

Energy Union:

Deep Building Renovation for a low carbon - low energy society

Why do buildings matter in the Energy Union ?

- Buildings account for over 40% of the EU's total energy consumption. Buildings are the best way to reach the sector's own target for 2050 – cf Low carbon roadmap 88-91% decarbonisation by 2050.
- The environmental impact is equally huge, with buildings being responsible for 36% of Europe's CO₂ emissions. With deep renovation of the EU building stock we can cut this energy use by 80%¹ and reduce 30% CO₂ emissions.
- New buildings are only built at a rate of ~1% per year, whereas 70-90% of buildings today will still be there in 2050 and 75% of current buildings were built with no or minimal focus on energy efficiency. The priority is therefore to shift the *existing* building stock towards low energy standards.
- The EU has recognised that Europe desperately needs to modernise its infrastructure, where better to start than Europe's largest infrastructure. Buildings are the biggest untapped European potential to reach a low carbon – low energy society and should therefore be put on an equal footing to transport, roads, rail etc.). Moreover, it would be counter-productive (financially, economically and societally) to make large investments in supply side solutions without realising there are demand based solutions that can and should be addressed first.
- We spend 90% of our time in buildings, investing in deep energy efficient retrofits improves: physical and mental health, productivity and quality of life.
- Buildings are the solution to realising one of European biggest challenges – reconciling economic growth with our sustainability objectives.

Energy Efficiency First - the starting point

- As recognised by Vice President Sefcovic and Commissioner Cañete and his colleagues on several occasions, Eurima firmly supports the principle of Energy Efficiency First (EEF), in particular in buildings.
- EEF should be the guiding principle to ensure that the direct and indirect benefits of energy efficiency are given due consideration, in order to redress the tendency towards prioritising or modernising supply over first finding long term ways to save energy. This means considering the potential for in all decision-making related to energy and climate.
- Our future energy system would look very different and cost less, if we placed the focus first on demand moderation. It would for example, change the investments required in the grid and reduce the electricity needed etc.
- Bottom-up analysis clearly shows that buildings have the greatest potentials for savings, and therefore the policy driving the implementation of the Energy Union should be based on the cost-effective potential of the different sectors of the economy to deliver the desired economic, social and environmental benefits.

¹ "Capturing the Multiple Benefits of Energy Efficiency", IEA 2014

A long term EU roadmap to ensure deep renovation of our buildings

Achieving progress in energy efficiency in the building sector requires a long-term roadmap and commitment backed up by robust policies and measures to address areas of market failures and leverage private investment. This means:

Creating a European Vision for a low energy consuming building stock by 2050 through a viable framework of policies and measures:

- Buildings are recalled in the Commission's 25 February Energy Union Strategic Framework as the sector with huge potential for energy efficiency gains².
- This means having ambitious targets for EE at EU level. Any success in realising our savings potential in the buildings sector needs to be supported by ambitious targets for Energy Efficiency at EU level.
- We now need a long term EU building renovation strategy with a 2050 perspective, with clear milestones for 2030 and 2040 and a sectoral target for reducing energy waste in this key sector.

Acknowledging the need for deep renovation:

- As deep renovations are infrequent - a 30-50 year renovation cycle is typical, although it can be somewhat shorter for commercial buildings - it is essential that most is made of every refurbishment opportunity. This means going deep.
- In the same spirit, any intervention in a buildings should trigger an energy improvement whenever relevant (today, too many renovation are undertaken without energy being considered) in the works.
- Achieving a deeply renovated building stock by 2050 will require Europe to at least triple its current rate of renovation of 1.2%-1.4% per year. A renovation rate of 3% is considered economically attainable, without shortening the normal renovation cycle and unnecessarily increasing costs for households, businesses or governments.
- Standard renovation or refurbishment will often leave a great part of the cost-effective savings potential untapped (energy savings typically ranging between 20% and 30% and sometimes less). Yet given that 70% of our buildings are inefficient and the technologies exist to drastically cut their energy consumption – up to 80-90% - renovating them should be done having the full technical and cost-efficient savings potential in mind. Undertaking shallow renovations would be short-termist and a missed opportunity as it ends up creating lock-in of savings potential.

How insulation can help:

- Innovative and well-proven energy efficiency systems, such as mineral wool insulation, are making a major contribution to tackling climate change, reducing energy use and improving home comfort.
- Eurima and its members are committed to delivering buildings with better energy efficiency. With very low or zero energy buildings can become the norm, European jobs can be created and we can all spend less on energy bills whilst contributing to a better environment.

² European Commission, A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, 25 February 2015

The multiple benefits of deep renovation

Competiveness/growth and jobs:

- Deep renovation of the EU building stock can kick-start the economy by helping create up to 2 million local, direct jobs by 2020³. Buildings related activities account for ~10% EU GDP and ~8% of direct employment. Building and construction employs over 14 million workers, set to rise in the coming year. Furthermore building renovation can put skilled people back to work see EC Build Up initiative.

Increased energy security:

- 61% of EU's imported gas is used in buildings. Most EU buildings were built when no or little thermal regulations were in force; therefore a very large amount of our imported energy is being wasted and will continue to be lost in the years to come if action is not undertaken. Research has demonstrated that a robust building renovation strategy at EU level would cost-effectively cut the sector's energy imports by 60% in 2030 and by 100% in 2050⁴.

Safeguarding consumers from rising energy bills:

- Energy poverty affected 80 million people prior to the recent economic crisis and this increased to 124 million in 2012⁵. This problem is likely to be aggravated in the coming years by increasing energy prices. Expensive fuel subsidies only work as a transitional, unsustainable solution. Coordinated and ambitious policies to foster energy efficiency in the residential sector are urgently needed as the only stable, long-term solution to this social challenge.

Economic recovery:

- In the aftermath of the economic and financial crisis, the EU cannot really kick-start recovery if our economies continue to be inefficient. Energy plays a significant role in the budget and external trade deficits of EU countries. Putting an end to waste in the building stock would generate an enormous, immediate cash flow into national balance sheets, as well as into the private sector. Furthermore it is found that, the renovation sector works as a stabilizer of the construction sector (countries less hit by the crisis having higher renovation activity)⁶.

Environmental and social benefits:

- The key for our 2050 building stock (from an economic, social and environmental perspective) would be to minimize the environmental impact while maximizing the social benefits. As such well-being for their occupants (comfort, health, safety efficiency at work and reduced operating costs) is at the heart of sustainability; therefore of resource-efficient and energy-efficient buildings.

Financing:

- Energy efficiency projects, especially those for deep renovation of buildings should be viewed as investment and asset value creation. Investment in energy efficiency is of strategic importance for the EU since it is a "*cost effective manner to reduce the EU's reliance, and expenditure, on energy imports over €400 billion a year*"⁷

³ Europe's buildings under a microscope BPIE

⁴ Deep renovation of buildings: An effective way to decrease Europe's energy import dependency", Ecofys 2014

⁵ Alleviating Fuel Poverty in the EU: Investing in home renovation, a sustainable and inclusive solution; BPIE, 2014

⁶ JRC, Energy Renovation: The Trump Card for the New Start for Europe, 2015

⁷ The report by the Energy Efficiency Financial Institution Group (EEFIG), on a range of actions that could help overcome the current challenges to obtaining long-term financing for energy efficiency, February 2015

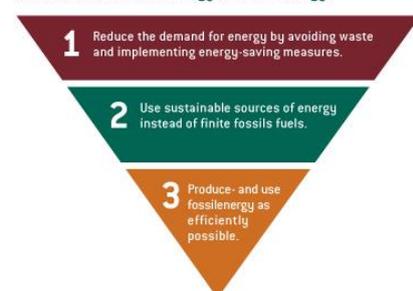
Our call to action

1. **Recognise the need to prioritize energy efficiency in buildings and energy efficiency first in the implementation of the energy Union, as a driving principle.**
2. **Given that buildings hold the greatest savings potential, ensure it can be unlocked. This should start with the creation of a long term EU building renovation strategy with a 2050 perspective, with clear milestones for 2030 and 2040 for reducing energy waste in this key sector.**
3. **Acknowledge the importance of deep renovation our building stock with a clear reference in upcoming Parliamentary policy initiatives in particular the Circular Economy Report, Energy Union own Initiative report and the Energy Efficiency Directive Implementation report.**

Buildings and key pieces of EU legislation

- **Energy Efficiency Directive (EED).** With the upcoming review of the EED - we believe that renovation strategies as stipulated in Art 4, have greater role to play to help prepare solid and consistent renovation policies covering incentives mandatory requirements and financing elements. The second version of these strategies, which member states will provide in 2017, should be prepared with solid methodologies and lead to implementable programmes of renovation.
- **Energy Performance in Buildings Directive (EPBD).** With the upcoming review of the EPBD and the ongoing public consultation, it is important to set clear definitions i.e. NZEB, have higher EU ambitions when it comes to the deep renovation of buildings (including monitoring tools such as a building passport) and ensure there is compliance at Member State level.
- **Eurima is committed to the application of the Trias Energetica principle.** Energy savings have to come first on the path to environmental protection. Only when a building has been designed to minimise the energy loss, should the focus shift to renewable energy solutions, such as solar panels or heat exchange and recovery systems.

The Trias Energetica concept:
the most sustainable energy is saved energy.



About Eurima

- Eurima established in 1959 and is the European Insulation Manufacturers Association representing the interests of all major mineral wool insulation producers throughout Europe.
- Eurima members employ over 21,000 people across Europe and our members include mineral wool manufacturing industries such as Saint-Gobain, Isover, Rockwool, Knauf Insulation, Ursa and Paroc.
- Eurima members manufacture a wide range of mineral wool products for the thermal and acoustic insulation and fire protection of domestic and commercial buildings and industrial facilities.

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