great opportunities for improving resource efficiency and material recycling and reuse.

Mineral wool insulation, for instance, is 100% recyclable but is not yet 100% recycled. To solve this, in the past three decades, our industry has developed and improved recycling solutions for most of its production residues in closed loops, through the furnace or through the forming – or by finding ways to recover them when a closed loop recycling was not economically or technically feasible.

However, we find that **today's biggest challenge is recovering 'post-consumer' waste generated during renovation or demolition/deconstruction projects.** Our goal is to disincentivise the landfilling of valuable resources and, instead, use these resources as secondary raw materials to substitute virgin non-renewable materials.

Currently, the mineral wool insulation industry identifies three main barriers hindering the attainment of its circular ambitions:

Economic barriers

As the cost of landfilling remains low across most of the EU Member States, it is difficult for alternative recovery options to become economically viable. This barrier is exacerbated by the fact that the cost of the raw materials derived from recycling is often more expensive than the cost of virgin raw materials.

Handling barriers

The handling and classification of Mineral Wool Insulation waste fall under different national and regulatory practices. These variations in practices can lead to confusion and inconsistency in the disposal and recycling of mineral wool waste, hindering the establishment of streamlined processes.

Legislative barriers

Overlaps between the EU Chemicals and Waste legislations can create bottlenecks as there are no harmonised End of Waste criteria for Mineral Wool. This creates complex permitting procedures for handling, transport and recovery that disincentivise the recovery of Mineral Wool.

How can the EU help?

- 1 Establish a robust regulatory framework that stimulates the recycling of recyclable materials, enables the reuse of non-virgin construction materials, and safeguards workers' health and safety.
- 2 Increase the cost of landfilling for recyclable products and ban it progressively.
- 3 Ensure that requirements on recyclable products are met with increasingly rigorous standards for non-recyclable products.
- 4 Base the tracking of materials on building material passports to facilitate dismantling, reuse, and recycling.
- 5 Mainstream deconstruction practices that sort and separate wastes from the start instead of demolition and set material-specific recovery/recycling targets for glass wool and stone wool.
- 6 Facilitate and reduce administrative permitting requirements combined with a commitment to value-chain education and maintain existing worker protection requirements.