

Micro capacity gains status

Small-scale energy projects can play a crucial role in cutting carbon emissions, argues **Seb Berry**



Since publication of the energy white paper in 2003 there has been precious little in concrete policy to enthuse the micro-renewable energy sector. However, there is one shining exception.

The positive planning policies pioneered by the London Boroughs of Merton and Croydon are hugely significant in delivering a vibrant and cost-effective UK micro-renewables market. At least 60 other regional and local authorities, including the Greater London Authority, have either adopted or are in the process of adopting Merton-style renewable energy planning policies.

These typically require developers to use on-site renewable energy systems to reduce their building's carbon dioxide emissions by at least ten per cent. They have the potential to deliver major contributions to energy efficiency and renewable targets. They also encourage developers to reduce the carbon footprint of their buildings from the outset.

The additional contribution from integrated renewables can be very significant. If every house built between now and 2020 were to incorporate an average-sized solar hot water, solar photovoltaic or micro-wind system, it would amount to approximately 50 per cent of the government's 2020 domestic energy efficiency target.

The jobs and investment impact of the Merton model on fledgling UK micro-renewable businesses should not be underestimated. Merton calculates that if 250 other councils adopt its approach, it would create an annual market of more than £750 million in the solar thermal, solar photovoltaic and wind sectors. The current UK market is worth £35 million a year.

The Merton approach also recognises the enormous scope for cost-effective integration of renewables into commercial buildings. Integrated projects typically offset the cost of traditional building materials as well as providing a long-term income stream



Croydon: commercial schemes earmarked to deliver integrated micro-renewable energy systems



Merton: developers are enthused by on-site renewable facilities

through renewable obligation certificates and a hedge against inflation and rising energy costs. They can pay back their costs in just a few years.

Yet the UK market for integrated renewables is still in its infancy, with nowhere near the economies of scale available in other more mature markets. A key barrier in the UK is developer concern over the application of latest technologies. But prospects are improving, helped by iconic projects such as the solar photovoltaic cladding system being installed on Manchester's CIS Tower.

The scheme is the largest such office installation in Europe and gives a tantalising glimpse of the potential for solar photovoltaic

and other zero-carbon renewables throughout the UK's urban areas. The Energy Saving Trust puts the potential market for integrated solar photovoltaics at 150MW-peak, the equivalent of 375 CIS Towers, by 2010.

But regardless of the technical feasibility of the Merton model, cost is the key issue for many. There is concern that the ten per cent requirement undermines otherwise "viable" projects. The evidence to date from Merton and Croydon suggests that this is not the barrier many have predicted. Eddy Taylor, Croydon's environment and sustainability manager, is upbeat about the reaction from most developers.

"Developer resistance stems from a lack of familiarity with the

technology rather than cost," argues Taylor. "If planners hold firm, developers will generally comply. For developers there are carrots as well as sticks. There is increasing evidence that renewable energy can increase sales values. There is also recognition among developers that this is where the industry is moving and it is in their interests to stay ahead of the game."

The ten per cent benchmark is just the beginning. In technical terms there is no reason why the rule could not be set higher. Research carried out for the ODPM's review of part L of the building regulations last year demonstrated that carbon reductions of at least 20 per cent could be achieved in new-build homes through small renewable energy systems.

These would typically add around one per cent to the sale price of the average new-build house in the South East. The cost will fall significantly once there is a move away from current niche

'Developer resistance stems from a lack of familiarity with the technology rather than cost'

markets to mass markets in a range of technologies. More widespread adoption of the Merton model will be a key factor in achieving this market transformation in the medium term.

But there is another reason to celebrate Merton's pioneering stance. According to Adrian Hewitt, principal environmental officer at the south London borough, the model's success and its enthusiastic reception are all too rare examples of successful local democracy in action.

"The ten per cent renewable energy policy is a demonstration of how councils can combat climate change, while at the same time driving the renewable energy economy and lowering fuel bills for residents and businesses," says Hewitt. "Unlike central government strategies and building regulations, the policy fosters imagination, innovation and a sense of community pride at a local borough level."

Merton and Croydon are winning converts to renewable energy in a developer community not noted for embracing innovation. "Contrary to some expectations, developers seem to be enthusiastic about the policy, seeing it as an opportunity to lead the field in designing and marketing low-carbon buildings for the future," notes Hewitt.

These local government pioneers are demonstrating that positive planning policies for renewables can work in practice. Buildings with renewable energy systems are being built right now. In Croydon, 25 developments requiring on-site renewable energy have been approved and at least three are now built.

The largest to date, on a disused hospital site, is providing 360 homes with 61 solar water heaters, 20 micro-wind turbines and a 40KW solar photovoltaic array. Meanwhile, Merton has approved five projects, including a commercial scheme incorporating a solar photovoltaic array and ten micro-wind turbines.

This approach shows that practical steps can be taken at a local level to deliver a genuinely sustainable approach to policy. These policies are far more than paper commitments. Over the next decade they have the potential to change the face of our towns and cities for the better. Seb Berry is head of micro-renewables at the Renewable Power Association.