

28th September 2012

Gareth Evans
Head of Profession - Engineering
Ofgem
9 Millbank
London - SW1P 3GE

Dear Gareth,

Re: Connection of Small-Scale Generation - revisions to the Distribution Code to replace Engineering Recommendation G83/1-1 with G83/2

The Heating & Hotwater Industry Council (HHIC) are responding to your letter of 20th August relating to the above proposed change.

We represent a significant number of companies involved in the micro CHP sector which has the greatest potential of any emerging low carbon domestic microgeneration solutions. Of the 26 million homes in the UK, 21 million are on the gas grid, and 1.5 million boilers are installed every year. We believe that with the appropriate policy framework, micro-CHP units could be widely installed by 2020. Field trials further suggest micro-CHP could save up to 60% on electricity bills for consumers. It is the only technology that consistently generates electricity at the time the grid is at peak load thus offsetting this maximum demand. Moreover, the potential value of micro-CHP to the UK economy is £1.5 billion and the creation of up to 20,000 jobs, mostly in manufacturing.

In order for the mass market potential of micro-CHP to be fully realised, continued Government support through the FIT has been sought in these early deployment stages and the government, as you probably know, increased the tariff for mCHP earlier this, the only technology to receive such treatment. It is clear from this commitment that the government, as well as industry, see significant opportunities for this technology and we are concerned that the changes proposed in the G83/2 will undermine its potential.

Our specific concerns are as follows:-

G83/2 states that the Micro Generator must NOT disconnect faster than the periods in 5.3.1 table. This goes against the purpose of G83 which was, as we understand it:

1. To ensure safety of personnel working on LV network
2. To prevent damage to the network
3. To prevent the MG contributing to network faults/excursions from statutory limits

We understand the need for these and support the spirit of maintaining them as a priority.

However, there was never an intention that the Micro Generator should provide ancillary services to the network such as voltage support. Although this point is not explicit here, it is in the ENTSO-e proposal which effectively makes Micro

Generator responsible for maintaining voltage and frequency even when the cause of those excursions is often caused by the DNO. Therefore we would like to see removed obligations on Micro Generators to continue operating at any time when its own controls would prefer it to disconnect.

A specific issue relating to resonant engines makes the frequency limits completely unacceptable as it would cause severe damage to the engines if they did not disconnect within much tighter limits typically +/- 0.5Hz. Although this could be overcome technically by connecting an inverter or other power electronics between the Micro Generator and the network this would reduce the product efficiency unnecessarily and add considerable cost, effectively making the product unmarketable. This is because the spring that drives the Stirling process is tuned to 50hz. There is little tolerance to this but the electronics do 'kick' it into synchronisation and keeps checking the frequency and syncs. If the frequency drifts too far and the unit cannot synchronize properly, it then shuts down. The frequency tests are beyond the capability of the unit, which was designed to generate AC therefore not needing an inverter. To introduce such requirement will prevent the sale of Micro Generator units which are at the emergence of volume sales.

The other point of concern is not actually in the text of G83 itself, but in the ENA website supporting information which now states that the DNO may make a charge for a network assessment for multiple installations. Again, this was never the intention of G83 which was "fit and inform" for single installations and "inform and fit", not "request and pay and maybe fit" for multiple installations. Again this is a barrier to free competition as it disadvantages relatively small players in the market, and as such should not be supported by Ofgem.

In addition, we cannot see specifically any requirements to allow a SSEG to be installed onto a ring circuit. Our understanding was that this was to be allowed and be more specific about the requirements, rather than a dedicated circuit, provided it was protected by a 16 amp circuit breaker.

In summary, we strongly believe that the proposals will undermine the emerging micro CHP sector which have an impact on low carbon employment in the UK as well as remove a cornerstone for achieving the UK's 2020 targets.

We would be more than happy to meet with you to discuss these issues further if it is of benefit.

Yours sincerely,

CHRIS YATES
Deputy Director, HHIC