

PIU Project on Energy Policy - Renewable Energy

Response by London Electricity plc

These are comments by London Electricity (LE) plc on the paper **Renewable Energy – Further Note** posted on the PIU website in August. The responses follow the sequence of the propositions (P), questions (Q) and comments (C) in the note.

Key Points

- We are extremely sceptical about the feasibility of targets currently proposed under the draft Renewables Objective (RO). For the reasons we give in this response, the profile of the obligation to 2010 should be further “back-ended” to recognise the realities in this country of bringing renewable technologies on stream.
- Even if planning and regulatory barriers can be overcome, there are practical reasons why the levels of take-up envisaged by the PIU beyond 2010 are not attainable.
- Support measures such as the availability of funding as indicated by the Prime Minister in March will continue to be needed if some of the more speculative technologies are to become viable.
- See section A8 of our preliminary response for other general remarks on the role of renewables technologies, our support for them and barriers to take-up.

Responses

P1. The UK could meet significant proportion of electricity needs from renewable sources in the medium term – 20/30% by 2020 may be feasible. In the longer term, much larger proportions, 50% or more, appear possible.

Considering the history of developing renewable generation in the UK (2.8% of the current contribution, only half of which has been achieved in the last decade), it is very hard to see how a 20% target can be delivered by 2020. Table 1 in the PIU *Renewable Energy – Further Note* is useful in demonstrating the potential but the technology targets do not take into account constraints arising from planning, network reinforcement and other obstacles and it is very doubtful whether these targets can be translated into delivered projects. Even with a concerted effort by government and the industry, a number of years’ time lag to remove major barriers to development will occur before any critical mass of projects can be delivered. In addition, some technologies such as wind power

will continue to face significant barriers to development due to the nature of the best land locations they require.

It is hard to see given our understanding of technologies known to be available how a 50% target can be attained even by 2050.

Q1. Is the methodology utilised by the PIU for assessing cost reduction potentials appropriate and acceptable? Are there any other factors that we have forgotten to take into account?

The engineering cost assessment and the use of “learning” curves seems appropriate. Clearly, take-up rate assumptions are crucial to achieving cost reductions to the level indicated, and, if take-up fails to occur to the level expected, the cost assumptions are not valid (creating a vicious circle). Given the comments made above about achievability of targets, the timing of further cost reductions is debatable.

P2. The cheapest options for exploiting renewable energy sources will become broadly competitive with “conventional alternatives” within 20 years.

If financial support is directed to the most promising technologies, such as off-shore and on-shore wind, and institutional and siting barriers do not prevent these technologies from being deployed in significant volumes, then we can expect to see these becoming competitive, compared with alternative fossil fuel sources within 20 years.

Q2. What role, if any, should expanded and longer term targets play for the development of renewables? Should targets be regulatory or aspirational?

Long-term targets are required to allow all stakeholders to plan and gain financial backing, especially for less well developed technologies.

Once set, targets must be stable if the full potential investment is to be realised. Targets should be backed up and enshrined in regulation, rather than being aspiratory.

P3. Network and intermittency constraints will not have a major impact on the development of renewables for the foreseeable future. However, additional development of key technologies for dealing with intermittency should be prioritised in order to open the option of much larger contributions in the longer term.

Certain technologies such as wind, both on and offshore, are typically developed in the more remote regions of the UK. It is in these areas that networks will be

least able to accommodate either intermittent and/or local embedded generation without reinforcement. Development of methods of energy storage will help alleviate this issue but not resolve it. Therefore we agree that support for energy storage technologies should be a priority to assist renewable development. Such development would also provide support to more conventional forms of local generation and network security.

P4. The environmental impacts of renewables are generally low.

We agree. As a guiding rule, the overall environmental impacts of renewable energy technologies are low in comparison with fossil fuel alternatives. However, some types of renewable technologies can have a greater impact on the local environment in addition to the visual impact. An example of this is energy crops, which could increase local traffic movements, with increased local vehicle exhaust/noise pollution.

P5. Renewable energy is an important tool in increasing the security of the system.

Diverse renewable generation capacity should provide an increased level of security to the local networks to which they are connected. This level of security will not be uniformly provided across the UK, as renewable capacity will be developed locally in the environment that best suits it. However, without significant network reinforcement in some locations, it may not provide the enhanced security where it is needed.

C4. Comment on the current institutional barriers to renewables, their current impacts and how they should be overcome.

Addressing the planning issues is fundamental, if there is to be any prospect of meeting the current targets by 2010 and improving the scope for development beyond that. In particular, the results of the Regional Development Agency regional renewable assessments need to be reviewed in a UK context to see if collectively they make the best use of the natural resources available nationally. The results of this exercise and planning guideline changes are required very quickly if they are to influence policy development.

Once planning barriers have been addressed, the RO should be given time to bed in. The industry would not welcome another review of the wholesale electricity trading arrangements – we need to start from where we are.

Regulation of networks, especially incentives to promote alternative low voltage technologies, are recognised as being in need of review. See our response to Qs20 and 21 of the Networks scoping note.

While changes to the planning system and resolution of network issues are needed urgently, they will take time to identify and implement, and this will create a further lag to project development timescales.

In terms of impacts, the 10% target for 2010 is almost certainly not achievable, considering the historical build rate achieved with bankable power purchase contracts under the NFFO and the nature of the remaining barriers. Cambridge Econometrics recently concluded that a renewables contribution of 8% at most could be achieved by 2010, with a 10% target not being attainable before 2015. Most stakeholders seem¹ to agree with the prognosis, and that proposed annual targets especially in the early years should be reduced.

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¹ For instance, the [Society for Chartered Engineers] in their submissions to the PIU.