# ALLIANCE OF PROGRESSIVE INDUSTRIES SUPPORTS AMBITIOUS REVISIONS TO THE ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE

By Corporate Knights' Global 100 Climate Policy Action Collaboration


We are progressive businesses writing to say that industry supports an ambitious recast of the Energy Performance of Buildings Directive (EPBD). It is vital for Europe's climate ambitions and for Europe's competitiveness and energy security.

In Europe, buildings represent 40% of energy consumption and 36% of emissions. As such, dramatically reducing their energy performance will be necessary to decarbonize. This is a long-term challenge: the buildings around us today will still be standing in 2030 (when we need to have reduced greenhouse gas emissions in Europe by at least 55%), and many will still be standing in 2050. This is also an immediate crisis: buildings are the largest gas-using sector in the 27 European Union countries. Two-thirds of the energy used for space heating comes from fossil fuels, with natural gas accounting for more than half of that.

European consumers and companies are suffering from high energy prices. Reducing their bills means eliminating losses to inefficiency, reducing both their consumption and overall scarcity.

The EPBD is an important opportunity to achieve this because it lays out the trajectory of renovations and technology deployment over the next 15 years. It includes practical goals in both the short-term and longer-term targets, allowing for verifiable predictability, crucial for major investment decisions.

As such, we call on the European Union to:

1. Approve ambitious minimum energy performance standards.
2. Deploy best-available on-site carbon-efficient technology (storage, heat recovery, heat pumps and energy-management devices) in synergy with renewables.
3. Make all new buildings true zero-emission buildings.
4. Ban new fossil fuel boilers.
5. Update certifications, including energy performance certificates.

For this to happen, the European Parliament proposal for the revision of the EPBD must be the basis of negotiations between institutions.

## 1. APPROVE AMBITIOUS MINIMUM ENERGY PERFORMANCE STANDARDS

Currently, every year 0.2% of buildings undergo deep renovations. To reach net-zero by 2050, 3% of buildings (residential and non-residential) must undergo deep renovations every year from 2030 to 2050, 15 times more than today.

Minimum energy performance standards (MEPS) are milestone dates by which the worst-performing buildings must be renovated to reach a minimum standard. This is important because it provides stable horizons for all involved: for building owners who need to renovate and for companies that must make investment decisions now for the supply chain and skills needed for tomorrow. The latter is not a small concern: Europe needs to invest €275 billion annually in building renovations. For every billion invested, 19,000 long-term jobs can be created – and a skilled workforce will be required to meet the task. Clear and ambitious timelines, starting in 2027 and 2030, will help industry to adequately prepare and meet expected demand.

For example, minimum standards will accelerate renovation rates in non-residential buildings such as offices, supermarkets, hotels and the like, where most economic activity happens. These represent only 18% of buildings but 25% of total floor space and 33% of the building stock's energy consumption. This means that this small fraction of large buildings consumes 14.9% of all final energy in Europe. Owing to the density of this energy consumption, interventions have a greater impact, leading to a rapid return on investment.

| | Energy consumed per m² per year | Savings of average energy renovation |
|---|---|---|
| **Non-residential** | 250 kWh/(m².y) | 47 kWh/(m².y) |
| **Residential** | 183 kWh/(m².y) | 14 kWh/(m².y) |

## 2. DEPLOY TECHNOLOGY, ESPECIALLY IN SYNERGY WITH RENEWABLES

This recast of the EPBD includes a brand-new clause promoting on-site solar where possible, starting with the roofs of non-residential buildings and carparks. These are important in not just reducing the energy consumption of buildings but also in decarbonizing the consumption that remains. It provides multiple benefits because it does this while reducing grid congestion by bringing energy production to where energy consumption happens and while ensuring that citizens see the benefits of the transition to cheaper renewables.

For on-site renewables to achieve their full potential, however, they need a supporting cast. Cumulatively, heat pumps, heat-recovery technologies, electric vehicle (EV) chargers, and other building loads can strain the grid. When coordinating via a building management system or when operating in a well-insulated building with thermal inertia, they switch to supporting the grid instead. When operating in tandem with solar panels, they make the grid far more resilient and dramatically increase the flexibility range that the building can provide to the grid, similarly to how a renewable energy source and a battery working in tandem can do far more than each individually.

## 3. BUILD NET-ZERO FOR NEW CONSTRUCTION

New buildings represent a very small amount of the stock each year. Of today's buildings, 90% were built before 1990, and 50% were built before 1970. As such, many predate any norms on energy performance, which first appeared in response to the energy crises in the 1970s.

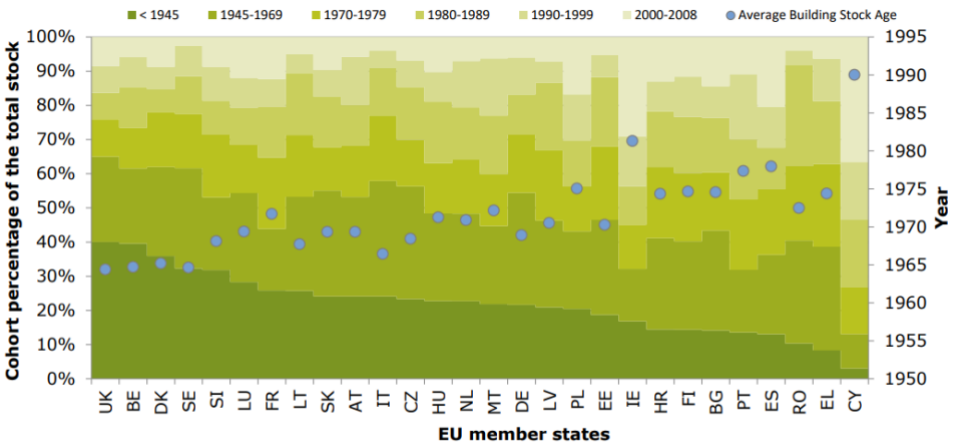


Figure 1 EU dwelling stock age cohorts (source: ENTRANZE, http://www.entranze.eu/)

This highlights the importance of renovation, but it also highlights how much building standards and techniques have improved since the days when most of our current building stock was made. Currently, all new buildings must be “nearly zero-energy” buildings, corresponding to best in class in terms of energy efficiency. The know-how to do this already exists across the continent as it is achieved every day with every new building and has been for years now.

This means that there is an opportunity to take it one step further: to make all new buildings true zero-emission buildings. These are the same as nearly zero-energy buildings, but the residual energy consumption is covered by some form of renewables or district heating. For new buildings, the concept of heat recovery should be embedded in the building project planning phase. For all cooling plants, waste heat (as a by-product) should be captured and reused within the same building. This is the logical next step.

## 4. BAN NEW FOSSIL FUEL BOILERS

Heat pumps have made dramatic improvements in the last decade and have a learning curve that is set to continue. The current standard heat pump is so efficient that even if it were connected to a grid running entirely on coal, it would produce fewer emissions than a standard 90%-efficiency gas boiler. This is because heat pumps function not by converting energy into heat but by using energy to move heat from the environment to where it is more useful, with a coefficient of performance of 300% or higher.

While affordability can be a concern when considering whether to replace an existing boiler that still works, choosing to install a new fossil boiler is making the choice to lock the building occupant into higher energy bills and higher emissions for years to come. This is particularly problematic where the decision-maker is not the future occupant, as is the case for new builds or for tenancies. Thus, the EU should ban the installation of new fossil boilers and close loopholes.

One notable loophole in the European Parliament proposal is that “hybrid boilers and boilers certified to use renewable fuels” may continue to be installed. While hybrid boilers might make sense in rare cases in existing buildings, they cannot be justified in new builds because of the expense of connecting a building to the gas network to power half of a boiler. “Boilers certified to use renewable fuels” is designed to allow for the possibility of biogas and for hydrogen but suffers from two major flaws. The first is that any gas boiler is also capable of running on biogas (as they are chemically identical) and so is “certified to use renewable fuels” without having any obligation to use anything but fossil gas. In recent climate packages, middle ground was found in some countries by which such boilers may be installed if there is a credible plan to use at least 65% renewable fuels within two years of installation. This can be demonstrated by local plans to create a hydrogen grid or proximity to a farm that produces biogas, for example. This does not, however, address the second flaw: such a provision exists for concerns of affordability, but such alternative fuels are extremely scarce and expensive, better suited for harder-to-abate sectors such as heavy industry. Electric heat pumps

will always be more efficient and thus, in the long run, more affordable than burning renewable fuels. Waste heat re-use will also lower the demand of input energy needed to produce heat.

Waste heat reuse will lower the demand of input energy needed to produce heat.

## 5. UPDATE CERTIFICATION, INCLUDING ENERGY PERFORMANCE CERTIFICATES

Energy performance certificates (EPCs) have existed since the first version of the EPBD in 2002 but have been unevenly implemented. Studies show that they are the most valued source of information for consumers and that building stocks improve faster where they are both deployed and then aggregated in such a manner as to create public benchmarks against which one can compare a given building to the national average. In some countries, it is mandatory to display an EPC to potential renters, with an obvious impact on preferences for renters in the midst of an energy crisis.

Thus, it is extremely important that these certificates are correctly informing citizens and reflect the latest understanding of a building. This should include measures in final energy consumption, it should include calculated energy needs, it should include information about financing, and it should include information about the capability to operate flexibly if in a country that uses peak/off-peak pricing.

For owners of large non-residential buildings – such as supermarkets, office buildings and the like – who have extra obligations to make their buildings smarter, with the installation of building-automation control systems, a dedicated certificate to understand and benchmark their buildings may be required. This already exists in the form of the “smart readiness indicator” (SRI), but it could be made more widespread.

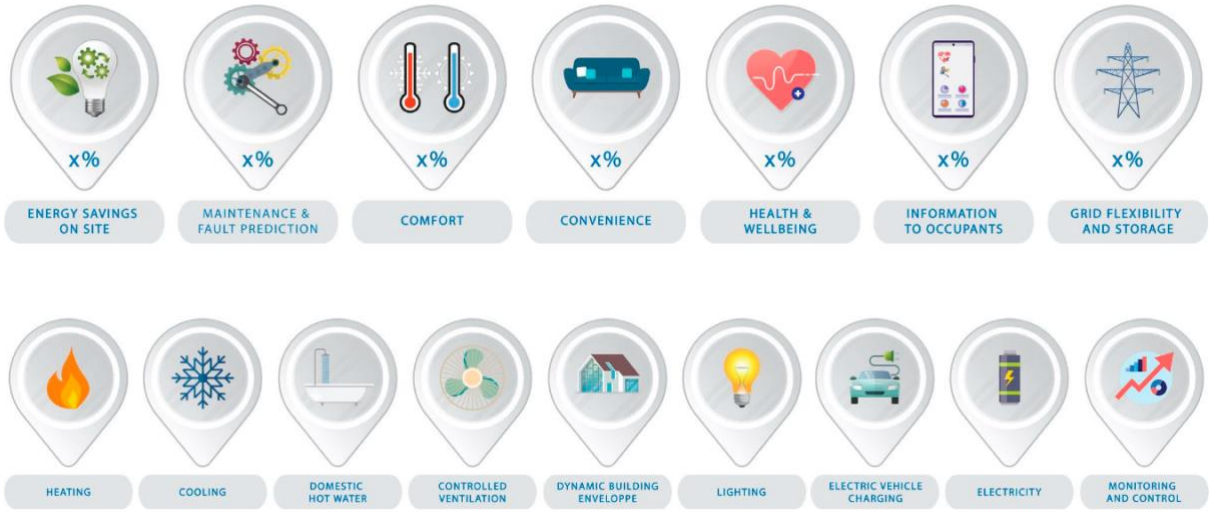


*Figure 2: https://doi.org/10.3390/su12229496*

The SRI is currently used for non-residential buildings with an effective rated output greater than 290 kilowatts (kW). (These are large buildings. For reference, most homes have an effective rated output of 30 to 40 kW for their boiler and cooking appliances but an actual subscribed power less than 12 kW.) In line with new automation obligations, this should be lowered to 70 kW and then made mandatory. This would provide a more granular understanding of this critical part of the building stock and help owners and investors identify where they need to prioritize investments (energy efficiency, grid flexibility, maintenance and fault prediction, convenience, etc.).

## SIGNATORIES

**GLOBAL 100 CLIMATE POLICY ACTION COLLABORATION EU WORKING GROUP MEMBERS SUPPORTING THIS POSITION STATEMENT ARE:**

1. Arçelik AŞ
2. Atea ASA
3. Atlantica Sustainable Infrastructure PLC
4. Copenhagen Infrastructure Partners
5. Ecolab Inc
6. Industria de Diseño Textil SA
7. IKEA (Ingka Group)
8. Koninklijke KPN NV
9. Mainstream Renewable Power
10. Maxeon Solar Technologies Ltd
11. Paper Excellence (Catalyst Paper Corp)
12. ROCKWOOL A/S
13. SAP SE
14. Schneider Electric SE
15. Trane Technologies PLC

## *ABOUT THE GLOBAL 100 CLIMATE POLICY ACTION COLLABORATION*

*In May 2022, Corporate Knights asked how we could use our data and networks to better harness corporate power to speed up effective climate policy. By November, we had launched the Action Declaration on Climate Policy Engagement. Fifty-eight companies (all sectors, regions, combined revenues of US$900 billion) committed to align their direct and indirect (via industry associations) policy engagement with the Paris Agreement and publish an industry association audit on climate policy by the end of 2023.*

*In January 2023 in Davos, we gathered more than 50 C-suite executives to seek their agreement to have Corporate Knights act as their secretariat to accelerate effective climate policies, directly through coordinated group engagement with policy-makers and indirectly to remedy influential industry associations playing an obstructive role. They agreed.*

*Our **theory of change** is simple: by harnessing the economic and leadership power of the Global 100 network and supporting it with cutting-edge research and analysis, we can move climate-policy-obstructive industry associations to realign with the substantial and growing climate-policy-positive leadership of their membership, in addition to demonstrating support for effective climate policy among corporate leaders to policy-makers and other influencers directly.*

- ***Short-term goals** – Build support for climate-ambitious versions of regional (EU, U.S., Canada, Japan) policy packages and/or specific components of those packages currently on the table.*
- ***Long-term goals** – Build options and support for more ambitious, broader-reaching fit-for-purpose policy.*

*Positive climate-policy advocacy among corporates is not a new idea. But this new collaboration is distinct in four ways:*

a) *This collaboration is not made up of a random or self-selecting group of companies. It is a cross-sector group of companies that are part of Corporate Knights' Global 100 network, Best 50 Corporate Citizens in Canada network, or who have committed to support climate policy aligned to the Paris Agreement by signing the Global 100/Corporate Knights' Action Declaration on Climate Policy Engagement.*
b) *The collaboration has the express buy-in of the companies' CEOs and/or C-suite executives, who also helped shape this collaboration through working sessions (May 2022/January 2023) in Davos.*
c) *The focus is not just on named policy streams, but also specifically on remedying the obstructive positions that some industry associations are taking on those policy streams.*
d) *The members lead on articulating what ambition looks like on important policies at regional and global levels from a public-interest perspective.*