

## DEVELOPING THE RENEWABLE HEAT MARKET IN NORTHERN IRELAND

### **Peter Hutchinson, Sustainable Energy, Department of Enterprise, Trade and Investment**

Over the past 18 months the focus on renewable heat policy across the United Kingdom and Europe has increased dramatically. The catalyst for this was the Renewable Energy Directive which requires the UK to ensure that 15% of its energy consumption comes from renewable sources. Significantly for the first time the requirement extended beyond electricity to heating and cooling and to transport.

In July 2009, the Department of Energy and Climate Change (DECC) indicated that they were planning to introduce a Renewable Heat Incentive (RHI) in Great Britain from April 2011. The GB RHI was the first of its kind with further information on its design and implementation was released in February 2010.

The RHI will apply across England, Scotland and Wales, rewarding those who install eligible renewable heat technologies with a payment to be made annually for small micro-generation installations or quarterly for larger technologies. The level of payment and length of tariff varies depending on the size and type of technology installed. Full details of the proposed tariffs and eligibility requirements can be found on the DECC website ([www.decc.gov.uk](http://www.decc.gov.uk))

The incentive, as it stands, is not available in Northern Ireland. The heat market in Northern Ireland is very different to the market in GB. Northern Ireland is largely dependent on oil with a developing natural gas market, whereas in GB the gas market is well established and is the predominant fuel source. There are also differences in fuel prices between GB and Northern Ireland and the amount of our income that goes towards heating our homes and businesses, as a consequence the levels of fuel poverty tend to be higher. Finally, the geography of Northern Ireland is very different to GB, with Northern Ireland being more rural with fewer larger cities and therefore has a very different heat density. These factors meant that it was appropriate for separate consideration to be given to how the heat market here might be encouraged and incentivised.

In order to better understand the Northern Ireland heat and renewable heat market and to determine the most appropriate method of developing the market DETI appointed AECOM Ltd and Pöyry Energy Consulting to carry out a significant study, with the project being part financed by the European Regional Development Fund under the European Sustainable Competitiveness Programme for Northern Ireland. This study completed in summer 2010 and has demonstrated that Northern Ireland has the potential to reach 10% renewable heat by 2020, but only with significant support from the Executive, in regards to policy, finance and cross-departmental working. This target was subsequently adopted as part of the Strategic Energy Framework.

A significant element of this study was gathering up to date, reliable information on the Northern Ireland heat market. It was determined that the total heat demand for Northern Ireland is around at 17,362 GWh per year. Oil provides the majority of heat demand at 77% of the overall demand (nearly 87% in the domestic sector alone) with

gas the second largest heating provider at 17% of the overall demand. The level of renewable heat is around 1.7%, of which the vast majority is from biomass.

The majority of heat used is in the domestic sector, at 61% of the total heat demand or 10,644 GWh. The large industrial sector consumes an estimated 22% of the total heat demand, the commercial sector 12% and finally the public sector 4%.

Looking forward to 2020, Northern Ireland's overall heat demand is predicted to drop from 17.4 TWh per year to 16.7 TWh per year with rises in demand from new development being outweighed by reductions in demand with efficiency improvements in the existing sector. The 10% for renewable heat therefore equates to 1.6TWh.

The study has demonstrated that a RHI, which specifically addresses the economics of the NI heat market, would be the most appropriate method of reaching the 10% target as it would provide the market with long term support at consistent levels ensuring that investors and consumers have the confidence to invest. This RHI would be focussed on developing renewable heat technologies in the domestic, commercial and public sectors.

A separate assessment on the appropriate support mechanisms for the heavy industrial sector will need to be taken. Interestingly the heavy industrial sector, which accounts for 22% of overall heat demand, is made up of just 17 large industrial sites. In fact just two industrial sites alone account for 14% of the overall heat demand, therefore there is obvious potential for deploying renewable heat in this sector. However, the individual nature of these sites and the specialist applications involved (for example, in cement works) means that a detailed analysis is required of each site to assess the technical potential and economical feasibility of deploying renewable heat in this sector.

In the longer term the potential development of community / district heating schemes should also be considered by the Executive. The study demonstrates that there is much scope within the Belfast Urban Area for district heating schemes, as well as there being potential for smaller schemes in new developments, specifically social housing, and for schemes using deep geothermal energy in the specified sites.

Returning to a potential RHI in Northern Ireland, it should be noted that the cost and method of funding for such a scheme remains a significant issue, with early estimates suggesting a cost of £2.5m per annum per % for the lifetime of a Northern Ireland RHI. The Chancellor's recent statement on the Comprehensive Spending Review included a provision of £860m of funding for the GB RHI in 2011-2012. If Northern Ireland is to introduce a similar scheme appropriate funding would have to be secured.

In order to determine the exact cost of a Northern Ireland RHI and consider appropriate tariffs, length of payments and segmentation DETI is currently carrying out a full economic appraisal of the policy. If the policy is economically viable DETI is committed to introducing such a scheme.

DETI remains committed to developing and supporting the renewable heat market in Northern Ireland which, in turn, will help create a more diverse and secure energy

mix, reduce carbon emissions and present opportunities for green jobs. In order to achieve this DETI will continue to work with colleagues in relevant government departments and agencies, with a view to consulting on a Strategy for Renewable Heat in Autumn/Spring 2011.