

Future Billing Methodology

Q **Apart from low carbon gases, what other options are available to provide low carbon heat for GB customers?**

A Recent UK energy policy for decarbonisation has focused on ultimate electrification of heat, combined with increased renewable generation and the use of high-efficiency appliances such as electric heat pumps in homes and businesses.

This raises a number of challenges. Most notably, the need to re-engineer the electricity networks to provide the significant additional system capacity and response capability that would be required to meet the very large diurnal and seasonal swings in heat demand which are currently served by gas. This, together with the need for increased power generation capacity for heat, is why the cost estimates for future electrification of heat to 2050 are so high, at around £300bn.

Low carbon heat alternatives to electrification include Combined Heat and Power (CHP). This typically requires 'high dwelling density' arrangements, such as compact housing estates and multi-occupancy buildings (MOBs). It requires specific planning and administrative arrangements, which can be costly for existing housing and has long lead-times.

Other non-gas alternatives include a range of dwelling-specific renewable solutions, which tend to be expensive, and which still require an electricity grid connection to meet higher heat demands. Although technology advances may increase the range of options available, it is likely that these would also involve high initial expense for consumers.