

Towards a European Strategy for the Security of Energy Supply Contribution of ExxonMobil International Limited

Preface

This contribution is a supplement to the Exxon Mobil Corporation submission sent to the Commission on the 28th September 2001. The responsibilities of ExxonMobil International Limited include the oversight of the gas marketing activities of ExxonMobil affiliates in Europe. This contribution is specific to European gas issues and builds on the more general Exxon Mobil Corporation submission in this area.

Summary

The European gas industry has a very successful record of providing security of supply over the past quarter century. This has been achieved during a period of very high growth in gas consumption. For industry to continue this success, the policy makers of the EU have two important roles to play.

Firstly, in developing relations with important producing nations, to encourage them to adopt outward looking, market oriented economies with stable business, political and legal systems in place. This will facilitate the large foreign direct investment that will be required to develop the gas resources of these countries.

Secondly, in developing a governmental, regulatory, and fiscal environment which is conducive to investment and maximises development of indigenous resources:

- A level playing field should be provided for all energy sources. Support for one energy source at the expense of another, or via subsidies, would damage EU competitiveness.
- Additional upstream taxation should be avoided - this would threaten the development of potential reserves in unexplored prospects, and also the development of smaller proven fields. In fact, reductions in taxation should be considered to fully exploit Europe's indigenous gas reserves.
- Government intervention, particularly in the investment decision process, should be minimised. The possibility of government intervention increases the risks associated with voluntary investment.
- The gas industry should be free to build, own and operate pipelines and other infrastructure. Obstacles to their development are likely to deter investment.
- Regulation should be minimised. Excessive regulation deters investment by increasing uncertainty and risk, and can result in unexpected and undesired effects. "Liberalisation" is more likely to enhance supply security where it *liberates* commercial factors and keeps regulation to a minimum.

Introduction

ExxonMobil International Limited is a subsidiary of ExxonMobil Corporation responsible for marketing natural gas and natural gas liquids in Europe. In addition to direct marketing activities, ExxonMobil affiliates have interests in important European gas companies, including Gasunie, Ruhrgas, and BEB.

ExxonMobil is the world's largest non-government equity producer of natural gas, with proven gas reserves of 56 trillion cubic feet (TCF) and a total resource base of 180 TCF. Moreover, ExxonMobil is an active participant in virtually every major global gas market.

Being part of a global gas marketing company, ExxonMobil International Limited is well suited to contribute to the debate on security of supply, based on its direct knowledge as an active participant in each of the different gas regions of the world, and the developments within them.

Submission

The approach taken in this submission is to structure it around the seven questions set out in the Green Paper which are relevant to gas.

1. Can the European Union accept an increase in its dependence on external energy sources without compromising its security of supply and European competitiveness? For which sources of energy would it be appropriate, if this were the case, to foresee a framework policy for imports? In this context, is it appropriate to favour an economic approach: energy cost; or geopolitical approach: risk of disruption?

Energy self-sufficiency is neither an attainable nor a necessary objective for an appropriate energy security policy. Energy trading, i.e. gas producing countries selling natural gas to non-producing or non-self sufficient countries, is a necessary part of the EU's energy future.

Trading offers the benefits of specialisation, allowing the EU to focus on those activities where it has a comparative advantage. Not to participate in the trade process is to forgo the economic benefits of comparative advantage, with inevitable adverse consequences for EU competitiveness and economic welfare.

The EU is fortunate in that 70% of global gas reserves lie within economic transportation distance. Technological advances in pipeline technology continue to reduce the costs of building transmission systems. The cost of moving gas by ship as Liquefied Natural Gas (LNG) has also been falling as the industry has invested in innovative technology. Both of these advances in cost reductions have made it possible to allow ever more remote gas to be economically exploited. Advances in LNG technology, particularly, are making it possible to be more flexible in terms of supply sources and delivery points.

These advances have enabled the 'traditional' import suppliers of the EU's gas (Russia, Algeria, Norway) to be joined by suppliers such as Qatar. Other potential future suppliers include Azerbaijan and Kazakhstan. This diversity of supply enhances security of supply.

Additionally, trade is a two-way process. Gas exporting nations have a vested interest in the economic well being of their customers. With few alternative sources of economic growth, many of the producing nations can be expected to actively compete to secure gas supply contracts with Europe and strive to develop a reputation as reliable suppliers. For example, gas exports are likely to remain critically important to Russia's balance of payments into the long term.

Whilst there is demand pull by Europe, there is also supply push from exporters. It is in these exporters interest to ensure a reliable competitive gas supply. Diversity and multiplicity of supply options will ensure suppliers will compete for EU market share.

2. Does not Europe's increasingly integrated internal market, where decisions taken in one country have an impact on the others, call for a consistent and co-ordinated policy at Community level? What should such a policy consist of and where should competition rules fit in?

ExxonMobil is a proponent of free and competitive markets.

In order for the benefits of competition to be obtained however, great care has to be taken on the part of policy makers to ensure an effective, well-functioning market. This can only be achieved in an environment of minimal regulation. Our view is that regulatory intervention in a market has adverse, unexpected and undesired effects. California's power crisis is a topical example. This crisis was not the result of deregulation and opening to market forces. Instead it was the result of poorly designed re-regulation.

Liberalisation is more likely to enhance supply security where it liberates commercial forces and keeps regulation to a minimum. Regulatory intervention increases uncertainty and risk, and can potentially reduce the attractiveness of investment in the market. This is an important issue, as ExxonMobil estimates that a €300 - 350 billion investment will be required to provide the gas supply required to meet European consumer demand through to 2020.

It is also important to realise that whilst a fully open internal market for energy will improve security of supply, it can not guarantee it. No matter how open the market, and how developed the interconnections between the gas grids of the Member States, security of supply is ultimately dependent upon the balance between supply and demand. Hence, security of supply is compromised if there is a lack of supply-side investment, or if there is demand side distortion through price capping. Again, both of these were contributory factors to the California crisis.

It is critical, therefore, for the EU to establish a stable environment for production and infrastructure investment that is competitive with other global opportunities. The key elements of any policy should include:

- Stability of fiscal and legal frameworks
- Freedom to build, own and operate energy infrastructure
- Minimal regulation
- No direct government intervention in investment decisions

Investment in upstream production facilities is particularly risky, and Europe's policy makers should take care not to deter investment at this point of the supply chain. In addition to market supply/demand risks, large geological and technical risks exist which are specific to oil and gas exploration and production.

The policy should recognise the integrated nature of upstream developments, including production-related pipelines, storage and processing facilities. Existing regulation is adequate in this area. It is in relation to these activities, where required investment and risks are at their highest, that intervention is likely to reduce the attractiveness of investment. Furthermore, considerable complications arise from attempts to regulate mixed oil and gas activities, particularly where gas is subordinate to liquids production. Also, prior to processing, the quality of gas in the pipelines often varies. The design of the processing facilities has often been made on the basis of depleting a specific resource with ownership of facilities being held by multiple parties. In such circumstances independent marketing is not a viable option.

LNG receiving terminals are another important area of this policy. As discussed in the response to Question 1, LNG will become an increasingly important source of European gas supplies. In investment terms, LNG receiving facilities should be seen as a tailor made, integral part of an upstream project. The terminals are built in conjunction with multi-billion dollar investments in field development, liquefaction facilities and ship construction. Development of gas fields for LNG supply depends on the assured availability of the associated regasification terminals adjacent to the sales market. The current proposals within the draft amendments to the Gas Directive, which would require receiving terminals to be subject to regulated third party access, will deter investment in this very area of the gas supply chain that is critical to LNG project development and to the EU's future security of gas supply.

3. Are tax and state aid policies in the energy sector an obstacle to competitiveness in the European Union or not? Given the failure of attempts to harmonise indirect taxation, should not the whole issue of energy taxation be re-examined taking account of energy and environmental objectives?

The Green Paper starts from the premise that 'the European Union has very limited scope to influence energy supply conditions' particularly in terms of indigenous production. ExxonMobil believes this assumption deserves reconsideration.

It is important to recognise the difference between 'proved reserves' and the total resource base. Proven reserves do not take into account the large volumes of potential reserves in unexplored prospects. In magnitude these are generally estimated to be equivalent to the existing stock of proven reserves.

For example in the early 1970's global proved oil reserves were estimated to be 700 billion barrels. Since then, almost 600 billion barrels have been produced. Yet today's estimate of proved oil reserves is close to 1100 billion barrels. Proven reserves do not define the extent of the remaining resource, merely the portion we know about.

For the EU to benefit from further indigenous developments, Governments have to set in place fiscal and regulatory regimes that are competitive with alternative global gas industry investment opportunities. Additional taxation and excessive regulation should, therefore, be avoided. These would damage the competitiveness of the EU, reduce its attraction as an investment location, and threaten the full exploitation of indigenous reserves (particularly in the North Sea).

Tax reductions should be considered to increase the economic viability of new field developments. European taxes on energy are considerably higher than in the US and Japan, with negative effects on industrial competitiveness for the EU. In Norway, the Netherlands and the UK, the marginal rate ranges from 70% to over 90%. No other energy source or industry in the EU is subjected to comparable fiscal burdens. Fiscal take is a key element influencing international gas companies investment decisions in particular countries or producing regions. Inappropriately high levels of taxation may result in recoverable resources not being developed for fiscal rather than technical considerations.

Since the 1960's, the upstream industry in the UK and Norway has contributed circa €360 billion in corporation and special taxes. In the Netherlands, the upstream industry has paid €145 billion since 1980.

4. In the framework of an ongoing dialogue with producer countries, what should supply and investment promotion agreements contain? Given the importance of a partnership with Russia in particular, how can stable quantities, prices and investments be guaranteed?

The EU has an important role to play in encouraging producer countries such as Russia to adopt outward looking, market oriented economies with stable business, political and legal systems in place. This will facilitate the introduction of the large quantities of foreign direct investment which will be required to develop the gas resources of these countries.

5. Should more reserves be stockpiled -as already done for oil - and should other energy sources be included, such as gas or coal? Should the Community take on a greater role in stock management and, if so, what should the objectives and modalities be? Does the risk of physical disruption to energy supplies justify more onerous measures for access to resources?

A 1999 Communication on Security of Gas Supply [COM(2000) 571], based on a study by Wood Mackenzie, determined that using existing load balancing tools, seven Member States (covering some 90% of EU gas consumption) could withstand their most serious foreseeable supply disruption for more than 12 months. A further three Member States could use bi-lateral co-operation to enhance security and the remaining States would be able to attain similar levels of supply security once gaps in physical interconnections were remedied.

EU stocks should not be used to intervene in markets to influence prices. This would be commercially perilous, and almost certainly unworkable. Volumes needed to influence market prices are high and costly to hold. Drawing an analogy with the oil supply industry, OPEC's intervention over the last two years to first raise the crude oil price from historically low levels in early 1999, and then to halt the escalation of prices in late 2000 involved volumes which dwarfed those held in the EU and other IEA Government stocks.

EU intervention, or even the possibility of it, could actually exacerbate market instability. Again drawing an analogy with the oil industry, if it appeared that any EU intervention was likely to have an impact unacceptable to OPEC, they (OPEC) could easily counter with their own intervention to neutralise the EU's action.

The use of strategic stocks for market intervention would also be commercially perilous, running the risk of speculators betting against intervention targets should they be made public.

If security stocks are unwisely used in an attempt to influence market prices, they would no longer be available for use in case of a supply disruption and later replenishment of these stocks would extend the period of high prices.

Long-term stock-piling i.e. reserving part of existing gas production capability or delaying the development of potential production capacity for use during future disruptions of supply or price shocks is also unlikely to have any material effect on security of supply. In such circumstances, infrastructure is likely to have been removed and/or dismantled before the full geological potential is developed.

Security of supply would be better realised by continuing investment in international supply sources, which are open to the free movement of trade, technology and investment, and make use of existing EU storage capabilities through commercial solutions.

6. How can we ensure the development and better operation of energy transport networks in the European Union and neighbouring countries that enable the internal market to function properly and guarantee security of supply?

Governments can best facilitate gas market development by putting in place a stable and predictable fiscal, legal and regulatory environment. There should be a free market to build, own and operate pipelines, and there should be the opportunity to enter into long-term supply and transportation contracts. Government and regulatory intervention should be minimised.

We believe that if the threat of government intervention exists, then the risks associated with voluntary investment will be increased, potentially making investment unattractive.

An investment of €750B has been made in the European gas industry over the past forty years to increase natural gas's share of primary energy from 5% to 23%. It is questionable whether this growth would have been achieved under a tightly controlled, regulated environment.

We also believe that the option should be available to buyers and sellers to enter into long-term take-or-pay contracts if they wish to do so. Current long-term contracts are wrongly perceived to have an adverse effect on competition. However, long-term contracts continue to have an essential role to play in ensuring an appropriate level of investment in the gas sector, and parties should have the option to enter them if this best suits the needs of the buyers and sellers.

By contrast, in California, the specific banning of the use of long-term contracts was a contributing factor to their shortages, as it both discouraged investment and helped to mute the market signals which would have given advance warning of a tightening in supply.

In committing large capital investment to gas projects, investors take account of the total balance of risks, including price, geology and technology uncertainties, associated liquids, market supply/demand balances and market liquidity. Because of the lack of liquidity, European markets have significant off-take risk. The European markets have historically been able and willing to mitigate these off-take uncertainties for large gas investments through long-term take or pay contracts, and this has been an important part of risk sharing.

The pricing of these long-term contracts is often linked to oil prices. There is currently no liquid, independently published gas index for Continental Europe. Oil has been, and continues to be, the primary alternative to gas, and it is reasonable for gas to be priced in relation to its alternative.

There is already a mix of long and short-term contracts in place with a variety of indexing methods, reflecting industry's willingness to meet customer needs. Buyers and sellers

must continue to be free to agree on the contract terms and pricing bases that they believe best suits their needs.

7. The development of some renewable energy sources calls for major efforts in terms of Research and Technological Development, investment aid and operational aid. Should co-financing of this aid include a contribution from sectors which received substantial initial development aid and which are now highly profitable (gas, oil, nuclear)?

The magnitude of the task confronting the renewables industry should not be underestimated. For example, the UK has a goal of supplying 10% of its power from renewable sources by 2010. Assuming 100% load factor and an average turbine size of 1.3MW, this would suggest that one new wind turbine needs to come on-line every day between now and 31 December 2010 if the target were to be achieved through wind power alone.

Though the costs of some technologies (particularly wind power) have fallen over recent years, it should also be noted that most renewable sources of electricity are significantly higher cost than gas-fired combined cycle gas turbines -- with implications for EU competitiveness. Though the UK example quoted above assumes 100% availability, operating experience suggests that at best wind power achieves a load factor of around 30%. To give a similar degree of reliable power availability to more traditional technologies would therefore require the provision of back-up facilities. Typically, the cost of such facilities is not included in the economics of renewable energy projects.

Though ExxonMobil does not currently see a business case for investing in renewables such as wind and solar power, other companies do. This suggests that these technologies are attractive in today's market and it is not therefore obvious that the most promising renewable technologies need the kick-start of subsidies and protected market shares. It is also not clear what the 'most promising' technologies might be. We would anticipate significant technological changes over the next 10-20 years would result in rapid changes in the market's assessment of which technologies are promising.