Home is where the heat is, say experts

Germany and Denmark are blazing a trail on energy efficiency in buildings, but does an EU law give their counterparts too much leeway? Karen Carstens reports

The word 'home' usually conjures up images of a shelter from a harsh outside world. After a hard day's work and a long slog back to one's very personal sanctuary, the last thing one is likely to be on most modern-day commuters' minds is 'just how energy efficient is this place?'

But there's a lot more to buildings than meeting the energy needs of buildings - not cars or factories - are the biggest emitters of carbon dioxide in Europe and small ones are often the worst culprits.

"The energy used to cool, heat and light our buildings accounts for more than 40% of all CO2 emissions in Europe," said Horst Biedermann, director-general of the European Insulation Manufacturers Association (Eurima). "That's bigger than all forms of transport put together and more than the total output of the industrial sector."

The trouble is, according to industry interests including insulators and the wider climate change community, an existing EU directive on the energy performance of buildings falls far short of what it could have achieved.

It leaves up to 90% - the equivalent of 370 million tonnes of CO2 annually - of the potential emissions savings untapped, according to a study conducted by energy consultants Ecosy for Eurima.

The main problem is that, under the current legislation, buildings smaller than 1,000 square metres are not fully covered.

The directive, which came into force last year, requires governments to set minimum energy efficiency standards for buildings. But it applies only to newly-built housing and renovations for very large properties.

"Member states, which could postpone a 2005 deadline to implement the directive until 2008, have the option of setting their own targets - and two have blazed a trail that others will be hard pressed to follow," Germany has announced plans to apply the directive's measures to all buildings by going down to zero square metres across the board, while Denmark is going down to 50 square metres.

Belgium's Flanders region, meanwhile, is going down to a less dramatic 600 square metres.

Biedermann said the Danes had decided that 50 square metres was a good compromise, given that the country's coastal summer cottages were not occupied year-round, so it had been decided that the need to subject them to the new renovation codes was less urgent.

The main point, he said, was that both Germany and Denmark have demonstrated how far countries can go in making all buildings more energy efficient. "Without taking such measures in buildings, we will be unable to meet our Kyoto targets [of reducing CO2 emissions]," Biedermann cautioned.

The Ecosy study, released in March, found that extending the energy performance of the directive to existing small residential properties would double its effectiveness in meeting Kyoto targets.

Eurima, which represents synthetic insulation manufacturers, claims it presents the first estimate of the directive's greenhouse-gas cutting potential since it was agreed.

The study calculates the legislation would shave 5.4 million tonnes of CO2 off total emissions of the 678 million tonnes expected annually from buildings by 2010, under a business-as-usual scenario.

But it says that gradually applying the new efficiency standards to existing small residential buildings would more than double this saving to 70 million tonnes by 2010, an amount equivalent to 20% of the EU's remaining reduction commitment under Kyoto.

And once all the housing stock is thus 'retrofitted' the savings would be even greater.

Small houses were originally excluded because housing policy was felt not to be within the EU's competence. But Biedermann said the debate about effects on competitiveness of meeting Kyoto targets should force a rethink.

"We are probably the best solution to the whole energy efficiency debate," he claimed.

Officials from the Commission's environment directorate-general were impressed with the Ecosy study and encouraged Eurima to come up with more evidence, he said, adding, that a follow-up study on standards and the energy savings potential for buildings in central and eastern Europe would be concluded by the end of the year.

"There is a lot we don't know about standards there, but they have been historically very poor," he said, as they had in southern Europe, where the increased use of air conditioning was becoming a real cause for concern.

Biedermann said he feared that precisely these laggards would take advantage of the 'opt-out' in the directive, by extending them until 2010, to adopt the new rules. "That means there will be no movement in many cases until 2010," he lamented.

One option to speed up the process would be for the European Commission to open up the directive and 'tighten it up' - but this could prove politically difficult.

Alternatively, Biedermann suggested, the EU executive could instigate an EU-wide '.small houses directive', for example.

"We must find ways to make this politically palatable," he said.

But therein lies the real problem: "One politician once told us that he could not get re-elected based on his record on improving insulation standards - it just does not sound that appealing to people," Biedermann added.

A lack of awareness was Eurima's "worst enemy", Biedermann added.

And insulation manufacturers are not alone in lobbying for stricter renovation codes.

"There is this great opportunity for getting sensible, positive things done," said Andrew Warren, secretary general of EuroACE, a London-based coalition of 20 major companies - including Siemens, Dow Europe and Philips Lighting. The group, boasting a combined 670 billion turnover, manufactures products and offers services to make buildings more energy efficient.

"We should see short-term Kyoto targets as opportunities, not barriers," Warren added. "There are commercial opportunities, not just problems.

With Germany and Denmark leading the way, there is no reason for others to follow, according to insulation and other industry experts.

"The idea that member states are against this is ridiculous," said one insider.

"Now you're creating another two-speed Europe.

"The EU's strong dependency on external sources of gas and oil should also be considered, he added: 'This could help tackle security of supply problems and climate change.'

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