EU News & Policy Debates

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CONSUMERS, REGULATORS AND ENERGY EFFICIENCY IN BUILDINGS

Contents

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European Commission officials, led by Energy Union chief Maroš Šefčovič (pictured) are mulling how best to supervise energy efficient building renovation. [European Parliament/Flickr]

Energy Union governance to include building renovation reporting

The European Commission will likely revamp the reporting of national building renovation rates, bringing it under the future oversight framework of the EU's flagship Energy Union strategy.

The executive has identified energy efficiency in buildings as a priority in delivering the twin goals of the plan to boost the EU's resistance to energy shortages and fight climate change.

70% of the EU's existing building stock is highly inefficient. Buildings are responsible for 40% of the EU's energy consumption and 36% of its CO_2 emissions. Those emissions could be cut by 5%.

But there is increasing acceptance that the current framework for member states to report the state of their building stock simply isn't robust enough to deliver results.

Widely accepted figures put the EU renovation rate of buildings at just 1%. But the true figure could be even less because there is no common standards of what constitutes renovation.

National governments currently must submit renovation plans to the Commission in the Energy Efficiency Directive, scheduled for a review in autumn, but there is a lack of common definition of renovation that calls the data received into question and makes it impossible to compare accurately.

EurActiv.com has learnt that the Commission is considering incorporating renovation reporting into the governance framework of the Energy Union rather than the EED.

Plans for the oversight of Energy Union, in which the EU energy regulator ACER is expected to be given legal enforcement powers, are expected by the end of the year.

"This will mainly be a question of streamlining and consolidating to make sure so that we have a good intelligence set of things to measure the progress building of the Energy Union," said Peter Handley, Head of the European Commission's Resource Efficiency unit.

"It will integrate the key things we need to know about renewables, energy efficiency and building infrastructure," said Peter Handley, Head of the European Commission's Resource Efficiency unit.

"The energy and climate governance initiative shall address mainly the fact that the reporting and planning obligations that exist under energy legislation are gathered together. It's a stream lining exercise that will avoid double reporting," added Radoš Horáček, team leader of the European Commission's General

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Energy Efficiency Team.

Not robust enough

Given the importance of buildings to delivering both energy security and EU and international climate goals, stakeholders are also pushing for a revamp of the system.

Thomas Boermans of climate consultancy Ecofys, said, "I think this is an important element needed for planning ahead. There is not a consistent picture which really tells you are we doing enough.

"There's some way to go to make the reporting system robust. Under the national renovation plans in the Energy Efficiency Directive, different member states have different ways of describing different actions."

Speaking at a policy event during Sustainable Energy Week – five days of Commission-back discussion and debate in Brussels – Sorcha Edwards of Housing Europe said the system wasn't working.

"In one case the British renovation roadmap came out with higher points than the German one – are we in some kind of inverted reality here? That does not reflect reality," she said at a debate organised by Renovate Europe.

Renovate Europe campaign director Adrian Joyce said, "I agree that the current reporting framework is not robust. At the moment there is a lot of bundling of reporting from member states. You find lots of sectors are bundled together when reporting on CO_2 emissions, so being able to pick out in particular energy renovation is extremely difficult."

"A restructuring of how those stats are gathered and asked for is extremely important."

Will it have teeth?

A preliminary discussion paper for Energy Union oversight was circulated in July 2015.

After EurActiv exclusively revealed the plans made no mention of punishment for wayward member states, the plan was criticised for lacking teeth.

Peter Handley of the European Commission this week refused to speculate on whether the new framework would have bite.

But the executive has promised to back up its energy efficiency legislation – which has been poorly implemented across the EU – with legal action.

Every single member state except Malta was hit with infringement proceedings – many of which continue to this day – for not transposing EU rules onto their national lawbooks.

Speaking at the opening conference of Sustainable Energy Week Climate Commissioner Miguel Arias Cañete said the executive would back up current legislation and its revised successors with tough enforcement.

High expectations for EU efficiency laws as Sustainable Energy Week begins

Climate Commissioner Cañete speaking on the first day of last year's Sustainable Energy Week. [European Sustainable Energy Week/Flickr]

The European Commission is under pressure to keep its promise that 2016 will be the "year of delivery" for its Energy Union strategy to fight climate change and boost the import-addicted bloc's resistance to shortages.

The executive is expected to lay out the legislative framework that will increase energy efficiency across the bloc this autumn.

Revisions to the Energy Efficiency Directive and the Energy Performance of Buildings Directive will be scrutinised to see if they have the heft to deliver on climate, cost, and energy security.

Today is the first day of Sustainable Energy Week, a Commission-backed series of conferences, debates and discussion in Brussels.

It provides an opportunity for industry, NGOs, policymakers at all levels of government, and other stakeholders

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to feed into officials' thinking on these pivotal dossiers.

The dominant theme will be how to incentivise consumers to help build the Energy Union, which currently remains a plan. Autumn will see the first fresh legislation to give it a grounding in regulatory reality.

Energy Union foresees an interconnected EU grid, with multiple suppliers, that would also move the bloc towards a lower carbon future by combining renewables with gas.

The plan was given impetus by two political drivers; international moves to cap global warming and the Ukraine crisis, which highlighted the EU's dependence on Russian gas.

Policymakers recognise that greater efficiency reduces energy use and demand, which is good for the environment but also strengthens energy security by lessening imports.

Energy Union chief Maroš Šefčovič and Climate Commissioner Miguel Arias Cañete have both vowed to "put efficiency first" in the strategy they outlined in 2015.

Import dependence and climate goals

The EU imports more than half its energy every year. Russia supplies about 30% of the EU's gas. Meeting Europe's full efficiency potential would cut gas imports by 40% over the next fifteen years, according to Commission analysis.

EU leaders committed to increasing energy efficiency by 27% above 1990 levels by 2030. They also vowed to cut greenhouse gas emissions, which includes CO_2, by at least 40%, and boost renewables by 27% over 1990 levels.

The 2030 climate goals were set before the UN Climate Change Conference in December 2015.

In Paris, world governments agreed a landmark deal to cap global warming at no more than two degrees above pre-industrial levels. An aspirational 1.5 degree target was also set.

The challenge facing EU policymakers is how to deliver on their EU and UN commitments. The revised autumn directives will be heavily influenced by that responsibility, as well as energy security; the other "master" of the Energy Union project.

Buildings

Renovating Europe's inefficient building stock has been identified as vital for delivering on energy security and on climate.

"It is clear that achieving our 2030 targets [...] will not be possible if we overlook the enormous potential of buildings in Europe," Šefčovič has said.

70% of the EU's existing building stock is highly inefficient. Buildings are responsible for 40% of the EU's energy consumption and 36% of its CO_2 emissions. Those emissions could be cut by 5%.

Buildings in the EU typically last from 50 to 100 years and nine out of ten nine out of ten existing buildings will still be standing in 2050, according to the Renovate Europe campaign.

Renovation also has great potential to create local jobs and give the economy a boost.

Despite that the current renovation rate of buildings is just 1% a year.

The Commission launched its Heating and Cooling strategy in February this year. It is the first EU initiative addressing the energy used for heating and cooling in buildings and industry, which now accounts for 50% of the EU's annual energy consumption.

That includes 59% of total EU gas consumption and 13% of oil consumption. 22% of gas boilers, 34% of electric heaters, 47% of oil boilers, and 58% of coal boilers in the EU are older than their technical life.

"By using smart technologies and smart financing, Europeans can still enjoy adequate home temperatures, but without over spending on their energy bills and without over polluting the environment," said Šefčovič at the time.

The plan is an EU-wide communication, a coordination tool, but it will up to member states to put it into practice.

How the strategy, which identifies consumers as vital, is implemented at national level will be hugely influential.

Enforcement and investment

The new EED and EPBD is not guaranteed to be successful without national pick-up. Both the EED and EPBD's previous iterations have been bedevilled by poor implementation, with the Commission forced to launch numerous lawsuits against member states. Strong enforcement will be vital.

Investment is also an issue. Private investment in energy efficiency needs to increase fivefold by 2030, according to a group set up by the European Commission and the United Nations Environment Programme (UNEP) Finance Initiative.

The Commission has pushed to make it easier for building renovation programs to access the multi-billion euro Juncker Investment Fund, although barriers to raising the necessary investment remain.

A new Smart Financing for Smart Buildings initiative to bridge the investment gap will be unveiled in autumn.

Total public funding for energy efficiency in the EU grew from about €6 billion in 2012 – when the 2012 Energy Efficiency Directive was approved – to about €7.1 billion in 2014, according to research from Ecofys published last week.

"The increase in public funding for energy efficiency in the EU is encouraging, but it is only one element of what is needed to trigger real investments", said Stefan Scheuer, secretary general of The Coalition for Energy Savings.

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"Member states and the European Commission's financial efforts to support energy efficiency will not lead to major market uptakes unless they are accompanied by significant structural reforms, including in the areas of public deficit accounting and state aid, and by high ambition for 2030".

Consumers

But what is clear is that the consumer has a central role to play in delivering better energy efficiency in buildings.

Global leaders can make all the promises they want, and laws can be handed down from government, but ultimately it is homeowners who will have to put their hands in their pockets.

Consumers spend on average 6.4% of their total consumption on electricity, gas, heating and cooling – up by 15% compared to five years ago.

But energy efficient renovation cannot just be a luxury for the rich. An estimated 54 million Europeans suffer from energy poverty, according to a European Commission analysis, which blames rising prices, low income and energy inefficient homes for forcing people to choose between eating or heating.

You are in energy poverty if you cannot afford to heat your home at an affordable cost. Almost 11% of the EU's population is faced with that reality, according to the Commission.

This Special Report will run concurrently with Sustainable Energy Week and investigate the multiple challenges and opportunities the EU faces as it strives for a secure, greener future through greater energy efficiency in buildings.

Climate Commissioner: Age of traditional energy consumers 'almost over'

The age of traditional energy consumers is almost over, Climate Commissioner Miguel Arias Cañete will say today (14 June), before outlining plans for Europeans to take control of their energy use and production.

Commissioner Cañete will declare the age of traditional energy consumption 'almost over' today. [Bromford/Flickr]

Cañete is speaking at the opening conference of the European Commission backed Sustainable Energy Week in Brussels this morning.

The Commissioner will also highlight possible plans for a bloc-wide definition of energy poverty and bolstered reporting of the issue as part of the plans for oversight of the Energy Union project.

He will speak alongside Commission Vice-President Jyrki Katainen, who is expected to announce measures to funnel risk guarantees from the multi-billion euro Juncker Plan towards energy efficiency projects

"We want to empower citizens to take ownership of the energy they consume and produce," Cañete will say, "That means incentivising citizens, energy co-operatives and local authorities to become active market players in their own right."

"Ultimately that is what has to define our energy transition; consumers that take control of their energy consumption. In my view, when it comes to energy the age of the traditional consumer is almost over."

Vision

Cañete will outline his vision of the "21st Century energy consumer", describing him or her as the "focal point" for the shift to a more sustainable future.

"Automation of demand response must develop as a market instrument to allow consumers to tweak and optimise their energy use throughout the day," he will say.

But he will warn;

- Millions of Europeans rely on century old analogue metering and are spending 15% more on energy than five years ago;
- Price signals are not passed onto consumers, meaning consumption stays the same;
- That there are still very limited incentives for self-generation and consumption.

"Our job is to facilitate the transition to a new, flexible, clean energy system that provides sustainable and affordable energy to all and encourages innovation at every turn," he will say.

"I cannot overstress how important empowering consumers will be in the energy transition."

The Commission will consider how to improve the clarity and frequency of consumption information and develop minimum EU-wide information standards for bills, he will tell delegates.

Online consumption informative can reduce energy use by 8% but the data is too infrequent and confusing to be really useful, he will say.

The Commission will also support the ongoing roll out of smart meters throughout Europe, as well as connected

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devices and new technology such as the Internet of Things.

"Buildings could even produce more energy than they use," Cañete will say in a reference to measures such as putting solar panels on roofs.

Energy poverty

An estimated 54 million Europeans suffer from energy poverty, according to a European Commission analysis, which blames rising prices, low income and energy inefficient homes for forcing people to choose between eating or heating.

"Being more sustainable and energy efficient will be essential in these situations," Cañete will say before demanding "special efforts" from member states to address the problem.

"During this energy transition we will not leave anyone behind as move into a new era," he will say.

The Commissioner will announce that the Commission is considering;

- Developing an EU-wide definition of energy poverty;
- Boosting national reporting on the problem as part of the plans for Energy Union oversight;
- Creating 'an energy poverty observatory' to boost awareness.

Buildings and regulation revamp

Buildings are responsible for 40% of Europe's energy consumption and 70% of the building stock is inefficient.

"This is a priority area for us," Cañete will say, "Just consider that two third of our buildings were built before energy performance standards were limited or non-existent."

The Energy Performance of Buildings Directive will be updated in Autumn. A new Smart Financing for Smart Buildings initiative will help double renovation rates to above 2% annually by 2020.

The Commission's Energy Union strategy is its response to the twin challenges of boosting energy security and climate change.

Launched last year, it envisioned an interconnected EU single market for energy based on gas and renewables.

In Autumn the Commission will update and review its whole range of energy legislation to drive the bloc towards cleaner energy.

That shift is given greater urgency by the EU's signing up to the Paris Agreement to cap global warming, and by EU leaders' backing of the 2030 climate and energy targets.

"If 2015 was about making ambitious commitments, 2016 is about making ambitious policies to keep pace with those commitments," Cañete will say, according to documents obtained by EurActiv.com.

The Commission will put its 27% 2030 renewables target into legislation with its revision of the Renewable Energy Directive at the end of the year. A new electricity market design will attempt to boost integration of renewables and respond to more flexible and active demand.

"But underpinning all of those efforts is our drive to be more energy efficient," Cañete will say, "With climate change as it is we cannot afford to waste energy any more than we can afford to waste food or water."

The revised Energy Efficiency Directive (EED) will set out "a path to meeting and hopefully surpassing" the at least 27% increase over 1990 levels in efficiency called for by the 2030 targets.

Earlier iterations of the EED and Energy Performance in Buildings Directive have been dogged by poor implementation at national level. Cañete will this morning promise to step up enforcement of the existing legislation.

Homeowners offered cheaper mortgages in return for energy efficiency renovations

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, under "pioneering" plans being drawn up by lenders for consideration by EU and global regulators.

Renovation will be rewarded with a lower risk profile for borrowers and for banks, if the scheme is taken up. That would translate to lesser monthly payments for homeowners, according to the European Mortgage Federation and European Covered Bonds Council (EMF-ECBC).

"We truly believe this will be a pioneering, revolutionary component of the mortgage market," said Luca Bertalot, secretary-general of EMF-ECBC. "The entire mortgage lending industry is ready to go for it."

Green borrowers less likely to default

Much of EU energy efficiency investment has been driven by public sector subsidy. The multi-billion euro Juncker Plan leverages private investment through public guarantees but this is the first EU level scheme by a private sector financial sector player.

EU rules drawn up after the financial crisis for how much capital banks must hold against risk have been blamed for

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choking off investment in the economy. Under the EMF-ECBC plan, renovation would reduce the risk of banks' portfolios, resulting in lower capital charges and freeing up cash which could be used to back small businesses.

"Derisking nowadays indeed is an important aspect of banking as a result of post-financial crisis regulations. Initiatives such as this one linking costs of mortgages to renovation can be seen as innovative and very welcome, and not only because they can address energy efficiency," a spokesman for the European Banking Federation (EBF) said.

Research in the US showed that the chance of a green borrower defaulting on a mortgage is up to 32% less than other consumers. EMF-ECBC analysis in the UK, Netherlands, and Italy confirmed renovation led to improved property values and reduced risk for borrower and lender.

Radoš Horáček, team leader of the European Commission's General Energy Efficiency Team, said, "It has been observed in several member states that when consumers invest in energy efficiency, the default rate falls, allowing credit institutions to give lower rates."

Bertalot said renovation increased house values, which was in the interest of both the lender and borrower. Building renovations have the additional advantage of creating local jobs and further stimulating the economy, as well as improving the loan-to-value ratio for bank and borrower, he said.

How would it work?

A borrower would ask for a renovation loan to be tacked onto a mortgage. This would be at a lower rate than a standard consumer loan.

Once the work is certified complete, the homeowner can return to the bank. As the probability of default has lowered and, thanks to lower energy bills, disposable income has increased, the rate can be reduced, and the bank can benefit from derisking the home/asset.

The idea is to incentivise citizens to move their property out of the "brown zone" – energy rating G-D – and into the "green zone" – energy rating A-C.

The EMF-ECBC is in contact with the European Commission and the global standard setter, the Basel Committee on Banking Supervision.

Thomas Boermans, principal consultant at climate consultancy Ecofys, said, "This is done from a private sector perspective and it is good to have private market actors doing this rather than just the public sector."

Adrian Joyce, director of the Renovate Europe campaign, said, "This is a very good idea and should indeed be rolled out. Preferential rates linked to proper monitoring and evaluation would bring a spin-off of reliable datasets from industry that will underpin the good value and sense of energy renovation as a forerunner in the building sector," he said.

Bertalot said the plan was for the scheme to be entirely transparent to prove its solidity, make data comparable, and encourage wider pick-up.

He said the plan could also convince institutional investors to back real estate portfolios, which are currently at risk of a "brown discount" – depreciating value due to its inefficiency.

Bertalot said that international climate commitments made at the UN Climate Change Conference last December meant that inefficient properties would lose value over time.

Institutional investors such as pension and insurance funds are sitting on large amounts of dry powder, capital they are not yet prepared to invest. Convincing them to loosen the purse strings is part of the EU Capital Markets Union strategy.

Capital Markets Union

The Basel Committee recommended how much capital banks must hold against risk, standards which were translated into EU law in the form of the fourth Capital Requirements Directive.

Drafted in response to the financial crisis, it has been criticised for setting capital charges too high.

The EBF spokesman said, "It is clear that the regulatory landscape for banks in Europe requires recalibration so that banks can start financing the economy again."

The Commission has said it is willing to look again at its banking regulation as part of its Capital Markets Union strategy to unlock investment.

Bertalot said, "This plan will contribute to the derisking of bank liabilities which will help financial stability. It could also lead to a pan-EU convergence of standards, which would support the Capital Markets Union and help to gradually begin to create a single market for mortgages."

"It will give the same chances to homeowners in Greece or Italy in the same way as in Belgium, the Netherlands or Germany," he added.

Investment gap

The plan – three years in the making – also has the potential to help bridge the massive energy efficiency investment gap in the EU, which is vital if the EU's Energy Union project is to be a success.

Private investment in energy efficiency needs to increase fivefold by 2030, according to a group set up by the European Commission and the United Nations Environment Programme (UNEP) Finance Initiative.

"Considering that the European building stock constitutes the largest single energy consumer in the EU, and that the value of the European mortgage market is equal to 53% of the EU's GDP, there is huge potential for unlocking the benefits of mortgage financing to support energy efficiency," said Bertalot.

Energy Union

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The Energy Union is the EU strategy to fight climate change and increase energy security by increasing its number of suppliers and reducing consumption. Buildings have been identified as a Commission priority in achieving both goals.

Europe's ageing building stock is responsible for 40% of the EU's energy consumption and 36% of its global warming CO_2 emissions. 70% of the stock is highly inefficient, according to the European Commission.

Greater energy efficiency is vital if the EU is to meet the commitment it made at the UN Climate Change Conference in Paris. The EU has set a target of a 27% increase in efficiency levels compared to 1990 by 2030, and a greenhouse gas emissions cut of at least 40%.

Despite that the current renovation rate of buildings is just 1% a year.

Bertalot said that ideally the regulatory framework for the initiative would be set at EU level, with the departments for financial services and energy working together. How new rules would be proposed and in what legislations would be up to the Commission.

Energy efficient renovation could save Europeans money on their mortgage repayments. [Colin/Flickr]

Before that can happen, the EMF-EMC needs to collect more data, in collaboration with banks and EU authorities.

Once the evidence is gathered it will be presented to the Commission and to the Basel Committee in September 2017.

Juncker Plan

Speaking yesterday in Brussels at the opening conference of Sustainable Energy Week, Commission Vice-President Jyrki Katainen said that €17 billion euros was earmarked for energy projects from the multi-billion Juncker Plan.

DG Energy's Horáček said the mortgage initiative would be a good candidate for the Juncker Plan.

Bertalot agreed. "It could be a nice trigger," he said. "But this can work without a state guarantee. This will be a contribution from the private sector so will not rely on the fiscal capacity of individual countries."

Horáček said that the idea chimed with the thinking behind the Commission's Smart Financing for Smart Buildings Initiative, which aims to double renovation rates to 2% a year by directing money already present in the market towards energy efficiency.

Smart meters 'not needed' after all for European power grid

A transition to an intelligent electricity grid in Europe can take place without smart meters, industry players have said, in comments that will embarrass the European Commission, which pushed a Europe-wide plan to roll out smart meters years ago.

There are other more efficient ways than smart meters to help develop intelligent power grids, said industry delegates at the annual convention of Europe's electricity association Eurelectric, held in Vilnius last week.

These include quicker integration of renewables, the development of energy storage and energy demand response solutions, said the industry representatives.

The actual benefits of smart meters were also questioned at the conference, as several member states have done previously. Germany, for instance, has decided not to have a national roll-out plan at all, running counter to requirements laid out in EU legislation.

80% roll-out target

EU member states are required to implement smart meters under the 2009 Third Energy Package wherever it is cost-effective to do so, with the goal to replace 80% of electricity meters with smart meters by 2020.

The 80% target applies to both households and commercial buildings, a Commission spokesperson confirmed. The EU executive will publish in the next one to two years a report on smart meters "in the context of our regular monitoring exercise of the progress of members states," the spokesperson said.

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But progress has been sluggish, with few countries having completed their roll-outs and a number of nations – most notably Germany – having so far decided against a nation-wide deployment of smart meters.

And the countries that do have a commitment to smart meters, such as the UK, have run into hurdles in completing its roll-out because some meters would cease to work if a consumer decided to change energy supplier.

Markus Merkel, a senior advisor to the management board of German distribution system operator (DSO) EWE, told the Eurelectric conference that "there isn't a positive business case" for smart meters in Germany.

Real data vital

EWE's move towards an intelligent grid has focused to a large extent on upgrading the system to integrate the vast amount of new renewable energy at a quicker pace.

He said smart meters would be more useful for DSOs in their work to upgrade the grid if they provided real time data on energy consumption rather than the circa 15-minute intervals that current products provide.

"We need something different, and maybe smart metering 2.0 – the next generation of smart meters – will deliver something more that we as DSOs can also use," he said.

Laurence Carpanini, director smarter energy solutions at IBM, echoed the real time data point, adding: "I don't look at smart meters now as being the drivers of change – you don't need smart meters really."

Instead, industry players should "think about flexibility solutions as a whole" and focus on a mix of demand response technologies, frequency response and energy storage, she said.

Storage was also highlighted by Ari Koponen, CEO of Finnish DSO and utility Caruna. He said that while smart meters have been "essential" for collecting energy consumption data, the aspiration should be to access this data in real time and bring in more storage solutions.

"This would [bring] the smartness of the grid to a whole different level," Koponen said.

The industry's comments are an embarrassment for the European Commission's own plan to deploy smart meters across Europe by 2020.

The Commission spokesperson declined to comment on the views about whether or not smart meters are necessary for the transition to an intelligent grid.

Member states are expected to conduct their own cost-benefit analyses for their national smart meters roll-out plans, the official said.

A smart meter is installed, but industry players have questioned their use. [Portland General Electric]

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