



Irish Academy of Engineering

Renewable Heat Incentives - Irish Academy of Engineering Analysis

Ireland has agreed to increase RES Heating and Cooling from 3.5% in 2005 to 12% by 2020. Given the very low base Ireland is coming from, compared with many EU countries, this will be extremely challenging in the Academy's view, particular as the Consultation Document is far too narrow in both its scope and its ambition and a much broader range of technologies and support mechanisms need to be considered in order to achieve the 12% target.

In reality it will require that RES H&C is raised to 600ktoe by 2020, on the basis of DCENR's projection that total energy requirements for heating and cooling will be 4.9 Mtoe by 2020, assuming all additional conservation measures are implemented.

Thus while a reasonably broad spread of technologies are listed in the consultation document as possibly contributing to the target, the bulk of the document focuses on how biomass- fired heating could be supported in commercial scale installations in the Non-ETS sector. However, biomass-fired installations are only likely be considered at locations currently using oil-fired heating, as the lower cost and convenience of gas heating, as well as its lower CO₂ emissions, make replacement of gas heating systems unlikely.

An extensive analysis of industries in the Non-ETS sector, covered by the EPA's IPPC reporting requirements, concluded that the use of petroleum products in those industries was less than 60ktoe in 2011. Furthermore an analysis of the estate of State owned institutions also revealed that at this stage a very large proportion of heating requirements are met using gas heating.

Thus the realistic potential to deploy biomass heating, in commercial scale installations in the Non-ETS sector, is very limited, and even if fully exploited would come nowhere near meeting the RES H&C target.

Thus the Academy considers it essential that the range of technologies and support mechanisms envisaged is broadened and has to include support for the use of heat pumps, to displace oil fired central heating in the 300,000 homes in rural areas outside the natural gas grid. The Academy's analysis indicates that this is the most cost-effective renewable technology available in Ireland and would, if fully implemented, increase Ireland's RES H&C by over 300ktoe i.e. half the 2020 target and it has the additional advantage of having the potential to reduce GHG emissions in the Non-ETS sector by 1.3 Mt, far more than can be achieved by biomass fired installations. Yet this approach is ignored in the Consultation Document.

As advised in the Academy's response to the Consultation Document on renewable electricity supports the Academy considers that there is no technical or commercial justification for paying a premium for electricity generated in Biomass CHP or AD plants, above that available for biomass-powered electricity plants. Any additional premium for the renewable heat output should be funded from the Renewable Heat Incentive scheme rather than the electricity sector.