Office of Utility Regulation

Buy-Back Rate Review

Information Notice

Document No: OUR 09/17 **September 2009**

Office of Utility Regulation
Suites B1 & B2, Hirzel Court, St Peter Port, Guernsey, GY1 2NH
Tel: (0)1481 711120, Fax: (0)1481 711140, Web: www.regutil.gg

Table of Contents

1. Introduction

In June 2008 the States noted the Energy Policy Report, which requested the Office of Utility Regulation ("OUR"), in partnership with Guernsey Electricity Limited ("GEL") under the Energy Policy work stream Headline Policy 2:A(v):

> "to research the level of buy back tariffs that would encourage small-scale renewable electricity generation and whether the charge for the installation of the export meter should be abolished and then to produce a joint report back to the Policy Council, via the Energy Policy Group (EPG), on how such tariffs and costs may be amended to reflect the States' Energy Policy".

The buy-back rate is the rate domestic consumers receive from GEL when they sell electricity back to GEL which has been generated using micro-generators. Micro-generators are used to generate electricity for the customer's own use, but in some cases, it is possible that more electricity has been generated than what is needed for own consumption. Examples of micro-generators are photo voltaics (e.g. solar panels), micro-wind turbines, micro-hydro and domestic Combined Heat and Power. Under the current arrangements, GEL customers could sell excess electricity to GEL at a rate determined by GEL. The average rate over the last 12 months was approximately 5.4 pence per kWh.

The OUR issued a public consultation document in October 2008 (OUR 08/17) which presented the various approaches to encourage the uptake of micro-generation which have been adopted in the UK, Jersey, Isle of Man and various other countries. The consultation presented two broad options, namely a buy-back tariff based on a so-called 'avoided cost' approach and a tariff based on a premium being paid for electricity generated using domestic micro-generation (e.g. a 'feed-in tariff'). The document also included a simplified version of a feed-in tariff in the form of a net metering approach, as used in the Isle of Man. The consultation outlined some of the possible advantages and disadvantages of these approaches, especially considering Guernsey's specific circumstances.

The OUR received six responses to its consultation. The key points made by respondents are summarised in this information notice and the full responses can be found on the OUR website. One of the six responses was from the Energy Policy Group, which notified the OUR that it had concluded to close the work stream with regards to the buy-back of micro-generated electricity.

2. Buy-Back Options Outlined in the Consultation

In its October 2008 consultation document the OUR presented two broad options to determining the appropriate buy-back rate, namely an approach based on 'avoided costs' and an approach which would pay a premium for electricity generated using domestic micro-generation (e.g. feed in tariff approach). A simplified version of the feed in tariff approach, e.g. a net metering approach was also included.

2.1 Buy back rate based on an 'avoided cost' approach

Under this approach the buy-back rate is set to reflect the costs which GEL avoids due to micro-generators generating and selling electricity back to GEL. The consultation explained that GEL has a large number of different cost categories and the key challenge when adopting an 'avoided cost' approach is deciding which of these cost categories to include. There is little doubt that the main cost which GEL would avoid is the wholesale cost of electricity (i.e. the cost of purchasing electricity from EdF or generating on-island). However, the situation in relation to other cost categories is less clear. For example, with so few micro-generators selling electricity back to GEL (two customers in 2007 and two customers in 2008) there seems little scope for GEL to reduce other costs such as electricity transmission and distribution costs, costs due to losses, etc. Currently, the buy back rate set by GEL seems to be based on the (avoided) wholesale electricity costs, which is calculated on a monthly basis. A similar approach is used by Jersey Electricity Company and a number of UK electricity suppliers.

The October consultation outlined a number of advantages and disadvantages with such an approach. Arguably, the main advantages are:

- Cost reflectivity;
- More transparent;
- Less risk of inefficient investment;
- More equitable; and
- Better tailored to Guernsey's specific circumstances.

The consultation also outlined a number of disadvantages associated with this approach, namely:

- Less investment in the short-term in domestic micro-generation;
- Only affluent households are likely to be able to invest in micro-generation; and
- Requirement of having an additional meter installed.

The consultation noted that if the objective is to encourage micro-generation whilst keeping the buy-back rate cost-reflective, it might be worth considering other financial measures, such as grants to help households with the initial capital expenditure. Such an approach would enable policy makers to attach conditions to obtaining a grant, such as first having appropriate insulation levels of the home and other energy savings measures in place (e.g. energy saving light bulbs, loft insulation, cavity wall insulation, etc.) as for example is required in the UK in order to qualify for grants.

2.2 Feed-In Tariff

The second broad option proposed in the consultation was some type of 'feed-in tariff'. The objective of this approach is to encourage the installation of domestic micro-generation by offering a premium in excess of the electricity wholesale price to

micro-generators who sell electricity back to the network. The premium is a subsidy from either the tax payer or other electricity customers to the micro-generator. This approach has been applied in a number of European countries, most notably Germany and the Netherlands as discussed in the October 2008 consultation.

The consultation outlined a number of advantages of this approach, most notably:

- Simplicity;
- Greater investment certainty;
- Effective in increasing the amount of domestic micro-generation; and
- Marginally less reliance on electricity imports through the cable link during summer and off peak winter periods and marginally less reliance on on-island generation during peak winter periods.

The consultation also outlined a number of disadvantages of this approach, namely:

- Costly;
- Likelihood of less well-off customers cross-subsidising well-off customers;
- Risk of promoting what in a few years time might transpire to be the 'wrong' technology;
- Move away from a least cost approach for GEL;
- Quite arbitrary;
- Investment uncertainty;
- Costs of administration;
- Further increases to the already significant level of electricity generation capability on the island; and
- Given the small contribution likely to be received from micro-generators, the true beneficial impact on the environment is likely to be very small.

2.3 Net Metering Approach – a simplified version of a feed-in tariff

As set out in the October 2008 consultation, a net metering approach could be regarded as a simplified version of a feed-in tariff. This approach has been adopted in Isle of Man. However, in Guernsey it would be more difficult to implement due to the fact that the new AMR meters would not be able to deal with both the import and export of electricity.

The October 2008 consultation set out a number of advantages in relation to this approach, namely:

- Simplicity;
- Transparent;
- Greater investment certainty;
- Likely to increase the amount of domestic micro-generation;
- Marginally less reliance of imports/on-island generation; and
- Easy to administer.

However, it also has a number of possible disadvantages, such as:

- Costly;
- Likelihood of less well-off customers cross-subsidising well-off customers;
- Risk of promoting what in a few years time might transpire to be the 'wrong' technology;
- Move away from a least cost approach for GEL;
- Quite arbitrary;
- Investment uncertainty;
- Costs of administration;
- Further increases to the already significant level of electricity generation capability on the island;
- Given the small contribution likely to be received from micro generators, the true beneficial impact on the environment is likely to be very small; and
- Potentially more costly to implement if the customer has an AMR meter.

3. Responses

The OUR received six responses to its consultation and the DG would like to thank all the respondents for their submissions. The OUR received responses from:

- Mr. R. Bisson;
- Mr. R. Dorey;
- Mr. N J J F MacPhail
- The Commerce and Employment Department;
- The Energy Policy Group; and
- Guernsey Gas Ltd.

In accordance with the OUR's policy on consultation set out in Document OUR 05/28 – "Regulation in Guernsey; the OUR Approach and Consultation Procedures", non-confidential responses to the consultation are available on the OUR's website (www.regutil.gg) and for inspection at the OUR's office during normal working hours.

3.1 Comments on the various policy options

The October 2008 consultation document presented three different policy options. We received a number of comments in relation to these specific options and also a number of comments on other issues.

3.1.1 Avoided cost approach

One respondent favoured the avoided cost approach to protect customers from "subsidising the over-enthusiastic installation of such devices resulting from the ready availability of cash in our affluent island". Another respondent argued against this approach on the basis that it was too heavily skewed in favour of the supplier.

3.1.2 Feed-in Tariff

None of the respondents supported a Feed-in tariff approach. One respondent argued that this approach would be too heavily skewed in favour of the domestic generator. Another respondent argued that the overall level of uptake and net benefits of further uptake would not be significant enough to merit the costs both to the taxpayer and to the electricity consumer.

3.1.3 Net Metering Approach

One respondent favoured the net metering approach. According to this respondent, who has installed micro-generation, the likelihood of a domestic micro-generator installing more capacity than needed for own use is small unless the buy-back rate was set well above the current level.

This respondent also pointed out that a feature of photo voltaics (one of the micro-generation techniques discussed in the October 2008 consultation document) is that most electricity is generated when you need it least (e.g. during the Summer and in the day time). This respondent argued that the current approach used by GEL to determine the buy-back rate was inequitable, as it resulted in GEL paying 5 pence per kWh to the micro-generator and GEL then being able to sell this electricity at 12 pence per kWh to another customer, resulting in a net 7 pence per kWh profit for GEL with no contribution to the creation of this electricity. This respondent therefore argued that on balance a net metering approach might be most appropriate for Guernsey. This respondent also argued that the success of micro-generation should not be measured in terms of the amount of electricity sold back to GEL but instead (i) in terms of how much more electricity GEL would have had to supply without micro-generation and (ii) how it impacts on the customer's overall consumption of energy, rather than just electricity. In the words of this respondent: "the key determinant for investors being attracted to micro-generating technology will be driven by a combination of economic return, ideology and security of supply".

3.1.4 No buy-back rate

Another respondent questioned the need of a buy-back rate and argued for the present buy-back scheme to be discontinued. This respondent stated: "I am sure that no electricity generating utility really wants the costs involved in the metering, accounting and administration of buy-back for the tiny amount of energy that domestic generation can produce. Indeed one can foresee circumstances when, at night for example, tidal input could exceed consumer demand and yet the electricity utility could still be forced to pay for micro-generation input that they do not want and cannot use."

This respondent therefore questioned the buy-back approach and argued that it might make more sense for the comparatively small amount of electricity generated by micro-generation to be stored within the householder's property as heat in a thermal store or cylinder for the householder's own domestic heating or hot water supply use.

This respondent did point out that he had a clear interest, being the patent and trade mark owner of certain thermal storage boilers.

3.2 Other comments

Heat pumps

Two respondents questioned the inclusion of heat pumps in the consultation, given that heat pumps themselves do not generate electricity.

OUR comment

It is correct to say that heat pumps do not generate electricity, however, heat pumps could reduce the demand for electricity as they could successfully be used for heating space and pre-heating water. Heat pumps were therefore included for completeness, thus recognising that consumers who invest in micro-generation tend to invest in technologies that complement each other, such as heat pumps and solar panels.

CO_2 emissions

Two respondents questioned the figures on CO_2 emissions. One respondent pointed out that a distinction should be made between man-made and total CO_2 emissions. Another respondent questioned whether "approximately 92% of the electricity imported through the submarine cable link is carbon free".

OUR comment

This number was provided by GEL based on their source data. The OUR notes that there remains a variety of views on what this actual rate is.

Commercial CHP

One respondent was disappointed that commercial scale CHP was outside the scope of the consultation.

OUR comment

The October 2008 consultation was part of the Energy Policy work stream. This work stream focused on domestic micro-generation and hence commercial CHP was outside the scope of this project.

3.3 Decision to close this work stream

In its response, the EPG considers that "greater overall benefits could instead be yielded by focussing government action on encouraging energy conservation in the home, rather than on promoting the uptake of domestic micro-generation."

The EPG therefore concluded that "in order to achieve the Energy Policy's key aim of reducing Guernsey's carbon emissions by minimising energy use and wastage,

government action should, at this time, be focused on encouraging energy conservation in the home."

The EPG has therefore decided to close the Energy Policy work-stream in relation to the buy-back tariff for domestic micro-generation and noted that "neither the OUR or Guernsey Electricity Limited are required to take any further action as this stage, in respect to the Energy Policy Workstream Headline Policy 2: A (v)".

4. Conclusion

The EPG response to the consultation document concludes this buy-back work stream and draws it to a close. The EPG is of the view that it would be more appropriate to concentrate on pursuing other schemes that could create "bigger wins" within its Energy Policy in aid of reducing Guernsey's carbon emissions and has informed both the OUR and GEL that they are no longer required to undertake any further work on this issue.

ENDS