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Arthur Cooke
Ofgem
9 Millbank
London SW1P 3GE

Dear Mr. Cooke,

The regulatory implications of domestic scale microgeneration

Thank you for allowing us to submit a response to the above consultation after 15th July 2005. LIFE-IC is a clean energy technology accelerator www.life-ic.com. Amongst our current portfolio of companies there are a significant number of microgeneration technology companies. The institutional arrangements for the 'supply of electrical energy' and the 'off-take of electrical energy' from premises impact the commercial development of these companies. Ofgem's consultation is therefore very welcome and timely coinciding as it does with the Government's own consultation on the UK's microgeneration strategy. We particularly welcome Ofgem's recognition that the existing licensing framework was not created with domestic-scale microgeneration in mind and that regulatory changes may therefore be necessary to reflect the connection of domestic-scale microgeneration to distribution networks.

Turning now to the consultation itself our principal comments are set out below.

Reward for microgeneration kWh – Obligation to take

Change Condition 32 of the supply licence and place an obligation on licensed electricity suppliers to take and offer terms. In paragraph 7.23 Ofgem states "Ofgem is not persuaded that creating such an obligation would be desirable". The lack of any obligations on licensed electricity suppliers to either purchase micro generation output or indeed take micro generation output together with their powerful position as buyers compared with domestic consumers is a significant barrier to micro generation. Due to constraints in the Balancing and Settlement Code, only licensed electricity suppliers can register metering systems associated with micro generation. Although in theory this does not prevent other parties from buying the output the practical viability of this is unproven. Therefore it has to be assumed that licensed electricity suppliers are likely to be the only purchasers of micro generation output. Potentially there are some significant competition issues associated with this situation e.g. The same licensed electricity

supplier being on both sides of the negotiating table at the same time when buying and selling energy; A licensed electricity supplier becoming aware of micro generation installation because of meter changes and making offers with their preferred micro generator supplier and/or offering “special” supply terms, etc. Furthermore it would be impractical for two different licensed electricity suppliers to become involved with import and micro generation export, if there were one 'combined' meter on site. Whilst to our knowledge two licensed electricity suppliers do offer micro generator “off take” terms the lack of any obligations on licensed electricity suppliers will contribute to undermining micro generation development. The evidence to support this assertion is the lack of published terms from all other licensed electricity suppliers and Ofgem’s own admission in paragraph 5.4 of the consultation document – *“Ofgem frequently receives reports of microgenerators who cannot find a purchaser for excess electricity produced by microgeneration”*. Therefore, we believe that Condition 32 of the supply licence should be changed to place an obligation on licensed electricity suppliers to take and offer terms.

Selling exports

Paragraphs 5.5 to 5.8 of the consultation address in large part the value of microgeneration kWh. Unfortunately these paragraphs appear to have been drafted from a licensed electricity suppliers’ perspective and don’t address the underlying economic position of microgeneration kWh. Ignoring taxes, profits and Licensed Electricity Supplier other supply costs the economic cost of a kWh of electricity at the point of connection to the low voltage network is the cost of producing the kWh of electricity; plus the cost of delivering the kWh of electricity including losses; plus the cost of the environmental damage to produce & deliver the kWh of electricity. This cost is also a function of time. There are two particular corollaries of this proposition; firstly the value of the kWh is the avoided cost; and second the value of the kWh does not depend on which side of the customer’s terminals it is measured at, on the premise.

Connection of microgeneration

In paragraphs 9.8 to 9.11 of the Ofgem consultation standard terms of connection for microgeneration are discussed. Despite having the legal ability to connect microgeneration without seeking prior permission from Distribution Network Operators, many of the contracts currently in place between domestic consumers and their suppliers still require such permission to be granted. Ofgem’s suggested solution is welcome that the issue is addressed through the Distribution Commercial Forum. However, a timetable or date should be set for the necessary changes to take place, because this issue has already been addressed over the last two years in a number of committees and groups including work stream four of the distributed generation coordinating group without any progress being made. There is little disagreement that change is required here, but the process for effecting such change is genuinely complex – the contract between a customer, their licensed electricity supplier and their Distribution Network Operator is a commercial arrangement between these three parties, and subject only to limited regulatory purview. Class changes to such agreements require all licensed electricity suppliers to agree such changes with every Distribution Network Operator in whose licensed area the licensed electricity suppliers operates. This means that a large matrix of contracts require change and will inevitably be subject to a degree of bespoke negotiation.

Information on microgeneration

In response to Ofgem's interest regarding the provision of information Paragraph 6.8 we believe that Condition 25 of the supply licence should be changed to include the provision of information on microgeneration. Licensed electricity suppliers should be obliged to deliver information on microgeneration to their customers. However, the content should be provided by a third party such as the Micro Power Council. Micro generation utilises primary resources far more efficiently and effectively than large-scale power stations, transmission and distribution systems. A micro generator of only a few kW is an extremely efficient way to utilise primary energy. Renewable energy micro generators are "Carbon free" electricity producers and if the displaced energy is from a fossil fuel plant it will reduce total Carbon Dioxide (CO₂) emissions. Micro generators that produce electricity from fossil fuels, ignoring bio fuels, and operate in CHP mode are "Carbon abatement" electricity producers. There is little, if any, environmental impact from micro generation in terms of visual intrusion and emissions to land, air and water and micro generation has no long-term environmental implications e.g. storage, contamination, interference, visual intrusion, decommissioning etc. It seems to us that these messages need to be put in front of the customer in an unbiased and measured way without promoting any particular company's commercial product.

Metering – Measuring Exported Energy

Whilst we understand Ofgem's position as set out in paragraph 10.13 of the consultation we now believe that serious consideration should once again be given to "net metering", because:

- The number of microgenerators on the system is likely to be low for the foreseeable future
- Whilst "net metering" potentially could over reward micro generators the actual impact on settlement is likely to be small due to low number of microgenerators
- It would provide a simple incentive for microgeneration with little if any additional bureaucracy

Net metering could be allowed for a set period, say seven years. During this period a "specification" for a microgeneration standard could be developed for the metering of micro generation. Ofgem should consider feasible routes to take this forward.

Metering – Process for Changing Meters

This problem is another barrier to entry for microgeneration. Paragraphs 10.3 and 10.30 of the consultation suggest that Ofgem do not consider meter changing to be a problem. Other than the sale of a microgenerator by a Licensed Electricity Supplier to one of its existing customers, it is currently very difficult for meter changes to be arranged for the same time as microgeneration installation, and even more difficult for the microgeneration installer (even if suitably trained and qualified) to perform the necessary work and avoid additional call-out costs. When this situation is combined with the "distressed purchase" of certain microgeneration equipment it is apparent that there is considerable institutional difficulty in this area. Solutions to this problem have been put

to Ofgem by work stream four of the distributed generation coordinating group. It is in all parties interests to deliver a “one stop shop” solution to this problem.

Size of microgeneration under development

Paragraph 5.1 of the consultation document states that “Micro-generation equipment currently available or under development is primarily intended to produce electricity for on-site use.” This view is asserted without any evidence or indeed any intellectual underpinning. It represents a very restricting premise on which to base regulatory or legislative requirements. It is simply not true as there are a number of microgeneration developers who are developing plant and equipment to fit within the G83 connection standard definition. This has nothing whatsoever to do with on site production and consumption of electricity. The generation node that is developing at the G83 connection limit is developing because of the connection standard.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Philip M Johnson', with a long horizontal flourish underneath.

Philip M Johnson
CEO LIFE-IC Incubator