

Energy efficiency and renewables in buildings in national recovery and resilience plans

Central and eastern European Member States fail to kick-start investments for the renovation wave



Investments in building renovations can significantly contribute to reaching the EU's 2030 energy and climate objectives. For this, the right investments have to be made, and given the challenges, this will lead to enormous funding needs. The Recovery and Resilience Facility presents an opportunity to help meet those funding needs, given the 37 per cent climate target that spending from each plan must reach. Most Member States have dedicated a specific allocation for building renovation in their national plans. This is most welcome in central and eastern European (CEE) countries, where the building stock faces important challenges. In this region, several interesting measures are included in national plans. However, the general picture is less ambitious, and loopholes remain that will prevent the recovery plans from substantially contributing to a long-lasting renovation wave in central and eastern Europe, which will have a real impact on climate action.

For more information

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The benefits of investing in building renovation

With buildings accounting for 40 per cent of the energy consumed and 26 per cent of the greenhouse gases emitted in Europe,¹ action on building renovation is necessary to contribute to achieving the 55 per cent greenhouse gas emissions reduction target by 2030. Moreover, investing in buildings can help tackle issues such as energy poverty, air quality and job creation.

The recent Renovation Wave strategy² put forward by the Commission in 2020 sets ambitious objectives in this regard: reducing buildings' greenhouse gas emissions by 60 per cent, their energy consumption by 14 per cent, and the energy consumption of heating and cooling by 18 per cent. The targets are considerably more ambitious, with proposals to double the renovation rate in Europe by 2030, which currently lies at around less than 1 per cent of the national building stock (this rate varies from 0.4 to 1.2 per cent in different Member States). The quality of renovations should also be deepened by applying strengthened performance standards, integrating more renewable energy sources in buildings and using resource efficient materials in a circular way.

Investments needed for building renovation

Significant investments are therefore needed in the building sector: the Commission estimates that around EUR 275 billion of additional investments are needed per year, including EUR 150 billion alone for energy efficiency.³ To bridge this gap, or at least to kick-start the investments in buildings, the EU counts on the Recovery and Resilience Facility. The renovation of buildings is one of the Facility's six flagship initiatives, which identify common issues faced by Member States where they should all concentrate their investments.

The Commission encourages Member States to include specific measures for renovation and proposes concrete examples of investments and projects to be included: home renovation support schemes to increase the energy and resource efficiency of residential buildings and social housing, schemes for public buildings, one-stop-shops facilitating energy renovation projects, transferrable on-bill recovery schemes, etc.

Measures needed for the building sector in CEE countries

The recovery funds will play an even greater role in building renovation in central and eastern European countries, a region highly reliant on EU funding where 41 per cent of all public investments come from EU funds. There are also greater challenges in this region due to the inheritance of a less energy efficient building stock in comparison to other parts of Europe. For instance, energy poverty is much more common (up to 40 per cent of households at risk in Bulgaria compared to 9 per cent in the EU⁴), and although the renovation rate varies a lot across the region, it is often much lower in CEE countries than in the rest of Europe (only 0.12 per cent per year in Poland compared to 2 per cent in France⁵). The affordability and accessibility of the energy efficiency measures in CEE countries are therefore dependent on the grant element that EU support offers.

Investments should be well targeted and avoid false solutions that could contradict the **'do no significant harm' principle**, such as the replacement of coal boilers with gas ones. The recovery and resilience plans are

¹ European Commission, ['Energy – Renovation wave'](#).

² European Commission, [A Renovation Wave for Europe](#), 14 October 2020.

³ European Commission, ['Closing the gap on energy efficiency investments'](#), Brussels, 22 December 2020.

⁴ Helene Sibileau, ['Building Renovation: act now to improve lives and make our 2050 vision a reality'](#), C4E Forum.

⁵ The Prince of Wales's – Corporate Leaders Group, [The energy transition in Central and Eastern Europe: The business case for higher ambition](#).

an opportunity to increase investments and prepare for a long-term renovation phase. Therefore, including innovative low-carbon solutions and circular economy elements should be prioritised as well.

On top of the financial investments needed, a **suitable policy framework and the reduction of administrative barriers** are also required in order to accelerate building renovation. This is often missing in CEE countries and must be addressed by the recovery plans.

An analysis of energy efficiency and building measures in national recovery and resilience plans

From the initial assessment of the European Commission, it appears that the Recovery and Resilience Facility will support investment needs in building renovation with around EUR 50 to 55 billion throughout the EU. Although this is far from the EUR 2,750 billion needed in the next ten years for the sector, it can serve as an effective tool to kick-start the renovation wave, provided that the funds are used to drive the right investments.

In CEE countries, based on assessments conducted by CEE Bankwatch Network,⁶ these investments will have to be significantly improved both in terms of quality and quantity in order to reach the EU's Renovation Wave objectives.

Good measures for building renovation in CEE national plans

In central and eastern European countries, all national recovery and resilience plans assessed by CEE Bankwatch Network include energy efficiency and building renovation measures. Some countries have included notable measures.

Energy efficiency measures are part of the green component of the **Czech** plan,⁷ with an allocation of EUR 230 million. In **Estonia**,⁸ the recovery plan includes a EUR 47 million measure to renovate 100,000 individual homes and 14,000 apartment buildings to the C1 energy efficiency label standard.⁹

Proposed reforms for building renovation in **Slovakia**¹⁰ include integrating various public support measures, increasing transparency, complex assessments of historical buildings and dealing with construction waste. The last reform is the only circular economy initiative in the entire recovery plan.

Some recovery plans are introducing crucial themes into national legal systems. For instance, in the **Bulgarian** plan,¹¹ the concept of energy poverty will be tackled at the national level for the first time thanks to a measure aimed at improving efficiency in building. The government is planning to allocate at least EUR 10 million of EU funds to co-finance energy efficiency and renewable energy projects in private buildings, both for multi-family and single-family buildings. In total, the programme is expected to benefit more than 10,000 households.

⁶ CEE Bankwatch Network, [‘A new budget for a new Europe’](#).

⁷ CEE Bankwatch Network, [Assessment of the Czech Republic’s recovery and resilience plan](#), May 2021.

⁸ CEE Bankwatch Network, [Assessment of Estonia’s Recovery and Resilience Plan](#), April 2021.

⁹ Estonian Ministry of Economic Affairs and Communications, [‘Energy performance of buildings’](#), last updated 3 March 2015.

¹⁰ CEE Bankwatch Network, [Assessment of Slovakia’s recovery and resilience plan](#), April 2021.

¹¹ CEE Bankwatch Network, [Assessment of Bulgaria’s recovery and resilience plan](#), May 2021.

Problematic measures for building renovation in CEE national plans

However, in many countries, the plans are not ambitious enough to really kick-start the renovation wave. This is mainly due to the low ambition in the countries' existing national strategies for achieving energy efficiency objectives, as well as insufficient measures and budgets for building renovation, a lack of reformative elements and problematic elements in heating systems.

1. Many countries propose plans that are often not ambitious enough and refer to outdated strategies.

In some countries such as the **Czech Republic** or **Slovakia**, the plans regularly refer to the outdated EU objective of a 40 per cent emissions reduction by 2030 to justify their measures. The Slovak decarbonisation model does not even include the energy efficiency and renewable energy targets for 2030, which were increased in 2018.

In **Poland**¹² as well, the national recovery plan refers to the outdated Polish National Energy and Climate Plan and Polish Energy Policy 2040, which are not in line with the EU's target of a 55 per cent greenhouse gas emissions reduction by 2030. In these policy documents, the contributions for energy efficiency and energy consumption remain of modest ambition compared to the level of effort needed at the EU level. The Polish authorities have acknowledged that this will have to be amended following future modifications of the country's strategic direction.

In **Hungary**, the recovery plan is based on the approach of the National Energy and Climate Plan and National Energy Strategy, which do not emphasise the energy efficiency component enough. Hungary's contribution to the EU's energy efficiency target shows a very low level of ambition, amounting to 18.8 Mtoe of final energy consumption (translating into 30.7 Mtoe of primary energy consumption). Hungary claimed there was no scope for greater ambition under the economic and budgetary conditions prevailing at the time it submitted the strategy. This controversial approach is also reflected in the recovery plan; Hungary has not seized the opportunity to use the Recovery and Resilience Facility to massively improve energy efficiency.

2. Insufficient funding and lack of concrete planned investments for energy efficiency and building renovation is observed in most plans.

In the **Czech Republic**, the funds proposed in the recovery plan for energy efficiency in buildings will not be enough to meet the targets set in the Czech Building Renovation Strategy. It is necessary to increase the target of this component to 70,000 buildings and the allocation to buildings' energy efficiency to EUR 771 million (from EUR 385 million).

In **Bulgaria**, the plan proposes to finance individual renewable energy measures in residential buildings not connected to district heating and gas network, which is a positive measure, but it will be available to too few participating households and will have an insufficient budget.

The **Hungarian** plan only tackles energy efficiency marginally. The scheme for residential heating and electricity supply focuses on renewables and provides households with the option to install better insulated windows, but the full insulation of houses is not supported. The plan also proposes a community energy project

¹² CEE Bankwatch Network, [Assessment of Poland's recovery and resilience plan](#), April 2021.

based on low-capacity solar power plants in disadvantaged settlements, in the frame of which revenues from the solar plants would be used for social housing and electric heating while relinquishing the long-term benefits of improving the energy performance of buildings. The only area where energy efficiency receives more attention is university buildings; however, the plan only requires shallow renovation to be carried out, which would lock in energy-wasting operations for decades without using the funds efficiently. However, the plan does not provide exact figures, which makes it hard to assess this measure's energy saving potential.

Regarding public buildings, the **Polish** plan has lowered the ambition to modernise them during the preparation of the national plan, failing to significantly increase their energy efficiency and resigning to transform them into passive buildings.

3. The Recovery and Resilience Facility is based on both investments and reforms that should be implemented by Member States in order to receive money. Many countries fail to address proper reformative elements for building renovation.

In the case of **Latvia**, measures to remove administrative barriers should be included to speed up energy efficiency improvements in the residential housing sector. For instance, these measures should include easing the process of making collective decisions for the renovation of the buildings (in residential buildings that are not divided into apartments) as well as widely introducing individual heat meters in multi-apartment buildings for improved energy saving habits.

The **Hungarian** plan lacks non-refundable support for the energy renovation of residential buildings. While the population plans to renovate 1.4 million flats in the next five years, this should be supported with a comprehensive energy housing renovation scheme, including a 30 to 40 per cent non-refundable element. Furthermore, measures such as time-varying pricing, conditional on a review of current 'overhead-reduced' pricing and interventions to compensate for the expected increase in overhead costs for those in energy poverty should be included to really trigger energy savings. This is a missed opportunity given the current availability of loans, an energy efficiency obligation scheme and a marginal amount of potential grants under the Environment and Energy Efficiency Operational Programme.

In **Romania**, the plan proposes a significant allocation for building renovation, which has increased during the negotiations with the Commission. However, the proposed reforms are too timid to correct legislative problems, and there is an urgent need for the training of workforce for adaptation for high standards such as nearly zero energy buildings. Furthermore, nothing is planned to address the disorganisation of service and improve institutional collaboration. Without a detailed action plan to implement the national renovation strategy, the allocation for building renovation under the recovery plan will not be able to contribute to the Renovation Wave objectives.

A clear definition of circular economy is also missing in some plans, and this prevents reform of the sector. This is the case in **Bulgaria**, where a comprehensive methodology for introducing the circular economy principle in the building renovation and construction sector should be included in order to guarantee it will minimise the amount of waste generated or ensure its recycling.

4. Some investments are based on unambitious or outdated measures and should be strengthened.

In its national plan, the **Bulgarian** government will allow recovery funds to pay for class C energy efficiency measures, which do not meet the European Renovation Wave targets for annual deep renovations. While

prioritising the renovation of residential buildings that fall into the energy consumption classes of E, F and G, residents of class D or C buildings who wish to achieve close to zero energy consumption from accessing energy efficiency programmes should not be excluded.

In **Slovakia**, the components of the recovery plan that include the modernisation and renovation of buildings should incentivise deep renovation (at least 60 per cent primary energy savings) – not medium (at least 30 per cent primary energy savings) in order to meet the climate targets. Moreover, Slovakia's Long-Term Renovation Strategy relies on insufficient assumptions, such as only a 25 per cent decrease of carbon emissions from gas by 2050. Therefore, this strategy and the recovery plan do not incentivise an ambitious decarbonisation of the building stock.

5. Heating and cooling systems are a crucial element in need of investment to help decarbonise buildings. Yet in many countries, such measures are not sufficiently covered in national plans and sometimes include potentially harmful investments.

Central and eastern European countries' plans often miss the opportunity to modernise heating systems. For instance, in **Latvia**, the plan allocates no resources for improving central heating systems, which would reduce emissions, as well as improve energy efficiency, promote new connections and increase the share of renewables in the heat supply thanks to zero emission and storage technologies.

In the **Czech Republic**, the modernisation of the network of pipelines constituting district heating infrastructure will be well covered by the recovery plan, but its 100 per cent contribution to the climate target is doubtful since the fuel switch from coal in the heating plants (to be financed by the Modernisation Fund) will lead towards heat generation based on fossil gas.

In **Hungary**, the plan proposes to connect solar energy systems and the electrification of heating, although electricity generation and heating demand with solar panels are separated on a daily and seasonal basis. This will not be cost-effective in terms of climate protection and does not provide long-term, sustainable relief to those in energy poverty.

It is also regrettable that some Member States are planning dubious measures for heating systems, failing to phase out fossil fuels. Thus, in **Poland**, the recovery plan does not set a limit to support for gas investments in household heating, while gas should only be allowed as a 'last resort' when the use of renewable energy sources is not possible. In businesses, support for gas investments should be entirely excluded.

In **Slovakia**, the plan includes an investment package for improving the energy efficiency of 30,000 family homes in an attempt to address energy poverty, including a EUR 50 million allocation for fossil gas boilers. This should be replaced with renewable energy source systems, combined with deep renovation of houses and comprehensive energy poverty measures.

In the **Czech Republic**, the plan proposes to support the renovation of heating systems with the replacement of boilers, 30 per cent of which will use natural gas (the rest biomass or heat pumps). Although it does not increase the risk of stranded assets (given the 15 to 20 per cent lifetime of boilers), this sends the wrong signals and is based on the outdated objective of reducing greenhouse gas emissions by 40 per cent in 2030.

Overview of building renovation investments in CEE recovery plans¹³

Country	Type of energy efficiency measure	Cost	Total budget of recovery plan	Targeted value	Assessment according to renovation wave ambition
Bulgaria	Energy efficient and renewable energy projects in private buildings	At least EUR 10 million	Up to EUR 10.7 billion	More than 10,000 households (both multi- and single-family buildings)	5 to 10 times more renovations needed to meet the national targets
Czech Republic	Building renovation component, for energy efficiency investments and replacement of heat sources	EUR 730 million for the building renovation component, including 330 million for heating	EUR 7.1 billion requested	More than 35,000 complex and medium-deep energy renovations	Target of 70,000 building renovation to achieve the national strategy objectives
Estonia	Investments in energy efficient buildings	EUR 47 million	EUR 982.5 million requested	Renovate 100,000 individual homes and 14,000 apartment buildings to the C1 energy efficiency label standard	141,000 buildings need renovation within 30 years
Latvia	Renovation and energy efficiency measures for apartment buildings and public buildings (including historical ones)	EUR 101,542 million	EUR 1.8 billion	185 apartment buildings; no figure for public buildings	Low or no milestone provided
Poland	Investment in energy efficiency in buildings through Clean Air Programme	EUR 3,858 million, including: EUR 300 million for heating systems, EUR 3,201 million for replacing heating sources and energy efficiency in buildings, and more than EUR 350 million for public buildings	EUR 36 billion requested (including EUR 12.1 billion loan)	85% of (licenced) heating systems energy efficient by 2030 resulting in 28.4% RES share in heating (in line with RED II provisions)	Heating system efficiency rate as planned in Polish energy plan but open door for investments in gas heating with no set limit

¹³ This table is a compilation of data and analysis provided by CEE Bankwatch Network's campaigners, as well as figures from relevant national strategies (e.g. National Energy and Climate Plans, Long-Term Renovation Strategies etc.). Hungary is not included in this table due to lack of available/accessible information on specific measures. Due to the various different data sources and types of information available for each country, this table is not meant to provide a basis for comparison across countries, but rather an overview of the situation in each country.

Country	Type of energy efficiency measure	Cost	Total budget of recovery plan	Targeted value	Assessment according to renovation wave ambition
Romania	Establishment of a Renovation Wave Fund	EUR 2.2 billion	EUR 29.3 billion requested (including EUR 15 billion loan)	At least 4 million m ² of multi-family buildings and at least 2.5 million m ² of public buildings, leading to achieve a medium-depth level renovation as defined in the Commission's Recommendation on Building Renovation	EUR 13 billion needed by 2030 according to the National Renovation Strategy
Slovakia	Energy efficiency in households – energy poverty	EUR 50 million	EUR 6.3 billion	40,000 family homes in Slovakia in an attempt to address energy poverty	Dedicated investments for gas boilers – should be replaced by renewable and energy efficiency investments

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