

Preliminary Submission by BP

PIU Energy Review

Introduction

1. The areas of the Energy Review where BP has most experience and involvement are as follows:

- Security of Supply, with particular emphasis on gas and 'connectivity' issues;
- Market Liberalisation, with its implications for both prices and security of supply;
- Environmental concerns, with particular emphasis on Solar and renewables.
- Energy Efficiency, with particular emphasis on Combined Heat & Power and advice to industry (we are developing a business, called 'Total Energy Management')

2. This is consistent with a view of UK Energy Policy which embraces four main dimensions i.e.:

- Competition Policy: how best to make energy markets work efficiently;
- Environmental Policy: how to integrate successfully environmental factors into energy markets through internalising externalities (which essentially involves clean air and climate issues)
- Fiscal Policy: how to arrive at an equitable basis of taxation and the distribution of rent from upstream energy production
- Security of Supply: how to ensure that energy supply is available at market prices as and when demanded.

3. BP has already submitted its views to Her Majesty's Government (HMG) and others on many of these issues. For example, BP Exploration is a major participant in PILOT, where there is a regular exchange of views and information on North Sea issues, and how best to realise the potential of the United Kingdom Continental Shelf (UKCS). BP UK Gas and Power has made a detailed submission to the DTI's Review and Updating of the Offshore Infrastructure Code of Practice (11th May 2001). BP Solar was a major participant in the Department of Trade and Industry's (DTI) Photovoltaic Government-Industry Group, and contributed to the Group's Final Report which was published on 26th March, 2001. BP has also made a submission to the European Commission, presenting our initial comments on the Green Paper 'Towards a European Strategy for the Security of Energy Supply'.

4. There are, however, some broad principles underlying all these submissions which we would like to emphasise in this paper. They embody an approach to the issue of Energy Policy from the perspective, based upon our experience and belief, that:

- Liberalisation of energy markets is of benefit to consumers (domestic and commercial) and to economies as a whole because the process encourages greater efficiency and leads to lower prices. It enables an economy to improve both its productivity and competitiveness.
- Market solutions to energy problems are almost always 'lowest cost' solutions. Other approaches — such as policy 'interventions' to address

concerns over supply security - carry a higher cost, often in terms of higher cost gas or higher cost electricity. Limitation of access to low cost energy imports would create a very real cost. For this reason,

- Policy interventions, if they are to be considered, must be justified on a transparent cost-benefit basis; and the same point applies to environmental goals.

With these broad principles in mind, we address some of the specific issues raised by the review.

Security of Supply & Market Liberalisation

5. Security of supply issues are often the most cited but least defined of factors. They are prompted by concerns over

- medium and long run supply availability from geographically proximate sources
- risk of long run resource depletion
- disruption of supplies for various reasons (physical disruption, political forces, accidents etc.)
- market failures

From a UK perspective, these concerns present themselves in terms of:

- Oil; fears over OPEC reliability, possible political disruption in the Middle East, and issues of long term oil resource availability.
- Gas: concerns over the longevity of UK resource base, the long term cost and resource availability of gas through continental Europe, the slow pace at which EU liberalisation is currently moving, and the risk of disruption to supplies from what some would regard as unreliable sources, such as Russia.
- Trade Union Militancy/Civil Disruption: A dependence on fuels/electric power capable of disruption by workforces, although this would normally be of limited duration.
- Integrity of energy grids and distribution systems — and the role of regulation to encourage long-term investment in the UK's gas infrastructure.

7. The greatest of these concerns currently concentrates on gas supplies, and a question for this Review is whether such concern is well-founded. BP would argue that it is exaggerated, and that those concerns which are legitimate can be remedied by appropriate government action. However, it is not difficult to see how this concern has arisen.

8. UK gas production is reasonably expected to peak and decline during the coming decade. At the same time, the European Union will very likely become more dependent upon longer distance gas supplies. There is a concern that new suppliers of EU Gas may prove unreliable, although there has been no evidence to date of this happening despite political disruptions in places such as Russia and Algeria.

9. This is the pessimistic view point. The same reality can be expressed differently. Namely, that the EU is surrounded by an abundance of potential supplies of gas, which it is very much in the interests of suppliers to make available to

European consumers. These suppliers are in competition with each other, which provides individual EU gas purchasers and aggregators with the opportunity to diversify suppliers and thus reduce risk. Added to this is the increasing diversity of LNG sources which are now coming from Trinidad and Nigeria to complement North African supplies. Both these projects have significant expansion potential, while new Atlantic basin projects in Egypt, Angola and Venezuela are also looking for a firm home in Europe. Even more encouraging is the fact that more distant LNG exporters in the Middle East are looking to Europe for both short-term and long-term contracts.

10. The following points support the more optimistic perspective of this issue.

Globalisation of International Gas Markets

Gas trade has been growing by about 9% p.a. for the last 20 years in the shape of international pipelines (such as from Canada to the US, from Russia and Norway to Germany and France, from Algeria to Italy and Spain). LNG — liquefied natural gas — has flowed from Alaska, Abu Dhabi, Indonesia and Australia to Japan and from Algeria to France and other EU destinations).

The number of international links has been growing rapidly in recent years. There are new pipelines from Argentina to Chile, from Bolivia to Brazil, from the UK to Belgium, from Malaysia to Singapore and from Turkmenistan to Iran. New LNG projects have also come on stream in Oman and Qatar for Asian markets, from Nigeria for European markets and from Trinidad for the US and Spain. 22% of gas consumed globally now crosses an international border. This is up from 15% in 1990. If intra-FSU gas trade is included this share rises to 27% in 2000. As much as 70 per cent of global gas reserves lie within economic transportation distance of the EU.

In addition, LNG sales into Europe are increasing as Middle East and Asian sellers find it harder to sell surplus capacity to existing Asian LNG markets, and as returns in Europe improve. During 2000, high US gas prices drew in spot cargoes of LNG from as far away as Algeria, Australia, Nigeria, Oman and Qatar. Malaysian LNG also reached Iberian markets.

This trend is set to continue and grow stronger as plans continue to be unveiled for expansions to most LNG projects and new schemes are under discussion or advanced planning in Irian Jaya, Sakhalin, Iran, Yemen, Angola, Venezuela and even Bolivia.

Connectivity

A greater concern than physical supplies should be the existence of adequate infrastructure (pipelines, terminals etc) and commercial arrangements to facilitate the interoperability of networks. In particular, a priority of UK Energy Policy should be to ensure that regulatory frameworks evolve to provide the appropriate investment incentives to increase the number and capacity of supply routes into the UK, and to ensure that sufficient capacity exists at appropriate entry points — this latter aspect will require close dialogue between industry, the DTI, Transco and Ofgem. BP stresses the importance for the UK in being able to secure and handle gas imports (including Natural Gas Liquids) from Norway. This means that more physical offshore connections are required between the NOCS grid and existing UKCS

pipelines. The UK also must be an integral part of the European grid, and should promote full connectivity across the EU to allow the free flow of gas and diversification of UK supplies. This raises the role of the Interconnector, which itself is part of a separate study to which BP is contributing and which will form a part of BP's final submission.

Market Prices

It is not enough for the UK and the EU to be assured of physical supplies of gas — consumers and governments understandably wish to be confident that these will be available at market prices, as opposed to politically inspired levels through artificial restrictions and manipulation. Over the last twenty years, UK gas consumers have benefited from a real decline in oil prices to which the price of gas is linked. It is to be expected, however, that EU linkage to oil prices will diminish with increased liberalisation and the growth of gas-to-gas competition. The issue of prices is closely linked to that of Market Liberalisation.

Market Liberalisation

Downstream liberalisation provides the best guarantee against the imposition of excessive prices by the EU's current big players. Introducing competition and creating a dynamic gas market will also increase security of supply. However, steps must be taken to ensure that the market functions effectively throughout the process of liberalisation. A protracted period of turmoil due to ineffective or incomplete regulatory change could undermine the functioning of the market to the extent that security of supply becomes jeopardised. The appropriate policy response to this outcome is to ensure that the transition to a liberalised market is minimised through effective and comprehensive regulatory change which opens downstream gas markets to real competition. We do not believe there need be a conflict between market liberalisation and long-term or take-or-pay contracts; BP believes there is a role for both. It is equally necessary that the continuing upstream investments in developing resources and delivery assets are adequately recompensed without undue additional commercial risk posed by EU downstream liberalisation. The UK experience has shown how a market can be liberalised while maintaining upstream investment — BP's recently announced fifteen year deal with Statoil is an object lesson in this regard. What is crucial is that the liberalisation agenda should comprise a comprehensive programme of pragmatic regulatory initiatives, such as downstream Release Gas, comparable third-party access to the transmission systems and the appointment of empowered independent regulators. Progress to date has been partial in this area, and does not inspire confidence that a long and tortuous path to market liberalisation in the EU will be avoided. However, in other respects, there are more promising signs e.g. Spain has recently introduced a release gas programme for major volumes of Algerian gas. The need to address these initiatives will be a major component of BP's main submission.

11. These are the main issues which arise under the Security of Supply heading. There are, of course, others. The fiscal and regulatory regime of the UKCS, for example, will continue to have a major impact on the extent to which the UKCS

attracts further investment and is therefore fully developed. The vision of PILOT is to achieve 3 million barrels of oil equivalent per day (boepd) by 2010. So far, UKCS production has risen every year for the last ten years, which nobody would have dared to predict ten years ago. But this only happened because the UKCS remained attractive to industry in comparison with opportunities elsewhere — and it is a constant challenge to retain this advantage as the UKCS matures. It is impossible to separate the issues of UKCS Tax and regulation from how long UKCS production can be continued at significant levels. Technology is constantly stretching the profile — but this technology won't be encouraged without a supportive and stable tax regime.

12. However, there is no denying that the UKCS has now entered its mature phases — which is why UK Energy Policy cannot be seen in isolation, separate from either the EU or the global energy scene. In the final analysis, rising gas dependence — and ultimately dependence on imported gas — should not be a serious problem or concern. Gas resources are widely available; international gas markets are globalising. Any attempt to avoid this reality will only result in higher costs and reduced economic competitiveness. But as will be argued in our final submission, there are policy measures to be taken to reduce the risks of transition and to ensure that the UK is well placed to take advantage of the new realities offered by an international gas market.

The Environment

13. Clearly, a central tenet of UK Energy Policy must be how to meet this country's international and voluntary obligations to reduce its CO₂ emissions. As has often been remarked, it is only because gas has supplanted coal in so much electricity generation — although not yet to the extent that was once predicted — that the UK has to date been so well placed in this regard. Gas will continue to play a decisive environmental role. But in time, gas too could be regarded as environmentally inferior to other alternatives.

14. This raises the issue of nuclear power and the future for renewables. In terms of the current Energy Review, the question facing the Government is the same for both — should either or both receive special assistance? Should either be favoured over the other?

15. The first requirement is to encourage new technology — both in terms of energy efficiency and renewables - to make its own unique contribution, and to stress the importance of market mechanisms in this process. Technology is already making possible cleaner fuels in terms of local emissions; undoubtedly, it will do the same over time for global emissions. The question is how much time? In advising HMG's PV Government/Industry Group, BP has emphasised the importance of measures to stimulate the market — as opposed to the payment of direct subsidies to the *suppliers* of this market. For this reason, we are consistent in saying that competing fuels —such as nuclear or coal - should receive no special favours in relation to its competitors.

16. The UK Government, however, does have the option of encouraging the demand for renewable energy to increase at a faster pace than otherwise would be possible. This has been the rationale behind the various suggestions which have been made to stimulate the UK Solar Market - including a capital grant programme for

commercial and domestic users, tax incentives, simplified connection agreements and, most importantly, compulsory net metering to enable solar system owners to sell-back into the grid at attractive prices the energy which their own solar panels have generated. As mentioned above (para. 3) BP has already made detailed recommendations to HMG on this and related matters. Other measures are fully discussed in the PV Government-Industry Group Report — such as changes to building regulations, government procurement policies, and treatment for tax purposes. Obviously, it is also necessary to avoid unintentional discouragements — as currently faced, for example, by CHP and Wind Power developments as a result of the NETA reforms.

17. One should not exaggerate, however, the potential which renewables such as solar offer in the short-term. As the Report recognises, the global PV market has accelerated steadily over the past ten years. It suggests that by 2020, PV could come within the range of prices of the technologies in the Renewables Obligation. BP has already announced plans to increase its Solar business turnover to \$1 billion by 2007, which represents significant growth. Over the next two years, we will double our solar business's capacity.

18. But none of this can supplant the dominance of fossil fuels — anymore than nuclear could if it too were expanded — over the short to medium term. That is why improving the environmental consequences of fossil fuels should be the first priority. That is why gas remains an attractive fuel environmentally (as well as commercially) for the purposes of power generation. In addition, policy makers should be reminded of the importance of fiscal incentives to accelerate the transition from fossil to renewables — both in terms of encouraging renewable technology, and in encouraging consumers to shift their pattern of consumption.

19. There is also a crucial role for energy efficiency to play. BP are advocates of the potential offered by Combined Heat and Power (CHP) and our later submission will expand on this aspect. We also see benefits - both in policy terms, but also in terms of our own commercial business — in increasing the quality and quantity of information to companies and businesses relating to their own energy consumption. BP is developing a business (Total Energy Management) whose purpose is to help our customers to use our products more efficiently and economically.

Conclusions

20. BP will seek to develop many of the above points in greater analytical detail in its final submission. But the points of principle can be identified already.

21. The UK still has significant oil and gas reserves, and the fiscal and regulatory regime is currently maintaining a positive investment climate aimed at bringing those reserves to market. A primary requirement of UK Energy Policy should be that the fiscal and regulatory regime continues to keep the UKCS competitive on a international scale. Provided this is so, concerns that UK gas reserves will soon be exhausted are misplaced.

22. On the other hand, the UK cannot hope to escape the need for imported energy. Already, under certain conditions, there is a need to import gas in wintertime during periods of peak demand. Norway is an important and competitive source of gas for the UK market with significant future exploration potential. BP has already taken steps to ensure additional long term supplies are available to the UK market from October this year. That is why no UK Energy Policy can be conducted — or indeed, 'reviewed' — in a vacuum. Developments elsewhere in the EU and in the world are highly relevant.

23. The most urgent policy necessity is to facilitate liberalisation of the EU gas market without endangering EU Security of Supply. The two objectives are by no means incompatible and can be mutually beneficial if the liberalisation process is effective; but they do require changes of current policy and practice which will be fully explained in BP's main submission.

24. In terms of the environment, it is a common objective between HMG and BP that renewable energies should be developed. BP's primary interest is in Solar, and we have emphasised the potential which could be realised by measures to stimulate the UK market.