

## **PIU Project on Energy Policy - Objectives and Uncertainties in Energy Policy**

### **Response by London Electricity plc**

These are comments by London Electricity plc (LE) on the paper **Objectives and Uncertainties in Energy Policy** prepared for the stakeholder workshop on 20 July and which forms the first in the set of initial scoping notes posted on the PIU website.

#### **Key Points**

- The current energy policy framework is outdated and is insufficiently comprehensive to capture newer policy goals being set with regard to the environment and security of supply.
- Under the revised policy, suppliers should be enabled to evaluate a range of market-based options for carbon abatement and for achieving emission reduction targets on a consistent basis, in order that they can pursue the most cost efficient options and those that best fit their competitive positions. In turn, such a policy is likely to ensure outcomes that enable achievement of environmental goals at least overall cost. We believe that a unified and mandatory framework for emissions trading should be explored that sits across the different areas of energy policy rather than relying upon a multiplicity of mechanisms that do not necessarily complement each other and which can conflict.
- The updated energy policy framework needs to be flexible to changes in supply and demand and technological development. Projections should be used only as indicators.
- We believe that policies should be pursued that rely less on prescription and enable the market to pursue its own business decisions within a stable rules environment.

#### **Responses to questions raised**

1. *How might the framework and practice of energy policy-making change, compared to current approaches and policies, once renewed consideration is given to security of energy supply, and to long-term issues like climate change, and to possible conflicts between objectives?*

The framework needs to be broader than at present, span government and conflicting departmental objectives. It should specifically address and assess differential impacts of environmental (including sustainability) and security

objectives, as well as efficiency criteria, and the trade-offs between them. It also needs to tackle effectively concerns such as the RCEP's about the current "disjoint" between energy and environmental policies.

See also A3 of our preliminary response on 10 September.

2. *Is the description of energy policy objectives [provided by the PIU] accurate and useful?*

The description of energy policy objectives in section 3 of the scoping note provides an outline of the key elements of energy policy only. The government's overall stated energy policy objective is "to ensure secure, diverse and sustainable supplies of energy at competitive prices", but this global objective has been significantly amplified on a number of occasions. Furthermore, the description does not take in recent, more detailed policy statements made by the government (e.g. the summary of policy in the 1998 White Paper<sup>1</sup> or the recently proposed draft DTI guidelines to Ofgem on environmental and social policy<sup>2</sup>). What is needed here is a complete statement that brings together the various objectives and statements underlying different departmental policies and programmes, in order that any overlaps, inconsistencies and gaps can be identified.

3. *In relation to energy security, what are the main risks faced both in the shorter and the longer term?*

The security of supply scoping notes identify the main risks to energy security (paragraphs 3.4 and 3.5). In our preliminary response, we highlighted particular LE concerns with regard to system security and risks of under-investment in the network as an effect of current approaches adopted in the UK towards economic regulation. We have also noted that the current role and prospects for interconnection have been omitted from the PIU's project scope, which means that the risk analysis would not be complete.

More generally, risk identification and analysis needs to be carried out within an holistic framework that considers risk throughout the supply chain from the point of production up to the point of delivery to the end customer.

4. *Are environmental objectives likely to become more important in relation to other objectives?*

We believe that environmental objectives will be *considered to be* more important by the wider community as a better understanding is achieved of the implications of achieving Kyoto targets and RCEP goals once endorsed. It is important, however, that the policy framework provides for assimilation between conflicting policy objectives and that there is a methodology for identifying and quantifying trade-offs. It is also important that the cost

---

<sup>1</sup> *Conclusions of the Review of energy Sources for Power Generation*, DTI, Cmnd 4071 (October 1998).

<sup>2</sup> *Draft Social and Environmental Guidance to the Gas and Electricity Markets Authority*, DTI (May 2001).

implications of different mechanisms to pursue environmental and other non-economic policies are properly taken into account in energy policy formulation.

5. *What (serious) trade-offs can be foreseen between energy policy objectives in the future?*

The cost trade-off has been referred to in the answer to Q4 above. Other serious trade-offs include:

- generally, any security and diversity of supply price “insurance premia” vs. economic competitiveness;
- specifically, network system security vs. lowest price delivery;
- cost of participant obligations (e.g. emissions targets, RO, EEC) vs. lowest price delivery;
- environmental or externality pricing vs. economic competitiveness;
- energy taxes vs. economic competitiveness; and
- security and environmental targets vs. social programmes (e.g. tackling fuel poverty).

*A1. Will at least one technology, currently either unfashionable or unknown, achieve economic breakthrough in the energy field?*

This will almost certainly be the case, especially in view of the timeframe of the review extending out to 2050. However, we believe that the PIU (and government more generally) should not attempt to “pick winners”, and development should as a guiding rule be left to the market (though some direct central support will always be needed for some of the more speculative, as yet unproven technologies). Central forecasts have a habit of being wrong. The evaluation framework to be developed by the PIU needs to be flexible and responsive to technological and economic developments (or “surprises”).

*A2. Will at least one renewable energy technology achieve radical cost reductions?*

Yes, though our comments in response to QA1 above apply equally here. In the case of renewable technologies, current targets are based on projections of costs and likely market penetration that are much too bullish.

*A3. Can carbon sequestration overcome environmental problems and become a reasonably cheap and reliable technology?*

There are a number of barriers that need to be overcome, but carbon sequestration will clearly have an important and growing role to play in balanced, diverse energy policies.

*A4. Will decentralised and locally based energy systems become more important than now, and become dominant?*

Decentralised and locally based energy systems will certainly become more important in terms of their absolute contribution to energy supply. Whether they will become “dominant” will depend on many factors, including how quickly NETA settles down, the rate of market penetration of new fuel storage technology and what changes are made to the regulatory framework to better accommodate embedded technologies.<sup>3</sup> See also Qs 11 and 12 of our networks response (Scoping Response 2).

*A5. Are fossil fuel-based technologies (e.g. the internal combustion engine) likely to react effectively to competitive challenges from other technologies?*

Yes, we think fossil fuel based technologies will react effectively, though we do not expect any further dramatic technological changes in them.

*A6. Is it likely that nuclear power can revive in the UK on the basis of new technology?*

Yes, we think nuclear power can revive, and we note the preparatory steps being taken by BNFL to have its AP600/AP1000 technology licensed here in the UK. Generation IV designs are also showing potential for development over the longer-term.

We believe that the industry needs to keep an open mind on the options for future direction of nuclear development and its timing, and should not “put all its eggs in one (domestic) basket”. As we indicated in our preliminary response, there remain barriers to the realisation of cost-effective nuclear power in this country that need to be tackled. Some can only be addressed with government’s assistance and much better public information.

Separately, we have asked our parent company EdF for comments on the nuclear scoping note in order that we can provide a more considered contribution on this issue.

*A7. Will demand-side measures (new technology, better diffusion) contribute more to carbon savings than supply technology?*

Demand side measures have an important role to play in a balanced, diverse suite of energy policies. The potential is amply demonstrated by the assumptions on the role of the domestic sector underlying recently proposed EU legislation,<sup>4</sup> though the precise contribution of the demand side (including

---

<sup>3</sup> For instance, through the work programme recently initiated jointly by DTI and Ofgem to follow up the work of the embedded generation working group.

<sup>4</sup> Recent research suggests that improving building efficiency by 2010 could reduce greenhouse gas emissions by 12.5%, greater than the Kyoto Protocol target of a reduction of 8%.

its contribution relative to supply technologies) remains hard to quantify. However, in considering the correct mix of policy measures to tap this potential, traditional methods of active demand side management based on price responsiveness have to date a poor track record. We have also identified various barriers to the take-up of energy efficiency solutions in our response to the Energy Efficiency/CHP scoping notes (Scoping Response 5).

*B1. Is it agreed that natural gas will become the dominant fossil fuel in the UK, in Europe or worldwide?*

Whilst projections need to be treated with caution, we see no reason to disagree with the broad messages *for the UK* arising from the data referred to by the PIU at launch of the review. Table 1 shows that natural gas is already dominant in terms of primary energy use by fuel, but that its relative share should increase by 2010 and further still by 2020. World Energy Council figures also project a similar position *globally* by 2050 under most growth scenarios, with natural gas displacing oil.<sup>5</sup>

*B2. Given forecasts that world fossil fuel supplies will peak and decline within 30 years or so, how likely is it that fossil fuel supply shortages (or radically higher fossil fuel prices) will prove a major constraint on energy policy choices?*

The record of the past suggests that current forecasts will be revised and that new sources of fossil fuel will be located at acceptable prices. However, changes in forecasts are likely to impact on the *timing* of depletion and its adverse price impacts, rather than on the *existence* of increasing constraints on energy policy choices that we expect to be real.

*B3. Economically recoverable UK fossil fuel reserves are expected to peak and then decline relatively soon, but since past supplies have generally exceeded expectations, can we be confident of such forecasts?*

Our response to QB2 about forecast uncertainty is equally applicable in response to this question.

*C1. Is it agreed that, in the absence of further policy measures, there will be a persistent but muted underlying trend towards further decarbonisation of the economy?*

In the absence of further policy measures in the UK (including introduction of externality pricing), the answer to this question is probably “no” especially if there is a phase out of nuclear power. This observation will be particularly applicable if, as we expect, based on experience of fuel taxation and consumption, demand for power continues to be largely price inelastic. Globally, further development of the knowledge economy in developed

---

<sup>5</sup> World Energy Council Global Energy Scenarios to 2050.

markets is likely to be offset by increasing industrialisation in developing markets which will aggravate the overall carbonisation of the global economy.

*C2. Is it agreed that electricity will become of much greater importance than today?*

We think the answer to this question in the absolute sense is “yes”, at least in terms of business process dependency. It is far from clear, though, how electricity use will fare relative to competing forms of energy fuel use, and a key determinant will be the pace at which we evolve into the “knowledge economy”.

*C3. Is it agreed that climate change science is unlikely to reverse itself (so that the case for internationally coordinated action on emission reductions would be likely to become stronger)?*

Overall, we think the answer to this question is “probably yes”. If so, this means that pressure for collective action against emissions will increase (rather than decrease) despite unsupportive positions recently taken by countries such as the United States.

*C4. Will demand from consumers for private/individual means of transport continue to grow?*

In the absence of policy measures to produce a different outcome (e.g. fuel taxes and transport congestion pricing), the answer is “undoubtedly yes”.

*C5. Is security of access to energy supplies [not services] likely to be more highly valued?*

Security of access to energy supplies will certainly become more highly valued by certain types of user (especially among industrial and commercial users) if there is a perception of lower security. See our response to Q6 on the security scoping notes (Scoping Response 3).

*C6. Alongside continuing use of other instruments, will policy mechanisms of a market-based type (e.g. taxes, emissions trading) become more important?*

As we have indicated in our preliminary response, market based policy mechanisms *should* become more important.

We believe that suppliers should be enabled to evaluate a range of market-based options for carbon abatement and for achieving emission reduction targets on a consistent basis in order that they can pursue the most cost efficient options and those that best fit their competitive positions. In turn, this is likely to ensure outcomes that enable achievement of environmental goals at least overall cost. We believe that a unified and mandatory framework for emissions trading should be explored rather than reliance upon a multiplicity of mechanisms that do not necessarily complement each other and which can conflict.

We do not consider necessarily that taxes are a market-based mechanism (though they can and do impact on the market framework). We certainly believe that policies should be pursued that rely less on prescription and enable the market to pursue its own business decisions within a stable rules environment.

**London Electricity  
28 September 2001**