Trillions of euros of energy efficiency investment up for grabs

Pension fund: EU should promote ‘one-stop shop’ for housing renovation

Energy efficiency entrepreneur: EU targets should be higher

Central Europe slow to embrace new finance for housing renovation

Back to front: Struggle to renovate EU building stock persists

Inaction on building renovation is ‘costing lives’

Latent demand, not funding, is biggest obstacle for building renovation
European Union policymakers have made energy efficiency, particularly in buildings, central to their plans to create an Energy Union. But they must convince private investors to unlock trillions of euros of capital.

The Energy Union is a strategy to cut the bloc’s dependence on energy imports, which cost €400 billion a year, and fight climate change. The twin goals can both be met with greater energy efficiency, which reduces demand and cuts emissions.

The European Commission, under the direction of Energy Union chief Maroš Šefčovič, has vowed to put “energy efficiency first” in its plans. EU officials pinpointed building renovation as a priority for the strategy and reiterated that commitment in November’s Clean Energy for all Europeans communication in November last year.

75% of the EU’s building stock is inefficient and buildings account for 40% of the EU’s primary energy demand.

Energy efficient renovation can give a fillip to the economy through local jobs, increase house prices, and cut household bills. Increasing the life and value of public buildings through renovation should also be attractive to municipalities but, despite the multiple benefits, such as reducing energy poverty, renovation rates in the EU are just 1% a year.

Ironically, in the next five years, there could be more progress in getting self-driving cars on the road than taking advantage of efficiency technology that already exists.

A major obstacle to getting renovation rates higher is access to finance, which is an issue for both businesses and households. This week’s special report will examine private and public sources of capital for energy efficient renovation, look at the role of EU policymakers and some of the benefits driving efficiency investment.

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INVESTMENT GAP BUT WHO PAYS?

Private investment in energy-efficient buildings renovation must increase five-fold by 2030, according to a group set up by the European Commission and the United Nations Environment Programme (UNEP) Finance Initiative.

The Energy Efficiency Financial Institutions Group (EEFIG) has called for a “historic level of public-private collaboration” to bridge the funding gap for energy savings projects.

For most homeowners, a house is their single largest investment. The European Mortgage Federation is pushing out an EU-wide scheme to make green mortgages more available.

Homeowners will qualify for reduced repayment on their mortgages if they undertake energy efficiency renovations, and lower interest rates on loans to pay for them.

Research shows that homeowners carrying out such renovations are less likely to default, and borrowers will be rewarded with a lower risk profile and less monthly payments.

The “pioneering” plans, first revealed by euractiv.com in June last year, are now being rolled out.

Dutch bank Rabobank offers 0.5% lower interest rates for the most energy efficient homes. The Dutch government offers banks a tax deduction on their returns on green investment.

Triados Bank, which has branches in the Netherlands, Belgium, Germany, Spain and the UK, will reduce interest rates on existing loans if building energy performance improves. At the time of writing, interest rates are 1.7% with energy label A, 1.8% with B, 1.9% with C and so on.

ING has also launched building renovation loan scheme worth up to €50,000 at 1.95% over ten years.

But the only way to get renovation rates across the EU higher is to unlock the capital held by institutional investors such as pension funds and insurance funds.

There is growing interest from these investors in energy efficiency project. They recognise the potential of a long-term, low-risk project with stable returns.

After the landmark success of the United Nations’ Paris Agreement on climate change, members of funds are increasing pressure on investors to find green projects.

TRILLIONS OF EUROS

Danish Pension Fund PKA has set a target of investing €3.5 billion, 10% of their €35 billion capital, into efficiency and renewables by 2020.

PKA is chairing the Institutional Investors Group on Climate Change, a forum for collaboration on climate change between investors. IIGCC members represent €18 trillion in potential investment.

EURACTIV understands PKA is pushing for other funds to match their 10% target, which could unlock 1.8 trillion of additional funding for energy efficiency investment.

But institutional investors traditionally back larger projects, such as infrastructure. Renovating individual buildings would be too small an investment.

Finding methods to aggregate a number or pool of smaller projects into a large investment opportunity will make it easier to raise finance.

Public money can be used to de-risk such pools through loan guarantees. Such guarantees can incentivise much larger amounts of private capital.

The European Commission’s Smart Finance for Smart Buildings initiative and the flagship Juncker Investment Plan are examples of such public-private partnerships.

The Smart Finance initiative can unlock an extra €10 billion of public and private funds by 2020 through new project aggregation mechanisms and efficiency financing platforms.

Those platforms will help bring added investment from the European Structural Investment Funds and the European Fund for Strategic Investment, which is the mechanism for the Juncker Plan.

EU TARGETS CAN DRIVE INVESTMENT

EU policymakers can incentivise more renovation investment through higher EU energy efficiency targets for 2030, according to campaigners.

The Commission is pushing for a binding 30% efficiency target in the revisions to the draft Energy Efficiency Directive.

That is more than the 27% goal set by EU leaders in 2014, but the executive argues that the ratification of the landmark Paris Agreement on climate change last year justifies the increase.

The European Parliament has repeatedly called for a 40% target, which the Commission says would be too costly. MEPs and national diplomats must agree to an identical target before it can become EU law.

Member states are divided on whether to back 27%, a non-binding 30% or a binding 30% target. Malta, which holds the rotating Presidency of the EU, hopes to agree the Council’s position before the end of June.

The European Council for Energy Efficiency (ECEE) is a non-profit with more than 75 member organisations including national regulators, environmental NGOs and industries.

It argues that a higher 2030 target would bring huge benefits, as well as giving investors the certainty they need to back efficiency projects.

According to ECEE, an increase to 30% from 27% would significantly cut air pollution. This could prevent 30,000 premature deaths across the
EU. Increasing the target to the 40% backed by MEPs would, according to Commission research, save about 200,000 lives and cut health and pollution control costs by up to €41 billion per year.

The ECEE estimates that a 30% target would double building renovation rates, while 40% would triple them, provided

Ecofys, a research group, estimates that combining a 30% efficiency target with a 30% renewable energy target would slash EU emissions by 44% in 2030. EU emissions would be cut in half with a 40% efficiency target.

The EU has a target of cutting greenhouse gas emissions by at least 40%, compared to 1990 levels, by 2030. That commitment is the cornerstone of its pledge to the Paris Agreement, which aims to cap global warming at two degrees above pre-industrial levels, with an aspirational 1.5-degree goal.

The influential International Energy Agency estimates that half of the global emissions cut needed to stay below two degrees must come from energy efficiency.

Mirella Vitale, senior vice-president at insulation company Rockwool international, said, “For us it’s very clear that ambitious EU energy efficiency targets will boost demand for buildings renovation and other forms of energy efficiency. By adopting ambitious, binding legislation, decision-makers will cut risks and costs, and open the gates for many billions of euros of investment in Europe.”

The European Commission is also revising the Energy Performance in Buildings Directive, which compels member states to have long-term renovation strategies, and buildings to have certificates on their energy efficiency.
Homeowners typically don’t have the capital to invest in energy renovation solutions, despite the proven returns. Danish pension fund PKA helps bridge that gap with a one-stop-shop solution which, it believes, could be replicated across Europe.

Pelle Pedersen is head of responsible investment at PKA, a Danish pension fund. He spoke to EURACTIV.com’s publisher and editor, Frédéric Simon.

**Why is a pension fund like PKA interested in energy efficiency?**

There’s a number of factors. First, we represent the healthcare sector, nurses and social workers and 90% of our members are women. And our members believe we should pursue investments where we are able to merge sustainability and profit. Because of that, we have in our investment strategy a specific reference to climate change and to what we call impact investing.

That’s not to say it’s easy to find a project where you can combine the two. We started in 2011 with our first wind park investment in Denmark, which was the biggest in the country at the time. Now we have invested roughly €1.7 billion into four wind parks.

We’ve also created our own energy renovation fund where we provide fully funded energy renovations to homeowners and companies in Denmark. We’re repaid through savings on energy bills, plus interest on the loans we provide.

This got a lot of attention in Denmark, from mayors and politicians all over. PKA provides the capital but we’re very honest about how knowledgeable we are about building renovation, which is a specific area of expertise. So we’ve teamed up with another organisation, Smith Innovation, and they are the experts.
in providing the needed solutions together with the essential financing, which makes our offer much more effective.

On our side, we bring capital to the table. We invested €40 million into this fund called Sustain Solutions, offering fully funded renovation in Denmark, and we hope to see further allocations being made to that fund as we go along.

When the fund was launched back in 2015, we had to explain what this was all about, why we believed this was very innovative. Now, we’re exploring how we could collaborate with other Danish companies to provide a one-stop package to homeowners so they don’t have to engage with ten different contractors and ten different companies for specific solutions.

You said it wasn’t always easy to find projects that combine financial returns with environmental benefits. So what, typically, were the kinds of projects you refused and those you accepted?

What we’re looking for – as all investors do – is a stable political environment. And we’ve seen a few cases, in Spain and the Czech Republic, where legislation on renewables was changed retroactively and investors suffered a loss. This led some investors in Europe to take a step back and say, ‘Well, maybe we shouldn’t be investing in renewables’.

Do you have similar concerns about retroactive changes made to legislation in the energy efficiency field?

We actually don’t because we’re not that dependent on subsidies when it comes to energy efficiency. It pays its own way much more. Other investments such as wind parks or similar are of course today much more dependent on subsidies to attract private capital.

But when we look at our energy efficiency investments, actual energy savings usually range between 30-60%. So the business case is there no matter what. Of course, it’s beneficial for the project that we have some levels of subsidies, but it’s not the main reason to invest. And the payback period for these loans tends to be five years depending on whether you decide to install solar, which will extend the payback period.

If the payback is good, have you decided to invest more money in that area as a result?

On a general basis, the main problem is that homeowners don’t have the capital to invest in energy renovation solutions. So that was a real problem for the companies providing these solutions in Denmark. With our capital, we can actually bridge that gap.

But we haven’t really seen these types of solutions move at scale and that’s what we’re trying to do now. Of course, we’re looking at Denmark, but down the road, we could potentially consider broadening the scope to also include the rest of Europe.

Essentially, you need these one-stop shop solutions. We all know engaging with several contractors can be a huge challenge. And we truly believe in our solution, which makes the entire process a lot easier to understand.

So you think every country should have a one-stop shop in place for energy renovation. Should this be guided by EU-level legislation or can it happen at national level only?

Both are needed, clearly. What we need is higher ambition in EU legislation, which is then translated into appropriate levels of ambition at national level as well. That’s exactly what happened with the 2020 legislation and that’s what we’re campaigning for looking ahead to 2030.

Now, the actual hubs or platforms – this is something the Commission is planning for as part of the smart

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finance for smart buildings initiative. They’re talking about national platforms where money can meet projects and where there can be technical assistance provided.

But this can also work on a multilayered approach. For example what PKA is doing in Denmark with our partner organisation is a very concrete case of capital meeting technical expertise, so it doesn’t have to all be done through national platforms, which would be set up by member states with the assistance of the EIB and the Commission. That’s just one way of doing it, but there has to be room for initiative.

If there were one-stop shops across every EU member country, that would be an incentive for PKA to expand its activities?

Exactly. With a stable framework, it makes sense for us to consider scaling our investment in energy efficiency to other European countries. However, we need the right partners with the essential know-how before this can be an option. But ambition with strong political backing is crucial. That’s also why we are focussing on Denmark at the moment. That’s our home country, we trust the regulation.

Again, we need the EU to deliver, at least on its current ambitions. To be frank, on our side we would prefer less bureaucracy. If we had to engage with the EU every time for each specific project, it would be too much. This is not to say the EU should not play a role. Public-private-partnerships could be the game changer we all need. However, as investors, we do not always have the time for policymakers to catch up.

Accessible capital is, fortunately, today not the main barrier for mobilising private investment. And when it comes to energy efficiency, a major barrier is the actual understanding of the risk, which is a key consideration for institutional investors.

Institutional investors always base their investment on a risk/return-adjusted ratio, so we always compare the return with the risk. Of course, there’s no return without a risk, but the risk is drastically reduced if you have the know-how to measure the cash flows you will be receiving in the investment period.

So it is really essential to build some sort of database to highlight the actual risk against the perceived risk with energy efficiency investments, which can be a key driver to mobilise more private capital.

How do you overcome that? What makes you invest in energy efficiency despite the lower evidence for quick returns?

Generally speaking, we need more research on the actual risk to attract more private capital. This is something the European Commission is doing – they’re building up a database of energy efficiency projects across Europe and they’ve got a staggering number, around 12,000 individual cases.

For a pension fund or a bank, this is exactly the breadth of data you need to analyse to decide whether energy efficiency is worth putting your money into.

Across Europe, you see that more and more banks are either proposing very low-interest rates for green mortgages or lowering them to renovate your home. Here in Belgium, ING offers 1.95% on up to €50,000 over ten years to renovate your home, which is extremely competitive. In Bulgaria, Pro Credit, a German bank, is offering very low loans as well. It’s the same in the Netherlands.

So we’re seeing that more and more banks are seeing the opportunity and are beginning to act as advertisers for energy efficiency. And when a bank sees an opportunity to make money with energy efficiency and starts campaigning for it, then we’re really starting to get the sort of critical mass we need.

PKA currently operates in Denmark. Where would you go to next?

There’s a lot of opportunity still in Denmark, which is where our main focus today is. But just look at the potential in the UK when it comes to insulation, district heating and similar. Billions are needed and we need all the relevant stakeholders to be a part of the solutions.

The same goes for the Baltic countries. And Poland as well, where the air quality issue can be a key driver. When you look at the causes of air pollution, you see that 40% of Polish homes have no insulation whatsoever. And a large number of Polish homes are using coal for heating and it’s very low-quality coal, it’s waste coal which cannot be burned to produce electricity.

So the health factor there is a huge issue and what we’re seeing is that more and more energy efficiency is just fitting into these bigger human and social logics. Energy efficiency is not the standout issue but it’s becoming recognised as the solution for much bigger issues.

Where next? Central and Eastern Europe?

If you just look at the existing building stock in Europe, it’s estimated that between 75 and 90% will still be up and running by 2050, so there’s tremendous potential, even in Denmark.

Policymakers keep asking pension funds to invest in Europe – whether in renewables, energy efficiency, roads, or infrastructure in general. But at the same time, many financial regulators...
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at the national level are very cautious about alternative investments – in Denmark and in many other European countries. So if the financiers nationally are not able to actually support those kinds of investments, then we’ll never succeed.

At PKA, we’ve invested roughly 25% in alternatives, but the average investor only has 1% in alternative investments because a smaller pension fund might not have the resources to set up a 20-man team as we did. At the same time, if the regulators question alternative investments such as renewables and energy efficiency, then where is the incentive to do so? That is also why a greater focus on actual risk, against perceived risk, is essential.

Since you’re investing so much in alternatives, you must have lots of data. Are you making that data available to others in the financial sector?

We can make the case to invest in alternatives. A few weeks ago, we sold one of our wind parks and made a return of €150 million over three years. Therefore, it can make sense for pension funds under the right circumstances to invest in alternatives combining the green agenda with our responsibility to provide our members with the best possible pensions.

That’s also why we’re here in the EU explaining that to policymakers, explaining that there are billions on the table.

Are they listening?

They are listening, they’re very interested. One of the main messages we’re trying to get across is that it’s not just an issue of money – it’s really a matter of know-how.

Sometimes even large cities find it very hard to engage with EU institutions. You need intermediaries, people who understand how to finance projects and how to help project developers put together applications to get the financing. Because not every pension fund has the initiative or resources like PKA to team up with local organisations that have this know-how. This is something that the Commission and member states can do a lot to help with – put the capital in touch with the projects.

Just look at our wind parks. All of them were developed with Dong Energy. When you have the model, when you have the company in charge of the contract, of getting all the permits, actually building and operating the wind park, the only thing we have to do is to provide the capital.

That’s the type of solution we need if we are to scale investments in energy efficiency.
INTERVIEW

Energy efficiency entrepreneur: EU targets should be higher

Ambitious European Union targets to boost energy efficiency can unlock much-needed private investment, Peter Sweatman told EURACTIV.com. But the current targets are not high enough, said the rapporteur on the Energy Efficiency Financial Institutions Group (EEFIG).

Peter Sweatman is the rapporteur of EEFIG, which was set up by the European Commission and the United Nations Environment Program Finance Initiative. EEFIG works to identify barriers to the long-term financing of energy efficiency.

Sweatman is also CEO of Climate Strategy & Partners and was a managing director at specialist fund manager Climate Change Capital.

Sweatman spoke to EURACTIV’s Political Editor, James Crisp.

EEFIG says that investment in energy efficiency has to increase by five times.

That’s exactly what we wrote about private investment. In 2014, we published a couple of reports and most recently a database that brings forward 7,800, more or less, energy efficiency projects from buildings and industry in Europe.

When you are dealing with the big numbers it is actually very hard. You can do a top down approach on the numbers, which is overall estimates of energy expenditure, and you can do bottom up by counting projects. We tried to do both, working from data from Eurostat and the International Energy Agency, and estimating the financing which could be available on an annual basis.

Then we have gone to a project by

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Isn't that giving these private investors a subsidy? A guarantee to get the investors to unlock their capital.

Yes.

So why don't they just invest? It makes good business sense.

Of all the questions you get in energy efficiency, that's probably the hardest. It makes good business sense so why don't people do it? All I can say is that in practice, decision-making by business and the public just isn't logical.

When presented with alternatives, some of which are money-making in the long run, some of which provide pleasure or alternative emotions in the short term, human beings are not always rational.

If we had infinite savings perhaps we would do everything we are supposed to do economically.

Is it that the rates of return are not attractive enough?

Long-term investors, institutional investors, often express a great deal of keenness to get into energy efficiency. Part of the problem is that energy efficiency projects are heterogeneous and they are small and they are scattered around a lot of buildings and industries.

It requires a great deal more analytical resources in the middle from financial institutions or from aggregators to group them up into baskets to allow pension funds or banks to invest in them.

There is an economy of scale in the provision of finance. What we used to say when I worked at JP Morgan was the amount of time and energy required to do a billion dollar transaction was the same as for $100 million was the same as $10 million.

An energy performance contract will have the same number of pages, independent, broadly speaking, of the amount of investment it concerns. Every building is a complex whole, which has systems, operations and controls that have to be coordinated.

Where public funds are necessary is to increase the level of technical and project development assistance to help overcome that.

So who benefits from such assistance?

A CEO said once energy efficiency is like picking up the dollar bills lying around on the floor. Energy efficiency is not a new thing. Large global brands have tended to do energy efficiency as part of the low hanging fruit of their climate programmes.

It is medium-sized and smaller companies that have the lowest hanging fruit. But at a time when it is harder for them to access capital markets in general and they are not as creditworthy.

Public funds and I don’t think of this as a subsidy, can be used to give a first loss provision. This is a feature that can allow a larger investor to have confidence in a pool of smaller projects. If in that pool of 100, there are a couple of bad ones, then the first loss tranche will take care of that couple of bad ones. This public, facilitative funding is able to get the right amount of funding to those SMEs and smaller projects.

Should green investments have a lower capital risk weighting for lenders?

This is definitely a fertile area for work. Energy efficiency has been booming in China because Chinese banks have energy efficiency guidelines and the People’s Bank of China has provided improved capital weighting allocations for banks conducting energy efficiency investments. There is a precedent.

I particularly like a programme which has been around for 12 years and is promoted by the European Bank for Regional Development, the Sustainable Energy Finance Facilities. They are using their resources to focus on a particular country, understand what kind of projects would be available, what industries, what types of buildings and what types of technologies...
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needs to focus on is upgrading the professionalisation of the teams that are in your house to offer you those energy efficient solutions. We are not being offered those energy efficient alternatives enough. Because sometimes the supply chain in the construction and buildings industry may not be familiar enough with the alternatives or confident enough they can deliver you the savings associated with them. So that’s an area for improvement.

**What can Europe do in that space which is better than at a national level?**

Personally, I am a supporter of targets. It’s strange to see how financial institutions and large companies work when a topic is written about in the press. If it’s on the agenda for the management teams then the management teams will ask the questions. It’s only a matter of asking the question then the people focusing on the financial side and the operational side will have to get together and come up with a project.

**Can you get management teams to ask the question without targets?**

It’s targets that put pressure on national governments. That gets the subject into the national newspapers and discussed. Then the management teams and the industries providing the solutions will be requesting meetings with the management teams, so everything is kind of a big circle.

**Do you think the EU’s 27% energy efficiency target for 2030 is high enough?**

No, I don’t. I’ve started up many firms in my career and NGOs and I think that it is great to have vision. Sometimes having a big aggressive ambitious vision gets you to a place you wouldn’t have got to. 40% I think is economically and cost-optimally achievable and I definitely support it. I think that level of ambition would be extraordinary.

*The Commission wants 30%. When it is asked why not higher, it says the cost-benefit analysis doesn’t bear it out.*

There is a question over speed. The best time to intercede with energy efficiency upgrades to a building is when you are renovating anyway. If you talk to large holders of real estate investments, they will tell you we have a renovation schedule. It is highly cost effective to intervene when a building is having down time because you are not losing revenue and rental for that period.

Even though the actual energy savings of the measures would deliver better when you do them earlier. Sometimes stopping an industry or building sooner than it was ready to do so has alternative costs.

**Do you think the Energy Performance in Buildings certificate works?**

I’ve been asking financial institutions this question because it is one of those things I’ve heard said too many times in a loose fashion. ‘We need to harmonise energy performance certificates’ etc. etc. I don’t think it is a helpful discussion to introduce something like harmonisation or standardisation when I know that financial institutions in a national setting will deal with what is there.

In some countries, I asked if there are problems with energy performance certificates. In some leading countries, they said yes a decade ago and today, absolutely not.

**Does it drive change?**

I think it is driving consumer awareness. In the residential sector, it is working very well. If you have to have a certificate before you rent or sell a property, it forces consumers to realise there is an energy efficiency component and it may cause a conversation with an owner. Someone could say I see your rating is F. Why don’t you upgrade it? And if I am going to benefit while I rent your building for five years – well then maybe there is a deal we could do.
Central Europe slow to embrace new finance for housing renovation

The European Commission is emphasising the use of loans and guarantees to attract private funding in support for energy efficiency renovation projects. But Central European countries are only slowly catching up with this trend. EURACTIV Czech Republic reports.

Buildings account for 40% of Europe's energy consumption and two-thirds of them were built before energy performance standards existed.

The European Commission now wants to speed up the renovation rate of the existing building stock, which is currently estimated at only 1% per year.

Financing will play a crucial role in this effort, the head of the Commission's energy efficiency unit Paul Hodson pointed out at a conference in Prague at the end of April.

“When I changed my television for a better and more efficient one, I did not need to get a loan from my bank. But if the changes that we need are not replacing TVs, but the renovation of buildings, the willingness of households and companies to finance such investments is lower than we would like it to be,” Hodson said.

AGGREGATING PROJECTS

Projects for energy efficient buildings typically face such kinds of issues, according to Berna Topaloğlu, from the energy efficiency division of the European Investment Bank (EIB).

The problems are well-known. Homeowners don’t have the capital to invest in energy renovation solutions. Projects are often small and fragmented, and payback periods are long. Another problem is the split of incentives between landlords who invest in energy efficiency measures and tenants who benefit from them. The capacity of beneficiaries to define and implement projects is also critical, Topaloğlu told the conference in Prague.

One of the solutions is to aggregate projects. “Aggregation is the capacity to put together projects to be able Continued on Page 15
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to provide intermediate lending for example in cooperation with national banks,” she explained.

“We also have a broad range of financial instruments, and we provide technical assistance. However, we need a good regulatory framework to be able to tackle the needs in energy efficiency financing,” Topaloğlu added.

As part of its Winter Package of energy proposals presented last November, the Commission launched the Smart Finance for Smart Buildings initiative to unlock private financing for energy efficiency and renewables in buildings at a greater scale.

**DEPENDENCE ON EU GRANTS**

One of the major goals of the initiative is a more effective use of public funds, Hodson told the conference in Prague.

Money from the European Regional Development Fund (ERDF) and Cohesion Fund (CF) play an important role in financing energy efficiency measures in the housing sector in countries like Poland, the Czech Republic and Romania – but also in France and Spain, he said.

In total, planned allocations of EU money to energy efficiency tripled in for the 2014–2020 period, in comparison with the previous 2007–2013 period, said Radoslav Lipták from the Commission’s regional policy directorate (DG Regio).

But in many Central European countries, EU funding for building renovation tends to prevail over private means of financing.

This is also the case in the Czech Republic, which has more than €2 billion planned allocations in several programmes. At the same time, the country is struggling with a long-term inability to use EU money efficiently.

Prague has been successful with its New Green Savings Programme, covered by the share of auctioned emission allowances under the EU Emissions Trading Scheme, but is struggling to exploit the EU’s Structural Funds for regional development. This makes it more complicated to meet its energy efficiency target for 2020.

The Commission is now emphasising the use of repayable financial instruments like loans or guarantees which attract private financing and help to get more leverage out of the funds available.

The EU executive also supports the combination of structural funds with the European Fund for Strategic Investments established in 2015 as part of the Investment Plan for Europe, the so-called Juncker Plan.

“The use of financial instruments is not an objective. It is rather kind of a delivery mode,” Lipták said, explaining that energy efficiency loans provide stable, secure returns for investors.

“The activity must be generating income, revenue or cost savings to ensure repayment of investment,” he stressed.

However, it is up to national authorities to determine which types of investments are eligible for EU funding and prevent overlaps with private finance. “Financial instruments don’t fly if you have similar subsidy instruments,” said Vaida Lau ruš evičienė, of the Lithuanian Public Investment Development Agency.

In the Czech Republic, the use of financial instruments should increase after the planned transformation of the Czech-Moravian Guarantee and Development Bank into a national development bank.

But the whole concept of repayable instruments has not been adopted yet in the country, said Ondřej Šrámek from Knauf Insulation and the Czech Green Building Council.

“The government is undecided on how to approach financial instruments. Should we set up a centralised unit to deal with them, or do we let each managing authority to work on its own?,” he wondered.

“There is also a lack of leadership in the ministry of finance, unlike in neighbouring Slovakia which is a country from which we could learn in this regard,” Šrámek said.

Private investors, for their part, are waiting in the wings. PKA, a Danish pension fund, said it was considering expanding its activities in Central and Eastern Europe to offer loans for homeowners there.

“With a stable framework, it makes sense for us to consider scaling our investment in energy efficiency to other European countries,” said Pelle Pedersen, head of responsible investment at PKA.

However, he said ambition with strong political backing is crucial to avoid stop-and-go policies. “That’s also why we are focussing on Denmark at the moment. That’s our home country, we trust the regulation,” Pedersen told EURACTIV.
The renovation of the EU’s building stock is seen as critical in achieving the bloc’s climate change targets. Ahead of the revision of key EU legislation in the sector, EURACTIV takes a hard look at what’s on the table, the challenges ahead and how they can be addressed.

While many believe the European Union’s war on carbon is largely being fought across immense and ‘distant’ large point source emitters – coal/gas power plants and heavy industry, like steel, cement and glass – the reality is that it’s taking place much closer to home. Inside our homes, in fact.

And so it should. With Europe’s building stock – residential and non-residential – responsible for 40% of EU primary energy consumption and 36% of CO2 emissions, it remains unfathomable to many stakeholders that 75% of it remains inefficient.

Worse, the EU is crawling along with a paltry renovation rate of 1% annually, meaning it would take a century to decarbonise the building stock.

33 YEARS TO GET JOB DONE

And we don’t have 100 years to get the job done. More like 33 years.

By 2050, the entire existing global building stock would need to be retrofitted in order to have a chance of meeting the UN objective of limiting global warming to 2 degrees C, according to a joint publication by the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA) and Germany. Meanwhile, the share of near zero-energy buildings in new constructions would need to rise to 40% from a mere 1% today.

Reflecting the connectivity between the various elements of the energy-supply chain, decarbonising power and heat generation are a vital additional step towards achieving net-zero CO2 emissions in the buildings sector: indirect CO2 emissions currently represent around two-thirds of the sector’s CO2 emissions.

Of equal concern is the risk of buildings becoming stranded assets (obsolete or non-performing) if the building stock is not retrofitted.

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or replaced at scale and on time. The building sector is particularly vulnerable in this respect. For example, IRENA estimates that up to $1.3 trillion of buildings in Germany alone could become stranded assets if action is not taken.

The revision of the EU’s Energy Performance of Buildings Directive (EPBD), which seeks to deliver quality and modernity in the building stock through improved energy performance, is working its way through the European Parliament. Meanwhile, the Energy Efficiency Directive (EED) provides a 27% energy efficiency target for 2030, and outlines the means to help finance the renovation of the building stock.

**AMBITION EU ENERGY SAVINGS TARGET OF 40%**

An ambitious EU energy savings target of 40% is widely supported by building renovation stakeholders and experts, given it would increase renovation rates to 3%, add 1 million more jobs, lower energy imports, boost investor confidence and and remove uncertainties about the future of the EU building market.

The Commission is pushing for a binding 30% efficiency target in the revisions to the draft EED. That is more than the 27% goal set by EU leaders in 2014, but the executive argues that the ratification of the landmark Paris Agreement on climate change in 2016 justifies the increase.

The European Parliament has repeatedly called for a 40% target, which the Commission says would be too costly. MEPs and national diplomats must agree to an identical target before it can become EU law.

Meanwhile, member states are divided on whether to back 27%, a non-binding 30% or a binding 30% target. Malta, which holds the rotating Presidency of the EU, hopes to agree the Council’s position before the end of June.

Bendt Bendtsen, a Danish centre-right lawmaker, is rapporteur on the EPBD for the European Parliament. He loudly supports a more ambitious energy efficiency target: “European buildings must be more efficient. Doing so both decarbonises (the sector) and makes us more competitive.”

So, is the Commission’s proposed 30% efficiency target high enough to effect the change necessary?

“No, I don’t think so,” responds Peter Sweatman, the rapporteur on the Energy Efficiency Financial Institutions Group (EFFIG), which works to identify barriers to the long-term financing of energy efficiency.

“Sometimes, having a big, aggressive, ambitious vision gets you to a place you wouldn’t have got to. 40% I think is economically and cost-optimally achievable,” he said. However, he admitted that such a level of ambition “would be extraordinary.”

“One thing we wanted to avoid is to put more pressure on industry. We wanted it to be realistic,” explained Jobs and Growth Commissioner Jyrki Katainen at a EURACTIV event in December 2016.

**THE GOLDEN GOOSE**

However, those involved in renovating Europe’s building stock are desperate for pressure to be ratcheted up in order to meet long-term renovation targets. This is the only way, they argue, for the EU meets its low-carbon economy roadmap which calls for an 80% cut in greenhouse gas emissions, compared to 1990 levels, by 2050.

“The renovation of the European building stock is a golden goose, capable of laying many eggs,” insisted Adrian Joyce, campaign director of Renovate Europe, which seeks to reduce the energy demand of the building stock.

“But the right conditions are required for the goose to feel comfortable laying these eggs,” he added.

Advice on how to ensure renovations can begin at scale within the EU building stock came from a report entitled “Energy Transition of the EU Building Stock – Unleashing the 4th Industrial Revolution in Europe,” by Yamina Saheb (OpenExp).

The report estimated the EU energy renovation market at €109 billion in 2015 and 882,900 jobs. It revealed that the size of the EU energy renovation market could increase by almost 50% if a 40% energy efficiency target by 2030 was adopted by the EU. This would lead to more than one million additional jobs.

Achieving the above would require designing an integrated policy for buildings based on the “Efficiency First” principle. Such an overarching framework would streamline reporting and ensure coherence between the investment-climate-energy provisions currently included in at least 14 different EU policy instruments.

It would also simplify implementation for member states, avoid double-counting and facilitate compliance checking. The first step towards this transformation would be to address gaps and loopholes identified across existing EU instruments.

Additionally, the “Efficiency First” investment-climate-energy proposed framework for buildings would require new governance structure at EU level including setting-up an EU Energy Renovation Facilitator and an EU Risk Sharing Facility.

This would give industry confidence to invest in the industrialisation of energy renovation.

“You have to work really, really hard to find any negative numbers related to the renovation of the building stock,” said Paul Hodson,
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head of unit for energy efficiency at the European Commission. “It’s only positive...and better to employ European construction workers than to buy Russian gas!”

TRIGGER POINTS A MUST

However, “the benefits are harder to get in the next decade,” warned Hodson, as a reminder that further delay would lead to higher costs, using any metric.

Trigger points – key moments in the life of a building, such as its rental, sale or change of use – need to be introduced into national strategies via the EPBD to ensure renovation, says the Buildings Performance Institute Europe (BPIE), a building energy performance think-tank.

The BPIE also wants to see public authority-linked residential accommodations meeting the highest energy performance ratings; trigger point policies need to be carefully crafted and implemented to protect specific building types and occupants, particularly low-income households that may be unfairly penalised by renovation work through higher rents.

The European Commission wants to see a supportive policy framework, ensure the financial sector understands the risks related to lack of action on energy efficiency, better bundling of projects and the promotion of private finance in renovating the building stock. The latter would include a “clever” use of public money, leveraging it to better drive higher levels of private funding, Hodson explained.

SHOW US THE MONEY!

“Banks are ready, willing and capable to meet the demand for energy renovation when it materialises. There is no shortage of funds, but confidence must be boosted in the market,” ING’s Hibbert said.

Bendtsen added that “private investment is ready – be it the commercial banks like ING taking up the upfront investment, or be it institutional banking like pension funds securing the long-term income stream – both want to invest in energy renovation.”

“Contrary to popular belief, money is actually not the issue here”, added Joyce from Renovate Europe. “Banks are keen to invest, but they cannot address the latent demand. They need governments to support stronger legislation.”

It has been widely repeated, by NGOs like the World Wildlife Fund and economists alike, that the financial risks of the transition to a low-carbon economy are huge. The challenges are immense, but the rewards are immense as well.

Energy-efficient building refurbishments present a specific challenge to mobilise new sources of finance, given they lower capital costs but need to yield more certain returns, according to the IEA/IRENA/Germany report.

As such, the report highlights policy tools that facilitate investment in building efficiency, including: minimum performance standards; utility obligations; property tax repayment schemes; public procurement; tradeable certificates and revolving funds. Meanwhile, future investment decisions to renovate building stock could also be impacted by: energy performance certificates; performance data transparency; energy services companies.

Devising instruments and platforms to connect homeowners with capital and vice-versa remains incredibly challenging, even when the will to do so is present.

“If we want to crack the nut, we must get private funds – such as pension funds – working for us,” MEP Bendtsen underlined.

Some of them are starting to move, however. Pelle Pedersen, head of responsible investment at PKA, a Danish pension fund, says the main problem is that homeowners don’t have the capital to invest in energy renovation solutions.

“With our capital, we can actually bridge that gap,” he said.

Bridging the gap is one thing, scaling it up is another. “We haven’t really seen these types of solutions move at scale and that’s what we’re trying to do now….you need these one-stop shop solutions. We all know engaging with several contractors can be a huge challenge,” Pederssen added.

Both EU and national legislation are required, explains Pederssen, to ensure one-stop shopping can be put in place and made accessible and affordable.

The Commission wants to see a supportive policy framework, ensure the financial sector understands the risks related to lack of action on energy efficiency, better bundling of projects and the promotion of private finance in renovating the building stock. The latter would include a “clever” use of public money, leveraging it to better drive higher levels of private funding, Hodson explained.

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economy are largely predictable and avoidable. Those costs will be minimised if the transition begins immediately and follows a predictable path. The same is true when it comes to renovation of the EU building stock.

And what about the average European owner or renter? “Demand is lacking,” admitted Hibbert, pointing to the need to increase their awareness and education, along with effective legislative and policy triggers.

**IMPROVED QUALITY OF LIFE**

When queried about the focus on homeowners, Paula Ray Garcia, who is working on the EPBD for the Commission, pointed to the improved quality of life renovation of the building stock provides and would provide, and the importance of one-stop shopping in ensuring it actually takes place.

“We are also receiving complaints regarding poorly, or badly, implemented national legislation of the directive,” added Garcia. Citing Germany as one example, and the oft-overlooked Article 10 of the EPBD, Garcia stressed the importance of linking finance to regulation effectively to ensure renovation takes place.

Underlying the broader debate over the renovation of the EU building stock lies an obvious political advantage: homeowners who participate in and ‘live’ with the tangible benefits of more efficient and healthier homes are surely more likely to reward those who contributed to such a outcome.

Helpful at a time when the entire political class is suffering from a lack of trust and is seen as removed from citizens’ daily concerns

Back inside the corridors of EU power, the debate over how high to set the energy efficiency target, and its effects on the renovation of the building stock, is heating up.

Acknowledging the EU Council’s resistance to increasing energy efficiency targets, with insiders pointing to a “show us the money” positioning by some EU heads of state and a desire by Malta to rush proceedings to achieve an outcome, EPBD rapporteur Bendtsen clearly states his need for some 500 MEPs to stand behind the proposed revision of the EPBD. “That way, we can be strong (in our discussions) with the Council.”

Pulling together the asks to ensure Europe’s owners and buildings benefit from an energy efficiency transformation requires “a coherent long-term EU vision with an ambitious 2050 target and 2020 and 2030 markers along the way, alongside clear national milestones,” says Joyce of Renovate Europe. Without them? “That golden goose won’t lay a single egg,” he added.
Energy efficiency renovation can alleviate fuel poverty and bring a raft of health and societal benefits. While the EU could do more to boost renovation, several governments have shown that effective answers can be found at a national level.

Europe's old and inefficient building stock is a major factor in fuel poverty, which affects one in four EU citizens. Poor insulation and inefficient heating systems, coupled with low incomes and high fuel prices, leave many people facing a daily choice between heating and eating.

While annual renovation rates languish around the 1% mark across the EU, the health impacts of fuel poverty are very real. Not only does this undermine the well-being of a large proportion of EU citizens. It also puts extra strain on public services.

A 2011 study by Friends of the Earth found that "residents with bedroom temperatures at 21°C are 50% less likely to suffer depression and anxiety than those with temperatures of 15°C".

In the UK, where mental health conditions account for almost a quarter of the National Health Service's (NHS) total burden, the extra strain is significant.

But cold, damp homes also exacerbate circulatory problems and conditions such as arthritis, as well as acting as breeding grounds for mould, which can cause and aggravate respiratory conditions. In the UK, children who live in homes with poor heating are more than twice as likely to develop asthma, which alone absorbs around 1% of the NHS budget.

"Every year, the increase in deaths during winter months is measured, assessed, published and analysed, and every year the figures are shocking," said Dr Jessica Allen, the deputy director of the UCL Institute of Public Health Equity.

Experts attribute up to 50% of the annual spike in winter mortality to poor housing conditions. And the most pronounced patterns of seasonal deaths do not occur in the countries with the coldest winters but those with the poorest housing, including Portugal, Greece, Ireland and the UK.

In London alone, for example, an average of 3,710 people die every year...
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as a result of living in a cold home, according to Allen.

“We know the scale of our annual public health emergency, and we know what to do to prevent it. Inaction is costing many lives each year,” the expert said.

“THE SOLUTION FOR MUCH BIGGER ISSUES”

Poland provides another example of how fuel poverty can undermine citizens’ health and well-being. 40% of Polish homes have no insulation, so in order to stay warm, many people resort to burning waste and cheap, low quality coal. Not only does this lower the indoor air quality in these homes but it also adds to the country’s severe air pollution problem.

Indeed, according to the Health and Environment Alliance (HEAL), 2.5 million Poles – more than 5% of the population – suffer from chronic lung disease as a result of air pollution.

“The health factor there is a huge issue,” said Pelle Pedersen, head of responsible investment at PKA, a Danish pension fund.

“What we’re seeing more and more is that energy efficiency is just fitting into these bigger human and social logics. Energy efficiency is not the standout issue but it’s becoming recognised as the solution for much bigger issues,” Pederson added.

FOLLOWING LITHUANIA’S EXAMPLE

A number of EU countries have launched renovation initiatives to tackle fuel poverty and its societal impacts.

At 35%, Lithuania’s energy poverty rate is above the EU average, but its government is taking decisive action to turn the situation around, with a plan to renovate 8,000 homes by 2020 and cut domestic energy demand by around 40%.

Last year, Vilnius offered homeowners grants to cover up to 40% of their energy efficiency renovations. With the help of the European Investment Bank (EIB), the government raised €100 million in capital to leverage some €500m in low-interest bank loans to cover the remaining costs.

“These examples prove that national renovation strategies should integrate energy poverty alleviation, they bring benefits in terms of energy savings and improve the quality of life of vulnerable people,” Oliver Rapf, the executive director of the Buildings Performance Institute Europe (BPIE), told EURACTIV.com.

Similar schemes have been launched in the Netherlands and Romania.

Under the Dutch scheme, some 110,000 houses are scheduled to be renovated to near-zero emissions standard. The renovations are paid for by housing associations, which make their money back through savings on energy bills. And uptake has been strong, thanks to the government’s promise to carry out the work within two weeks and install a new Ikea kitchen as an incentive.

The Romanian scheme aims to renovate 65,000 communist-era apartments and update their communal heating systems to bring energy savings of up to 40%. Households earning less than €500 per month qualify for the €304m scheme, which leaves homeowners liable for 10-40% of the total cost.

“It isn’t always a matter of how much money you get, but how you use it,” Rapf said.

“DELIVER PROGRAMMES THAT WORK”

For BPIE, efforts to alleviate fuel poverty cannot be limited to providing subsidies to pay the energy bills but must include deep renovation programmes if the benefits are to be felt across society.

In a policy paper published last month, the organisation acknowledged the role the EU could play in boosting building renovation but called on EU member states to do more to improve the quality of their housing.

“The EU could certainly better use its funding mechanisms (like structural and cohesion funds) to earmark investments for reducing fuel poverty through renovation, but member states have the responsibility to design and deliver programmes that work,” said Rapf.

Initiatives like those in Lithuania, he added, “show that it can be done.”
Latent demand, not funding, is biggest obstacle for building renovation

A lack of demand for housing renovation – not a funding shortage – is the biggest obstacle to reaping the benefits of energy savings, seen as an unexploited ‘golden goose’ to tackle climate change and improve energy security.

EU legislation currently under revision must address the latent demand for housing renovation, stakeholders said at a Wednesday (10 May) breakfast event, hosted in Brussels by Bendt Bendtsen, a Danish MEP who is the rapporteur on the recast Energy Performance of Buildings Directive.

With Europe’s building stock responsible for 40% of EU primary energy consumption and 36% of CO2 emissions, it is difficult for many to accept that 75% of it remains inefficient.

The current underwhelming annual renovation rate of 1% across the EU means it would take a century to decarbonise the building stock. In reality, 2050 targets to lower the bloc’s CO2 emissions by 80% mean a tripling of the renovation rate is required.

EU heads of state have adopted a “show us the money” attitude, saying sufficient funding must be in place before tougher energy efficiency targets can be approved at European level.

But building stock renovation actors are keen to point out sources of funding are indeed available.

BANKS READY, WILLING AND CAPABLE

“Banks are ready, willing and capable to meet the demand for energy renovation when it materialises,” said Stephen Hibbert, head of energy and carbon efficiency finance operations at ING, the Dutch banking and insurance multinational.

“There is no shortage of funds, we have all the tools ready to be deployed.

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But confidence must be boosted in the market,” Hibbert explained. “Increased awareness and a stronger legislative and policy framework, with ambitious, bold and binding measures, can act as important triggers to stimulate consumer demand for energy renovation,” he said.

Bendtsen confirmed that private investment is ready, citing commercial banks like ING which are taking up the upfront investment, and a growing number of pension funds securing long-term income streams.

“Both want to invest in energy renovation. A strong EPBD must support this private investment,” Bendtsen stressed.

When asked why renovation was not happening at the pace and scale required, Bendtsen cited two main reasons: The first is so-called split incentives, whereby owners and tenants of rental properties neither want to invest further or pay more, respectively. The second is the cost and availability of financing for renovation, meaning only those who can afford it do so.

If we want to crack the nut, we must get private funds – such as pension funds – working for us,” Bendtsen underlined.

**WINDOW OF OPPORTUNITY**

The current revision of the EPBD offers a window of opportunity to address the demand for building renovation by boosting confidence and providing the regulatory certainty investors and consumers are asking for.

Paul Hodson, head of unit for energy efficiency at the European Commission, pointed to the lack of “negative numbers related to the renovation of the building stock”, adding that the executive want to ensure that the financial sector understands the risks related to energy efficiency, a better bundling of projects and promoting private finance in renovating the building stock.

Hodson underlined the importance of a “clever” use of public money, leveraging it to better drive higher levels of private funding.

Fiona Hall, a campaigner for the European Council for an Energy Efficient Economy, supported Bendtsen’s call for strong legislation to help consumers obtain healthier, more comfortable homes and lower energy bills. “Setting out a clear long-term vision for the building stock in the EPBD will boost consumer confidence and demand in a market eagerly waiting to lend a helping hand,” she said.

Miapetra Kumpula-Natri, a Finnish Social Democratic Party lawmaker (S&d) who is shadow rapporteur on the EPBD, emphasised the importance of supporting financial initiatives targeted at the poor.

“We must strive for a coherent package of legislation on energy renovation which will benefit all in society,” said Kumpula-Natri.

“Contrary to popular belief, money is actually not the issue here,” added Adrian Joyce, from Renovate Europe, a campaign group. “Banks are keen to invest, but they cannot address the latent demand. They need governments to support a stronger legislation which outlines a clear path to achieve a highly energy efficient building stock in the EU by 2050 in order to stimulate consumer awareness and demand in the market.”

Insiders close to the negotiations between the European Parliament and the EU Council of Ministers on the recast EPBD point to Valletta’s desire to rush proceedings in order to clinch a deal under the Maltese EU Presidency.

But Bendtsen called for “500 MEPs” to back the Parliament’s proposed revision of the EPBD, and stand up against EU member states that are resisting calls to increase the bloc’s proposed energy efficiency targets.

“That way, we can be strong (in our discussions) with the Council,” Bendtsen said.

If the golden goose is to lay any eggs at all, Bendtsen will need exactly that.