

Special Report | September 2022

Decarbonisation of buildings



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The European Union is doubling down on its objective to decarbonise buildings, as Europe steps up efforts to decrease its reliance on fossil fuels imported from Russia.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 893858.

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Energy crisis forces more ambition in EU green buildings law

By Kira Taylor | euractiv.com

Languages: <u>Deutsch</u>



Soaring energy prices are mounting pressure on Europe to renovate its ageing, inefficient buildings as governments scramble to protect citizens from rising utility bills.

Europe's buildings are responsible for <u>40% of its energy consumption</u> and many are in desperate need of better insulation in order to decrease the EU's reliance on imported fossil fuels.

Buildings are a key sector when it comes to addressing high energy prices and security of supply concerns, said Paula Rey Garcia from the European Commission's energy department, who spoke at a Brussels event in September. In light of the energy crisis and the war in Ukraine, there needs to be an "ambitious" revision of the EU's energy performance of buildings directive (EPBD), added Martin Pejřimovský, energy attaché at the EU representation of the Czech Republic, which currently holds the bloc's sixmonth rotating presidency.

As the EU presidency holder, Czechia aims to find a common position among the EU's 27 member states before handing over the reins to Sweden on 1 January to finalise negotiations on the bill with the European Parliament.

While not a short-term solution to the energy crisis, updating the buildings law must be part of the EU's answer, said Pejřimovský, who believes the current version is no longer fit for purpose.

"It's not enough for the challenges that we will be facing tomorrow and in the decades after, especially considering everything that's going on with the Russian invasion of Ukraine and the complete revision of a lot of truths and beliefs that were connected to the way we are running our economy," the Czech attaché told attendees at the event.

Ambition shaped by crisis

The European Commission tabled the <u>revision of the EPBD in</u> <u>December 2021</u>, two months before the invasion of Ukraine and the deterioration of the energy crisis. Since then, the EU executive has tabled proposals to <u>speed up</u>. <u>the energy transition</u>, including higher energy efficiency and renewable energy objectives for 2030 and short-term demand reduction targets for <u>gas</u> and <u>electricity</u>.

Building renovation was desperately needed, even before the current crisis. According to a recent study by the Building Performance Institute Europe, the EU is moving too slowly towards its legal objective of reducing emissions from buildings to netzero by 2050.

At an event to present the study, speakers from the European Commission, Parliament and Czech presidency all highlighted the urgency of renovation and finding agreement on the new law.

Lawmakers in Parliament already voted to <u>boost the EU's</u> <u>overall energy savings target in</u> <u>September</u> and an ambitious EPBD is considered a key tool to achieve that goal.

But while there is general consensus that greater ambition is needed, translating this into law is a different matter, where national divergences quickly come into play.

Morten Petersen, a centrist lawmaker from Denmark who is helping to draft the Parliament's position on the EPBD, predicts a lot of political resistance on how prescriptive the law should be.

A central element in the revised directive is the introduction of minimum energy performance standards (MEPS) requiring residential and non-residential buildings across Europe to meet a certain efficiency threshold. The lawmaker in charge of drafting the Parliament's position, Green politician Ciarán Cuffe, is pushing for high ambition on these in order to trigger an increase in the renovation rate of the worst performing buildings.

The European Commission proposed that the 15% worst performing buildings in each EU country should be renovated to grade E by 2030 for non-residential buildings and by 2033 for residential buildings.

Cuffe wants to go further, aiming for all buildings to reach C grade in the early 2030s.

"MEPS are the backbone of this legislation. They define a clear trajectory for improving individual buildings which will support more renovations and mobilise the market towards our decarbonisation goal," Cuffe told EURACTIV.

The Irish lawmaker has also introduced changes to promote social safeguards for vulnerable households and ensure property owners do not exploit tenants by raising rents after renovations.

Flexibility versus ambition

But EU governments are more cautious and fear raising the bar too high for homeowners who are already struggling with rising energy bills.

Cuffe, who is pushing for higher ambition, said EU countries were "trying to weaken the Commission's proposal" on minimum energy performance standards in order to have as few obligations as possible.

Pejřimovský said that the EPBD

revision is "almost revolutionary" for EU member states who will, for the first time, be obliged to renovate the least efficient buildings.

Minimum standards are "unbelievably politically sensitive" and need to be "carefully tweaked" by EU negotiators, he warned.

"How to make sure that this is legally sound in each and every member state and that people will still feel safe in their homes, regardless of their income, regardless of the availability of mortgages at some moment in their lives – this is something that requires a high level of scrutiny," he explained.

However, Cuffe told EURACTIV that minimum energy performance standards were a "fair approach" as they recognise differences between EU countries and tackle energy poverty by targeting the worst performing buildings.

When it presented its proposal in December, the European Commission said that the EPBD would leave enough flexibility for EU countries to define their own energy performance scale based on common EU-wide parameters.

"On that basis, each member state will define what are its own 15% worst performing buildings," a senior EU official explained at the time.

EU country representatives will meet this week to discuss their position with the aim of finding a common position in October. Meanwhile, the European Parliament hopes to finalise its position in December and be ready to negotiate with EU countries in 2023.

INTERVIEW

Building expert: Policymakers using 'shortsighted' subsidies to cushion energy crisis

By Kira Taylor | euractiv.com



Henna Virkkunen is a Finnish lawmaker with the EPP Group [European Parliament]

Subsidising energy bills to cushion the blow of the energy crisis is an "enormous waste of money", according to Oliver Rapf. While it is necessary to shield consumers, EU countries should be looking at energy efficiency measures that create long-term improvements and help tackle the climate crisis, he argues.

of the Buildings Performance Institute Europe, an independent centre of expertise on the energy performance of buildings. He spoke to EURACTIV's Kira Taylor about BPIE's new buildings tracker and the role of buildings in the energy crisis.

INTERVIEW HIGHLIGHTS:

• Building renovation in Europe is not on track to reach net

zero emissions by 2050 and the gap is widening.

- While supporting households through the energy crisis is needed, EU policymakers are using shortsighted subsidies rather than driving renovation that would create long-term improvements.
- Energy saving can be achieved by big buildings, like shopping centres,

Oliver Rapf is the executive director

lowering temperatures and reducing lighting, and consumers can take small steps to improve energy efficiency, but the big push needs to come from deep renovations, supported by governments.

 Minimum energy performance standards under the energy performance of buildings directive could drive more renovation, but there are concerns these will be watered down by EU countries.

BPIE recently published its first edition of the <u>EU buildings climate</u> <u>tracker</u>. What were the main results? And are EU countries on track to fully decarbonise their building stock by 2050?

We developed the tracker to monitor the progress towards climate neutrality by 2050 and, of course, the delivery of the Paris Agreement. We composed this index consisting of six subindicators to not only look at the development of CO2 emissions but also ask the questions: 'Are investments going in the right way? Are we making progress on renewable heating and cooling?'

What the tracker found is that we are slowly moving towards climate neutrality, but not with sufficient speed. In fact, the gap between where we should be and where we are in reality is widening. For us, that's a clear sign we need to accelerate the effort to close this gap.

What are your main recommendations for EU countries to close that gap?

What we really need is for

countries to implement their renovation strategies in an effective way. Every member state has delivered a renovation strategy to the European Commission. We now need to make sure they're effectively implemented or updated if they are not effective enough and if they do not show how member states will meet certain decarbonisation milestones in 2025 and 2030.

We now have significant funding coming from the EU. The recovery and resilience funds are a great opportunity to have more effective financial support instruments, but also the regular EU budget, the MFF, provides a lot of funding opportunities.

In the past, some member states found it difficult to absorb all the funding available. That means member states should invest in increasing their ability and capacity to absorb funds and distribute them to different renovation projects through well-targeted and well-designed financial instruments.

Because of the war in Ukraine and the energy crisis, we've heard a lot of talk about energy efficiency at the EU level, including a higher energy efficiency target. How can Europe seize that momentum? Are you actually seeing that on the local level?

On the EU level, the current revision of the energy performance of buildings directive (EPBD) provides the ideal opportunity to make structural changes in favour of energy efficiency. The introduction of so-called minimum energy performance standards for buildings will be the right policy to secure more energy efficient buildings for European citizens. On the local level, I think that all municipalities and all national governments are addressing the issue, but not necessarily with the right long-term perspective. Much of the focus right now is on buffering the impacts of very high energy costs on European citizens, which is a necessary short-term measure – we want to make sure that people are able to heat their homes and not have to sacrifice other necessary expenses.

But the debate about structural changes and how we consume energy is lacking. While I understand the short-term focus, we definitely need to make sure that we have these mid-term solutions too.

Of course, renovation cannot happen overnight. But in March, we suggested short-term efficiency measures which could have been implemented over the summer, like a big effort to insulate attics. It didn't happen. Maybe individual people took action and insulated their loft, but there was no government support whatsoever.

I regret this short-sightedness in most policymakers who do not address the more structural changes – changes which could have been implemented over the summer and can also be implemented over the coming years.

What do you think the barriers are?

Doing simple things like loft insulation could be done by most people. I don't see any technical barriers. I don't see any financial barriers. I just see a lack of political focus on these short-term solutions. Ahead of this winter, are there any similar quick fixes for building decarbonisation or energy efficiency that could help reduce energy bills for consumers?

A quick fix is for everybody to check their home or apartment for major leaks. A technically easy thing to do is check how leaky your windows are and buy insulation tape for the frame. Things like drawing the curtains at night to keep the warmth in, all these measures help a little bit but they do not replace the big structural changes.

Every government right now is willing to subsidise energy costs to a certain degree. The plans look different in every country, but every country is investing in subsidising energy bills one way or the other, which in the end, is an enormous waste of money because the money will literally be burned through the gas, oil and electricity people are consuming.

Again, the reasoning in terms of social cushioning is understandable and acceptable. But I would like to see a similar public investment to trigger short-term private investments in efficiency, but unfortunately, this is not really in the focus of policymakers.

The EU has a demand reduction target for gas and is looking at a reduction target for electricity. How can large buildings, like shopping centres, and also households contribute towards that?

The short-term measures are very similar for all buildings. You just have to reduce the heating levels. In big public places, where people move in and out, you can easily do that. You can also reduce lighting, especially in shopping centres. The same applies to homes. It really depends on people's individual living situations as well. If you live alone in your house, you can easily check whether the loft is insulated. If it's a multifamily apartment building, the situation is different and probably more complex.

What I would expect, in particular from the real estate investment companies who own non-residential buildings, like shopping centres and stadiums, is that they develop a plan for how to renovate their buildings and make investments to bring down energy consumption significantly and which put them on the pathway to climate neutrality.

Is there enough information from governments or the EU to explain what measures people should be taking? Or do you think that there's still this information gap when it comes to driving efficiency?

When it comes to targeting individual consumers, individual citizens, I think we could definitely have much more information. I also see a big role for DIY stores.

Definitely, local and regional governments should put out much more information because people who work on the issue might be very familiar with what could be done, but people who have different occupations might benefit from more advice.

When it comes to commercial properties, normally the bigger properties have facility managers onsite, who should know what to do. But they need to get the mandate from the owners, from the investors to develop deeper interventions.

Obviously, the revision of the energy performance of buildings

directive (EPBD) will be key to driving energy efficiency. What elements do you think are most important in it? And do you have any concerns that it might be watered down as the European Parliament and EU countries draft their positions on it?

One of the most important elements is the introduction of mandatory minimum energy performance standards (MEPS). They're a new policy instrument, which has already been tested in some member states and which can really change the dynamic of the renovation market.

We know that we need to accelerate the rate of renovation and that we need deeper renovations – that's exactly what these minimum energy performance standards can deliver.

Now, the devil is in the detail. The essential question is how do you design it so that these MEPS do not create socially unfair requirements? We know that the European Parliament is supporting quite a substantial strengthening of MEPS, but I'm quite concerned by what I hear about discussions in the Council, where member states are making an effort to water the requirements down.

At a recent BPIE event, we heard concern from the Czech presidency on these requirements. Do you think there is a scenario where you could have safeguards for households alongside strong minimum energy performance standards?

We can definitely design MEPS in a way that ensures low-income households are not burdened with a requirement to make an investment they can't afford. In my

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opinion, it makes sense to look at the investment capability of the different owners and structure MEPS around these.

We have a large amount of European real estate, whether it's commercial or residential, owned by large investors. They have the capability and the means to invest in upgrading. So I think we need to have different requirements for different owner groups. So we definitely must avoid social hardships but also make sure that the worst performing buildings are benefiting from renovation.

We need a mix of financial instruments and incentives, so that low-income households who own their property but do not have the means to invest can benefit. Whereas other groups who can afford renovation and who own property as a financial asset should face different requirements.

The upcoming negotiations must make sure that these minimum standards will be both effective to trigger more and deeper renovation and be socially fair. I am convinced that this can be achieved.

Do you have any other concerns about the EPBD?

There is a strengthening of energy performance certificates (EPCs), which is good because they are giving information on the current performance of the building, but what has been proposed will not roll these out fast enough.

Ideally, we would have an energy performance certificate for all buildings as quickly as possible because it's the start of a potential renovation journey. Of course, for those groups in society who can't afford it, we should offer it for free. We talked earlier about how prepared governments are to subsidise energy consumption – why should they not subsidise information as a starting point to renovate buildings?

I think the same applies to the building renovation passport. The certificates give you the status quo and the passport can explain where the renovation journey could and should go. So it gives a perspective into the future and, therefore, triggers investments. It should also be rolled out quickly.

We also need to look at the carbon emissions over the life of the building, what's known as whole life carbon. We haven't really seen it discussed in the Council yet and, while the European Parliament agree on gathering and disclosing data, they don't want to set requirements to reduce those emissions.

Ultimately, the carbon costs of the renovation wave will be significant, and construction activities will need to consider whole life carbon for both existing and new buildings. The revised EPBD should kick off the comprehensive collection of such data by member states which would then allow the definition of benchmarks for new buildings and renovation activities. This means that we need a clear legislative roadmap in the EPBD so that regulators, the construction industry and investors can prepare and implement the necessary policies.



How community-led renewables could help solve the energy crisis

By Kira Taylor | euractiv.com



s energy bills climb and fears grow that consumers will become unable to heat their homes, some are pointing to the EU's newly-created "citizen energy communities" as a way of enabling entire neighbourhoods to produce their own electricity or insulate homes.

So-called citizen energy communities allow groups of neighbours to join forces and install solar panels on their roofs or roll out energy efficiency measures like building insulation.

As energy prices skyrocket, supporters say these citizen-led communities could help slash bills and reduce consumption. But Europe needs to overcome bureaucratic barriers to unleash its potential.

"The time is now, the time is right" for these projects to flourish and help drive a shift towards decentralised, digitalised and democratised energy systems, said Achille Hannoset, a policy officer at the European Commission's energy department, who spoke at an event during Sustainable Energy Week.

"We are living in times of an energy crisis with potentially a climate change-induced strict winter on our doorstep. To face these challenges, many measures and solutions have already been brought forward, and one of them is the energy communities," he added.

Power to the people

Energy communities can help tackle the energy crisis in several ways, Hannoset explained.

Firstly, they offer fixed energy prices, shielding consumers from the volatile wholesale market. Producing energy locally also reduces losses during transport and decreases demand on the grid.

In addition, energy communities can be a "natural ally" in tackling energy poverty by working with local authorities and social housing companies, including by helping to finance renewable installations and providing low-cost energy efficiency services, according to Hannoset.

They can be particularly effective in rural and island communities, which often have higher levels of energy poverty and lower employment levels.

"Sometimes people really do say it's too good to be true," said Luisa Matos from Cleanwatts, a company that helps grow energy communities.

"A lot of times we are talking about very, very vulnerable communities, villages where the population is almost all above 70 or 80 years old. This gives them meaning, that they are contributing to something that may bring new people to the village," she added.

One Cleanwatts project in Portugal aims at creating energy communities in 100 villages, focusing on vulnerable areas and ones with high levels of elderly people. The company licences and installs the technology for communities. For this to work, it is key to cooperate with the community, contracting local workers and getting prominent people like religious leaders on board, said Maria João Benquerença, the energy communities director at Cleanwatts.

Another project, run by Energias de Portugal, focuses on building energy communities on islands. The IANOS project looks at boosting energy and resource efficiency on islands while reducing their carbon footprint.

A significant proportion of Europe's population lives on islands and often has higher energy costs, so projects in these areas can have more impact with fewer resources, said João Maciel, director at Energias de Portugal.

Barriers

But while energy communities are in high demand and a legal framework is now in place at EU level, the related administration and permitting systems are not moving fast enough, said Matos.

EU countries should have transposed into national law the 2019 electricity market directive, which created the legal framework for energy communities.

But many have faced delays because of slow permitting. And there are also issues with getting the necessary components and equipment.

"People are having their energy bill raised through the roof, and then companies – especially the smaller companies – are having a lot of problems. They need a fast response, and we are not able to give it to them," said Benquerença.

Because licensing is not in place, groups have to limit production as they cannot legally share the energy, she added, saying: "We are wasting energy in a time of our lives when we need it the most."

Over the last year, Brussels has rolled out more schemes to support energy communities. This includes creating an Energy Communities Repository in April 2022 to assist citizens in setting up an energy community in urban areas and a Rural Energy Community Advisory Hub in June 2022.

On top of this, in its plan to ditch Russian gas, tabled in May 2022, the European Commission set out a target to have one renewable energy community per municipality with a population higher than 10,000 by 2025.

This target is "very ambitious", Hannoset admitted, saying that energy communities "still struggle to become more than a niche in most of the EU energy markets".

To tackle this, he says that EU countries need to remove unjustified bureaucratic barriers, enable innovative business models based on flexible self-consumption, and set up one-stop shops to help boost technical and financial capacity for projects.

The blueprint is already here for this, added Hannoset, <u>pointing to</u> <u>the Clean Energy package, adopted</u> <u>in 2019.</u>

Med countries tipped off on energy savings in buildings

By Valentina Romano | euractiv.com



s climate change makes heatwaves more frequent and intense, Mediterranean countries face specific challenges when it comes to energy efficiency in the building sector.

Southern countries can strengthen energy security by applying efficiency measures in the building and construction sector, according to the Mediterranean Association of the National Agencies for Energy Management (MEDENER).

Last week, MEDENER presented some tools and methodologies they developed to assist local authorities implement green building programmes in the South Mediterranean region.

Those were presented on 21 September at the EU's Sustainable Energy Week, an annual event organised by the European Commission.

Globally, the <u>building and</u> <u>construction sector accounted</u> for 36% of final energy use and 39% of CO2 emissions in 2018, according the International Energy Agency and the UN Environment Programme (UNEP). Of the total emissions, 11% resulted from manufacturing materials and products such as steel, cement and glass, the report found.

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The potential for improvement is massive, however, with a possibility to achieve <u>energy</u> <u>savings of 50% or more by 2050</u>.

Here, the role of local associations is crucial to promote energy efficiency and renewable energy development, since they facilitate the sharing of experiences, know-how and best practices among members and accelerate the transfer of skills.

"The key message is to adjust tools and methods to the specific contexts," said Agathe Lacombe, project manager for the EU-funded project meetMED II (Mitigation Enabling Energy Transition in the Mediterranean region).

The meetMED project aims to enhance the energy security and green transition of beneficiary countries, which include Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia.

The technical coordinator of the project is the French Agency for Ecological Transition (ADEME), which has experience dealing with countries in the Mediterranean region. According to the French agency, successful programmes are those that are capable of adapting to the local context.

"ADEME believes that national agencies have a large role to play in identifying the needs of local authorities and to support the capacity building activities but also to adjust tools and mechanisms to local authorities," Lacombe said.

The meetMED project, which will run until 2024, aims at massively deploying renewable energy and energy efficiency measures in the region's buildings. Tools specifically developed for this include a software helping Mediterranean cities to establish their own sustainable energy and climate action plans.

The project was launched in Europe by the EU-backed Covenant of Mayors and then extended to other regions with the aim of bringing together municipalities committed to the Paris Agreement on climate change.

"The aim is to allow the Southern Mediterranean cities to establish the sustainable energy and action in the climate action plan without any technical assistance," said Adel Mourtada, Member of the Board at the Lebanese Association for Energy Saving and for the Environment (ALMEE).

The software assists local authorities when it comes to deploying energy efficiency measures, such as building insulation, low-consumption street lighting, or solar water heaters. In each area, solutions are offered on how the situation can be improved, how much CO2 can be saved and the types of investments needed.

"It makes it very easy for each municipality. Anyone, any engineer or any specialist in municipalities can use these tools and evaluate all the parameters relative to each energy efficiency measure," Mourtada explained.

Another IT tool, called GRASSMED Green BOOCC Platform, offers open online courses and certifications on "Green Building" for Southern Mediterranean countries.

"There's a major need at the local level," explained Ilja Dramac, a consultant at the City of Mostar in Bosnia-Herzegovina who is working on the implementation of a project called IMPULSE.

The IMPULSE project is led by a consortium of 15 partners located mostly in Mediterranean countries. Its objective is to offer an integrated management support system for planning affordable energy renovation projects for public buildings in the region.

According to Dramac, the implementation of the project in Mostar allowed identifying weaknesses in the local administration, including a low level of technical knowledge, the absence of a long-term strategy and inadequate budget for the financing of energy efficiency measures.

The main outcome of the project was the development of a tool designed to help the local administration define a yearly renovation plan for public buildings in Mostar.

"I believe that the tool is replicable," stated Ilja Dramac. "I believe it will be possible for local authorities to build such a plan according to the plugging tool that we developed. I hope in the end, replicability will be more and more present in the future."



INTERVIEW

Tallinn deputy mayor: Building renovation needs to be for everyone, not just the wealthy

By Kira Taylor | euractiv.com



adimir Svet is the deputy mayor of Tallinn, which will be the Europea Green Capital in 2023 [Tallinn City Office]

undreds of Soviet-era apartment blocks are in need of renovation in Tallin but owners may lack the funds, the trust, and possibly the will to renovate, says Vladimir Svet.

Vladimir Svet is Deputy Mayor of

Tallinn, which will be the European Green Capital in 2023. During the Green Capital Year, Tallinn's main themes will be biodiversity, reducing the carbon footprint and sustainability governance. He spoke to EURACTIV's Kira Taylor in Brussels about his city's push to decarbonise buildings and heating.

INTERVIEW HIGHLIGHTS:

 Soviet-era apartment blocks are the most complicated things to decarbonise and renovating them requires getting owners on board and guiding them on the best form of renovation.

- Building renovation needs to be for everyone, not just the well-off. Other neighbourhoods may lack the trust, funds, will or understanding to decarbonise. They need to be brought onboard.
- Digitalising buildings helps the consumer understand how much energy they are using and use electricity at cheaper times. It also enables the state to see what demand reduction measures.
- Every city is unique and will need to decarbonise and reduce demand in different ways, based off its energy mix. For Tallinn, the main focus is on decarbonising heating through a central system.
- The war in Ukraine had a huge impact on the green transition, from turning energy policy into security policy to making green investments more costly. Those working on the transition now have to work even harder to prove it will help consumers.

Tallinn aims to reduce its CO2 emissions by 40% by 2030 and reach climate neutrality by the middle of the century. How are you going to achieve that? And what role will buildings play in that decarbonisation effort?

Buildings are actually the most complicated issue if you look at carbon emitters in Tallinn. Hundreds of apartment blocks were built during the Soviet era, which I think is the biggest issue for us. If you want to renovate them, the flat owners association has to do that, and they are not always willing.

Mainly, the building and part of the surrounding land system belong to the apartment association. So, legally people own their apartments, but through apartment ownership they are members of an apartment association. This makes things slightly easier than in some other EU countries.

If we talk about private buildings, there is the question of how we support private owners in reconstructing their buildings and improving the systems that directly influence how much energy they consume and the CO2 emissions.

Here, we have good but small examples. For example, we have municipal subsidy programmes that support the reconstruction of facades and roofs, making them more efficient. We also have a foundation called <u>Kredex</u> which is the state's support for building renovation in Tallinn. Altogether, the Kredex foundation and the city subsidies create compensation for about 40-45% of all the costs of renovating a private building.

According to our statistics, houses in well-off neighbourhoods are more likely to use the measure. The houses in underprivileged neighbourhoods are less likely. All these measures work but work for certain houses that manage to do it.

If we talk about municipal housing, we have somewhat similar problems but approach them differently. First is the question of heating. In the case of Tallinn, the most efficient and ecologically friendly way would be to improve the central heating system.

Today, we have a lot of houses that are not connected with the system because, until this year, it was sometimes easier and maybe even cheaper to heat your house with a separate pump or a gas boiler. Today, this kind of economic model doesn't work, especially for municipal buildings.

We are in the process of drafting next year's budget, and we will have a special measure for the municipal facilities, schools, kindergartens, and the botanical garden, for example, who are the main consumers of gas to unite with the central heating system to drastically reduce the use of gas and, if it's not possible, create an alternative for these gas heating systems.

You talked about the renovation of these old Soviet apartment blocks. Those are in many cities, not just in Estonia but in other countries in the EU. What lessons do you think you've learned that other cities can benefit from?

Educating and awareness raising. If you want people to think about this kind of problem, you have to educate them. You have to give them the tools to deal with this very complicated and systematic issue in addition to what they're doing in their own lives.

In the case of Tallinn, a lot of these apartment blocks have 72 to 144 apartments. Some of them are up to 300 apartments. So if you want this community to come up with a plan to renovate the building in the way it should be done, you have to convince a lot of people not just to say yes, but to start paying. In the best-case scenario, you can have about 50% of the cost compensated. In order to renovate the building properly, a loan is required. However, as said before, some associations are hesitant with the loans. Especially in the current situation, with utilities bills going up, as well as private loans due to increased EURIBOR rates.

I think that either the state or the city should provide a way of managing this whole project with professionals outside the housing community, but not always from the private sector.

We see that there is a problem when you have a house-by-house approach. You might have a block where houses are renovated in four different ways and some not at all. The right and cost-efficient way is to do an integrated project. But this requires top-down management and motivating funds.

If we talk about central heating, in the case of Tallinn, we have regions that are totally outside the system. We will try to create a pilot project to renovate the street, create the necessary pipes for the central heating, and support people uniting with the heating.

Moving to the EU level, the EU is revising its Energy Performance of Buildings Directive, which could require countries to renovate their 15% worst performing buildings. Is Tallinn ready for that objective, and what would you like to see in the law in terms of additional support?

We understand the need to do that, and we understand that, at the moment, we lack the measures to make the leap. What we have in terms of framework, infrastructure and support measures is supporting the most active, the wealthiest.

I see the greatest problem being with the neighbourhoods that lack this trust, wealth and maybe even the will and understanding to deal with this. We also see this problem is much bigger in places with a more elderly population because, when you talk about renovation, you're talking about loans. Elderly people are much less eager to participate in a group loan that would be taken by the housing association.

If this can be addressed, it can be addressed at the EU level. Maybe the mere fact that this aim is being put forward at the union level will motivate the state to become more active. Not just creating measures but actually managing and directing them. I would really like to stress that this measure cannot be designed only for the wealthy and the active. It has to drag along those who are not on board now.

Estonia championed the digitalisation of its energy system during its presidency in 2017. What improvements have you seen, and what challenges are you seeing when it comes to digitalising buildings?

From the point of view of the user, keeping track of usage has become much easier. Information about water, electricity and heating is all available on an app or the website of the company that manages the building.

It also allowed us to create a better understanding of what is actually happening with consumption in different parts of the day. How can we influence this consumption? What measures help? A sad but effective example is what happened this year when the price for energy, politely speaking, fluctuated or jumped like crazy. When the newspapers were covering this topic and showing the predicted price of energy hour by hour, day by day, people were planning their daily activities accordingly.

Does that mean consumers have more control?

People now have the possibility to control at what rate they want to buy and use electricity, especially if we talk about daily actions that are dependent on your schedule, like when you do laundry or wash the dishes.

It's not only about a particular person cutting his bills. The city and the state can now predict what people will do at a certain point. During the summer, it's not such a big problem, but it could be useful in winter, especially in the situation where our country must always be ready for our eastern neighbour, Russia, to test the electricity grid and cut off supply. A few days ago, we had a warning that there might be a test of the grid, so the electricity may be switched off from the Kaliningrad side. Fortunately, the test was cancelled.

In light of the war in Ukraine and the energy crisis, the EU is looking at increasing its energy efficiency and renewable energy targets. What role do you see cities playing in helping to achieve this?

In this case, every city is unique. Every city has its own energy mix. In the case of Tallinn, it's a story of more and more central heating because, when you have central heating,

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you can actually control the CO2 emissions. The second thing is central cooling, which is like the little brother of central heating.

We see that central cooling is a very effective measure to reduce the costs and emissions of cooling large office buildings. If we manage to build this system and use seawater in the cooling process, this will help reduce costs, raise efficiency, and reduce emissions, not only with cooling but also with heating.

As the European Green Capital in 2023, using gas in the public transport has been our priority. Now, with the gas prices growing and given Europe's dependence on Russia we may consider broader range of alternatives. However, I would rather look for other fuels as a temporary necessity. Hopefully, we and other European cities can continue with the gas from another source in following years.

Finally, how has the war in Ukraine and the energy crisis affected what you're doing with the green transition? Is it slowing down progress, or do you think that it could actually speed up progress?

It changed everything in both good and bad ways. First of all, for countries in Eastern Europe, especially those neighbouring Russia, energy was always, to an extent, a question of security, and there was the understanding that energy supply is one of the cards being played in this game.

Now we're feeling that it is happening 100%. This securitisation of this topic brought the understanding that bigger and quicker investments are necessary right now and, on the other hand, it brought the need to convince people that the Green Deal is possible in this kind of environment.

I think that everybody dealing with the green transition today in Europe faces this problem. We need to argue twice as hard as we did before. We need to convince people more. We need to be more databased than before when we convince people that the green transition is not just something nature will win from, but a person will win from too, especially when people see the bills. Tallinn is eager to promote its green governance principles, as the decision-making always has to consider environment among other issues.

The second thing is that the cost of any investment, especially investment connected with the green transition, has become more and more costly. With inflation rates skyrocketing and supplies slowing down due to logistics crisis, the price tag on our infrastructure investments has risen from 20% to 70%, depending on the particular object. This means hard choices about new green areas or road reconstructions, etc. At the same time, we understand that we are forced to overpay for this investment today because we may have no alternative the day after tomorrow. Of course, that's a big hit for budgets, especially for countries that have been quite efficient in keeping a low deficit. Estonia is not a country that is very used to loaning money.

And the third thing is that this war in Ukraine made us rethink what is important to us and act more effectively. Both Estonia, but especially countries more to the centre of Europe, have enjoyed the time when gas was a very cheap and accessible source of energy. Well, it's not anymore.





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