

# ENERGY EFFICIENCY IN BUILDINGS

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## EU paper pencils in 30% or 35% efficiency target for 2030

To maintain Europe's emissions-cutting momentum, a 30% cut in energy usage is needed by 2030, rising to 35% if the EU wants to reap the benefits of energy security, jobs and growth, says a draft communication for the bloc's energy efficiency review, seen by EurActiv.

The target would be indicative – or non-binding on member-states – until 2017 at least, and would be based on an absolute reduction in primary energy consumption of 1312 Million tonnes of oil equivalent (Mtoe) for the 35% figure, and 1218 Mtoe for the 30% goal.

The paper is broadly in line with findings from an impact assessment revealed by EurActiv last week, which show that higher efficiency targets would bring optimum levels of GDP growth, jobs, energy security and emissions cuts.

But no agreement on a final goal to complement a planned 40% greenhouse gas emissions cut was reached at a meeting between the EU president José Manuel Barroso and a cabinet of top Commissioners on 18 June.



Photo: photoree.com/Flickr

Barroso himself is thought sympathetic to a robust 2030 energy savings target, and is said to have given a green light to the energy and climate commissioners, Günther Oettinger and Connie Hedegaard, to push for a higher headline figure than 25%. A number in the 30%-35% range remains firmly in play.

This faces strong opposition though from the EU's secretary-general Catherine Day, a key power in the current Commission regime, who is holding out for a 25%-27% energy savings goal on grounds of cost-effectiveness.

“The bottom line is that this [target] has to be fully in line with the rest of the 2030 package, it has to be politically acceptable, it

also has to be technically feasible,” one EU official said. “If you have a higher energy efficiency target then that has implications for costs in the non-ETS (Emissions Trading System) sectors, especially for some member states.”

The position is grounded in upfront investment costs, a particular form of modelling, and parts of the 2030 impact assessment which anticipate citizens taking low carbon investment decisions on the basis of a €40 per tonne carbon price by 2030, in the 40% of Europe's industry that the ETS covers.

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Environmentalists argue that this is “ivory tower thinking,” because it assumes that the carbon price will one day drive home-owners to renovate their houses and farmers to change their livestock.

Speaking at a German-Danish 2030 targets workshop on 18 June, the Green MEP Claude Turmes, simply asked: “Where is the political majority for that sort of carbon price?” Recent attempts to modestly raise the cost of allowances provoked strong reaction from business lobbies, even though the current price of around €5 a tonne is far too low to affect investments in energy efficiency or renewables.

Despite grumbles from Barroso’s office that their lobbying is fragmentary and counter-productive, officials in the EU’s energy and climate action departments insist that targeted energy saving measures will deliver quantifiable emissions reductions, without threatening the ETS itself.

## Communication proposals

In the short term, the new draft communication proposes:

- A review of the Ecodesign and Energy Labelling Directives, which deal with

the efficiency of household products, due for the end of 2014

- Bringing forward reviews of the Energy Efficiency and Energy Performance of Buildings Directive to 2015
- A review of progress towards meeting the new 2030 objective in 2017, at which stronger measures could be unfurled.

The bloc’s 28 member states are already committed to a 2020 target that would slash energy consumption by 20%, compared to 2005 levels.

According to the communication, “with full implementation and monitoring of already-adopted legislation, the EU can put itself on track to achieve this target, saving 170 Mtoe.”

## Revert to binding targets in 2017?

“But we cannot be complacent,” the document adds. “The Commission therefore intends to return to the topic in 2017, in particular to review whether national implementation is going as intended, or whether it is necessary to revert to the issue of binding energy efficiency targets.”

Sources close to the EU president’s office say that it would be a mistake to conclude

from the impact assessment and draft communication that recommendations for higher efficiency targets had been “concreted”.

A Brussels consensus holds that the 40% goal favoured by the new impact assessment would be unacceptable to the UK and Visegrad countries, but that a ‘binding at EU-level’ energy savings target, probably higher than 27%, would eventually be forthcoming.

The January 2030 package proposed a 27% indicative target for the share of renewable energy in countries’ national energy mixes, even though its impact assessment found that a 30% goal would create 568,000 more jobs and save €260 billion in fossil fuel imports.

Industry sources say that any attempt now to over-ride the findings of the EU’s efficiency impact assessment and communication would raise questions about the wisdom of spending so much money on them in the first place.

“Impact assessments are made to be followed and if they’re not, that is not a very cost-effective use of Commission or tax-payers resources,” Andoni Hildago, a spokesman for the European Insulation Manufacturers Association told EurActiv.

# New research casts doubt on energy performance certificates regime

The current system of certifying buildings according to their energy performance is beset by patchy enforcement, wildly-varying certificate costs, a laissez-faire attitude towards displaying information, and a lack of trained inspectors, according to the

preliminary findings of a study by the Buildings Performance Institute Europe (BPIE).

Countries in the EU are obliged to label all public authority buildings and properties bought, sold or rented for their efficiency standards under the Energy Performance in Buildings Directive (EPBD), so providing information about the likely range of future energy bills.

The directive says that certification schemes should be set up, independent control systems established and penalties for non-compliance set. But the new research shows that close to half of the bloc’s 27 covered states have no financial penalties for non-compliance with the EPBD’s requirements, and the cost of the energy performance certificates (EPCs) themselves

can vary from 10 to several hundred euros, depending on where you live.

Similarly, eight EU states have no minimum education requirements for their qualified experts and 13 states apply no financial or certification-withdrawal penalties for mistakes that such experts make in their energy performance calculations.

“It is as great shame that energy performance in buildings is not being rolled out at member states-level in the way that was intended,” commented Adrian Joyce, the secretary-general of the European Association of Companies for Energy Efficiency in Buildings (EuroACE).

“We note that where EPCs are in compliance with the directive and properly priced they are a very powerful tool for

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consumers to help them decide which properties to invest in,” he told EurActiv.

A requirement that all EU countries keep a centralised energy performance database of their buildings that can be publicly accessed is also widely flouted, the research finds.

“Some countries are doing a really good job,” said Oliver Rapf, the BPIE’s director. “Denmark has a broad database of individual buildings, Slovakia has something similar, and the Netherlands has a nice search engine where you can even search individual buildings by inputting an address.”

“But most other countries don’t have that and it limits that transparency,” he added.

Germany, Poland and the Czech Republic have no central database yet on their buildings, while countries such as the UK, Belgium, Spain and Italy depend on regional databases, which may not cover the whole country.

### Infringement proceedings

The European Commission has already begun infringement proceedings against three countries for not fully implementing the directive— Finland, Portugal and Belgium – and warning letters have been sent to several other EU member states.

The fines that could eventually be levied range from €19,000 a day for Finland, €25,000 a day for Portugal and €42,000 a day for Belgium.

But absolute defiance is not the only problem facing the EPC regime. In countries such as the UK, loopholes in energy efficiency legislation allow lawyers scope for advising clients on the best ways to opt out of the system.

“Anyone who advises landowners on this topic, knows there are grey areas where it is not clear whether you need to provide an EPC,” says one online summary by the law firm Mills and Reeve.

“You can always get one to be on the safe side. However, do you want to spend the money when there is an arguable case

that your transaction is one which does not require an EPC?” the text asks?

It notes that new guidance for local authorities issued by the Department of Communities and Local Government last month failed to mention that if a deadline in one regulation is missed, notice of penalty charges cannot be served more than six months after the breach of duty occurred.

“We need stronger enforcement, better control and better independent advice given on energy performance certificates,” Joyce told EurActiv.

### EPC displays

Currently, member states have great latitude in determining how to display their EPC information.

“In some countries it is included in

every real estate advert and is done really well,” Rapf said. “France is a good example for that but in other countries it depends on which online portal you’re looking for your real estate.”

Uneven enforcement of EPC provisions is viewed as a serious problem within the building industry’s pro-energy efficiency camp and, more widely, by environmentalists too.

Energy efficient buildings can cut energy bills and fuel poverty, and a strategy of renovations could more than halve dependence on Russian gas imports by 2030, according to a recent study by Ecofys.

Buildings are also responsible for around 40% of end-use energy consumption in the EU, and no decarbonisation of the bloc’s energy system is thought possible without addressing their energy wastage.



Photo: Jane0606/Shutterstock

# 'Acute' gas crunch fears push efficiency into spotlight

Energy security's ascent to the top of the political agenda was cemented at the EU's sustainable energy week yesterday (23 June), as a US ambassador to the EU, a Green MEP and the bloc's energy commissioner, Günther Oettinger all used the Ukraine crisis to highlight the importance of energy saving measures.

Security of supply was now "an acute issue," Oettinger told the conference. "The developments in Ukraine demand a policy response in the field of energy."

An ambitious energy savings target for 2030 would not only curb gas CO<sub>2</sub> emissions but gas use too, he said, adding that "the Commission estimates that every additional 1% in energy savings cuts gas imports by 2.3%."

Traditionally, the EU has juggled three energy priorities – competitiveness, sustainability and security of supply – with the ascendance of a competitiveness agenda after the 2008 financial meltdown and the economic crisis that followed.

But last week's decision by Russia to cut off gas supplies to Ukraine has intensified fears of a fuel crunch as winter approaches. That in turn has spurred calls for action on energy efficiency in a forthcoming review which could propose a target for 2030.

The Green MEP for Luxembourg, Claude Turmes, advised taking up a recommendation for higher targets in the review's now leaked impact assessment.

"If you dare to go for 40% [you can] say to the Russians: 'If you continue to play the tough game, we will take our precautions'



Photo: Lavinia Bordea/Shutterstock

and I think in Moscow they would be quite impressed," he said.

One key argument used to prioritise gas over efficiency has been 'the quick fix' or the assumed speed with which it can be brought to burn.

## Lessons of 1973

This was implicitly challenged by Anthony Gardner, the new US ambassador to the EU, who spoke glowingly of the "creative strategies" from measures imposed in the wake of the OPEC oil crisis in 1973.

These included the imposition of year-round daylight saving time to cut electric light and heating use, a maximum speed limit of 88 km/h to conserve fuel supplies, and press campaigns to turn off unused lights.

"Many of these policies faded away after prices stabilised but their lasting benefit is notable," Gardner said, noting that oil use had been projected to continue increase indefinitely beforehand but actually declined afterwards.

"Without the numerous energy efficiency improvements made since 1973, the US would require 50% more energy to deliver our current GDP," he said.

## Dash for gas

EU states such as the UK though argue that it would be more cost-effective to pursue an energy strategy based on encouraging gas producers, than to set an objective for accelerated energy efficiency measures.

The approach has drawn critics, ranging from died-in-the-wool environmentalists to former advisors to the Department of Energy and Climate Change, such as Dr Steve Fawkes

"There is a lot of obsession about shale gas but even in a good scenario it will be five to ten years before there is any significant volume – assuming it is there at an economic price," he told EurActiv.

The UK's national grid had emergency demand response plans to pay for load-shifting at peak times and there was also potential for an uptake of emergency building renovation measures, he added.

"The general problem is that that the demand side of things doesn't get as much attention as supply," he said. "We need to look at it as a resource, just like we do with oil and gas."

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## War on inefficient buildings

Randall Bowie, an industry consultant who has drafted previous energy directives for the EU, said that if people could be trained to go to war in a matter of weeks, as happened in World War II, engineers could certainly be trained to renovate buildings in the event of a gas crunch.

“If you started now, within nine months you could begin to feel the effects of reduced gas consumption,” he told EurActiv. “With a major renovation programme you could probably be impacting on your energy imports by winter, but it would require planning and national governments would have to push it.”

The EU’s recent energy security plan listed emergency building efficiency measures such as insulation and double glazing roll-outs as one potential response

to fuel shortages.

But a senior official from one EU state canvassed by EurActiv was sceptical about the prospects for a quick energy efficiency fix to a power supply crisis in Western Europe.

## Subsidies for double glazing

Some of the eastern European countries most dependent on Russian gas though were also the least energy efficient, he agreed, with no individual heating mechanisms for buildings and thus, little incentive for fuel conservation.

“You could introduce an instrument – that could be subsidies – there to ensure that people install double glazing and insulation,” he told EurActiv. “Of course you would need funding but the payback time is often very short. There are some very low hanging fruit in many of those member states and something could be done there.”

In Lviv yesterday, 20 new Ukrainian cities from the country’s east and west, committed to implementing ambitious sustainable energy action plans in the framework of a Covenant of Mayors signing ceremony. They will join a growing movement of local authorities - 71 in total - which have pledged a 20% cut in their CO<sub>2</sub> emissions by 2020.

The potential for coal-to-biomass fuel switching, and upgrading of urban district heating networks could also be response elements to a fuel crisis, according to Paul Voss, the director of Euroheat and Power.

“District heating’s inherent fuel flexibility makes it an ideal solution in the event of a sudden supply disruption and, more broadly, the long-term energy transition Europe is planning,” he said. The package includes updates of current waste legislation and mooted resource efficiency goals, such as increased targets for recycling.

# Think Tank: Europe needs a building renovations directive

Europe’s struggling bid to rein back energy wastage in the building sector could be boosted by a renovations directive implemented under a new Directorate-General for Resource Efficiency, says the sustainable energy think tank E3G.

Cutting CO<sub>2</sub> emissions in the building sector, which currently accounts for 43% of the EU’s total, will be essential for the bloc to meet its goal of decarbonising its economy at least 80% by 2050.

But only 16 of the EU’s 28 countries have written the flagship Energy Performance of Buildings Directive (EPBD)



into law, and proposals have been beset by loopholes and implementation issues.

“The current approach of dragging the market through a series of mainly voluntary measures has taken us as far as we can go,” Ingrid Holmes, the associate director of E3G told EurActiv. “We now need to transform the approach with a renovations directive that can mainstream efficiency by focussing on the use of mandate and regulation to take the market to scale.”

One building company contacted by EurActiv, Balfour Beatty, said that at present, energy efficiency was seen as a “low consideration” for buyers, compared to factors such as location, amenities, design,

layout and furnishings.

“For more investment to be made in energy efficiency measures in refurbishment projects, the cost of energy would need to be higher,” said Paul Toyne, Balfour Beatty’s head of sustainability.

“Sometimes access to capital stops energy measures as they are value-engineered out of the final solution,” he went on. “Legislation is another tool. In the UK, our regulations closely follow EU and revisions of building regulations constantly raise the bar in terms of energy efficiency.”

The EPBD, which is due for review

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next year, requires energy performance certificates to be issued to buildings over 250 metres squared by 2015 and sets a binding target for all new European buildings to be nearly-zero emitters by 2021.

But just 1% of the continent's building stock in any given year is newly-built, and only major renovations of Europe's existing 180 million buildings are covered by the EPBD. Definitions of what 'nearly-zero' means are also contested.

Professor Christian von Hirschhausen of the Berlin Technical University told EurActiv that the lack of a level playing field between EU states was one key problem.

Energy efficiency measures could be strengthened by "a combination of European standards – perhaps a renovation directive and a much stronger commitment by the member states," he told EurActiv. "For example in Germany, we are lagging behind in implementation at the city and regional level because of staffing and finance [shortages]."

### Loopholes

The European Commission is thought to be considering proposals to strengthen the EPBD in the current energy efficiency review, which could propose tougher building regulations as a way of meeting an energy savings target for 2030.

Loopholes could also be removed from an article in the Energy Efficiency Directive mandating public authorities to renovate 3% of their building stock every year. In Ireland, for example, only 81 buildings fall into the remit of the regulation.

Denmark is one EU state that has called for Europe's public sector to "be obliged to implement identified [buildings efficiency] measures which are economically profitable."

"It is clear that there is a lot of potential for energy efficiency improvement in the buildings sector but the system has no trigger," Samuele Furfari, an advisor to the Commission's Director-General for Energy, Dominique Ristori, told EurActiv.

"Renovations will be the major instrument if we want to reduce

consumption," he added. "It is impossible to change energy consumption with new buildings [alone], but whether we need a new renovations directive is another question," he added.

In the wake of the EPBD's poor implementation at national level, and a lack of trust in its main tools – energy performance certificates, company audits and inspection systems – the buildings efficiency sector favours a legislative approach.

Adrian Joyce, the secretary-general of the European Alliance for Energy Efficient Buildings (EuroACE) told EurActiv that his group would be "very happy" to see a renovations directive that would simplify the building sector's Byzantine regulatory regime.

"You could bring all the various aspects of good building design into one place, starting with energy efficiency, and ending with buildings that are high-performance, high-quality, with a healthy indoor climate that is desirable for people to live in," he said.

### DG Resource Efficiency?

"But I think this is definitely not going to happen," Joyce cautioned. The EU's energy efficiency file is subject to the jurisdiction of several competing directorates – Energy, Climate Action, Enterprise and Environment. Imagining a more integrated and structural approach was a fantasy, he added.

Instead, EuroACE proposes a "clusterisation" of commission officials who could cooperate on overlapping dossiers more closely, in keeping with the zeitgeist.

Holmes countered that "things never work, until they work" and said that with the upcoming arrival of a new Commission – and an imminent proposal on the circular economy – the time was ripe for creating a resource efficiency directorate, with responsibility for energy saving too.

She said: "At the moment, we've got water in DG Envi. We've got energy efficiency as part of DG Ener, fighting against the business-as-usual power generation side.

But with sustainable buildings, you have to think about water use and management, energy use, shared access to land, and flood risk."

"By creating a hub," Holmes continued, "you can address these issues and signal that this no longer a Cinderella issue but a mainstream concern for governments and Europe."

In the realm of mundane policy though, Furfari said that a focus on heating – "the poor relative of energy policy" – would be particularly important in the upcoming efficiency review, not least because of its contribution to building emissions.

Speaking at the EU's sustainable energy week conference on 24 June, Marie Donnelly, the Commission's top official for energy efficiency and innovation, said that "given the central role of heating within Europe's wider energy picture, it is difficult to imagine a credible strategy for an energy transition in which it is not explicitly and thoughtfully addressed".

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