

## If we can't count the buildings, how can we plan cuts in emissions?

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There is a paucity of information about the energy consumption of Europe's 190m buildings. Could an independent centre of excellence clarify where energy goes?

There are 190 million buildings in the European Union. Approximately. Between them, they consume some 40% of Europe's fuel. Or it could be 45%. There are several million people employed each year in improving the energy performance of these buildings. Or so it is estimated.

Energy policy has long been supply-oriented. We know precisely how many millions of barrels of oil are sold; how many gigawatt hours of electricity are generated; how many therms of gas are distributed. This is because the number of entities directly involved in supplying fuel is known, and have long been used to furnishing detailed output statistics to the authorities.

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Energy in production processes

In contrast, nobody really knows for sure who, how and where all that energy is used. Granted, given the finite number of players, we do have a rather better handle on how and how much energy is used in production processes. Public transport (rail, bus, air) is well-documented; even with private vehicles it is not too difficult to track cause and effect.

But buildings? Here the paucity of reliable figures is in some ways risible. Particularly as improvement in the energy efficiency standards of buildings has increasingly become one of the central features of demand-side policies. To quote European energy commissioner Andris Piebalgs: "Energy efficiency is the swiftest, most cost-effective and most publicly acceptable way of delivering our energy objectives. And the first place we should start is in the places we live and work."

Fine, so it is absolutely right for the EU to be concentrating upon developing policies to improve the energy performance of buildings. That is why a directive to achieve this, agreed as recently as 2002, is now being recast this year, to strengthen its scope and increase its effectiveness dramatically.

The problem is that there is a real absence of firm data around to point precisely to the potential. For the recast directive, the European Parliament's lead MEP is Sylvia-Adriana Biciu. A formidably bright 37 year old Romanian socialist, she came new to the subject when appointed as the "rapporteur" last November. She has been appalled at the absence of precision in European end-use data in buildings. Nowhere is the exact number of buildings in existence in the EU documented. And certainly not the square meterage occupied, let alone the relative actual energy performance of different types of buildings.

There is no definitive data showing precisely what the carbon footprint of Europe's buildings is. So we can have no confidence we can identify precisely what percentage of the carbon dioxide emissions by end use comes from space heating as opposed to water heating, lights and appliances as opposed to cooking.

Obviously the best is the enemy of the good in public policy making. The respected Dutch consultancy Ecofys, in a study for the European Commission energy green paper in 2005, stated that if all cost-effective savings in heating and cooling Europe's buildings were taken, then over 200 million tons of carbon dioxide per year could be saved by 2020. An average of just about one ton per building.

We know that broadly this is correct. But it remains deeply frustrating that we remain so ill-informed as to the precise potential, that we have to subsist upon what are so suspiciously round and inexact figures.

What is needed is an objective centre of expertise on all aspects of energy efficiency in European buildings. It should not be solely dependent upon EU funding. Nor be exclusively funded directly by European industry, even those involved professionally or commercially with buildings.

Centre should be first point of contact

This centre of excellence must be the first point of contact for anyone concerned with energy efficiency in buildings. It must provide rigorous, evidence-based information and policy guidance to policy makers and stakeholders across Europe. That does not just mean national level administrators. If we are to meet this enormous challenge, of upgrading Europe's buildings so that each can save that ton of CO<sub>2</sub>, then it is far more important to involve those operating at town and parish level.

There needs to be a neutral place where best practices, not just of technologies but of the best techniques to deliver

them, are instantly available. One that eschews hearsay and anecdotal information. But provides comprehensive and Europe-wide fact-gathering and analysis.

It is precisely the kind of venture that many charitable foundations were set up to espouse. If ever there was a time for such foundations to intervene, that time is now. Who will pick up this challenge? The fate of Europe's (approximately) 190 million buildings could be in your hands.PDF version