To:
Ms Rosalinde Van Der Vlies, Director (DG ENER.B)
Mr Lukasz Kolinski, Director (DG ENER.C)
Ms Margareta Djordjevic, Head of Unit (ENER.B2)
Ms Margot Pinault, Team Leader (ENER.B2)
Ms Paula Rey Garcia, Head of Unit (ENER.C1)
Mr Ignacio Asenjo, Team Leader (ENER.C1)
Mr Tom Howes, Adviser (ENER.C)

Cc:
Ms Barbara Bonvissuto, Head of Unit (GROW.H1)
Mr Hein Bollens, Deputy Head of Unit (GROW.H1)
Mr Robert Nuij, Head of Unit (ENER.B3)
Ms Niels Ladefoged, Deputy Head of Unit (ENER.B3)
Ms Nina Neumann, Team Leader (ENER.B3)

Joint statement – The potential of high-performance buildings to reduce the demand for heating & cooling and enable electrification

In the context of the upcoming EU Heating and Cooling Strategy and the Electrification Action Plan, we the undersigned organisations, wish to highlight that high energy-performance building envelopes are essential enablers of an affordable, resilient and people-centred decarbonisation of both the built environment and the EU energy system.

High energy-performance building envelopes[1], including structural components of exterior and interior building elements, **rationalise heating and cooling demand**, **reduce peak loads on electricity** and district-heating networks while, at the same time, **keeping indoor conditions safe and comfortable during both heatwaves and cold snaps**. As a matter of fact, they are the linchpin of the EU Affordable Housing Plan, the EU Strategy for Housing Construction, the New Impetus for Energy Efficiency, the EU Grids Package and the overall industrial competitiveness challenge.

The importance of addressing building consumption is further amplified by the fact that **space cooling is now the fastest growing end use of energy in buildings**. According to the International Energy Agency (IEA), the number of air conditioners - today globally around 2 billion - is projected to reach around 5.5 billion in 2050[2]. As electricity is the primary energy source for active cooling systems, and as heating is increasingly electrified, this trend implies a **substantial increase in building electricity consumption** in Europe. This places additional **pressure on electricity networks** and potentially **constrains the electrification of other sectors that are in dire need of affordable and clean energy to remain competitive and to stay in Europe**.

[1] Building envelope: The collection of building components that enclose the conditioned interior space, separating it from the outdoor environment and controlling the flow of heat, air, moisture, water, light, and sound between inside and outside.
[2] IEA, The Future of Cooling: Opportunities for Energy-Efficient Air Conditioning, 2018

Recent analysis and examples, including the peer-reviewed study "Flattening the peak demand curve through energy efficient buildings"[3], underline that if electrification runs ahead of system and grid capacity, society and the economy inevitably will face serious bottlenecks. Keeping improvements to the building envelope for both new buildings and renovation activities by **moving in step** with grid reinforcement and the accelerated roll-out of clean, electrified heating and cooling solutions is therefore key to maintaining affordability, managing system costs and ensuring indoor comfort.

Available data illustrate the scale of these benefits. Reinforcing building envelopes can **optimise and defer €44,2 billion every year in distribution grid investments**, **reduces grid congestion by up to 75%**[4], lowers wholesale electricity prices, and delivers **tangible reductions in energy bills** for households and industries alike. Additional recent modelling and case studies also show that buildings with high-performance envelopes **remain within habitable temperature ranges** for significantly longer time **during multi-day heatwaves and cold snaps** and require less backup power to keep occupants safe when energy systems are under stress.[5]

The European Commission already recognised this potential in the 2016 version of the EU Strategy on Heating & Cooling, noting that *"**big [energy] savings can be made through simple renovations** such as insulating the attic, walls and foundations, and installing double or triple glazing"*[6]. This assessment was relevant a decade ago, and it remains fully valid today. In fact, it is even more pertinent given that building envelope solutions have improved further over the past years.

Against this backdrop, the new EU Heating and Cooling Strategy & Electrification Action Plan must clearly acknowledge that **improving the performance of the building envelope is a prerequisite for reducing energy demand for both heating and cooling and effective, efficient and responsible electrification**. The initiatives must explicitly underline that:

- **Sequencing matters**: Prioritising improvements to the building envelope allows heating and cooling systems to be properly sized and deployed only where and when they are actually needed. This avoids oversizing, reduces upfront investment costs, and maximises system efficiency over the building's lifetime, which spills over to the entire energy grid.

- **Comfort and affordability matter**: Beyond energy savings, passive solutions delivered by high-performance building envelopes ensure stable indoor temperatures, improved thermal comfort and healthier living conditions by building on thermal performances and storage. Through significantly lowering heating and cooling needs, they reduce energy bills and increase households' disposable income. Evidence shows that every euro invested in energy efficiency renovations can deliver up to €12 in savings for households[7]. At the same time, better envelopes reduce the risk of

[3] Akhmetov, Fedotova, and Frysztacki, Flattening the peak demand curve through energy efficient buildings: A holistic approach towards net-zero carbon, 2025
[4] Ibid
[5] Franconi, E., et al., Efficiency for Building Resilience. PNNL-32737, Rev. 1. Pacific Northwest National Laboratory, 2023
[6] An EU Strategy on Heating and Cooling, COM(2016)
[7] European Commission, Energy Efficiency Awareness

dangerous indoor conditions during extreme weather, contributing to public health and social resilience.

- **Energy security matters:** Reducing energy demand through better building envelopes directly strengthens the EU's energy independence[8][9]. Energy saved in buildings can be redirected to other strategic uses, such as industry to support the transition to lower-carbon materials. Additionally, high-performance envelopes increase the resilience of homes, hospitals and other critical buildings during gas or electricity supply disruptions – whether caused by extreme weather, market shocks or deliberate attacks on energy infrastructure – by keeping indoor temperatures within habitable ranges for longer and reducing the need for emergency backup generation.

- **Design matters:** A building is more than an assembly of construction products. It is a system where they concurrently act to provide a comfortable, safe and sustainable shelter for human activities. Airtightness, reduction of thermal bridges, orientation, openings for light, and natural ventilation strategies are examples of applicable elements to the building envelope that contribute to the overall performance of a building whilst reducing energy-driven appliances

- **Local industry and jobs matter:** Construction products that enable high-performance building envelopes are manufactured in Europe, supporting industrial growth, regional value chains and the creation of thousands of local skilled jobs that cannot be outsourced. For example, an investment of €1 million in building renovation, particularly energy efficient renovations, typically triggers between 15 and 20+ total jobs (direct and indirect) within the EU[10].

The forthcoming Heating & Cooling Strategy and Electrification Action Plan should build on this acquis by treating high-performance building envelopes and the role of the construction sector as central pillars of EU policy on heating and cooling, electrification and grids.

The undersigned industries are ready to provide further technical input and work with the Commission and its partners to help translate this principle into concrete measures under the Heating & Cooling Strategy and the Electrification Action Plan and other forthcoming initiatives.

[8] European Commission: Energy Efficiency: A new impetus to reduce energy consumption
[9] BPIE, Putting a Stop to Energy Waste: How Building Insulation Can Reduce Fossil Fuel Imports and Boost EU Energy Security, 2022
[10] BPIE-REC, Building Renovation: Kick-starter for the EU Recovery, 2020

Construction Products Europe

Construction Products Europe represents the interests of all European construction products manufacturers, from SMEs to multinational companies. Established in 1988, CPE strive to facilitate sustainable competitive growth of the European construction products industry by promoting efficient housing and infrastructure solutions.

DI Construction

DI Construction (DI Byggeri) is an independent business association within the Confederation of Danish Industry (DI). We represent around 6,700 contractors and manufacturing companies in the Danish building and construction sector, ranging from major contractors to SMEs and producers of building components. Our members are involved in activities such as infrastructure projects, specialized contracting (including bricklaying, carpentry, and roofing), and the manufacturing of various types of building materials.

European Association for External Thermal Insulation Composite Systems

EAE, the European Association for ETICS, was established in 2008. It comprises 12 national ETICS associations, 4 leading European suppliers associations and 29 supporting company members, which comprise manufacturers of ETICS, ETICS components and accessories as well as research and test institutes. EAE represents more than 80 per cent of Europe's revenue from ETICS. EAE represents the entire ETICS value chain and as such hundreds of manufacturers, installers, institutes and national trade associations involved in the ETICS business.

European Builders Confederation

EBC (European Builders Confederation) is the European employer organisation representing micro, small and medium-sized enterprises (SMEs) and craft trades in the construction sector. EBC represents 21 members from 16 EU and EFTA countries, and around 350 000 companies. EBC is a recognised European Sectoral Social Partner for construction.

EUMEPS

EUMEPS, the unified European voice of the Expanded Polystyrene (EPS) industry, is the premier advocate for EPS solutions. Representing every link of the EPS value chain, from large companies to SMEs, we are committed to fulfilling European environmental objectives. Through our 23 national associations and numerous recycling initiatives, we strive to elevate the circularity of our industry.

European Insulation Manufacturers Association

Established in 1959 to create a favourable business environment for mineral wool insulation and promote improved standards for insulation materials, Eurima is a research-driven organisation whose industry members produce a wide range of mineral wool products for thermal and acoustic insulation, providing fire protection of domestic and commercial buildings and industrial facilities while offering innovative growing media and green-roofing solutions.

Eurogypsum

Eurogypsum is a European federation of national associations of producers of gypsum products (i.e. plaster and plasterboard). It is one of the few fully integrated industries (from cradle to cradle) within the construction products field. The companies which extract gypsum also process it and manufacture the value-added products and systems used extensively in construction and other industries.

Glass for Europe

Glass for Europe is the trade association for Europe's flat glass sector. Flat glass is the material that goes into a variety of end products, primarily in windows and facades for buildings, windscreens and windows for automotive and transport as well as solar energy equipment, furniture and appliances. Glass for Europe brings together multinational firms and thousands of SMEs across Europe, to represent the entire building glass value-chain.

PU Europe

PU Europe is the European federation representing manufacturers of rigid polyurethane (PU) insulation and their key raw material suppliers. The association promotes the role of high-performance PU insulation in delivering energy-efficient, durable and sustainable buildings across Europe.