HOUSE OF LORDS

European Union Committee

41st Report of Session 2005–06

The Commission's Green Paper, "A European Strategy for Sustainable, Competitive and Secure Energy"

Report with Evidence

Ordered to be printed 18 July 2006 and published 25 July 2006

Published by the Authority of the House of Lords

London : The Stationery Office Limited
£price

HL Paper 224

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FOREWORD—What this Report is about

The European Commission has set out its vision for a European Energy Policy in a new Green Paper, "A European Strategy for Sustainable, Competitive and Secure Energy."

Recent supply crises and rapidly escalating fuel prices have focussed the minds of leaders across the European Union, as well as those of businesses and individual energy consumers. This Green Paper is an important legacy of the end of the United Kingdom's Presidency of the EU—a major conclusion of the Hampton Court Summit was the need to develop a strong common policy.

Energy policy transcends a range of different policy areas, including competition, transport, environment and energy itself. In this Report, we consider whether the Commission has correctly identified the priorities for energy policy in the EU. The three key objectives identified are Sustainability, Competitiveness and Security of Supply. In order to achieve these objectives, the Green Paper outlines six priority areas for action containing over 20 concrete suggestions for possible new action. We consider whether these are the most important priorities for energy policy; whether they can be achieved fully, equally and simultaneously; or whether a hierarchy of objectives is necessary.

Our second key consideration is to evaluate what is best done at EU and at Member State levels. We believe that the case for moving towards a single European energy policy needs further justification, set against the achievement of the main policy objectives. The Green Paper provides little by way of insight into the Commission's thinking in this area. We therefore recommend that the Commission seek to develop a business case which clearly articulates why a change in approach, if any, is required on an item by item basis.

The design and implementation of new policy need to recognise that markets (rather than the State) are best placed to deliver objectives in an efficient and effective manner. The degree of EC/government intervention needs to be carefully considered. The Green Paper identifies a number of areas for specific intervention without necessarily providing supporting justifications.

Policy needs to be sensitive to national and regional differences and to avoid setting specific targets. Delivering a stable, long term framework to encourage innovation and capital investment is critical. Political intervention by the Commission or Member States should be cautious, infrequent and long-lasting.

The Commission's Green Paper, "A European Strategy for Sustainable, Competitive and Secure Energy"

CHAPTER 1: BACKGROUND

Global and European energy trends[1]

1. In the three decades from the early 1970s up until 2003, world consumption of total primary energy has increased by 75 per cent from around 6,000 million tonnes of oil equivalent ("Mtoe") per annum to over 10,000 Mtoe per annum. The rate of growth in energy consumption in specific regions, such as China and Asia, has been particularly high. There has been a global trend shifting away from oil (decreasing from 45 per cent to 34 per cent of total energy) to natural gas (16 per cent to over 21 per cent) and nuclear (one per cent to seven per cent) during this time. The global use of coal has remained relatively constant, in percentage terms, at around 25 per cent. On a global scale, renewables such as hydro-electric power, geothermal energy, solar and wind, etc. are still making only a minimal contribution to energy consumption, at less than three per cent of total energy supply.

2. Over the same period, the consumption of total primary energy by Europe has increased from around 1,500 Mtoe (approximately 25 per cent of global consumption) to around 2,000 Mtoe (approximately 18 per cent of global consumption).

3. In the UK, total energy consumption has fallen in real terms since 1970, due in part to the reduction in the manufacturing base. The discovery of economic North Sea oil and gas in the late 1970s allowed the UK to become a net exporter of energy for most of the 1980s and 1990s. During this period, the UK's ability to utilise indigenous fossil fuels (coal and North Sea oil and gas), in combination with nuclear power for electricity generation in particular, has resulted in an ability to generate sufficient electricity to meet rising demand, and an ability to balance the priorities of energy security, emissions reduction and the maintenance of efficient markets. Recently however, a number of factors have arisen which make it difficult for the UK to maintain this *status quo*, including:

- dwindling domestic gas reserves and the UK's limited gas storage capacity, resulting in increased reliance on imported gas;
- planned retirements of our existing nuclear capacity;
- downgrading expectations for the potential contribution of renewables to our generation mix;
- elevated environmental concerns; and

[1] Figures from the International Energy Agency ("IEA").

- volatility of the global energy markets.

Many of these factors are not unique to the UK and are relevant to the energy policy debate across Europe.

Climate change

4. The increasing body of scientific evidence for measurable human influence on changes to the natural climate has become progressively difficult to dismiss. With global levels of atmospheric carbon dioxide and other greenhouse gases rising, a number of national and international government bodies have taken action to regulate or otherwise provide incentives for greenhouse gas emission reduction by industry. In Europe the linked energy and climate change policy agenda has led to the development of progressive emissions reduction targets, which are seen as challenging, and the introduction of the European Union Emissions Trading Scheme ("EU-ETS").

Energy markets

5. While the UK has moved over recent years to a fully-liberalised energy market, consistent with the relevant EU Directives, the extent of liberalisation elsewhere in continental Europe is significantly lower, with national champions in a number of countries holding supply, generation, transmission and distribution assets within their corporate portfolio. One of the key economic principles behind the drive to liberalise is that liquid markets are best placed to set efficiently the price of commodities, such as gas, by taking account of supply and demand at any point in time. In practise, a wide-range of factors influence the prices set by markets, including physical supply constraints, geo-political issues and commercial relationships between counterparties.

The Interconnector

6. Until the commissioning of the Interconnector between Bacton (UK) and Zeebrugge (Belgium) in 1998, the UK was effectively a "gas island". Gas demand was satisfied mainly from domestic production with some imports from Norway. The new pipeline created a physical linkage between the UK gas market and the European gas market, which has facilitated arbitrage between the UK and continental Europe.

7. The Interconnector can operate in both directions, meaning it can either export natural gas from the UK to continental Europe ("Forward mode"), or it can import natural gas into the UK ("Reverse mode"). Since the UK and Belgium gas transmission systems operate at similar pressures, compressors are required to pump the gas from one system to the other. The capacity from Bacton to Zeebrugge is 20 bcm (billion cubic metres)/year while the capacity from Zeebrugge to Bacton was increased from 8.5 bcm/year to 16.5 bcm/year in 2005 (the differential flows in Forward and Reverse modes are a factor of the compression equipment and the capacity of the Interconnector's network of gas pipes). Two further expansions of the reverse capacity are planned; capacity should reach 23.5bcm/year by the end of 2006 and 25.5bcm/year by the end of 2007. Historically, the Interconnector has operated mainly in Forward mode, however recently this trend has been reversed. Capacity within the Interconnector is been sold under long term

contract to around 15 shippers, although some secondary trading of capacity takes place.

8. A new project, The Balgzand-Bacton pipeline ("BBL"), is due to start deliveries from Balgzand in the Netherlands to Bacton at the end of 2006, reaching its full capacity of 16 Bcm/year after four months. Once the BBL is completed, there will be physical links between Europe's most liquid gas markets: the National Balancing Point ("NBP"), Title Transfer Facility ("TTF") and the Zeebrugge Hub.

What happened last winter?

9. On 13th March 2006, UK spot gas prices tripled to record levels after a Gas Balancing Alert[2] ("GBA") was issued by National Grid. The GBA warned that as supplies were so tight, industrial users might have to have their gas supplies interrupted. Within-day gas (for delivery on that day) at the NBP peaked at £2.55 per therm ($44.50 per million British thermal units or Btu), with day-ahead gas (for delivery on the following day) touching £2/therm.

10. The GBA was issued because a late-winter cold snap boosted gas demand at precisely the time when supply was severely constrained. Rough, the UK's largest gas storage facility was closed following a fire in February, limiting the system's ability to respond to such a shortage.

11. The cold snap was experienced all over Northern Europe and continental suppliers were required to satisfy increased domestic demand at the end of the storage withdrawal season and apparently did not take advantage of the arbitrage opportunities which arose. The Interconnector did not operate at full Reverse capacity, despite the differential between the NBP price and continental prices.

Liquefied Natural Gas (LNG)

12. In recent years, as a result of higher natural gas prices and a growing demand for cleaner fuels, interest in new liquefied natural gas ("LNG") has grown. Since the mid 1990s, the costs of every stage of the LNG chain—gas production, liquefaction, shipping, and re-gasification—have dropped substantially, enabling LNG to become a global fuel. LNG is also a method of creating a physical market for gas reserves in counties far from the predominant gas markets themselves.

13. There are two distinct regional markets for LNG: the Atlantic Basin and the Pacific Basin. Thus, the construction of re-gasification facilities in the UK means that the country will gain access to a wide range of suppliers including Algeria, Nigeria, Egypt & Qatar, but also means that the UK will have to compete with the US and other European nations for these supplies.

14. A number of re-gasification projects are under development in the UK. An LNG import terminal at the Isle of Grain which is owned by National Grid began operations in 2005 with capacity of 4.4bcm/yr. The second phase of this development, which should be completed by 2008/2009, will have capacity of 9bcm/yr. The South Hook LNG terminal at Milford Haven is due to come online in 2007, with an initial capacity of 10.5bcm/yr. Also

2 The purpose of Gas Balancing Alerts (GBA) is to indicate a potential requirement for a demand response (i.e. a reduction in energy consumption), reflecting forecast supply and demand.

situated at Milford Haven is the Dragon LNG terminal which should start receiving cargos by the end of 2007 with an initial capacity of 6bcm/yr.

Russia as an energy supplier

15. In 2004, Russia exported around 110 Billion cubic metres of gas to the EU (representing 22 per cent of EU requirements) making it Europe's most important gas supplier. As indigenous European gas reserves decline, supplies from Russia will inevitably grow in importance. Russian gas exports to Europe (except deliveries to Finland and the portion of Turkish exports delivered via the Blue Stream pipeline) transit through three countries: Ukraine, Belarus and Moldova. Ukraine holds the pivotal geographical position with more than 80 per cent of Russian gas exports to Europe delivered via that country in 2004. Until January 2006, there had been no interruptions to Russian supply for 40 years. However between 1st January and 4th 2006, a price dispute between the Ukraine and Russia resulted in decreased supplies to Europe which cast doubts over Russia's reputation as a reliable supplier.

16. Construction has begun on the North European Gas Pipeline ("NEGP") which is a 1,200km pipeline along the Baltic seabed from Russia to Germany. With no transit countries along its route, the NEGP would give Russia a direct link with its main west European markets and is scheduled for completion in 2010.

Energy market regulation

17. The Office of the Gas and Electricity Markets ("Ofgem") is the economic regulator for Britain's gas and electricity industries. Protecting consumers is Ofgem's first priority achieved by:

- Promoting effective competition, wherever appropriate, and
- Regulating effectively the monopoly companies which run the gas pipes and the electricity wires.

18. Ofgem is by no means unique in Europe in its regulation of the markets, although it could be argued that it is a fore-runner amongst regulators, given the advanced state of the UK's market liberalisation.

Alternative fuels

19. Recent years in Europe have seen an increase in the contributions made by "alternative" or "renewable" sources of energy (albeit the overall contribution of these sources remains small in comparison with for example, fossil fuel sources). These sources include hydroelectricity, biomass, wind, solar, tidal, wave, micro-generation and geothermal sources. National policies and/or specific geographical advantages have led to varying contributions to total energy production from renewable sources across different Europe countries. For example Norway sources almost 100 per cent of its total domestic electricity production from hydroelectricity, whereas other countries have a much smaller contribution from this resource. In addition, technologies to utilise energy from these resources show varying potentials for future development, and are subject to significant research, development and demonstration risk.

CHAPTER 2: THE GREEN PAPER

Introduction

20. The European Commission ("the Commission") published a Green Paper on European energy policy, "A European Strategy for Sustainable, Competitive and Secure Energy" (the "Green Paper" or the "Paper") on 8 March 2006.

21. Commission President Barroso commented "The energy challenges of the 21st century require a common EU response. The EU is an essential element in delivering sustainable, competitive and secure energy for European citizens. A common approach, articulated with a common voice, will enable Europe to lead the search for energy solutions". Energy Commissioner Piebalgs added "The completion of the internal market, the fight against climate change, and security of supply, are common energy challenges that call for common solutions. It is time for a new European energy policy".

22. In this Report, we consider whether the Commission has correctly identified the priorities for energy policy in the EU. We also consider whether the areas identified for action would be most appropriately dealt with at EU or at Member State level. We have taken evidence as part of our investigation from UK-based witnesses, representing a number of the key stakeholders in the energy policy debate. Accordingly, our findings do not necessarily reflect the interests of other Member States, of which readers should be mindful when considering this Report and its conclusions.

The Green Paper

Overview

23. The Green Paper sets out the Commission's views on the key considerations to be addressed in order to develop a new, common energy strategy for Europe. The Paper was prepared in response to calls from European Heads of State and Government in 2005 for a common energy strategy with an integrated approach, reflecting concerns arising with respect to recent energy market and other related global developments[3].

24. The Paper states that these issues require a common European response, as opposed to developing an approach based solely on twenty five individual (Member State) energy policies. The Commission's Explanatory Memorandum, which accompanied the Green Paper lists the reasons why a common approach to energy strategy is needed:

- To equip the EU to play a full role in global markets;
- To improve sustainability in the EU and globally;
- To improve internal market functioning;
- To improve stability in the EU and neighbouring markets; and
- To reflect the strategic role of energy in achieving other political objectives.

[3] These developments are generally well documented and include concerns relating to energy security, emission reduction and market efficiency—a number of specific examples are listed in the Green Paper.

Policy objectives

25. The Green Paper proposes that Europe's common energy strategy should have three main objectives of Sustainability, Competitiveness and Security of Supply:

    (a) "Sustainability: (i) developing competitive renewable sources of energy and other low carbon energy sources and carriers, particularly alternative transport fuels, (ii) curbing energy demand within Europe, and (iii) leading global efforts to halt climate change and improve local air quality".

    (b) "Competitiveness: (i) ensuring that energy market opening brings benefits to consumers and to the economy as a whole, while stimulating investment in clean energy production and energy efficiency, (ii) mitigating the impact of higher international energy prices on the EU economy and its citizens and (iii) keeping Europe at the cutting edge of energy technologies".

    (c) "Security of Supply: tackling the EU's rising dependence on imported energy through (i) an integrated approach—reducing demand, diversifying the EU's energy mix with greater use of competitive indigenous and renewable energy, (ii) creating the framework which will stimulate adequate investments to meet growing demand, (iii) better equipping the EU to cope with emergencies, (iv) improving the conditions for European companies seeking access to global resources, and (v) making sure that all citizens and business have access to energy".

26. The Green Paper states that urgent action is necessary, given the time taken to bring innovation on stream in the energy sector, and recognises that a long-term commitment will be required. The Paper also states that a clear and flexible framework will need to be defined and subjected to periodic review. While this framework is not described in detail, reference is made to a Strategic EU Energy Review which will be completed and updated on a regular basis, to include coverage of the issues identified in the Green Paper.

Priority areas for action

27. In order to achieve the main objectives of Sustainability, Competitiveness and Security of Supply, the Green Paper outlines six priority areas for action, each of which includes a range of specific proposals, numbering over 20 in total. A brief summary of the priority areas and proposals is set out below:

    (1) Completing the internal European electricity and gas markets—A European energy grid code, a priority European interconnection plan, a European Energy Regulator and other new initiatives to ensure a level, competitive playing field.

    (2) Ensuring the internal energy market guarantees security of supply—Establishment of a European Energy Supply Observatory to monitor European wide supply and demand patterns and a revision of existing Community legislation on oil and gas stocks to promote the ability to mitigate potential supply disruptions.

    (3) Providing a European framework for national decisions on energy mix—While the choice of individual Member States on national energy mix is, and will remain a question for Member States in accordance with the

principle of subsidiarity, it may be appropriate to establish a European-wide energy mix benchmark and to stimulate the debate on the use of different energy sources.

(4) Tackling climate change—An Action Plan on energy efficiency to identify the measures necessary to save 20 per cent of the energy that would otherwise be consumed across the EU by 2020, plus a Renewable Energy Road Map for proposing targets and objectives for renewables for 2020 and beyond.

(5) Encouraging new energy technology innovation—A Strategic Energy Technology Plan to ensure Europe leads in the areas of energy efficient and low carbon technologies.

(6) Developing a coherent external energy policy—The identification of infrastructure priorities, a road map for the creation of a pan-European Energy Community, a renewed approach towards Europe's energy partners (particularly Russia) and a new Community mechanism to enable an efficient response to emergency external energy supply situations, enabling the EU to speak with a single voice in the international arena.

Next steps

28. The Green Paper concludes with a short list of questions for consideration, flowing from the proposals contained within each priority area for action. Public consultation on the Green Paper is open until 24 September 2006. On the basis of this consultation, and the conclusions of the European Council and Parliament, the Commission has indicated it will propose a series of concrete measures. This report constitutes our contribution to this consultation.

29. Our conclusions are set out in Chapter 8.

30. We make this report to the House for debate.

CHAPTER 3: A COMMON APPROACH TO EUROPEAN ENERGY POLICY?

Introduction

31. This Chapter of the Report looks at the nature of energy policy decision making in Europe and the Commission's reasons for conducting a review, considers the main policy objectives identified in the Green Paper and examines whether or not a common approach may be required to deliver these objectives.

Energy policy in Europe

32. Decisions relating to energy policy in Europe are primarily within the remit of individual Member State governments, with the European Commission's powers limited to two specific areas: (1) Creation of the European single-market, and (2) Matters relating to nuclear safety and security under the EURATOM Treaty. This position is in line with the principle of subsidiarity established by the Treaty of Maastricht, which states that matters ought to be handled by the authority closest to the citizen. According to this principle, the EU may only act (i.e. make laws) where Member State governments agree that action by individual countries is insufficient and that action can be better achieved at Community level.

33. Consequently, moving towards a common approach to European energy policy, with individual Member State governments relinquishing existing powers to the Community on energy-related matters, can and should only be pursued if Member States agree that a more co-ordinated approach is necessary. In his written statement to Parliament following the Energy Council on 8 June, Malcolm Wicks, the Energy Minister noted that "some member states emphasised that energy remained a national competence and that Energy Ministers should be informed and involved in agreeing Commission activity in advance."[4]

34. The extent of the transfer of powers towards Europe is clearly a critical decision point and in practice a sensitive balance is likely to be required between those matters for which the Commission should have responsibility and those where Member State governments retain sole authority. This report seeks to examine this balance in the context of the recommendations contained within the Green Paper.

Why conduct a policy review?

Evidence supporting the need to review European energy policy

35. Evidence provided by witnesses indicated broad agreement that the Commission review of European energy policy is an important process, despite the proximity of this review in time to other similar reviews carried out in recent years, both by the Commission and Member States, including the United Kingdom.

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[4] HC 15 June 2006 Col 71WS

36. Witnesses referenced a wide range of specific issues in support of their views, citing the challenges around competition, volatility of gas prices, security of supply and climate change, both from a European and Member State perspective.

37. For example, the Energy Intensive Users Group reflected on the challenges of:

- Very slow progress towards market liberalisation.
- Increasing concerns in respect of security of supply, especially over gas imports.
- Continually rising emissions of carbon dioxide due to: unrealistic expectations over fuel prices and the ability of renewable energy to compete without high and continuing subsidies; the ability to constrain consumption without compromising economic growth; and a schizophrenic attitude to the role of nuclear power.

38. It was noted by a number of witnesses that the Commission review necessarily has a global context, given the nature of the central issues e.g. economic growth in China and India et.al., with consequent effects on the world's climate from increasing carbon dioxide and other emissions. Centrica commented on the need to increase the dialogue significantly, both with key energy producers such as Russia and the Gulf States but also with the biggest consumer countries, in order to face the challenges of "enormous demand increase". Accordingly, delivery of the main objectives is ultimately somewhat dependent on factors outside of the EU's (or indeed individual Member States') control.

39. In providing written and oral evidence, witnesses chose to focus the majority of their comments on issues relating to the operation of the gas supply market across Europe, perhaps reflecting the difficulties recently experienced in the UK in Winter 2005/06, when gas failed to flow through the Belgian-UK Interconnector at expected levels, despite prices in the UK soaring ahead of prices in continental Europe (see Chapter 5 for further details).

40. While all of the evidence provided has been invaluable in properly evaluating the merits of the Green Paper, it is important to recognise that the remit of the energy policy debate is much broader than fuel supply alone (gas or otherwise), and covers demand-side management (including energy efficiency initiatives) as well as supply-side management in a power generation context, plus other energy intensive sectors such as transport (motor cars and aviation).

Why is the review being carried out now?

41. In the main, witnesses who provided oral evidence concurred that much of the body of evidence supporting the need for the review has been well known for a number of years, supporting our view that there is no substantive reason why the process could not have been initiated at a much earlier stage. "Ofgem" commented that the reason for undertaking the review now (in terms of pressure on prices, difficulty of supply and the political and geographical problems with Ukraine) is almost self-evident, but that it might have been done "more thoroughly and more generally earlier". (Q 180)

42. Looking forward, witnesses were in unanimous agreement that despite the merits of this line of argument, the review and its outcome are now critically important.

Are the policies best taken forward at an EU level or by Member States?

43. As set out in Chapter 1, the Green Paper identifies three main objectives for energy policy and six priority areas for action, a number of which would reduce the level of responsibility of Member States and increase Community responsibilities if enacted. In theoretical terms, such a move towards a more co-ordinated approach to energy policy in Europe could be properly justified if there were perceived or actual constraints in achieving the stated objectives at a national level i.e. increased co-operation between Member States was necessary to successfully mitigate the risks arising and deliver against the objectives.

44. Not all witnesses shared this perspective, although there was general acceptance that there were areas where increased co-operation across Europe would be helpful. For example, the Nuclear Industry Association argued that "the energy needs and policies in the Members States vary markedly and therefore a single energy policy is unlikely to be fit for purpose. Some element of coordination would however be beneficial for security of supply and mitigating against climate change". In addition, the Energy Minister reinforced the importance of the principle of subsidiarity, that is, what things are best left to the Member State.

45. In this context, the optimal balance between the Community and Member State governments on decision-making is likely to vary depending on the specific objective in question and the risks which may impact on its delivery (reflecting in part the extent of divergence between local circumstances across the Member States). Due to the inherent complexity of the three main policy objectives (which is considered further below), it will inevitably be challenging to determine this optimal balance—with the implications of failing to do so likely to result in adverse consequences over time.

46. The Green Paper provides little by way of insight into the Commission's thinking in this important area. In particular, there is no substantive evidence or rationale to support the transfer of powers towards Europe inherent within the priority areas for actions and the underlying proposals, other than an implicit view that the status quo is not acceptable.

47. While we do not necessarily disagree in principle with this view on the status quo, we recommend that the Commission seeks to develop a business case which clearly articulates where it believes that a more co-ordinated approach is required, on an item by item basis. This business case should detail what benefits would arise as a consequence of the implementation of its recommendations, and specifically why such benefits could not be achieved through the actions of individual Member States alone.

48. In considering the merits or otherwise of the recommendations in the Green Paper, it is important to distinguish between matters which relate solely to individual Member States and matters which are relevant in a Europe-wide context, with only the latter being important to this debate. While there is not necessarily a clear division between these two categories, it is helpful to bear the distinction in mind when considering the available evidence.

Policy objectives

Are the main policy objectives identified by the European Commission the right objectives?

49. All of the witnesses agreed that the Commission's three main objectives (Sustainability, Competitiveness and Security of Supply) were the right objectives to identify. An additional objective around minimising fuel poverty for vulnerable groups was highlighted by the Energy Minister, (Q 144) although this is implicitly referenced in part in the definition of the Commission's Security of Supply objective ("…making sure that all citizens and business have access to energy…").

50. It was noted that the Commission's objectives are broadly consistent with the UK Government's goals, as reflected in the current UK Energy Policy Review, supporting the line that Member States face a common set of energy issues. The Department of Trade and Industry noted that "the Green Paper correctly identifies the overarching objectives of balancing sustainable development, competitiveness and security of supply. These map, almost directly, onto the Government's objectives of Reliable, Affordable and Sustainable Energy for Europe".

Inherent tensions exist between the three main objectives

51. The principle, broadly stated objectives are each necessarily a summary of several, more detailed objectives, reflecting the desires of different stakeholders in the debate (including the Commission, Member State governments, industry, environmental groups, citizens, et. al.). For example, the concept of secure energy supply covers outcomes relating to the on-demand availability of both electricity and transport fuels, as well as health, safety and security issues associated with the energy supply chain.

52. Inevitably, key stakeholder interests are varied, and sometimes competing, which in part leads to inherent tensions between the main objectives e.g. sustainability is a priority for environmental groups, whereas secure and competitively priced energy is normally considered as most important by corporate energy users. In addition, tensions also arise due to the nature of the objectives e.g. investment in low carbon technology to diversify fuel sources for power generation is usually more costly than building gas-fired plant.

53. Witnesses illustrated the inherent tensions between the objectives in their evidence. Centrica said that there was "undoubtedly a tension" citing an example that "green power is more expensive…than dirty power today". (Q 5) The Energy Intensive Users Group gave a further example: "if we want a certain degree of security of supply as consumers we are going to have to pay for it". (Q 82) Equally, the objectives sometimes work in synchrony. To illustrate, the Energy Minister gave an example of a potential compatibility of objectives: "renewable energy would guarantee some pretty secure supply in Britain". (Q 148)

54. In response to these tensions, some witnesses indicated a desire to prioritise between the objectives, but noted this was unlikely to be practical due to the complex inter-relationships between the delivery of the respective outcomes. E.ON spoke of a desire, in an "ideal world" to rank the objectives in order to understand which are more important to politicians. (Q 38) Other evidence,

for example from Centrica and the Department of Trade and Industry, stated that equal priority for the three main objectives was desirable. The Energy Intensive Users Group agreed, commenting that an energy policy is "unlikely to be sustainable in itself if one or other…objectives dominates to the exclusion of others". (Q 81) In the view of the Association of Electricity Producers "the Green Paper understandably puts the focus on security of supply, but it is equally important that the other two pillars are given due consideration".

55. **In our view, it is not necessarily clear whether all three objectives (and the related outcomes) can be fully delivered, at the same time, in practice. It is by no means certain that the capital investment needed to diversify across different fuel and power generation sources to ensure security of electricity supply and reduced levels of carbon emissions could be delivered without significantly increasing the cost of energy and affecting Europe's competitiveness.**

56. **Consequently, it is critical that the inherent tensions which exist within and between the objectives are clearly identified by the Commission in their business case, as extant risks which must be successfully overcome. In principle, only where a greater degree of co-ordination between Member States is required to overcome these risks (and thereby deliver the objectives in an efficient manner) would it be appropriate to support the Commission's proposals for increased powers.**

57. **It is also our view that some form of compromise between the objectives will be inevitable, particularly when acknowledging the global perspective. The key for the Commission in taking forward their proposals will be to identify where and how much.**

What do the objectives actually mean in practice?

58. The majority of witnesses concurred that the Commission's main objectives are articulated at a high-level only and accordingly lack the necessary clarity to drive decision-making, either in a policy or commercial context. In contrast, the Energy Minister said that the objectives were "clear". (Q 144)

59. It was noted that it is likely that there will be differences in the way that each Member State understands and interprets the objectives, reflecting national and/or regional geo-political and energy market realities (e.g. the extent of liberalisation, the existing fuel-mix, public opinion etc.). In addition, the approach adopted to mitigation of the extant risks will also likely differ across the Member States for similar reasons. As an example, the issues related to security of supply in the UK are distinct (if not unique), partly due to the UK's geographical location and its rapidly depleting source of indigenous gas from the North Sea, increasing reliance on imports from Europe. By contrast, France and Germany are comparatively less exposed to security of supply risks on imported gas, the former due to the predominance of nuclear power in its energy mix and the latter due to its closer-proximity to Russian gas supply and the extent of liberalisation of its energy market (where long-term supply arrangements are typical).

60. The objectives as stated are a simple articulation of a complex and comprehensive set of desired outcomes, which have a high degree of inter-relationship. Consequently, if there is any lack of clarity in what the

objectives actually mean (and the outcomes they are intended to represent), the response across Europe will almost certainly be inconsistent between Member States, at best impairing delivery of the objectives and at worst leading to adverse, unintended consequences.

61. The Energy Intensive Users Group spoke of a lack of definition and a requirement for precision in relation to the terms "sustainability policy" and "security of supply": "The words that look fine here are so imprecise in certain cases that something which could fulfil the letter of this might end up being entirely unacceptable in certain parts of the energy industry and quite possibly to consumers as well". (Q 127)

62. **In our view, more work needs to be carried out by the Commission to define more fully the desired outcomes for each objective. These outcomes should be clear and comprehensive statements of each of the desired effects resulting from successful delivery of the objectives (and in contrast, an articulation of the outcomes which are to be avoided). The Commission should also review all of the potential risks (including the inherent tensions that exist in the system) which could occur and prevent achievement of one or more of the objectives, and equally, identify the opportunities which could aid delivery. The Commission will also need to design a robust basis for measuring progress over time, in order to ensure that any package of measures that is implemented ultimately delivers against the overall objectives.**

63. While circumstances inevitably change over time, and this affects perceptions as to what are currently the most important objectives or priorities, policy makers at all levels must recognise that stability through a long-term framework is critical to provide incentives for the necessary capital investment. Without such stability, it is likely that the levels of investment required to deliver the objectives will not be forthcoming.

CHAPTER 4: SUSTAINABILITY

Introduction

64. This Chapter of the Report examines the meaning of the sustainability objective, considers the factors that are relevant to the sustainability debate and reviews some of the recommendations made by the Commission in this area.

Definition

What does "sustainability" mean?

65. In the context of the review of energy policy, the Green Paper defines the objective of sustainability as "(i) developing competitive renewable sources of energy and other low carbon energy sources and carriers, particularly alternative transport fuels, (ii) curbing energy demand within Europe, and (iii) leading global efforts to halt climate change and improve local air quality". As this definition makes clear, the objective is set to address a wide range of factors relevant to the environment debate, including supply-and-demand-management, development of low carbon technologies and maintaining competitive markets.

66. A range of evidence was provided by witnesses indicating that this is an all-embracing yet complex objective, and while agreeing with its overall direction, noted that it lacks sufficient clarity to drive decision making, either in a policy or commercial context. References were made to sustainable policy, energy efficiency, new technology and the climate change impact. Often in evidence, for example that given by Centrica, E.ON and British Nuclear Fuels, "sustainability" was inferred to be synonymous with "mitigation of climate change".

67. The Energy Minister told us that "For once, when politicians and ministers say that something is the biggest issue facing the planet, they do not exaggerate. I think they are scientifically accurate when they talk about climate change and, therefore, sustainability is absolutely critical." (Q 144)

68. A key theme raised by the majority of witnesses around sustainability was the need for a long-term policy framework in order to better match the capital investment time-frame, which can be up to 40–50 years in the power generation sector. In support of this view, E.ON suggested that political intervention in terms of changing the policy framework should be cautious, infrequent and long-lasting in effect.

Relevant factors in the sustainability debate

Global demand for energy is increasing

69. Global demand for energy is significantly increasing, particularly with respect to growth in developing nations like China and India, and this provides a critical back-drop to the Commission review. De-linking GDP growth from growth in energy usage is widely accepted as a key priority, through demand-side management measures such as energy efficiency, to support the delivery of policy objectives.

70. As a consequence of forecast demand growth, policy will not be sustainable into the long-term if it is set purely with a European perspective alone, and thus needs to be drawn with a broader view. Whilst the Association of Electricity Producers commented that "the Green Paper should place more emphasis on the global dimension of climate change", the International Association of Gas & Oil Producers commended "the EU's efforts to keep alive the worldwide debate on climate". Part of the challenge here lies in the different attitudes to the key issues elsewhere in the world. For example, China plan to expand significantly their number of fossil fuel power plants and the United States has not ratified the Kyoto Treaty[5]. In order to reconcile these tensions and be truly sustainable, policy will need to be flexible and able to accommodate changing externalities, without diluting its long-term direction.

Measures to improve energy efficiency

71. For the reasons set out above, energy efficiency and other demand-side management initiatives are, in our view, a critical part of the energy policy debate, as supply-side measures alone are unlikely to be successful in achieving the objectives. Despite the Green Paper including a detailed section on its proposals around energy efficiency (including the development of an Action Plan on Energy Efficiency), there was only a limited amount of evidence provided by witnesses to help understand what needs to be done to drive change in this area, with very few comments extended beyond a passing mention.

72. Sir John Mogg of Ofgem told us that "what many governments and the Commission have done on energy efficiency is disappointing. It seems that what is always called the 'win, win, win' seems never to result in a win; it is always qualified and not actually achieving something…". (Q 200)

73. Broadly, however, there was support for energy efficiency, though some industry groups did not support the suggestion that EU-wide targets for energy saving should be introduced.

74. **In our view, this position is symptomatic of the general level of focus and effort directed towards demand-side management and energy efficiency initiatives in practise and the Commission should consider whether responses from other Member States reflect a similar lack of engagement.**

Pricing carbon through the European Union Emissions Trading Scheme

75. Integrating the cost of carbon into energy prices through the European Union Emissions Trading Scheme ("EU ETS") received unanimous support from witnesses, despite the recent volatility in carbon prices surrounding the announcement of national emission levels. There was also a broad consensus on the range of proposed changes required to improve the scheme going forward, including:

- Increasing the term of the scheme to at least 10–25 years to better match the capital investment time horizon. The International Association of Oil and Gas Producers, Centrica, E.ON and the Energy Intensive Users Group all gave evidence confirming views within this range; and
- Extending the scheme to cover other sectors, such as aviation.

[5] To give the treaty its full name, the Kyoto Protocol to the United Nations Framework Convention on Climate Change is an amendment to the international treaty on climate change, assigning mandatory targets for the reduction of greenhouse gas emissions to signatory nations.

76. In addition to this, Mr Ulrich from Centrica argued for the auctioning of carbon allowances, rather than allocation on a free-issue basis. (Q 24)

77. Nevertheless the EU ETS is currently seen by witnesses as a mechanism which is highly-susceptible to political intervention, running contrary to the desire to increase certainty around major capital investment decisions. The Association of Electricity Producers argued that "It is important that the EU clarifies, as soon as possible, the long-term framework well beyond 2012 so that electricity generators have greater certainty in relation to major investment decisions." (p 12, para 7) The Energy Intensive Users Group warned that "We cannot expect people to invest in low carbon generation, whether it is nuclear, carbon capture, renewables or even energy efficiency, if they have not got some degree of certainty about that, and we do not have that at the moment". (Q 83)

78. An appropriate balance is required here and witnesses recognised that uncertainty in part is inevitable and necessary in a corporate risk-taking/profit-making context.

79. From a global perspective, the significant risk to (and conversely opportunity for) the success of the EU ETS as a tool in the delivery of sustainability is persuading others elsewhere to adopt a similar approach. In the absence of such support, Europe may suffer competitively in a global context as compared to nations which do not internalise the price of carbon into their cost base, particularly as carbon prices should theoretically be expected to increase over time, as European policy pursues a de-carbonising trajectory.

80. The Energy Intensive Users Group viewed it as "pretty much inevitable that if we are going to go down a continuously decarbonising trajectory for European economies that that must lead, other factors being equal, to a rising cost for carbon over time…One does wonder whether carbon taxation, even though it may be less efficient for trading in certain respects, might have some advantages there." (Q 90)

81. The Green Paper itself says little on the EU ETS other than supporting it to create a flexible and cost-efficient framework for more climate friendly energy production. The Paper also indicates that the EU ETS provides the nucleus for a gradually expanding global carbon market, thereby giving European business a head-start. **We would support this view.**

82. **In our view, the EU ETS is an area where the Commission has a key role to play, responding to the early experience and promoting its merits on a global basis. Areas for consideration should include broadening the scope of the scheme to cover other sectors, significantly increasing the term of the scheme, reviewing the rigour and integrity of the headline targets for carbon reduction, and considering the basis on which allowances are allocated, particularly with respect to using an open auction process.**

Technological advancement is critical

83. The delivery of the sustainability objective will ultimately be critically dependent on the continued development of new technologies, both in the low carbon generation of power (e.g. carbon capture and storage, renewable sources, nuclear fusion etc.) and other areas, including energy efficiency initiatives and transportation. BP stated that: "it is desirable that any EU (or indeed national) Energy Policy should be based upon a fiscal and regulatory

framework in which Research and Development into new energy technologies is encouraged". E.ON added: "We welcome measures to increase the funding of research, development and demonstration in the energy sector…A higher proportion of the EU's available financial resources should be devoted to the development and demonstration of low carbon technologies, supplementing but not replacing national programmes and sources of funding."

84. It was felt that the internalisation of the cost of carbon through the EU ETS should help drive innovation, although experience to date is not sufficient to predict whether the long-term market price of carbon will be adequate to make these new technologies commercially economic in comparison to fossil fuels.

85. While technology development should be market-driven, one witness (E.ON) suggested that there was an opportunity for Europe to co-operate more through a European initiative or EU/USA initiative, as subsequently illustrated by the recent announcement on the sharing of nuclear knowledge between the UK and France. Dr. Golby further told us that in his view "the market, given the right framework, will bring forward the technologies." (Q 62)

86. Meanwhile Sir Donald Miller, the former Chairman of Scottish Power, argued in his submission that "The proper place for EU and Government development expenditure on energy systems is in R and D programmes until such time as they can demonstrate, if they can, that they have something significant to offer in terms of effectiveness and cost."

87. On the deployment of new technologies, a limited amount of evidence was provided by witnesses, although reference was made to the difficulty in obtaining the appropriate local planning and other consents, which is clearly a matter for individual Member States at present.

88. One witness raised the importance of focusing on technological improvement in the fossil fuels industry, as these will inevitably be needed a long way into the future, irrespective of more sustainable development: the International Association of Gas & Oil Producers predicted that "A key challenge will be to develop improved technologies to find, produce and use fossil fuels in ways that minimise negative impact on the environment".

89. There was agreement from the majority of witnesses that the setting specific targets at a European level for the proportion of each technology in the fuel mix (along with setting targets generally) was unlikely to be helpful in practice as local circumstances vary widely.

90. British Nuclear Fuels were a notable exception to this view, arguing in their submission that "Whilst we support an EU-wide approach to delivering diversity, this should be based on removing barriers to entry for energy technologies, and/or on identifying a minimum proportion of the mix to come from (unspecified) secure and low-carbon technologies, as is proposed in the Green Paper. We would not support an approach based on defining a particular mix of <u>specified</u> technologies, either at EU or national level."

91. **Given the importance of new technologies in delivering overall energy policy objectives, developing policy which is sufficiently flexible to allow the inclusion of key, low carbon technologies (for example carbon capture and storage or marine technologies), as and when**

they reach a commercial scale, is critical to delivering sustainability. On the setting of Europe-wide targets for the energy mix, in our view, Member States need flexibility to determine how best to meet the objectives at a national level, and ultimately the markets should be left to decide which technologies to research, develop and deploy and to what extent. In this context, it should be for individual Member States to decide whether national targets are necessary or helpful as part of the policy framework in that country.

CHAPTER 5: COMPETITIVENESS

Introduction

92. This Chapter of the Report examines the meaning of the competitiveness objective, considers the factors that are relevant to the competition debate and reviews some of the recommendations made by the Commission in this area.

Definition

What does "competitiveness" mean?

93. In the context of the review of energy policy, the Green Paper defines the objective of competitiveness as "(i) ensuring that energy market opening brings benefits to consumers and to the economy as a whole, while stimulating investment in clean energy production and energy efficiency, (ii) mitigating the impact of higher international energy prices on the EU economy and its citizens and (iii) keeping Europe at the cutting edge of energy technologies". As this definition makes clear, the objective is set to address a wide range of factors relevant to the competition debate, including completing the liberalisation process, managing volatility in energy prices and driving technology development.

94. A range of evidence was provided by witnesses indicating that this is a comprehensive and complex objective, although perhaps less so than the sustainability objective. While agreeing with its overall direction, witnesses noted that it lacks sufficient clarity to drive decision making, either in a policy or commercial context. References were made in particular to the slow pace of liberalisation in continental Europe and the impact of recent high/volatile energy prices in the UK.

95. It is relevant to recognise that the competitiveness objective necessarily operates on a number of different levels—for example, within individual Member States, across Europe as a whole, and globally—and the Commission's definition (as set out above) reflects aspects of each of these levels. Consequently, achievement of the competition objective is at least in part dependent upon global factors which are outside of Europe's direct control. In contrast, the ability of Member State governments and the Commission to directly influence the shape of the competitive landscape is by definition primarily limited to actions which can be undertaken within Europe's borders, for example, completion of market liberalisation or establishment of the EU ETS. The interface between Europe and the rest of the world—and the EU's ability to influence other governments to act in a way that is, at worst, not inconsistent with delivery of the main policy objectives—is clearly a critical part of the debate, and one which will in practice have a significant effect on the success or otherwise of meeting energy policy objectives.

96. The Commission has proposed the development of a common external energy policy to enable Europe to speak with a single voice in the international arena on issues such as energy prices, import dependency, global energy demand and global warming. **While we support efforts in this area, a much better understanding is required of how the**

perspectives taken by Member States, Europe and the rest of the world on competition issues inter-relate and consequently identify the specific risks that need to be managed.

97. In this context, it is interesting to note that the majority of the evidence provided to us by witnesses focused on competition effects within the EU, with only brief references to external, global factors. There could be many reasons for this, including the global perspective not being seen as an imminent issue compared to matters more immediately affecting Europe, but equally it may reflect the extent of the perceived challenge associated with managing such global risks.

Market-based approach

98. A key theme raised by all of the witnesses was whole-hearted support for a market-led approach to the delivery of energy policy objectives, with government responsible for setting the long-term policy framework and ensuring effective regulation. This is consistent with the evidence and comments made on sustainability, as set out in Chapter 3.

99. Dr Golby's view was that "the future of European energy policy is at a crossroads with one path leading to market-led solutions and another to increased state intervention and national protectionism, so this is an important point in time. At E.ON we strongly support the market-led approach and within a competitive market environment companies like E.ON will deliver the investment required to achieve the broad policy objective set out in the Green Paper." (Q 35)

Liberalisation

Extent of energy market liberalisation in Europe

100. While the UK has moved over recent years to a fully-liberalised energy market, consistent with the relevant EU Directives (and enjoyed some of the lowest energy prices in Europe as a consequence), the extent of liberalisation elsewhere in continental Europe is significantly lower, with national champions in a number of countries holding supply, generation, transmission and distribution assets within their corporate portfolio.

101. Several witnesses clearly stated (with differing degrees of emphasis) that this partially-liberalised position has resulted in a lack of both competition and transparency within the energy market, hindering the ability of the UK (at least) to achieve its policy objectives. Most witnesses indicated that the existing EU Directives would be effective if fully implemented, although one witness suggested that the degree of effectiveness or otherwise was not necessarily clear. According to the Energy Intensive Users Group, full liberalisation across Europe could be at least ten years away, based on progress to date. (Q 76)

102. **Given that the other twenty four Member States are each starting from a different position, with varying levels of appetite for the process, continued pressure by the Commission on delivering full liberalisation across Europe must be a priority if policy objectives are to be delivered**.

103. Unbundling of supply and generation assets from transmission and distribution assets, along with addressing protectionism in the energy mergers & acquisitions market, were two key areas noted for particular attention. Ofgem's submission argued that "[The Green Paper] does not discuss in depth the need to effectively unbundle (i.e. separate) network companies and activities from those companies in the potentially competitive parts of the market. Unbundling (preferably by ownership), in our view, is central to the achievement of a competitive single energy market as it is key to the delivery of non-discriminatory access to networks, efficient investment and transparent markets." **We endorse this view and recommend that the Commission continue to focus its efforts on separating supply and generation assets from transmission and distribution assets.**

104. In the view of The National Grid, "many of the current problems with the European energy markets would be solved if network activities were properly unbundled, in accordance with the Directives, from competitive elements of the gas and electricity markets."

105. We note that during the conduct of our inquiry, the Commission launched "dawn-raids" on several European Utility companies as part of their programme of action to ensure compliance with the Directives. **We are reassured by the evident commitment by the Commission to deal stringently with companies and Member States which do not abide by existing requirements.**

Impact of partial liberalisation

106. The lack of full liberalisation across Europe appears to have had a significant effect on UK security of supply and competitiveness, particularly during Winter 2005/06, when gas did not flow through the Interconnector from Belgium to the UK at the expected level, despite UK prices spiking to above 180p per therm. Similar concerns were expressed with respect to Winter 2006/07, in advance of new gas pipeline and Liquefied Natural gas ("LNG") infrastructure coming on stream from 2007.

107. While there was no clear view as to what specifically led to this situation developing, a number of witnesses suggested that much of continental Europe wanted to protect national gas supplies and reserves against a potential local cold-snap, rather than take profits on supplying the demand from the UK market. Malcolm Wicks, the Energy Minister, said: "…there is inevitably a tussle going on between the proponents of market liberalisation, such as us here in Great Britain, and some countries who are looking over their shoulder worried about energy security."(Q 156) The Energy Minister went on to say that, in light of the recent developments involving Ukraine, EU Member States may be of the opinion that holding onto existing practices and more duopolistic supply situations would be beneficial. (Q 161) This is clearly an example of a potential conflict between the objectives of security of supply and greater competitiveness.

108. The uncertainty and volatility around energy prices created by these and other issues is causing "off-shoring" of UK business and jobs, according to the Energy Intensive Users Group, as businesses move capacity away from the UK (either temporarily or permanently) to more stable locations in continental Europe and further a field.

109. **The evidence provided by witnesses leads us to conclude that the UK and/or the Commission do not appear to have effective high-level contingency plans to deal with issues which arise in the interim as a result of partial liberalisation in Europe (as set out above). Given the uncertainty around the potential timetable for full liberalisation, which may be a number of years away, this is a significant cause for concern with respect to the delivery of all three of the EC's main objectives.**

110. In the meantime, some might see the sharp increases in energy prices in the UK as casting doubts over the universal benefits of liberalisation. Dr Robertson from the EUIG told us that "…we have seen a doubling in gas prices in most of Europe where gas has been linked to oil. We have seen a trebling of gas prices in the UK where the market is liberalised. So the UK is not really a very good advertisement to the rest of Europe for the liberalisation process." (Q 76)

111. **While we understand that there are a wide-range of factors which influence gas prices across Europe, the Commission should consider the impact of this observation as to how others may view the UK's experience of liberalisation on the effectiveness of its programme of activity to ensure full compliance with the existing Directives.**

Can markets alone deliver the main policy objectives?

112. There were differing views as to whether markets alone could deliver the main policy objectives, even if a long-term policy framework was in place. For example, some saw the delivery of security of supply (including adequate strategic gas storage) as inconsistent with market principles, given by definition, excess capacity is required. Sir Donald Miller wrote that "It is doubtful that any revised market framework offering greater competition between suppliers will by itself have a significant impact on the security of our electricity supplies". The Energy Minister said: "I do not think market mechanisms alone are capable of delivering objectives either within one nation state, such as the UK, or across the European Union or, dare I say, across the world". (Q 162)

113. Other witnesses were clear that the markets would deliver secure energy, driven by the impact of risks associated with interruption to supply on their businesses. BP were of the view that "energy markets are no different in kind from other markets. Provided the regulatory and fiscal climate allows, properly functioning energy markets will, in the absence of catastrophic disruptions of supply, provide consumers with adequate security".

114. **In our view, the markets are best placed to determine how to policy objectives efficiently and effectively. The role of Member State governments and the Commission should be limited to establishing a clear, long-term policy framework within which market participants can take commercial decisions.**

Energy prices

Use of long-term supply contracts

115. Witnesses noted that energy users in Europe typically source gas via long-term contracts, rather than using short-term arrangements, as is the case in the UK where there is an active spot-market for gas. These long-term gas contracts are often priced against an oil index. Given recent high UK gas

prices, European businesses have benefited from cheaper long-term gas contracts linked to oil prices. One witness suggested that comparable (oil-indexed) contracts were not available to UK gas customers, although our limited enquiries indicate that this may not be the case.

116. Based on the evidence provided, in our view, the rationale for contracting and pricing in Europe reflects the partial pattern of liberalisation and the lack of a transparent and liquid market for gas supply. This has led to gas pricing in continental Europe being linked to oil where there are a number of benchmark prices.

117. In the UK, liberalisation has resulted in a liquid, traded market for gas and users have chosen to source supplies via short-term arrangements priced against the market. This behaviour reflects the economic principle that markets should efficiently price the cost of a commodity, in this case, gas.

118. The choices made by UK businesses, post-liberalisation, to source gas using short- rather than long-term arrangements is accordingly more likely to reflect commercial preferences rather than any structural inequity. Indeed, it is our understanding that this approach has historically delivered significant benefit to UK businesses in periods when gas market prices were low. In this context, Steve Smith of Ofgem commented on the overall lack of transparency: "…partly to do with the North Sea, but more to do with Europe", leading to large industrial customers being "lulled into a false sense of security" when deciding on their approach to gas supply. (Q 187)

Link between oil and gas prices

119. The lack of liberalisation in continental Europe, long-term contracting basis for gas supply and the consequent link between oil and gas prices may be causing gas prices to be higher than they would otherwise be in a truly competitive, European market place. **In our view, liquid markets are better able to deliver economic prices for commodities, reflecting the balance between supply and demand at any point in time, as has been seen in the UK post-liberalisation. In the same way, markets can also take account of the incremental costs associated with internalising the price of carbon, thereby supporting delivery of the sustainability and secure energy objectives.**

120. The majority of witnesses indicated an expectation that UK oil and gas prices were likely to remain at existing levels for the foreseeable future, perhaps in our view partly reflecting their expectations for the slow completion of the liberalisation process.

Regulation

121. Evidence provided by witnesses was divided on the subject of whether Europe needed a single energy regulator, as proposed by the Commission. Some witnesses stated that it is not likely to be possible to have a single European energy market without a single European energy regulator. However, the majority of witnesses (including E.ON, Centrica, National Grid and the DTI) saw a single regulator as unnecessary red-tape and favoured investment in the existing, national regulatory regime to ensure independence from Member State governments and application of best practices, quoting the UK's Ofgem as a successful example.

122. The decision as to whether a single energy regulator is required should be a key consideration within the Commission's business case for moving towards a more co-ordinated approach to European energy policy. **In our view, there is little direct evidence at this time to support the need for a single energy regulator and we recommend the Commission instead considers steps to ensure that existing national energy regulators are truly independent, have the necessary range of powers and operate in a way which is consistent with best practice. Looking forward, greater co-ordination between regulators across Europe may be needed to deliver a truly seamless European energy policy, in particular to avoid the risk of regulatory arbitrage.**

CHAPTER 6: SECURITY OF SUPPLY

Introduction

123. This Chapter of the Report examines the meaning of the security of supply objective, considers the factors that are relevant to the secure energy debate and reviews some of the recommendations made by the Commission in this area.

Definition

What does "security of supply" mean?

124. In the context of the review of energy policy, the Green Paper defines the objective of security of supply as "tackling the EU's rising dependence on imported energy through (i) an integrated approach—reducing demand, diversifying the EU's energy mix with greater use of competitive indigenous and renewable energy, (ii) creating the framework which will stimulate adequate investments to meet growing demand, (iii) better equipping the EU to cope with emergencies, (iv) improving the conditions for European companies seeking access to global resources, and (v) making sure that all citizens and business have access to energy". As this definition makes clear, the objective is set to address a wide range of factors relevant to the secure energy debate.

125. The evidence provided by witnesses on security of supply focused primarily on gas supply (including LNG), rather than other fuel sources (such as coal, uranium, renewable sources or biofuels), possibly reflecting the difficulties experienced in the UK in Winter 2005/06 and Russia's recent positioning with Ukraine and others on gas supply—the Energy Minister described the latter as having "…sent a shiver down the energy spine of Europe…" (Q 144)

126. In the main, the evidence provided suggested that this objective is fundamentally easier to understand than the sustainability or competitiveness objectives, but it is nevertheless a complex area in its own right, and delivery of secure energy will be closely linked to delivery of the other two objectives.

Diversity of technology and supply

127. It was noted that the UK's position on gas supply has changed from a net export to net import position, as North Sea gas reserves decline and existing nuclear and coal plant retire. Without affirmative action, the proportion of gas-fuelled power generation capacity in the UK's energy mix is likely to increase, accelerating the demand for imported gas—Europe as a whole faces very similar issues. While there are significant new investments in gas pipelines (e.g. Langeled) and LNG terminals in train which will improve the UK's import capacity in the future, these will not be on line in time for the forthcoming 2006/07 Winter, which remains a concern.

128. It was generally accepted that diversity in fuel supply, through the introduction of a range of different power generation technologies, is key to not only ensuring energy security but also reducing carbon emissions. The OGP's submission argued that "one of the cornerstones of security of supply is energy diversification in its widest sense: by type, source, transportation

route, technology, contract category, producer and supplier." Shell UK further argued that "Diversification of energy supply is the proper response to risk and uncertainty. Diversification provides resilience."

129. In this context, the fact that the majority of the evidence provided on energy security understandably focused on the supply of gas alone, should not be interpreted as meaning that the issues relating to other fuel sources are not important as part of the overall energy mix.

Russia

Russia as a major supplier of gas to Europe

130. Russia is a major supplier of gas to Europe and the second largest gas producer in the world, after Saudi Arabia. Some commentators have suggested in the light of recent events that Russia is using energy (including gas supply) as a political tool, heightening concerns over security of supply e.g. interrupting the gas supply to Ukraine, seeking to develop alternative markets in the Far East, Gazprom's interest in European energy assets etc.

131. However in a recent debate on energy prices in the House, Lord Owen took issue with what he saw as a "sort of hysteria we are starting to develop about Russia" and argued that any idea that "Russia is trying to do us all down by increasing its pipelines" was "ludicrous" as it was very much in the interests of EU Member States to have multiple pipelines from Russia available.[6]

132. A number of our witnesses noted that a significant amount of capital investment is needed in Russia's exploration, production and supply infrastructure in order to fulfil the needs of the European market. Currently, there is no clarity as to how such investment will be secured—in particular, it is not clear how inward investment into Russia will be treated and whether foreign investors will have adequate security over their investments and associated returns.

133. In the course of our previous inquiry, "Gas: Liberalised Markets and Security of Supply"[7], Mr Pfaff, Vice President of Ruhrgas, told the Committee that even were there to be a severe gas shortage, governments would not restrict supply to neighbouring States to ensure domestic supply as a priority. In his view long term contracts would dictate that if "there is only 80 per cent available in comparison to what we ask for, then we split the available volumes in proportion to what we have asked our supplier to deliver". (Q 167) The experiences of Winter 2005/6 cast some doubt over this assessment.

134. The importance of the ratification of the Energy Charter Treaty by Russia was highlighted by a number of witnesses. Although Russia signed the treaty in 1998, they have yet to formally ratify it. The Energy Minister stated that in the Government's opinion this was "very important". (Q 157) Centrica's submission argued that "the EU should pursue ratification of the Energy Charter Treaty by Russia and continue with initiatives to promote the adoption of EU internal market principles by neighbouring states, such as the

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6 HL 25 May 2006, col 934

7 "Gas: Liberalised Markets and Security of Supply", 17th Report (2003–4), HL 105—available at http://www.publications.parliament.uk/pa/ld200304/ldselect/ldeucom/105/105.pdf

South East European Energy Community Treaty signed under the UK Presidency".

Negotiating with Russia

135. The Green Paper proposes a new initiative to develop a common external energy policy to allow Europe to speak with a single voice when dealing with Russia. While this proposal received support, it was noted that gas supply arrangements are negotiated on a commercial basis between energy market counterparties, not by governments. However, there was a broad consensus among witnesses that establishing a Europe-wide context for these specific negotiations would be helpful. Increasing demand for energy from developing nations like China and India underline the importance of the EU taking a collaborative stance in this regard.

136. Although, understandably, negotiations with Russia were given prominence in the evidence, witnesses commented that the focus of European-level negotiation would also need to extend beyond Russia to other nations. The DTI noted that "there are significant benefits to be gained from developing a more coherent external energy policy at the Community level. The EU already has a constructive dialogue with Russia and OPEC at the EU level and this should be extended to dialogue with other major supplier and producer countries".

Liquefied Natural Gas

LNG and Europe's future energy mix

137. There was a broad consensus from witnesses that LNG is likely to play an important role in ensuring security of supply through diversification of supply sources (including countries like Qatar and Algeria), particularly in the UK, although estimates of penetration of the fuel mix by 2010 varied from E.ON's "high single digits or maybe just into double digits" (Q 54) to Centrica's "as high as 20 per cent". (Q 12)

138. In part, this variation in views is likely to reflect the global commodity nature of LNG. Unlike the transport of gas by pipeline, the supply destination for LNG is not fixed and LNG tankers will always have the flexibility to serve the markets which are willing to pay the highest price (complimented by the fact that transport costs are not directly linked to distance travelled), although this is constrained by the current shortage of LNG tankers.

139. **In our view, LNG in itself is not a single solution to the UK's security of supply concerns, although it may play a significant role in future. The extent of benefit to be gained from diversifying gas supplies to include LNG will depend on the comparative pricing between the UK and other markets, which would ultimately be expected to dictate the destination for LNG supply**. However, while the UK is geographically at the end of the gas supply pipe, it was noted that LNG does present an opportunity for the UK to establish itself as the "staging post" for Europe on LNG import/export.

CHAPTER 7: PRIORITY AREAS FOR ACTION

Introduction

140. This Chapter of the Report sets out a summary of the Commission's priority areas for action and our response, taking account of the evidence collected during our investigation.

Completing the internal European electricity and gas markets

Summary of Commission proposals

141. The Commission proposes a European energy grid code, a priority European interconnection plan, a European Energy Regulator and other new initiatives to ensure a level, competitive playing field.

Our response

142. Evidence provided by witnesses was overwhelmingly in support of the completion of the liberalisation process across Europe, and we agree that this should be an urgent priority for the Commission—progress to date indicates that this is an area where the Commission needs to use its authority to enforce the existing Community Directives. In the interim, the current pattern of partial-liberalisation is clearly disadvantaging Member States who have implemented the relevant Directives, specifically the UK. **In our view, bringing to bear the power of an open and competitive market place through completion of the liberalisation process is imperative. The challenges Europe faces in delivering against its energy policy objectives will be fundamentally more difficult without the benefits of truly efficient markets, particularly with respect to stimulating capital investment and thereby enhancing security of supply.**

143. **In principle, we support expanding the degree of inter-connection between Member States across Europe, through completion of the physical electricity and gas networks, although caution the Commission to be wary of the associated challenge in implementing common rules, standards and bases for contracting between counterparties. The Commissions role in this area should include completing the unbundling process through the separation of supply and generation assets from transmission and distribution assets.**

144. **We do not support the creation of a single European energy regulator—in our view, individual Member States should focus on ensuring existing national energy regulators are truly independent, have the necessary range of powers and operate in a way which is consistent with established best practice.**

Ensuring the internal energy market guarantees security of supply

Summary of Commission proposals

145. The Commission proposes the establishment of a European Energy Supply Observatory to monitor European wide supply and demand patterns and a

revision of existing Community legislation on oil and gas stocks to promote the ability to mitigate potential supply disruptions.

Our response

146. **While we support improving the transparency of energy infrastructure capacity across Europe, we believe that the completion of the liberalisation process will go a long way towards resolving the issues which currently exist (including, for example, the problems experienced by the UK in Winter 2005/06). In this context, despite neutral or positive comments from witnesses in evidence, we do not believe that the case has been proven for the development of a European Energy Supply Observatory. Further, we do not agree with the need for a revision of Community legislation on gas stocks, which should be a matter reserved for individual Member States, as a consequence of local and regional differences between markets.**

Providing a European framework for national decisions on energy mix

Summary of Commission proposals

147. The Green Paper suggests that while the choice of individual Member States on national energy mix is, and will remain a question of subsidiarity, it may be appropriate to establish a European-wide energy mix benchmark and to stimulate the debate on the use of different energy sources.

Our response

148. **We agree that diversifying across a broad range of energy sources is critical to meeting the Commission's main policy objectives, and in particular enhancing both security of supply and sustainability. However, we do not believe that setting a European-wide energy mix benchmark is appropriate, as local circumstances vary widely. In our view, markets are best placed to determine the specific technologies and related proportions within the overall mix and stability through a long-term policy framework is critical to facilitating such investment, thereby providing incentives for the research, development and deployment of new technologies.**

Tackling climate change

Summary of Commission proposals

149. The Green Paper calls for an Action Plan on energy efficiency to identify the measures necessary to save 20 per cent of the energy that would otherwise be consumed across the EU by 2020, plus a Renewable Energy Road Map for proposing targets and objectives for renewables for 2020 and beyond.

Our response

150. **We endorse the Commission's proposals in this area—action to reduce the demand for energy and increase the proportion of renewables in the energy mix are both vitally important goals. However, we do not believe that setting targets is appropriate, as local circumstances vary widely—as with decisions around the energy mix,**

markets are best placed to determine how to achieve policy objectives in an efficient manner.

151. **We also encourage the Commission to respond as a matter of priority to the early experience around the EU ETS, with reference to broadening the scope of the scheme to cover other sectors, significantly increasing the term of the scheme, reviewing the rigour and integrity of the headline targets for carbon reduction, and considering the basis on which allowances are allocated, particularly with respect to using an open auction process. Despite the apparent short-comings of the scheme as it stands, the evidence provided to us in our investigation had a clear consensus—the EU ETS has the ability to make a real difference in Europe—and there is also a genuine opportunity for Europe to take the lead in the creation of a global carbon market.**

Encouraging new energy technology innovation

Summary of Commission proposals

152. The Commission proposes a Strategic Energy Technology Plan to ensure Europe leads in the areas of energy efficient and low carbon technologies.

Our response

153. **We endorse the Commission's proposals in this area. We note that the EU ETS has a key role to play in integrating the cost of carbon into energy prices—consequently the success of the scheme will ultimately be key in delivering new energy technology innovation, making low-carbon sources of energy competitive as compared to fossil fuel technologies.**

Developing a coherent external energy policy

Summary of Commission proposals

154. The Green Paper calls for the identification of infrastructure priorities, a road map for the creation of a pan-European Energy Community, a renewed approach towards Europe's energy partners (particularly Russia) and a new Community mechanism to enable an efficient response to emergency external energy supply situations, enabling Europe to speak with a single voice in the international arena.

Our response

155. **We endorse the Commission's proposals on developing a coherent external energy policy. Such a framework, if properly defined, will allow participants in energy markets across Europe to negotiate with third parties in a manner consistent with the delivery of the main policy objectives.**

CHAPTER 8: CONCLUSIONS AND RECOMMENDATIONS

Introduction

156. This Chapter of the Report sets out the key conclusions and recommendations arising from our inquiry. It also summarises the detailed recommendations, as listed elsewhere in the Report.

A common approach to European energy policy?

157. **We recommend that the Commission more clearly articulates where it believes that a more co-ordinated approach is required, on an item by item basis. The Commission should detail which benefits would arise as a consequence of the implementation of its recommendations, and specifically why such benefits could not be achieved through the actions of individual Member States alone.**

158. In this context, evidence taken from witnesses suggests that increased co-operation between Member States in certain areas may help mitigate risks and thus achieve objectives, particularly around climate change and security of supply.

159. While we have set out our high-level views on the Green Paper's priority areas for action in Chapter 7, it is not possible to definitively conclude at this stage on the merits or otherwise of these actions, until further work has been undertaken by the Commission, as set out below.

Taking the Green Paper forward

160. **We agree that there is an urgent need to review and revise energy policy, reflecting the scale of the challenge and the time-taken to effect change as a consequence of the capital intensive nature of energy industries. The design and implementation of new policy needs to recognise that markets (rather than the State) are best placed to deliver objectives in an efficient and effective manner. Accordingly, the degree of EC/government intervention is a critical decision point and needs to be carefully managed.**

161. While the Green Paper supports a market-led approach, it then identifies a whole range of areas for specific intervention, without necessarily providing supporting justifications. We feel that there is a real risk that these specific interventions may have polarised views and diverted attention away from the key underlying principles. This is clearly illustrated by the fact that witnesses usually agreed with the main policy objectives in principle, but then disagreed with many of the measures set out in the priority areas for action.

162. **Delivering a stable, long-term framework to encourage innovation and capital investment is absolutely critical. Political intervention by the Commission or Member States should be cautious, infrequent and long-lasting. Policy needs to be sensitive to national and regional differences and avoid setting specific targets.**

Implementation

163. **The definition and clarity of the main policy objectives, including the understanding and interpretation at a Member State level, needs to be reviewed and revisited. The evidence taken in this review clearly underlines**

the risk of proceeding without objectives which drive and support consistent decision making across Europe.

164. Energy policy transcends a range of different policy areas, including competition, transport, environment and energy itself. A number of witnesses suggested a more co-ordinated approach was needed from the UK government, including the establishment of a "Department of Energy", similar to the model used in the USA. In this regard, we support increased collaboration on energy related matters, within Member States and at a European level.

165. Given the complexity and importance of the associated issues, delivering effective European Policy on energy will require a significant degree of political will from all quarters. Compromise will be inevitable—the key is to identify where and how much. In our view, failure by the Commission or by Member States to set effective policy poses the risk of seriously compromising the welfare and security of this and future generations.

Other detailed recommendations

166. For ease of reference, summarised below are our more detailed recommendations, as listed elsewhere in the Report.

167. Chapter 3: A common approach to European Energy Policy?

- We recommend that the Commission seek to develop a business case which clearly articulates where it believes that a more centralised approach is required, on an item by item basis.
- In our view, it is not necessarily clear whether all three objectives can be delivered in practice, particularly in a global context. The inherent tensions need to be specifically acknowledged and managed in a proactive fashion if delivery of the objectives in an efficient manner is to be a realistic proposition. Some form of compromise will be inevitable—the key will be to identify where and how much.
- In our view, much more work is needed to properly define unambiguous outcomes for each objective, and fully explore and understand the key drivers of success, including a basis for measuring progress over time.

168. Chapter 4: Sustainability

- In our view, this position is symptomatic of the level of focus on energy efficiency and the Commission should consider whether responses from other Member States reflect a similar antipathy.
- In our view, the EU ETS is an area where the Commission has a key role to play, responding to the early comments and promoting its merits on a global basis.
- In our view, developing an energy policy which is sufficiently flexible to allow the inclusion of key, low carbon technologies, as and when they reach commercial scale, is critical to delivering sustainability.

169. Chapter 5: Competitiveness

- The evidence provided by witnesses leads us to conclude that the UK and/or the Commission do not appear to have effective high-level contingency plans to deal with issues which arise in the interim as a result of partial liberalisation in Europe. Given the uncertainty around the potential timetable for full liberalisation, which may be a number of years away, this is a significant cause for concern with respect to the delivery of all three of the EC's main objectives.

- In our view, breaking the price-linkage between gas and oil is likely to result in gas prices finding their own, lower level through competition, which would then help to off-set the incremental costs associated with internalising the price of carbon.

170. Chapter 6: Security of Supply

- In our view, the fact that the majority of the evidence provided on energy security focused on the supply of gas alone, should be interpreted in a much broader context.
- In our view, LNG is not a single solution for security of supply and may even work against the UK if gas prices elsewhere are higher.

171. Chapter 7: Priority Areas for Action

- In our view, bringing to bear the power of an open and competitive market place through completion of the liberalisation process is imperative. The challenges Europe faces in delivering against its energy policy objectives will be fundamentally more difficult without the benefits of truly efficient markets, particularly with respect to stimulating capital investment and thereby enhancing security of supply.
- In principle, we support expanding the degree of inter-connection between Member States across Europe, through completion of the physical electricity and gas networks, although caution the Commission to be wary of the associated challenge in implementing common rules, standards and bases for contracting between counterparties. The Commissions role in this area should include completing the unbundling process through the separation of supply and generation assets from transmission and distribution assets.
- We do not support the creation of a single European energy regulator—in our view, individual Member States should focus on ensuring existing national energy regulators are truly independent, have the necessary range of powers and operate in a way which is consistent with established best practice.
- While we support improving the transparency of energy infrastructure capacity across Europe, we believe that the completion of the liberalisation process will go a long way towards resolving the issues which currently exist (including, for example, the problems experienced by the UK in Winter 2005/06). In this context, despite neutral or positive comments from witnesses in evidence, we do not believe that the case has been proven for the development of a European Energy Supply Observatory. Further, we do not agree with the need for a revision of Community legislation on gas stocks, which should be a matter reserved for individual Member States, as a consequence of local and regional differences between markets.
- We agree that diversifying across a broad range of energy sources is critical to meeting the Commission's main policy objectives, and in particular enhancing both security of supply and sustainability. However, we do not believe that setting a European-wide energy mix benchmark is

appropriate, as local circumstances vary widely. In our view, markets are best placed to determine the specific technologies and related proportions within the overall mix and stability through a long-term policy framework is critical to facilitating such investment, thereby providing incentives for the research, development and deployment of new technologies.

- We endorse the Green Paper's call for an Action Plan on energy efficiency—action to reduce the demand for energy and increase the proportion of renewables in the energy mix are both vitally important goals. However, we do not believe that setting targets is appropriate, as local circumstances vary widely—as with decisions around the energy mix, markets are best placed to determine how to achieve policy objectives in an efficient manner.
- We also encourage the Commission to respond as a matter of priority to the early experience around the EU ETS, with reference to broadening the scope of the scheme to cover other sectors, significantly increasing the term of the scheme, reviewing the rigour and integrity of the headline targets for carbon reduction, and considering the basis on which allowances are allocated, particularly with respect to using an open auction process. Despite the apparent short-comings of the scheme as it stands, the evidence provided to us in our investigation had a clear consensus—the EU ETS has the ability to make a real difference in Europe—and there is also a genuine opportunity for Europe to take the lead in the creation of a global carbon market.
- We endorse the Commission's proposals for a Strategic Energy Technology Plan. We note that the EU ETS has a key role to play in integrating the cost of carbon into energy prices—consequently the success of the scheme will ultimately be key in delivering new energy technology innovation, making low-carbon sources of energy competitive as compared to fossil fuel technologies.
- We endorse the Commission's proposals on developing a coherent external energy policy. Such a framework, if properly defined, will allow participants in energy markets across Europe to negotiate with third parties in a manner consistent with the delivery of the main policy objectives.

APPENDIX 1: MEMBERSHIP OF SUB-COMMITTEE B

The Members of the Sub-Committee which conducted this inquiry were:

Baroness Eccles of Moulton
Lord Fearn
Lord Fyfe of Fairfield
Lord Geddes
Lord Haskel
Lord Roper
Lord St John of Bletso
Lord Swinfen
Lord Walpole
Lord Woolmer of Leeds (Chairman)

Declarations of Interests:

A full list of Members' interests can be found in the Register of Lords Interests:

http://www.publications.parliament.uk/pa/ld/ldreg.htm

Members declared no interests relevant to this inquiry.

APPENDIX 2: CALL FOR EVIDENCE

1. The Internal Market Sub-Committee (Sub-Committee B) of the House of Lords Select Committee on the European Union is undertaking an inquiry into issues raised by the European Commission's Green Paper: "A European Strategy for Sustainable, Competitive and Secure Energy."

2. The Green Paper says that an approach based solely on 25 individual energy policies is not enough, that Europe must act urgently and that a new European market is needed. The Paper puts forward suggested options "that could form the basis for a new comprehensive European energy policy" and identifies "six key areas where action is necessary." These are:

- Competitiveness and the internal energy market—Is there agreement on the fundamental importance of a genuine single market to support a Common European strategy for energy?
- Diversification of the energy mix—What should the EU do to ensure that Europe, taken as a whole, promotes the climate-friendly diversification of energy supplies?
- Solidarity—Which measures need to be taken at Community level to prevent energy supply crises developing, and to manage them if they do occur?
- Sustainable development—How can a common European energy strategy best address climate change, balancing the objectives of environmental protection, competitiveness and security of supply?
- Innovation and technology—What action should be taken at both Community and national level to ensure that Europe remains a world leader in energy technologies?
- External policy—Should there be a common external policy on energy, to enable the EU to speak with a common voice?

3. The Green Paper expands on these issues and makes a number of proposals for future actions.

4. Sub-Committee B's inquiry will focus on **three questions**:

(a) Does the Green Paper correctly identify the key issues for future energy policy in the European Union?

(b) Does it appropriately identify those issues where, in future, the EU acting as a whole should be responsible for policy development and action?

(c) Does it appropriately identify those issues where, in future, Member States should be responsible for policy development and action?

APPENDIX 3: CORRESPONDENCE WITH THE MINISTER

Letter from Mr Malcolm Wicks MP, Minister for Energy, Department of Trade and Industry to the Lord Grenfell, Chairman of the Select Committee on the European Union

EM 7070/06, COM (2006)105: UK RESPONSE TO EUROPEAN COMMISSION GREEN PAPER: A EUROPEAN STRATEGY FOR SUSTAINABLE, COMPETITIVE AND SECURE ENERGY

Following my appearance before your committee on 5 June 2006, I have pleasure in attaching copies of the UK's interim response to the European Commission on its Energy Green Paper ("A European Strategy for Sustainable, Competitive and Secure Energy"). The response comprises a covering letter, a 6-page summary and a 30-page response (30 page response not included herewith). As noted in the covering letter to DG TREN of 23 June, the UK will provide a supplemental response in September after the Energy Review has reported, but before the end of the Commission's consultation process.

Copies of the UK's interim response have already been sent to Jimmy Hood MP and to the individual members of the House Commons European Scrutiny Committee following my participation in the European Standing Committee C debate of 27 June.

I am also copying this letter to the Clerk of your Committee, Les Saunders (Cabinet Office European Secretariat) and Alison Bailey (DTI Scrutiny Coordinator).

4 July 2006

UK response to the Commission Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy

SUMMARY AND PRIORITY ACTIONS

The UK welcomes the Green Paper which provides a good framework for developing a European approach to energy policy. As the conclusions of the Spring European Council 2006 recognised it is an important step building on the agenda set by Heads of State and Government at Hampton Court.

This paper sets out the UK's initial thinking on some of the proposals in the Green Paper. The ongoing UK Energy Review precludes a complete response at this stage, but the UK expects to be able to submit such a response before the end of the Commission's consultation period.

The UK shares the Commission's analysis that a coordinated European response to global energy policy challenges is necessary which can contribute to economic growth, ensure security of supply and protect the global environment. In particular the UK would identify 3 key challenges on which the EU must cooperate:

- the need to complete the single market for energy
- the need to ensure diverse and reliable supplies in the face of Member States' increasing dependence on external energy sources
- the need to ensure that our energy policy is compatible with, and reinforces, our climate change objectives

Strategic EU Energy Review

The UK strongly endorses the proposal to establish a framework for regularly reviewing the EU's energy policy and identifying an action plan for endorsement by the European Council. To be most effective the Strategic Energy Review must identify specific proposals for action at the appropriate level, focussing on the key challenges described above. In particular, the Strategic Energy Review should provide information to the market about market developments and review the state of the EU's external energy dialogues. The UK supports the Commission's intention to bring forward the first Strategic Review for the December European Council to enable preparatory discussions to take place.

Action to complete the internal gas and electricity markets

The UK agrees with the Commission that rapid completion of the internal market is a priority. Concrete proposals that should be considered should be identified in the first Strategic Review.

- Development of a European Grid: The UK agrees that barriers to cross-border trade need to be removed through a common approach on regulatory issues that affect cross-border trade and investment although it is not necessary to develop a European Grid Code as the term is generally understood. Nor is it necessary to establish new institutions such as a European regulator or European Centre for Energy Networks. Rather the focus should be on enhancing cooperation and information exchange between national regulators and TSOs, promoting transparency of markets and ensuring the independence of national regulators, with sufficient powers for them to be able take into account cross-border issues.
- Improved interconnection/Creating the framework to stimulate new investment: The first step must be to ensure effective use of existing capacity through congestion management procedures and scrutiny of grandfather rights. New investment in interconnection should be led by the market; action should therefore focus on establishing a clear and consistent regulatory framework that facilitates cross-border investment. Specific action should include broadening the remit of national regulators (see above), clarifying the regulatory treatment of long term contracts and streamlining planning procedures.
- More effective unbundling: The UK agrees that effective unbundling is a priority to achieve a genuinely competitive market. Experience of legal unbundling suggests further action is necessary. If independent network operation cannot be ensured under the existing framework the UK would support ownership unbundling.
- Boosting competitiveness through better coordination between regulators, competition authorities and the Commission: The UK strongly supports steps to improve cooperation between relevant authorities in order to underpin establishing and developing an efficient and effective internal market. Strict application of competition rules and enforcement of EU legislation are both necessary. Existing initiatives such as regional cooperation launched by ERGEG and the European Competition Network should be built upon.

Ensure the internal market guarantees security of supply: solidarity between Member States

- Review of EC legislation on oil and gas stocks/Improved transparency on energy stocks: The UK supports the IEA lead on oil emergencies in view of the oil market's global nature and successful response to Hurricane Katrina. Efforts on improving transparency of oil stocks should focus on the quality and relevance of the existing data provided rather than increasing the frequency of publication. The UK is reviewing gas security of supply in the context of the UK Energy Review.
- Establish a European energy supply observatory, enhancing transparency: Information about and analysis of the EU energy market is essential for proper market functioning, but new institutions are not necessary to achieve it.
- Improved network security through increased cooperation: Enhancing cooperation between TSOs would enable sharing of best practice in emergency planning. Existing coordination mechanisms at Government level, such as the IEA on oil and the EU's Gas Coordination Group (Directive 2004/67/EC) provide appropriate fora for providing any added valued at that level.
- Greater physical security of infrastructure: the UK does not consider work on critical infrastructure protection, with a view to establishing common standards, adds value to EU energy infrastructure protection. Infrastructure should be protected on a risk-assessed basis; common standards are very unlikely to deliver an appropriate answer in all cases. What is proposed duplicates existing responsibilities and measures or is otherwise unnecessary.

The UK firmly believes that the make-up of a nation's energy mix is a matter of subsidiarity. In the UK, the market, within an overall policy framework set by the Government, determines the fuel mix. The UK, however, does support the development of an overall strategic objective based on an EU wide energy mix benchmarking assessment. The UK envisages that this exercise would evaluate the EU mix composition in terms of sustainable energy use, competitiveness and security of supply and would form a strong evidence base for the development of future objectives proposed in the annual Strategic EU Energy Review to be agreed by the Council and Parliament.

Dealing with the challenges of climate change in a manner compatible with Lisbon objectives

The UK agrees with the emphasis on ensuring EU policy on energy and climate change are compatible and reinforce each other. Clean energy technologies, renewables and energy efficiency have a key role to play in reducing carbon emissions. In this context, the EU Emissions Trading Scheme is the most effective market based instrument for both delivering climate friendly energy production and improving security of supply. We should try to extend this to third countries. Agreement on the long-term shape of the scheme will provide the certainty needed for investment decisions and promoting low-carbon technologies.

- Prioritising energy efficiency: The UK agrees this is the most effective way of addressing our energy security, environmental and competition objectives. The Energy Efficiency Action Plan should be ambitious and realistic, and incorporate a long-term focus going beyond Kyoto commitments. The focus should be on creating a framework for action by Member States, which recognises the different circumstances they face and provides the flexibility for tailored action. This approach should be applied to the range of specific actions proposed by the Commission.

- Adopting a road-map for renewable energy sources: The UK supports this proposal which should help maintain EU leadership in renewable energy. The road-map should be centred on the establishment of a strong market framework and policy measures to provide the incentives necessary to deliver our clean energy goals. Consideration of specific proposals on targets, new legislation on heating and cooling, bio-energy and bringing renewables energy sources closer to markets will need to be judged against whether they support the overall objective and whether they could be effectively implemented.

Strategic energy technology plan

The UK supports the proposal to establish such a plan to facilitate prioritisation and effective support mechanisms. Reviewing financing mechanisms for a more strategic approach, particularly with a view to mobilising the EIB to promote near market R&D is required. The UK believes that clean energy technologies and energy efficient technologies should form the cornerstone of the proposed Technology Plan.

A common external energy policy

The UK strongly supports developing a clearly defined external energy policy which is pursued consistently at every level and promotes a more collective dialogue with our major suppliers, current and potential transit countries, and major energy consumer nations. This needs to be developed in a transparent and open manner to ensure it commands the support of all involved. Existing partnerships, dialogues etc need to be reviewed.

The UK agrees that energy should be integrated into other policies with an external dimension. Much greater focus ought to be placed on climate change, energy efficiency, global market access, investment trends and security of energy supplies in relations with global partners. The EU should consider widening the geographic scope of the EU ETS and making concrete use of trade policy tools to support the European Energy Policy.

- Identify priorities for the construction of new infrastructure necessary for the security of EU energy supplies: The UK supports increasing transparency and the availability of accurate intelligence and analysis on all aspects of demand and supply, including potential priorities for the development of new or upgrading of existing infrastructure. An approach based on the increased availability of reliable information to enable market operators to make fully informed decisions will stimulate competitive investment. The EU should not be prescriptive about the interconnections that should be built.

- a pan-European Energy Community: the UK strongly supports the extension of the Energy Community Treaty to Turkey, Ukraine and Moldova. A similar approach should be adopted, through Euromed arrangements, to extend the principles to Euromed partners.

- a new energy partnership with Russia: the UK is prepared to consider a new initiative with Russia, within the framework of the PCA successor arrangements, only if it is based on fair and reciprocal access to market infrastructure including third party access, Russian ratification of the Energy Charter Treaty and Transit Protocol.
- reacting effectively to external crisis situations: the UK considers that our efforts might be better directed at bringing together foreign policy and energy experts, under existing mechanisms to fulfil the necessary horizon-scanning and emergency co-operation functions.
- deepening energy partnerships with producers, transit countries and other international actors: the UK supports active engagement with key players particularly in the Caspian, Central Asia and Mediterranean states. The dialogues should have clear and focused objectives, be transparent and have the active involvement and support of Member States. Initial priorities should be to facilitate the transport of Caspian oil and gas, and co-operation with Algeria, which is capable of producing tangible results
- international agreement on energy efficiency: a co-ordinated global agreement on energy efficiency could have merit, depending on what it might actually contain and how it would interact with, or build on, the existing range of international initiatives to promote energy efficiency.

23 June 2006

APPENDIX 4: LIST OF WITNESSES

The following witnesses gave evidence. Those marked * gave oral evidence.

*	Association of Electricity Producers
	British Nuclear Fuels PLC
	BP
*	Centrica
*	Department of Trade and Industry
*	Energy Intensive Users Group
*	E.ON UK
*	Gas and Electricity Markets Authority
	International Association of Oil & Gas Producers
	International Energy Agency
	Sir Donald Miller F.Eng. FRSE
	National Grid
	Nuclear Industry Association
*	Office of Gas and Electricity Markets (Ofgem)
	RWE npower
	Shell U.K. Limited

APPENDIX 5: RECENT REPORTS

Recent Reports from the Select Committee

Session 2005–06

The Services Directive Revisited (38th Report, HL Paper 215)

EU Legislation—Public Awareness of the Scrutiny Role of the House of Lords (32nd Report, HL Paper 179)

Ensuring Effective Regulation in the EU: Follow-up Report (31st Report, HL Paper 157)

Annual Report 2005 (25th Report, HL Paper 123)

The Work of the European Ombudsman (22nd Report, HL Paper 117)

Scrutiny of Subsidiarity: Follow up Report (15th Report, HL Paper 66)

Evidence from the Minister for Europe—the European Council and the UK Presidency (10th Report, HL Paper 34)

Ensuring Effective Regulation in the EU (9th Report, HL Paper 33)

Evidence by Commissioner Franco Frattini, Commissioner for Justice, Freedom and Security on Justice and Home Affairs Matters (1st Report, HL Paper 5)

Reports prepared by Sub-Committee B (Internal Market)

Session 2005–2006

Seventh Framework Programme for Research (33rd Report, HL Paper 182)

Including the Aviation Sector in the European Union Emissions Trading Scheme (21st Report, HL Paper 107)

Completing the Internal Market in Services (6th Report, HL Paper 23)

Session 2004–2005

Liberalising Rail Freight Movement in the EU (4th Report, HL Paper 52)

Session 2003–2004

Packaging and Packaging Waste: An Update Report (33rd Report, HL Paper 198)

Services of General Interest (29th Report, HL Paper 178)

Gas: Liberalised Markets and Security of Supply (17th Report, HL Paper 105)

Directors’ and Auditors’ Liability (15th Report, HL Paper 89)

Minutes of Evidence

TAKEN BEFORE THE EUROPEAN UNION (SUB-COMMITTEE B)

WEDNESDAY 3 MAY 2006

Present	Geddes, L	Swinfen, L
	Haskel, L	Walpole, L
	Roper, L	Woolmer of Leeds, L (Chairman)
	St John of Bletso, L	

Memorandum by Centrica

1. *Does the Green Paper correctly identify the key issues for future energy policy in the European Union (EU)?*

1.1 Centrica welcomes the Commission's new Green Paper on Energy as a tool for debate on how the EU can develop a more effective and coherent common policy for energy. We support the principle that the policy should meet the three core objectives of: security of supply, competitiveness and sustainable development. These objectives should have equal priority on the basis that achieving one is not possible without the others.

1.2 In particular, we welcome the Commission's assertion that a sustainable, competitive and secure energy supply will not be achieved without open and competitive energy markets. Failure to liberalise EU energy markets will both compromise security of supply and contribute to higher prices for UK consumers. The UK Treasury recently said failure to open up the gas market to competition meant that Europe's energy consumers will pay an estimated £40 billion pounds of extra costs this year. With the cost to UK consumers and businesses estimated at £10 billion.[1]

1.3 We agree that recent moves towards protectionism and support for dominant national players will not strengthen Europe's global competitiveness. Current proposed mergers, such as GDF-Suez in France and Belgium and Endesa-Gas Natural in Spain, will further strengthen monopoly positions that are already excluding competitors from local markets. Furthermore, the consolidation of existing dominant positions in gas access to Belgium and thus to the UK gas interconnector (IUK) could disadvantage UK consumers.

1.4 The Green Paper identifies a wide range of issues for Europe's future energy policy. We agree that the key issues for debate have been identified within the paper. From these some of the main issues of importance for the UK and wider EU gas and electricity markets include: enhancing security of supply in the internal market; completing the internal market; increasing information transparency; achieving effective third party access to and interoperability of Europe's energy networks; securing constructive relations with producing countries and creating an integrated policy approach to climate change that supports EU competitiveness.

1.5 We comment on some of these issues in greater depth in Sections 3 to 7.

2. *Does it appropriately identify those issues where, in future, the EU acting as a whole should be responsible for policy development and action? Does it appropriately identify those issues where, in future, Member States should be responsible for policy development and action?*

2.1 The EU should be responsible for ensuring delivery of a fully effective internal energy market and bringing forward new proposals if existing measures are not effective. The EU also continues to have a role to play in setting a common framework for the contribution of Member States to meet the region's climate change commitments. We agree that the EU should also take the lead in a common external policy on energy, for example, by promoting relations with the main energy producing nations and neighbouring countries through which gas is transported.

[1] UK Treasury *The case for open markets: how increased competition can equip Europe for global change,* 10 April 2006.

3 May 2006

2.2 Member States should retain responsibility for decisions on fuel mix (including primary production and the contribution of nuclear energy), energy taxation and national security measures covering energy installations. Member States also have a responsibility for implementing the internal market to meet the spirit of the Gas and Electricity Directives.

2.3 Both the EU and Member States have a role to play in providing an environment that supports commercial investment in energy infrastructure and new gas sources.

3. *Completion of the internal market*

3.1 Full implementation of the 2003 Gas and Electricity Directives and Electricity Regulation[2] and 2005 Gas Transmission Regulation[3] must be a priority. We agree that **further measures on unbundling** will probably be needed. More needs to be done to improve information transparency in Continental Europe. Suppliers are still not getting the information they need from system operators. Clearer short and medium-term information is needed, for example on system capacity availability and usage, aggregate system status, gas balancing actions taken and maintenance.

3.2 It is not fully clear what the Commission intends by a **European grid code**. Certainly implementation of more harmonised gas and electricity network conditions would facilitate both competitive energy trade and security of supply. Some harmonisation is already being pursued via the European Regulators Group Electricity and Gas (ERGEG) and the Madrid and Florence regulatory forums. Problems arise from a lack political will by Member States to support these existing processes and proper implementation of the legislation mentioned in 3.1.

3.3 Equally a **European Centre for Energy Networks** is suggested as a formal body bringing together network operators, but existing structures exist in the form of the European associations for gas and electricity transmission system operators (GTE and ETSO respectively) and the Madrid and Florence forums.

3.4 We do not see an immediate need for a **European energy regulator**, even if its responsibility is limited to cross-border issues. The priority should be to set mandatory minimum levels for the powers and independence of national regulators. In particular, national regulators should be given the power to oversee the implementation of network unbundling. Enhanced coordination and collaboration between national regulators can be achieved via existing mechanisms such as ERGEG.

3.5 The Commission should not be given the power to direct investments in gas and electricity interconnectors between Member States. The focus should be on ensuring that unbundled transmission system operators (TSOs) are incentivised to develop their networks and that the market can signal the need for new investment in interconnection. Any **priority interconnection plan** should focus on accelerating authorisation processes, in particular planning.

4. *Diversification of the energy mix*

4.1 We agree that each Member State and energy company should be free to choose its own energy mix.

4.2 The Green Paper does not set a clear framework or objective for the proposed **Strategic EU Energy Review**. It could create substantial investment uncertainty if common EU energy policy is routinely open to renegotiation each year. We suggest that a Strategic EU Energy Review be limited to a statistical review of the status of EU energy markets and implementation of agreed policy objectives. This could be produced by the proposed European Energy Supply Observatory.

5. *Solidarity and security of supply*

5.1 The EU has already adopted a **legislative framework** for security of supply in two directives—in 2004 for gas[4] and in 2006 for electricity[5], with implementation dates of May 2006 and February 2008 respectively. These include provisions for Commission monitoring, national emergencies and (for gas) community coordination in the case of a major supply disruption. We believe that these measures provide a largely sufficient common framework and substantial revision is not required.

[2] 2003/55/EC Gas Directive, 2003/54/EC Electricity Directive and 1228/2003 Regulation on conditions for access to the network for cross-border exchange in electricity.

[3] 1775/2005 Regulation on conditions for access to the natural gas transmission networks.

[4] 2004/67/EC Directive concerning measures to safeguard security of natural gas supply.

[5] 2005/89/EC Directive concerning measures to safeguard security of electricity supply and infrastructure investment.

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5.2 The creation of a **European Energy Supply Observatory** focusing on the monitoring and publication of supply and demand information could enhance market transparency and support investment decisions, especially in gas and electricity where public data is limited on the Continent. The "observatory" should consist of a small team within DG Tren using the large amount of information that Member States are already providing to the Commission. A new EU body is not needed.

5.3 We do not believe that a **new legislative proposal setting national gas stocks targets** is required. We do not see any immediate need for strategic storage in the sense of a "stand by" reserve for release in exceptional circumstances set by the government or the EU. The UK market is focused on the immediate priority of developing more commercial storage and is delivering in this regard. In total, the market is bringing forward investments that will double existing storage levels by 2008. New commercial storage investments have also been announced in mainland Europe.[6] A requirement to build strategic storage would deliver the opposite of what is intended, as players in the competitive market reduce investment in their own storage facilities, including much needed commercial storage.

5.4 Furthermore, Member States have different national requirements for storage. For example in the UK customers requiring a 100 per cent guaranteed supply are only a proportion of the overall market and substantial alternative sources of flexibility are available to UK suppliers. These customer groups can be safeguarded through other mechanisms including flexible procurement contracts, self interruption and fuel switching Combined Cycle Gas Turbines (CCGTs) and large end-user customers, and firm access to gas markets and transmission infrastructure on the European mainland. A significant amount of flexibility will also continue to be available via United Kingdom Continental Shelf (UKCS) production and increasingly from Liquefied Natural Gas (LNG) coming into the new regasification terminals. Whilst, gas imports to the UK will increase, the market is on its own initiative pursuing a strategy of diversification of gas sources and routes—with new gas coming from Norway, the Netherlands, Malaysia, Qatar and Africa.

5.5 The Commission should focus on ensuring more open, liberalised access to storage on the Continent combined with a more flexible approach from countries such as France, where there is a unduly conservative tendency to hold gas in their own storage rather than release it in response to high market prices in neighbouring markets. More generally, the Commission could also consider the effect that differing national security of supply standards have on gas trade and work with national regulators and governments to minimise undue market distortions.

6. *Sustainable development*

6.1 The Commission intends to propose an Action Plan on Energy Efficiency in 2006. We believe that energy efficiency can have a substantial role to play in mitigating the environmental effects of an increasing demand for energy whilst contributing to security of supply. It also has an important role to play in reducing fuel poverty and can mitigate the effects of rising energy prices by reducing household demand. Centrica believes that in general market-based practices and incentives are preferable to regulation as a way of encouraging energy efficiency, although we accept that regulation may be preferred by governments in certain circumstances. The design of any future European incentive or regulatory scheme should neither undermine current energy efficiency schemes at Member State or EU level, nor adversely affect competition.

7. *Innovation and technology*

7.1 We generally support the proposal for joint technology initiatives to accelerate the development of promising energy technologies and "leading markets" for innovation.

8. *External policy*

8.1 We would support a renewed emphasis on EU-led dialogues with producing countries to support security of supply and competitive markets. There are some stakeholders who argue that the only way of securing future gas supplies from producing countries is to create a small number of very large gas supply companies in Europe. We believe that creating a supplier oligopoly to deal with a producer oligopoly will not guarantee supply and will ultimately be detrimental to the competitiveness of the European economy. EU-led dialogues with producing countries as proposed in the Green Paper are the preferred route for mitigating producer power and negate the argument for further major consolidation.

[6] For example Gasunie Trade & Supply recently announced that it is considering investing up to one billion Euros in gas storage on the Dutch side of the Balgzand-Bacton Line (BBL).

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8.2 We believe that the EU should pursue ratification of the Energy Charter Treaty by Russia and continue with initiatives to promote the adoption of EU internal market principles by neighbouring states, such as the South East European Energy Community Treaty signed under the UK Presidency.

18 April 2006

Examination of Witnesses

Witnesses: Mr Phil Bentley, Group Finance Director and Managing Director for Europe, Centrica, and Mr Jake Ulrich, Managing Director, Centrica Energy, examined.

Q1 ***Chairman:*** Good afternoon, Mr Bentley and Mr Ulrich. May I extend to you a warm welcome to the Select Committee this afternoon and also thank you for your written evidence. Like other witnesses, you welcomed the Green Paper, but then you proceeded to give a lot of reasons why you disagreed with it, so we will try and square that circle and explore some of those issues this afternoon. Time is terribly tight. We have got just forty-five minutes we want to aim at. If you would like to make an opening statement, do, but please keep it short. We have lots of questions to ask you.

Mr Bentley: My Lord Chairman, thank you very much. Just by way of introduction, I am Phil Bentley. I am the CFO of Centrica, on the board for the last five and a half years. I am also our managing director for our commercial interests in Europe. I am joined also by my colleague, also from the board, Jake Ulrich, who is responsible for all the upstream procurement for both gas and power, in particular trading, which of course is a big issue for us in the European market. I think Centrica is better known by its brand name British Gas. We have been through all the liberalisation of the market many, many years before, but we are one of the few new entrants, if you like, into the European market. We have interests in Spain, a new office we have just opened in Germany, in Holland and in Belgium, and I think we are quite well-equipped to describe how difficult it is to do business against entrenched monopoly incumbents. I think that is one of the points I would just make at this point, that when the UK industry was liberalised the natural monopoly assets (these are the gas pipe lines and the high voltage networks) were actually separated from other commercial activity and therefore ownership of those assets in the UK do not convey any commercial advantage in, say, generation and supply. That was a key plank to the UK deregulation. What we have in Europe, though, are still very much integrated incumbents which have got control both of monopoly assets as well as commercial assets, and as a consequence of that it is very difficult to compete when these monopoly assets are held by incumbents. I think that was the one point I wanted to just leave with my Lords at this point. Clearly, we do welcome the Green Paper. I think the key issue for us of the three elements of sustainability, competition and security of supply is that we would argue that competition is one of the key elements we are very much in favour of seeing a lot more of. Therefore, we see competition in the UK, we see competition in our business in North America, but we are not seeing, in our view, enough competition in Europe. I think that is probably all I would want to say at this point.

Chairman: I can promise you we will come back to those points during the course of this session.

Q2 ***Lord Swinfen:*** My Lord Chairman, I should start by declaring an interest as I have a few shares in Centrica; not very many, it certainly does not make me a wealthy man. I am interested to know, bearing in mind there have been energy policy reviews both in the United Kingdom and in Europe over the last few years, why do you think the Commission has decided on an energy review now? What has changed since the last review, and do we really need another review?

Mr Bentley: I think there is a good question there, because clearly there was a Green Paper in November 2000 and since then we have had a number of directives across Europe for bringing in competition both in gas and electricity. I think it probably is timely at the moment. If you look at some of the energy trends and analysis of usage over the next twenty years or so, then clearly the environmental impacts are there to be considered, and we can touch on that. I think also, as we are importing more and more gas from outside of the European markets, then again we need to look at how we best secure supply of that gas. I think the third point that we have had these directives, but the fact is, frankly, the markets are not functioning well for competition today in Europe. So we have a number of inquiries going on through the European Commission today. We have DG TREN, transport and energy, who are looking at benchmarking, seeing exactly how did these directives get implemented, and the fact is they have not been implemented in a standardised way and they have not fixed some of these incumbent advantages. We also have DG Comp, the Competition Commission, looking at a sector inquiry and they have actually concluded that today the market is malfunctioning. Those are their words, and quite strong words coming out of the Commission, and on top of that we are seeing some quite major consolidation moves in the industry and I think it is

timely that we consider what some of those effects are having. If we take, for example, Spain where the monopoly gas business is trying to buy the largest electricity company. The effect of that would mean that these markets will be so-called foreclosed (i.e. closed for competition) before the directives are actually implemented. So we would say it is quite timely in a way to have a review of the competition impact, the longer term view on the environmental impacts and then just understand where some of the security of supply concerns could actually be met. I think Jake has some points on that as well.
Mr Ulrich: Last November the Commission also released a review of the 2003 gas and electricity directives and they found very poor levels of implementation there, so we do not see an opening up in the ability to compete on a level playing field in Europe as it currently stands. Again, we are very sold on the idea of competition. If you look at the end-user energy prices, both pre and post caps, despite all the wholesale price increases in the UK we are still lower than the EU15 as far as customer pricing is concerned.

Q3 ***Lord Swinfen:*** You say that the market is not working all that well at the moment. Will the directives not skew the market even further? Would it not be better to let the market sort itself out?
Mr Bentley: The key question is where the detail is. If we just take something as simple as the Green Paper suggesting that we have a European regulator or a European code of network access, I think you have got to understand what that actually means when you get into the detail. I think if you argue, justly, for competition, we live and die in competitive markets, we are only operating in so-called competitive markets, so we are the champions, if you like, of competition. But if you are looking at things like environment impact, for example, how do we set policy for the next twenty, thirty years on CO2 emissions, competition is not really going to fix that. How do we set targets for renewable, sustainable generation, for example? I think they are the areas where we would argue it is quite timely for the review now to look at some of those longer term targets.
Chairman: I think that neatly leads us to the second question.

Q4 ***Lord Haskel:*** In your paper you welcome the Commission's policy pillars of sustainability, competitiveness and security of supply. What do you think are the real underlying objectives of this, and do you think they have been correctly identified? Are there any things which are unclear, or do you think they do in fact cover everything that we need to be studying?
Mr Ulrich: Broadly, I think those three are correct. The devil is in the detail. The question is, just at the Green Paper stage, there is some vagueness and some lack of clarity around that and how implementation would go forward. There are proposals, for instance, about how the bridge should operate and what the specific code should be, but there is not a lot of detail around that. There are some overlapping areas within the proposal, the European energy for energy networks, for instance, where there is already a group which is put together to look at how both gas and transmissions grids operate. So, again a little bit vague and unclear, but generally we do not disagree with the three primary objectives.
Mr Bentley: I think if you look at the competition, competitive markets, that is all about making sure that Europe does not price itself out of the competitive world because its energy prices are higher than the US, for example. It is interesting, coming back to the UK point, that our industry still enjoys lower energy prices than the European industry and that must be an advantage competitively. So if you go right back to the Lisbon agenda of creating in Europe a competitive market force, then competition is clearly right on the agenda. The other part of the triangle, if you like, is Kyoto, and again Europe has committed to the environmental reduction of CO2 into the atmosphere and I think it is right that therefore sustainability is there as part of this Green Paper. I think the third one is obviously, as you have said, this point about security of supply. As we increasingly reduce reliance upon the UK indigenous North Sea production, we are having to get it from Nigeria, Russia and Algeria and we need to ensure that from a long term policy point of view the lights are going to stay on. I think they have addressed the key issues there.

Q5 ***Lord Haskel:*** Do you think these pillars are perhaps mutually exclusive? For instance, if we are going to be competitive, will it be at the cost of sustainability? If we are going to have security of supply, how can we choose whether it is sustainable or not?
Mr Bentley: That is a very good question because there is undoubtedly a tension there, because green power is more expensive, I am afraid, than dirty power today. One of the good things of higher oil prices is that actually now offshore wind and onshore wind becomes competitive in today's market place, so maybe we are responding to market forces. But clearly with the UK, for example, its Kyoto targets of a total reduction by 2015, the delta of reduction is equivalent to what China pumps out incrementally every year. So we cannot do this on our own and it is almost unfair if Europe has a set of environmental policies which make for more expensive prices compared with the world, but I think they are on the

right track and they are right in taking the lead and trying to square that circle.
Mr Ulrich: I think the angle is promoting economic growth in Europe without necessarily directly linking that with growth in energy and greenhouse gases.

Q6 ***Lord Roper:*** In terms of security of supply, you do have reservations about a new legislative proposal for national gas stock targets?
Mr Bentley: Yes, we do. The fact is that if you look at the oil industry, it is grappling with Middle Eastern suppliers quite effectively without a lot of market interference, if you like. We talk about how governments in the EU are interfering with market signals, but as long as the market signals are allowed to prevail then our view is that industry will respond to those market signals and make the investments which are required.
Mr Ulrich: I think you have to look at each country specifically. If you look at France, the geology is different, they can use aquifers for storage. Germany has aquifers for salt domes, also some depleted fields. In the Netherlands, quite a few depleted fields are available. We have some offshore fields available, but we also have different commercial interruptability of contracts, we have a lot of swing on our beet supply, so there are other ways of going about it than just prescribing specific stock levels.

Q7 ***Chairman:*** Could I just come back to Lord Haskel's point. You say that you agree on the objectives of competitiveness, security of supply and sustainability. What do you think the Commission means by an objective of "security of supply"? You could not run a business which said that is an objective. Somebody would say, "What do you mean by this?" So what do you think the Commission means by "security of supply" and what do they mean by "sustainability"? Take security of supply.
Mr Bentley: It is back to where the devil is in the detail. What we mean by "security of supply" is ensuring that a variety of investments are made in the UK such that there is no one supplier that the country is reliant upon. Therefore, British Gas has been assigned long term contracts to bring gas from Norway on a new pipe line which is coming in to east Yorkshire. We have a new pipe line coming in from Holland to East Anglia. We have LNG arriving on ships in Kent, we have got LNG arriving on ships in Pembrokeshire, and we have got an interconnector existing between ourselves and Belgium. All of those are enabling us to diversify our sources of supply and therefore we would argue that is how we achieve security of supply. That, if you like, is a UK model or a Centrica model. Let us take a potentially German approach, E.ON, who are the incumbent. The larger electricity company bought the incumbent gas company. Their idea of security of supply is, "Let me sign a deal with Gazprom for the good of Germany, a bilateral deal. Let's not have too much competition in my home market because it will make it more difficult. Give me my home market and I will secure bilaterally a long term deal with a third party." It is a very different approach. Our view is that in the long term the UK model responding to economic signals is, we will deliver greater security of supply. So I think in terms of your question, is the EU clear on what it means as a remedy, I do not think it is and I think that is part of the debate which needs to be had through the Green Paper. What do they mean by that?
Mr Ulrich: Clearly, it is not only diversity of supply sources, it is diversity of fuel types.

Q8 ***Chairman:*** What you have demonstrated in those two contributions, one very brief but to the point, is that it is not absolutely clear what are the objectives of security of supply. You have said that Germany might have a quite different view to the UK. The European Union has said that a key objective is security of supply. What do you think they mean by that at a European level?
Mr Bentley: We come back to the same point, that the European Commission, certainly DG TREN, Mr Pielbags the minister there, would like to be sure that particularly gas is flowing in in reliable volumes in the quantities that Europe needs. Beyond that, in terms of how that is best achieved, I do not think that has been fully thought through, quite frankly.

Q9 ***Lord Haskel:*** Do you think they thought through how they could achieve this without any interruption, because it is the interruption which is the crisis?
Mr Bentley: Again, that is one of the concerns post the issues with Gazprom and the Ukraine. Our view is that that is overplayed, actually, and that Gazprom has been a very reliable shipper of gas, as has Algeria and other places, as has any number of Middle Eastern oil producers. Therefore, our view is, let the market respond to the market signals and diversify sources and, as Jake says, fuel types.

Q10 ***Chairman:*** Is there any possibility of a gas cartel like OPEC?
Mr Ulrich: I think there is some possibility in time. I think it would be more centred along the LNG producers, though. If you are strictly a pipe line gas shipper you do have limited options, but the LNG traders would have numerous options. So it would not surprise me if in five or 10 years you do see some confederation of the major LNG producers having some commercial agreements.
Mr Bentley: It is interesting that the EU has not responded to OPEC by creating a pan-European buying group for oil, so why is that required for gas, for example?

Q11 ***Lord St John of Bletso:*** Can I probe a little more on the competition, because you make the point very forcefully in your introductory comments that one of the problems Centrica has is doing business with "entrenched monopoly suppliers" and in your paper you went further, in fact you mentioned: "The UK Treasury recently said failure to open up the gas market to competition meant that Europe's energy consumers will pay an estimated £40 billion of extra costs this year. With the cost to the UK consumers and businesses estimated at £10bn." What do you think the chances are of the energy review having some chance of freeing up competition in this market? Putting that £10 billion in the context of the larger market, what percentage is that in terms of cost savings? We are seeing increasingly a convergence of companies offering gas, electricity and other utility costs and offering quite substantial savings. Apart from strict competition in terms of pricing, what other costs savings do you see?
Mr Ulrich: One point there is that £10 billion is about £186 per household in the UK, to give you some percentage.
Mr Bentley: So that is 20 per cent of the average bill today. The point of that calculation is that behind the issue there is that currently across Europe the price of gas is linked contractually with the price of oil and the argument on those calculations is that again if you broke up these monopoly entrenched positions and allowed any number of competitors to bring their gas into those markets, these linkages of gas to oil prices would break down and you would see gas competing in markets. What we saw in the UK was that as soon as British Gas was no longer the monopoly buyer of gas in the UK, BP, Shell and Esso started selling their gas directly into the market. So ICI would buy their gas not from British Gas but from the lowest supplier and that drove competition and drove down prices. The whole point about the security of supply discussion we have just had regarding the incumbent bilaterally controlling the home market is that you never break that linkage. So we would argue, separate the monopoly assets and allow competition so that if British Gas can bring its gas cheaper into France and win market share, it should be allowed to do so. Today it cannot do that.
Mr Ulrich: An example closer to home is, if you look at last November we saw gas prices at the NBP here in the UK of around £1.50 per therm. There was gas available at the Dutch/German border for 50 pence per therm. We could not access it because there was not the transportation capacity from that point through Netherlands, into Belgium and into the interconnector. The interconnector had the capacity. The right signals are not being sent in Europe. We do not have transparency. We do not know what capacity is available, what new build capacity could be available, and I think that is the idea. If we had more information, more transparency and the right price signals were being sent, we would see more infrastructure and we would see lower prices.

Q12 ***Lord Geddes:*** Apropos cartels—and you mentioned LNG—plucking it out of the air, the year 2010, what percentage of the UK market do you think will be covered by LNG?
Mr Ulrich: It could be as high as 20 per cent.

Q13 ***Lord Roper:*** Just on this unbundling issue, the Green Paper does say at one stage that if progress to a level playing field does not result, further measures at community level should be considered. Do you have any idea of the things you would recommend?
Mr Bentley: Yes, and I think that is where the DG Comp is looking at it very carefully now. It is breaking up ownership of monopoly assets which are conveying a competitive advantage. We could give a long list, as Jake said, a lack of market information, storage access. If I take Belgium as a market, Electrobel Gas de France, which is the proposed merger of Gas de France and Suez, will effectively have a monopoly on all the gas that is brought into the country. It has a monopoly on storage and balancing. It owns a monopoly on all the nuclear generation which, because the cost of which has been written off by the taxpayer, has a cash running cost much lower than any other form of generation. It is the majority shareholder in the gas network, it is the majority shareholder in the electricity network and it has 80-odd per cent of the supply business. Now, we are trying to compete against that and if we want electricity below our generation, we have got to buy it from Suez. If we want gas, we have got to buy it from them. They ship it, they see what we are doing with our customers, and it is a very difficult market to do business in. That is why we are very vocal at the moment against that proposed transaction. That is just one market. Germany has its own nuances, as does Spain. In Spain the government has set a price for electricity, a so-called tariff, which has not been allowed to flow back to the market signals and has not been allowed to flow upwards with the high cost of gas which generates the electricity. As a competitor, we have to buy from a pool price which is much higher than the so-called tariff, and yet to win customers we have to beat the tariff. The incumbents are paid what is called a "tariff deficit" between the two, but the new entrant does not get it. You cannot make money.

Q14 ***Chairman:*** This is all extremely helpful, the detail. What you have said in your submission is that all the necessary directives and regulations are all there and it is up to the DG Competition directors and others to enforce them, but then you provide a whole series of evidence, Germany, Belgium Spain, and it raises this question: we are in love with liberalisation but does anybody else in Europe really believe it? The framework is there, but it is not being implemented because politicians are not willing to do it. The Germans will say, smiling at us last winter, "Well, you guys, you like the market. Put up with the price it gave you. Look at us, we've got long term security." So is it that the British model is actually wrong?

Mr Bentley: I think it has to work within a framework which is compatible and the point which Jake made is that if there is excess gas in France and Germany that is not being transmitted in response to the UK signals, then we would argue that is not true competition. I think Europe at it heart still has the principle of competitive markets, so we will continue to push that.

Q15 ***Chairman:*** At the European level?

Mr Bentley: Yes. In the Netherlands, for example, we have been lobbying there and they are now separating out their electricity networks from their supply and generation, so it is beginning. I think in Belgium they will see some further sales of some of this monopoly position. In Germany we now have a vocal consumer group, which we have not had before, because they have ended up paying the higher prices. You have got a regulator which is just beginning to flex some muscles and you have got the network code beginning to see some liberalisation. So we are playing into the right stream here and I think it would be wrong for the UK to sort of draw up stumps on competition.

Q16 ***Lord St John of Bletso:*** Potentially you have got a surplus of gas in France and Germany. Do we need a single European energy market, and if so what difference will it make?

Mr Ulrich: Yes, I think clearly we do need a single energy market. I think the issue here is not as critical in power but certainly critical in natural gas where a number of the supplies that we expect to receive over the next 10 or twenty years will be coming from Russia and former Soviet Union provinces. So unless we have an open market, unless we have transparency, the capacity to move that gas, we will end up as British customers paying more. It eliminates one of the diverse sources which we currently have. Europe is sort of at the end of the pipe line in that sense, but we are more or less at the start of the LNG landing areas, so it is a little bit of a trade off, but I think that the history in Germany, France, Belgium, a lot of it is technical. There are issues which do have to be resolved over the calorific value of the gas, the types of impurities and things of that nature, but they are all solvable. We need this information. We need information on flows so that we can make the right investment and get the lowest cost.

Q17 ***Lord St John of Bletso:*** Your point is well taken because, of course, we are all acutely aware that we have been self-sufficient on gas for some time and in the next five years we will dependent on up to 50 per cent of our gas from imports, but really the follow on question is, can we achieve our energy policy objectives without help from Europe?

Mr Bentley: I think it has to be achieved in the context of Europe. I do not know whether "help" is the right answer, but going back to the three legs, if you take the environmental leg, if you like, there is no point in the UK having its own emissions trading plans when actually it is far more efficient to have a framework across Europe whereby carbon credits can be traded freely. That is an example of where some of the credits were given free to the polluters, which has had a sort of perverse windfall benefit to those who pollute the most, but in the longer term once you see proper auctioning of carbon allowances you will have an efficient pan-European market. You could not have achieved that in the UK alone.

Q18 ***Lord St John of Bletso:*** Just one final supplementary to that is what issues then are best dealt with at a European rather than at a Member State level, and vice versa?

Mr Bentley: I think if you take carbon, it is a good example. So set the framework in Europe, set the long term targets for CO2 reductions, set the targets for renewable generation and leave it to the Member States to work the detail out. Do you want to put a particular levy on wind farms in Scotland, for example, versus something else in Holland? Leave the local Member States to work that through nationally. Do you want to put a tax on private transport, because transportation is one of the biggest emitters of CO2, and favour public transport? That is all the detail which the Member States can work through. That would be a good example.

Q19 ***Lord Swinfen:*** Bearing in mind that during the winter Russia cut supplies of gas to the Ukraine and bearing in mind that politicians in intervening states between Russia and the United Kingdom will wish to see their voters properly warmed in very cold winters, can you guarantee a good supply of gas from Eastern Europe, through Europe to the United Kingdom at all times?

Mr Ulrich: I do not think you can guarantee it at all times. You could have a physical disruption, not a political one. Again, as Phil mentioned, we see the Ukraine/Russian argument as one over price and not politics per se. That is why the diversity of supply is so important, so that you do not have an overriding percentage of gas coming in from Eastern Europe, but you do have the LNG terminals, you do have the Norwegian and you do have the BBL pipe line. The latest pipe line which the Russians are looking at, the

north European gas pipe line, which would land in Germany and then come across the Netherlands and either hook up with BBL or come directly to Britain, clearly the less stops, the less transit countries, the fewer opportunities for interruption. I think by building up the proper infrastructure network and having the proper levels of storage and diversity here we, if not eliminate, reduce the impact of that.
Mr Bentley: Just thinking of Jake's point about the LNG, McKinsey Deutsche Bank did a study a couple of years ago which said that by 2025 there will be more gas shipped around the world than oil tankers because there are much more gas reserves than oil reserves and it is now economic to move gas. For example, the UK can be served from Trinidad, from Qatar, West Africa and Russia, all similar sort of prices. It is back to diversifying the sources from producing countries.
Lord St John of Bletso: There is no problem in getting gas tankers to transport LNG.

Q20 ***Lord Walpole:*** Could I just declare an interest, actually being a tenant of Centrica, trustee of Fakenham Town Gasworks, the only surviving gas works in England and Wales, I believe. Now, the serious question: how should government interact with the markets to ensure that the policy objectives are delivered, or are the market-based mechanisms alone capable of delivering the underlying objectives?
Mr Ulrich: I think generally we see two areas where there is scope for government intervention. One clearly is regulating monopoly activities, and much of what we are discussing, the gas and electricity transmission and distribution networks, should be again under some sort of government oversight. The second one would be along the lines of social and environmental policy and safeguards and, as Phil mentioned, the Emissions Trading Scheme is a perfect example of where the government needs to come in.
Mr Bentley: I think just making sure that again the second directive is really followed through and delivered in each country, the third party access to the monopoly assets, the liquidity, the independent regulator. We have seen examples of regulators overruled by government in Spain, Germany and in France in a way which we think compromises their ability to really push forward on liberalised markets, ensuring that consumers have a choice and it is easy to switch. These are all the things which I think government can ensure, through further regulation, we deliver on.
Mr Ulrich: Just one other point, government can also help in establishing a framework and promoting some of these projects. I know it was necessary to get a treaty with Norway before the Langled was built, but one of the issues we see right now in the UK is the slowness of moving storage projects forward, and planning has slowed up quite a few. We are on the lower end of the storage capability within the EU and a lot of that is due to local planning issues.

Q21 ***Lord Walpole:*** Yes, we have got quite a lot of little spaces just offshore which you can use to store gas in.
Mr Ulrich: A bit more expensive.

Q22 ***Lord Walpole:*** Thank you, that is helpful. What impact will moving towards a much more coordinated approach have on energy prices and where do you think oil, gas and carbon prices will be in the future?
Mr Ulrich: I attended a meeting in the United States last month where they gave me three scenarios and they were along the lines of $60 to $65, $40 and $150 and I like to believe the $150 case is not where we are headed. I see in the short term, medium term, three or four years, not a lot that is going to move prices away from where they are now and it is not an issue of resources. We are not believers in a peak, that we are past it. There is a lot of gas and a lot of oil available. It is getting it into production, the above-ground issues, that are slowing things up. Unfortunately, the $60 to $70 range could be with us for some time. Gas prices in the UK are too high right now, again because of the supply/demand imbalance, but once we see gas coming in next year at worst we will be at parity with the Continent, which will mean prices in the 60p and 70p range should come down back in to the high 50s, so some help there. There is more gas available to the UK next year, significantly more so due to these projects, and we could see much lower summer and spring prices. So I am fairly optimistic that we will see a drop there. Carbon, as you know, has halved this week and in the trading community when people cannot decide whether it is worth 50 or whether it is worth 10, so there seems to be quite a bit of oscillation.

Q23 ***Lord Walpole:*** I see that British Sugar are now thinking about and building a factory to produce liquid fuel from sugar. I remember many years ago they told me, when it went over $20 a barrel that it would be cheaper to make it out of sugar with the oil price. I presume it is cheaper to make fuel out of sugar at the present price?
Mr Ulrich: At the present price there is a number of agricultural products you can use, yes.

Q24 ***Lord Roper:*** Question four is the question of whether the European Union's Emissions Trading Scheme is capable of delivering a price which will support significant investment in low carbon technologies.

Mr Ulrich: That is a very difficult and vexing question because right now one would look at the prices right now and say no. Our view is that a few things have to happen. The Emissions Trading Scheme is a good idea. The implementation was somewhat flawed, giving away free credits, giving some people windfalls and did not, I think, really accomplish much. We need a longer time period for the trading scheme. We need auctioning. We need to broaden it beyond the energy sector into, say, the transportation sector. So there is a number of things but if it is implemented correctly we do believe that it will provide the right incentives. Even Centrica is looking at clean coal plants right now.

Q25 ***Chairman:*** Just a short question on that. When you say you would like to see the Emissions Trading Scheme have a longer timeframe, I presume you mean beyond 2012?
Mr Ulrich: Exactly.

Q26 ***Chairman:*** So what would you like to see that helps business decisions, what timeframe?
Mr Ulrich: Some commitment to keep, for instance, a floor using, say, the Climate Change Levy or the ETS into the 2020s.
Mr Bentley: We are making investment decisions now. We are close to building a power station down in Plymouth which has a 20/25 year life and we have no idea what the price of carbon is going to be in 2012. It will not be operational until 2008, so we will have four years of certainty and then a complete unknown and we are required to make a £400 million investment.

Q27 ***Chairman:*** That takes you to 2030, beyond the 2020s, so you would like to see a framework which really gives a 20 to 30 years commitment?
Mr Ulrich: If you look at it economically, 15 years would be nice.

Q28 ***Lord Roper:*** We were talking earlier about ensuring security of supply, including sourcing and supplying fuel and power both through interconnections with Europe and via the use of LNG terminals. I wonder whether you could say what impact the proposals in the Green Paper are likely to have in practice as far as those sorts of decisions are concerned? In particular, as we have mentioned already, what role does the UK's geographic positioning in Europe play in these considerations?
Mr Ulrich: I do not think there is going to be a tremendous amount of impact on those because, as you are aware, under the current regime you can get an exemption for third party access, if it is required, to build a pipe. So we do not have a problem if someone is going to guarantee that the pipe will be built and they will be bringing gas to the UK. Our issue is around when the facility is not used. So if we do get provisions, use it or lose it type of provisions, and transparency over whether it is being used, it will help if those issues are addressed. It is a pragmatic issue, it is how much information and how can we make sure that everything is being utilised.

Q29 ***Lord Roper:*** How do you see the major gas suppliers responding to the Green Paper? Are there things in it which are likely to change their behaviour?
Mr Bentley: Again, there is quite a lot of detail to still be worked through. Would the European regulator be in favour? Probably not. If they could influence it such that it is the lowest common denominator, then perhaps they would be quite happy to have the European regulator. If the European regulator was as tough as the UK regulator, then I am sure they would have a very different view. I think the other thing is we have to recognise that some of these policy decisions—let us take the example we used of maybe France and Germany hoarding storage and hoarding gas over the winter. The UK cannot deal with that on its own, it needs to have the framework of information, availability, capacity and able to be buying capacity and therefore bring gas to the UK. We are trying to bid for gas capacity across Belgium at the moment and the first available is, what, 2011. There is no transparency. We have no idea. Are these storage assets full? We do not know. Is there capacity available? We do not know. What we know is what we are told, "You cannot have capacity until 2011." So that is where I think this type of Green Paper could be quite helpful in that respect.

Q30 ***Lord Geddes:*** For the record, I declare an interest as an extremely modest shareholder in Centrica and I hope with these questions, which are basically about capital investment, that if Messrs Golby and Dolben are sitting behind they will hoist on board the fact that the same question will be coming their way. You mentioned, Mr Ulrich, very helpfully in reply to my Lord, Lord Woolmer, that fifteen years is what you would like for certainty as far as capital investment is concerned. What changes, if any, would you like to see in this Green Paper to give you that sort of security for capital investment purposes, or are you perfectly happy with it?
Mr Bentley: I think if we saw really proper implementation of the internal market that would be a big step forward for us. I think we would feel confident about that. We cannot expect to have the whole of the next twenty years sort of mapped out before we make any decision because that is not the basis of risk-based decisions, but if we have got proper unbundling of these network monopoly assets so that we can get, as a new entrant, access and capacity then we can balance. We have got

information and they are the things which again I think will help. The Green Paper refers to the European Energy Supply Observatory. Again, how will it work? We are not sure, but if it is monitoring, publishing information, the sort of information which is very difficult to get in Europe, for example in storage, which is available daily in the UK in the storage assets that Centrica own, it is that sort of dialogue that we would like to see resulting from the Green Paper.

Q31 ***Lord Geddes:*** So at the risk of putting words into your mouth—and please take them out again—are you saying that the proposed energy policies are okay, it is the implementation you are worried about?
Mr Bentley: That would be our big message regarding the key elements of this Green Paper without detracting from the importance we would also place on environmental targets in the long term. I think the other part is, everybody has got a little bit of the energy market or the energy brief, if you like. You have got DG Comp, DG TREN, DG Environment. Some coherence, rather than a particular special pleading, to energy policy, if that could be a result out of the Green Paper would be also a sort of tick in the right direction.

Q32 ***Chairman:*** You said you would like to see more coherence between the three different directives in the European Commission. Would you apply the same observation about the UK Government's energy policy?
Mr Bentley: I am sure they are wrestling with the same trade-offs, yes.

Q33 ***Lord Haskel:*** I hear what you say, that you are happy to continue with your investment and to invest more if there is unbundling and if there is a liberal market, but of course at the moment things are not that way. We all hope that they will be, but if you suddenly one day wake up and feel that Europe is not going to do that, Europe is not going to unbundle more, that we are not going to have a liberal market, what would your attitude then be?
Mr Bentley: We honestly do not believe that is the case. We do not see any fundamental reason why, if the oil industry can make it work competitively, the gas and electricity markets cannot function in that respect. From Centrica's perspective, we took on BT to try and break up the telephony monopoly which BT had and we actually sold our business OneTel last year to Carphone Warehouse largely because we had actually made a bit of a success. We plugged away and plugged away and finally we had had the break up or equal access to the services division of BT and now we felt that perhaps Carphone Warehouse was ready to take it forward. That was a four or five year lobbying effort, but it eventually prevailed and I think from a strategy point of view we cannot afford to ignore the interconnection with the UK and Europe. Whether we like it or not, we are no longer a gas island, we are inextricably linked to our European colleagues and therefore we have got to continue lobbying for competitive markets.

Q34 ***Chairman:*** Thank you. That has been extremely helpful, very interesting and has supplemented your written evidence with enormous benefit to us. Would you like to add anything which you think we have not touched upon and which you are dying to tell us should be foremost in our minds?
Mr Bentley: No, I think you have obviously got the key points of your brief and we thank you for the opportunity, my Lord Chairman and my Lords, to be able to present it at this time.
Chairman: On behalf of the Committee, I would like to thank you both very warmly indeed. Thank you.

Memorandum by the Association of Electricity Producers

1. The Association of Electricity Producers[7] welcomes efforts to forge a more consistent and effective energy policy across the EU. Energy policy must take a long-term view and be underpinned by stable and coherent regulation. It should be based on the three pillars of competitiveness, sustainability and security of supply. Given current concerns, the Green Paper understandably puts the focus on security of supply, but it is equally important that the other two pillars are given due consideration.

2. In summary, the Association believes that:

- The UK government should support proposals for a common EU energy policy, to the extent that it:
  - adds value and complements the policies pursued by Member States;
  - gives priority to the liberalisation of electricity and gas markets, so that energy can be freely traded across Europe;

[7] The Association (AEP) represents large, medium and small companies accounting for more than 90 per cent of the UK generating capacity, together with a number of businesses that provide equipment and services to the generating industry. Between them, the members embrace all of the generating technologies used in the UK, from coal, gas and nuclear power, to a wide range of renewable energies.

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  - — aims to reduce political risk by forging good relations with the major energy-producing countries on the basis of a collective strategic understanding of the EU's long term energy requirements; and
  - — ensures a proper balance between competitiveness, security of supply and environmental objectives.
- — The EU institutions can best contribute to safeguarding security of supply by:
  - — providing a stable and predictable regulatory framework in which companies are able to invest;
  - — promoting competitive markets and non-discriminatory access to infrastructure;
  - — developing a regulatory regime which incentivises the construction of cost-effective interconnection in electricity and gas;
  - — encouraging diversity of gas sources, including gas pipelines, LNG facilities and storage;
  - — supporting the development of new energy sources outside the EU through diplomacy and managing relations with other major energy importers, such as the US, to support a coherent global approach to energy supply;
  - — removing regulatory and planning barriers to the development of new infrastructure, eg nuclear and clean coal power stations, renewables, transmission lines etc; and
  - — ensuring that EU legislation, in particular environmental regulation, is developed holistically and takes account of security of supply considerations; conflicts between policies, eg between air pollution legislation and security of supply objectives, need to be avoided.

Responses to Specific Questions

(a) **Does the Green Paper correctly identify the key issues for future energy policy in the European Union?**

3. The Green Paper correctly states that there are a number of new challenges in the energy sector which have to be addressed: the need for investment in infrastructure, rising import dependency, dependency on a limited number of supply countries, increasing global energy demand, rising oil and gas prices, climate change and the need to liberalise energy markets across Europe. The Association's views on the six key issues identified by the Commission are outlined below.

4. *Competitiveness and the internal energy market:* Competitiveness and a functioning internal energy market are the *sine qua non* of European energy policy, as they provide the appropriate framework for investment. We welcome particularly the Commission's efforts in ensuring correct and timely implementation of the Electricity and Gas Directives.

5. *Diversification of the energy mix:* The Association supports efforts to diversify supply sources and use the EU to speak with a more unified voice on political issues relating to energy.

6. *Solidarity:* The Association supports the principle of solidarity between Member States but is unsure about how this will work in practice, eg the Commission proposal for a mechanism to provide assistance to a Member State in case of damage to essential infrastructure. It is important that the Commission does not intervene in the market in the name of security of supply. To do so could lead to unintended and damaging consequences. We also do not consider it necessary to review the Gas and Electricity Security of Supply Directives so soon after their entry into force.

7. *Sustainable development:* The EU Emission Trading Scheme is the key instrument for delivering carbon reductions in the EU. It is important that the EU clarifies, as soon as possible, the long-term framework well beyond 2012 so that electricity generators have greater certainty in relation to major investment decisions. EU-wide initiatives on energy efficiency and renewables are also welcome in order to ensure a level-playing field across the EU and contribute to a sustainable energy policy.

8. *Innovation and technology:* The Association fully supports the development and deployment of new energy technologies, eg carbon capture and storage, hydrogen, and wave and tidal. In addition, research should be carried out into improving existing technologies, for example clean coal.

9. *External policy:* The EU should pursue a more unified common energy policy towards third countries, but it should not limit Member States' freedom to choose which countries they wish to trade with.

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(b) **Does the Green Paper appropriately identify those issues where, in future, the EU acting as a whole should be responsible for policy development and action?**

10. On the whole, the Association believes that the Green Paper correctly identifies those issues where the EU should be (jointly) responsible for policy development and action. However, in some areas EU intervention appears to be ill-timed and out of tune with the drive towards market liberalisation. The Green Paper itself mentions a series of targets, benchmarks and plans, but it is unclear how far these are compatible with a liberalised market or how any policy conflicts would be resolved.

11. The Association is in favour of more cooperation at European level and believes that Commission negotiations with third countries should concentrate on facilitating security and diversity of supplies. However, it should be kept in mind that EU external policy is governed by unanimity, ie the EU can only adopt a common standpoint if all 25 member states agree. It is therefore unrealistic to assume that the EU can replace bilateral relations altogether.

12. As regards the fuel mix, the Association welcomes the Green Paper's assertion that it should be left to Member States to decide the appropriate mix. EU Directives on renewables and carbon trading already provide a stimulus to a more sustainable fuel mix reflecting environmental concerns. The Association does not believe that an additional low-carbon target as proposed by the Commission would be helpful. The EU should promote low-carbon technologies including carbon capture and storage through its research programmes and it should aim to remove planning and regulatory barriers which could hamper technologies such as nuclear or clean coal. The proposed Strategic Energy Review could also be used to provide greater knowledge about different technologies and their impacts.

13. The Association supports the Commission's call for an integrated approach to climate change and recognises the key role of the EU Emission Trading Scheme. However, the Green Paper should place more emphasis on the global dimension of climate change. The European Union will soon account for less than 10 per cent of global emissions and there is no logic in adopting a go-it-alone approach. It should be a central objective of EU foreign policy to achieve an agreement on future climate policy with other major emitters. The Association also believes that a broad range of policy instruments will be required to meet climate change targets, not simply energy efficiency, renewables and carbon capture, as suggested by the Green Paper. In the electricity sector, clean coal, other efficient fossil generation and nuclear energy also have a role to play.

14. The Association is not convinced that a European energy regulator is appropriate at this stage. This could lead to additional layers of regulation, which would run counter to the objective of an open market, and could raise demarcation issues between such a regulator, the European Commission and national regulators. On the other hand, the Association does see the need for more cooperation and consistency between national regulators to ensure that barriers to cross-border trade are overcome. The Green Paper suggests a number of other new institutions such as a Centre for Energy Networks and an Energy Supply Observatory. In the Association's view, impact assessments should be carried out on each to determine whether they will have any added value. Finally, the Association does not see the need for targets for interconnection. Interconnectors should be built on the basis of economic need rather than arbitrary objectives. However, the EU could play a facilitating role, for example on planning.

15. The Green Paper could place more emphasis on competition policy. This is an area where the EU has great powers which it can use to assert its goal of open and competitive markets, eg in the light of recent attempts by national governments to prohibit foreign take-overs of energy companies.

16. The Association considers that the Commission's attempt to reopen the debate about strategic storage for gas is ill-timed. A similar proposal was rejected by Member States in 2004 and there is no reason for it to be reopened now. The Commission should not be interventionist in this area when it promotes free markets elsewhere. In the UK, new storage facilities have been built in recent years, showing that the market adapts to new supply situations. Equally, revising the Electricity and Gas Security of Supply Directives just after they have entered into force is not in line with good regulatory practice.

(c) **Does the Green Paper appropriately identify those issues where, in future, Member States should be responsible for policy development and action?**

17. The Association believes it is important that the principle of subsidiarity is respected in the energy policy field, particularly with regard to choice of fuel mix. EU energy policy should facilitate but not limit Member States' fuel and technology choices. The Association therefore fully supports the Green Paper statement that "each Member State and energy company chooses its own energy mix".

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18. On interconnection, the Association notes that the Commission intends "to look at individual measures that it considers important at the level of Member States". The Association believes that the market, not the Commission or indeed Member States, should determine where new infrastructure is needed, as has happened in the UK concerning new gas infrastructure eg LNG terminals. Targets for interconnection and prescribed investment would not fit easily with the liberalised market. The Commission should concentrate its efforts on creating the right conditions to enable investment in new cross-border infrastructure.

19. The Green Paper rightly points out that Member States have to implement the liberalisation directives correctly, as this is an essential prerequisite for an internal energy market.

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Memorandum by E.ON UK

1. E.ON UK is the UK's second largest retailer of electricity and gas, selling to residential and small business customers as Powergen and to larger industrial and commercial customers as E.ON Energy. We are also one of the UK's largest electricity generators by output and operate Central Networks, the distribution business covering the East and West Midlands. We are also a leading developer of renewable energy sources.

2. E.ON UK is part of the E.ON Group. In addition to the UK, the Group has electricity and gas interests in Germany, Central and Eastern Europe, Italy, the Netherlands, Scandinavia, the USA and Russia. E.ON's planned investments in capital expenditure on property, plant and equipment for the next three years total over €16 billion, and are intended, above all, to reinforce security of supply in E.ON's markets. Most of the investment will modernise or build power stations and grids, while about €1.2 billion will be used for renewable energy.

3. We welcome the Commission's Green Paper' objective of promoting debate on how the EU can address the key challenges facing it in the energy sector—the need for large investments by energy companies over the next 20 years to maintain security of supply and reduce carbon emissions, managing increased dependence on imported gas, and rising fossil fuel and energy prices—in a more coherent and balanced way.

The Role of Markets and Governments

4. E.ON UK fully endorses the Green Paper's recognition that "sustainable, competitive and secure energy will not be achieved without open and competitive markets, based on competition between companies looking to become European-wide competitors rather than dominant national players". In our view companies such as E.ON will, within a competitive market environment, deliver efficiently the investments that are needed in diverse and low carbon assets across the EU provided Governments or the EU:

- set a long term stable policy framework to achieve objectives which are external to the market, particularly the delivery of lower carbon emissions;
- do not intervene in the market in a way which reduces investment returns.

5. Direct state intervention in the market to achieve particular objectives—for example through the creation of strategic gas stocks or through subsidising interconnections and other infrastructure—is likely to be inefficient in its own right and will also raise the costs of private sector investment by increasing the regulatory and political risks which have to be factored into private sector investment decisions.

The Role of National Governments and the EU

6. The creation of a single integrated energy market, as with other areas of EU policy, shifts decision making from national Governments to EU institutions. This affects the way national markets function, and creates tensions given that national Governments are directly accountable to electorates for policies to support delivery of secure, sustainable and competitive energy supplies.

7. Decisions need to be taken at the EU level to ensure companies are competing in the market under broadly the same conditions, that the conditions exist to allow efficient cross-border trade in energy, and that competition controls can be applied where appropriate to the operation of energy markets at the EU level. However, increased centralisation of decision making in the EU can reduce regulatory accountability, transparency of decision making, increase the overall costs of regulation, and create multiple layers of regulation which will increase regulatory risk. National Governments may also legitimately want to retain control of some areas of policy, particularly those related to security of supply and fuel mix, although they

should not discriminate in favour of national companies, or inhibit the free movement of goods, services and capital across the EU.

8. A convincing case therefore needs to be made before focussing more regulatory power at the EU level. Where decisions are best taken at the EU level, the same principles of better regulation which apply in the UK (that regulation should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed) should also apply at the EU level. There has been an increasing commitment to consultation by the Commission and the European Regulators' Group for Electricity and Gas (ERGEG), but there is still some way to go. In particular the UK practice of developing regulatory impact assessments of new areas of regulation needs to be properly implemented at the EU level.

The Six Priority Areas

(i) **Completing the internal European electricity and gas markets**

9. We are not convinced of the case for a European energy regulator (para 2.1(i)) at this stage and the paper does not make a case for it. Where possible the creation of new bodies and layers of regulation, which can add to regulatory risk, should be avoided unless there is a convincing case which demonstrates that this is the most effective way of meeting the objective. If a European regulator is established, its objectives would need to be tightly confined to cross-border issues, to avoid duplication of the activities of the Commission on the one hand and national regulators on the other. We also do not see a case for the proposed European Centre for Energy Networks, given that ETSO (European Transmission System Operators organisation) already exists to discuss and advise on high voltage network issues. The suggestion that this new grouping might "report to energy regulators" and "implement schemes approved by the relevant regulatory institutions" (2.2(i)) is too interventionist.

10. We welcome recognition in para 2.1(ii) of the need for more infrastructure investment. However Member States and the EU should focus on improving the efficiency of the land use planning system rather than on determining where interconnections should be built through a priority interconnection plan. The need for new investment in infrastructure should be driven by the market.

11. The Commission also raises (2.1(iv)) the need for further legislation to complete the internal energy market. In our view, the focus should remain on the effective implementation by Member States of the existing electricity and gas directives agreed in 2003, before assessing the need for more legislation which will create additional political and regulatory uncertainty.

(ii) **An internal market that guarantees security of supply: solidarity between Member States**

12. The proposed European Energy Supply Observatory (2.2(i)) could have a useful role in providing objective advice about demand and supply patterns in the EU and analysis of global energy markets as they affect the EU, provided this can be done cost-effectively. However, a case would have to be made to show this added value to the activities already carried out by the IEA.

13. The proposed mechanism between Member States to prepare for and ensure solidarity and assistance to a country facing difficulties following damage to essential infrastructure (2.2(i)) may be worth exploring but a much tighter definition is required of what circumstances this is intended to cover.

14. We do not see a case for re-examination of the existing Directives on gas and electricity security of supply which have only recently become law and which, in the case of electricity, is yet to be implemented in the UK. We also do not support investment by Member States in strategic gas stocks to be deployed by the Government or the imposition by the EU of minimum stock levels on Member States. The former will prevent efficient investment by companies in gas storage and add to political risk, given the uncertainty that would exist about when the stocks would be released into the market. The latter is inappropriate as individual Member States have widely differing levels of dependence on gas, and widely differing geological capabilities to provide storage.

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(iii) **Tackling security and competitiveness of energy supply: toward a more sustainable, efficient and diverse energy mix**

15. While we agree that it is for Member States and energy companies to determine their own energy mix, decisions taken in one Member State to pursue a particular course can have significant implications for other Member States. The wider EU-level context for national decisions provided by the proposed Strategic EU Energy Review (2.3) could therefore be helpful to Member States and companies in assessing the implications of their decisions. However we are unconvinced of the need for a minimum level of the overall EU energy mix originating from secure and low carbon energy sources. Investment in low carbon technologies should be driven by the market within the framework of the EU Emissions Trading Scheme.

(iv) **An Integrated approach to tackling climate change**

16. We support the emphasis on the role of the EU Emissions Trading Scheme but little new is proposed on climate change (2.4(i)). The Commission proposes a Renewable Energy Road Map (2.4(ii)), although the constituent parts appear to be little more than existing policy developments which are already scheduled. In the longer term we would see the EU ETS, rather than technology specific obligations, as the main driver of investment in mature low carbon technologies at the EU level. We welcome recognition of the need for additional research and development for carbon capture and storage (2.4(iii)), but the main focus now should be on demonstrating clean coal and carbon capture and storage on a commercial scale.

(v) **Encouraging Innovation: a strategic European energy technology plan**

17. We welcome measures to increase the funding of research, development and demonstration in the energy sector as discussed in 2.5. A higher proportion of the EU's available financial resources should be devoted to the development and demonstration of low carbon technologies, supplementing but not replacing national programmes and sources of funding.

(vi) **Towards a coherent external energy policy**

18. There is a case for a more coherent EU approach to external relations with energy exporting and importing countries outside the EU (as discussed in 2.6). The EU should aim for a more pro-active relationship with major energy exporting countries and indeed other major energy importers such as the US, on the basis of a collective strategic understanding of the EU's long term energy requirements. How this is best taken forward and the appropriate role of EU institutions are matters for Member States rather than companies but it should be aimed at encouraging more open and transparent markets outside the EU in gas, oil and electricity, stable global energy market conditions, and a receptive investment environment for European energy companies.

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Examination of Witnesses

Witnesses: Dr Paul Golby, Chief Executive Officer, E.ON UK, Mr David Porter, Chief Executive Officer, and Mr Gwyn Dolben, Head of European Affairs, Association of Electricity Producers, examined.

Q35 ***Chairman:*** Good afternoon, Mr Porter, Dr Golby and Mr Dolben. You have waited very patiently. Could I, on behalf of the Committee, thank you also for your written submissions. They differ from Centrica's in part in content but also both of you found thirteen issues on which you raised question marks about the Commission's proposals against the mere 10 which Centrica had. The written evidence of both of you is extremely interesting and we thank you for your frankness and guidance on the issues. As I said before, time is tight. We are always delighted to take opening remarks. We do know about both the Company and the Association. I think E.ON's submission usefully told us about yourselves anyway. Is there anything you would like to say to us before we go into questions?

Mr Porter: My Lord Chairman, the Association does not want to make an opening statement, but I do know that Dr Golby wants to say something.

Dr Golby: My Lord Chairman, thank you very much for the opportunity of appearing before your Committee. Quite clearly energy, correctly, is at the top of the European agenda for reasons which you know full well and which I will not go into. It seems to me that the future of European energy policy is at a crossroads with one path leading to market-led solutions and another to increased state intervention and national protectionism, so this is an important point in time. At E.ON we strongly support the market-led approach and within a competitive market environment companies like E.ON will deliver the investment required to achieve the broad policy objective set out in the Green Paper. To put that into perspective, my group has planned capital investments over the next three years which total over £11 billion and over £2 billion of that is committed to investments which will bring an improved gas supply to the UK. Our fundamental view about energy policy is that we need a long term framework, and I am going to agree with some, but not all, of the evidence of the previous people who gave evidence to you, the long term energy framework which gives us the security to invest against some degree of certainty, but not total certainty, of course. We are in business to take risks. Thank you, my Lord Chairman.

Chairman: Thank you very much indeed. When we ask questions, you would not want me to invite who wants to contribute. We really do want to hear from you, so do feel entirely free to come in if you think it appropriate. It may be, from time to time, that a Member of the Committee may direct a question initially at one of you, but do feel entirely free to come in. Lord Swinfen will start the questions.

Q36 ***Lord Swinfen:*** The same question as I asked Centrica: why has the European Commission decided to review energy policy now, what has changed since the last review, and do we really need another review, and if so, why?

Dr Golby: Shall I take that first, my Lord? I think partly this comes from the Prime Minister's initiative in his Hampton Court speech and I think that was re-confirmed, of course, by the events over the winter in the Ukraine. I think that has heightened these issues to the top of the agenda. So I think sensitivity about security of supply is the thing which has changed, together with environmental heightened awareness. In terms of do we need this review, I do feel at times we are in danger of review overload. I know I could deploy probably 50 per cent of my organisation to participating in these reviews. Where I think the EU review has some resonance is that increasingly, particularly in interconnection and the gas markets, it is important that Europe develops a more coherent policy to these issues than hitherto has taken place.

Mr Porter: We would support that, my Lord Chairman. It has been five years since the last review. We have a new energy commissioner and it is quite interesting that many of the issues which are being raised at a European level are uncannily similar to those raised in the Energy Policy Review being conducted by our own Government.

Chairman: Most of them, if not all, were in the last European Green Paper, five years ago. I hear what you say, but I am not entirely convinced, you will gather. Nevertheless, we have a review and so let us reflect on it.

Q37 ***Lord Haskel:*** The Commission has decided to raise the issues of sustainability, competitiveness and security of supply. Do you think these are the correct issues which we have to study, and what do you think are the underlying objectives they have in raising these issues?

Mr Porter: These are largely the same issues again which we face in the UK and from the point of view of the politician they are probably the right objectives, they fit the current political agenda, but as has already been explained this afternoon, these objectives are sometimes difficult to reconcile. They do not fit comfortably with each other at all times and this is something which, as I have said flippantly to people in the past, actually keeps associations like ours in business, because the politicians are forever playing tunes with these objectives and they make life extremely difficult at times for companies which have to invest very large sums of money over very long timescales. What we are forever calling out for, when we face the politicians here and in the European Union, are very clear statements of what they really intend and that that clarity should be long-lasting so that companies can invest in the way in which both Centrica have said this afternoon and Dr Golby has just commented on more recently.

Q38 ***Lord Haskel:*** So do you think that politicians should then limit themselves to things which are not incompatible, things like the efficiency of insulation of homes, the efficiency of the way in which we transport electricity and gas around the country, those sorts of thing, rather than these matters of policy pillars?

Mr Porter: In an ideal world the objectives might at least be ranked, so that at any given time you knew which of those objectives was more important to the politicians. That would help companies which have to invest, but experience over many years shows that that is very difficult for politicians actually to achieve. Things happen. The environmental agenda may be very clearly the top priority and then something happens with the gas supply and we switch to security of supply issues. That has happened before us in the last few years and it is just the kind of difficulty which companies have to face, investing in this market. We are looking at, in the UK, at least £20 billion worth of investment in new power stations in the next few years and at European level at figures which practically go off the page. I think the politicians are at least beginning to learn that when they play around with their objectives they are also playing

around with very large capital-intensive industries and their plans and in the end with what customers pay for their energy.
Dr Golby: Could I just add to that, my Lord? I agree with much of what Mr Porter has just said. I think that any student, be it political or economic student, would come up with those same three pillars. The real issue is the trade-off. How do we trade off one against another? We have not been too clever at that in the past and it is important that we do not leave that solely to the whims of politicians, oscillating between different periods, so this year it is the environment, next year it is the security of supply. This is where we need long term frameworks. The Emissions Trading Scheme could be the basis of one such framework, that we put it in place and then the market operates within that framework, rather than fearing that politicians will come back and re-intervene and change something yet again.

Q39 ***Chairman:*** When we talk about sustainability, both the previous witnesses and yourselves have said a long term framework for the Emissions Trading Scheme, that is a statement which is clear about what is meant by sustainable objectives. What is the equivalent on security of supply? We are all in favour of security of supply, but what does it mean for investment decisions?
Dr Golby: I think, my Lord Chairman, that given the right framework in which we can make economic choices between different types of fuels and different types of supply sources, the market and companies will, quite frankly, look after security of supply. I would suggest that I would be the second person fired if the lights went off in the UK. Probably first would be the Energy Minister and then I would follow quickly afterwards if it was my company which had got into that position, so I think there is no lack of will or intent of companies to invest to ensure security of supply but we do need a framework against which we can make judgments about the type of investment to make.

Q40 ***Chairman:*** What is the framework? I am trying to understand what you mean by that.
Dr Golby: The framework comes back to fuel choice, then it is dictated by the cost of carbon, so, for example, do I invest in gas, do I invest in clean coal or do I invest in nuclear? I would suggest that I am not about to bet the future of my company on Russian gas, for example, in the long term, so I want a diverse mix of technologies and I need a framework where I can judge those technologies economically, one against another.

Q41 ***Chairman:*** So you want the Commission to set out a framework which indicates a balance of how much nuclear—
Dr Golby: No, no, what I am saying is, if we have a framework which values carbon we can make economic choices between different technologies and that, frankly, is what I am looking for and that is a combination of UK government policy and European government policy.
Mr Porter: I know that other members of the Association would echo that, my Lord Chairman. They would probably say that a well-functioning market is probably the route to security of supply that we want because the companies in that market have a responsibility to their customers which they have to meet and governments are sometimes at risk of making that harder for them, even with good intentions.
Chairman: We will come back to that. I am going to take question six, because it picks up that theme, and then I want to go to question three because Lord St John of Bletso has to leave in 10 minutes' time.

Q42 ***Lord Geddes:*** Firstly, Mr Porter, may I apologise for omitting your name when I alerted the other two sitting on either side of you that I was coming to this when you came to give evidence. I am still not clear in my own mind. When getting evidence from Centrica, they actually did give us a period of time that ideally they would want the security in order to justify capital investment. You have just talked about £20 billion. Do either of you, or both of you, have a period of time in which ideally you would like the security in order to make the investment of such a huge magnitude?
Mr Porter: We have been asked that question a number of times, but there is probably not a single answer for all sorts of reasons, one of them being different technologies around at different periods of time, and so on. It is very easy to describe what is not helpful, and what is not helpful at the moment is having just the rudiments of carbon allocations for the next two years and a little bit more indication up to 2012, but very little, and then nothing after that. That is a very uncomfortable mismatch with the investment timescales of companies like Centrica and E.ON which build power stations to run for, I think Centrica said 25 years, but they frequently run for rather longer than that. I do not know whether E.ON might like to comment on a more precise date into the future when it would be good to know what the carbon allocations were?
Dr Golby: I think probably the first point to make is that my company currently has two planning applications with the UK Government for new power stations and I echo the point made by Centrica that if we go ahead and build those, they would just about be coming on stream as we are running into the final stages of the current Emissions Trading Scheme. So the first point is that 2012 is certainly too short. Would I like it to be longer? Yes. Am I looking for

absolute certainty over the life of a power station? Of course I am not, because I am in business to take risks. So my view would be similar to Centrica's, that I would like to see a scheme which certainly goes into the 2020s; the middle of that decade would be fine from my point of view.
Chairman: We will return to that theme later.

Q43 ***Lord St John of Bletso:*** I think you make a very strong point, Dr Golby, that there is a definite need for a long term energy framework which will give some level of certainty and security. We noted the six priority areas which you listed in your very interesting paper. Leading on from that, a similar question which I asked Centrica, do we need a single European energy market, and if so, what difference will it make?
Dr Golby: My belief, my Lord, is that you do. If you look at this from an engineering point of view, it is far more efficient from a capacity utilisation point of view to have a greater degree of interconnection between these various markets so that we are sharing capacities across Europe. So from an engineer's standpoint, technically it is very sensible to approach this from a European point of view. I think from an energy source point of view it is also important because we know, for example, with gas there are relatively few sources of gas. In maybe a flippant moment I described the situation to friends as Russia having 30 per cent, Iran having 20 per cent, and then we move on to the more difficult countries, but joking aside, there are relatively few suppliers of these precious commodities and we need a more joined up approach across Europe to make sure we are negotiating with the suppliers with a much clearer voice and a greater sense of purpose.

Q44 ***Lord St John of Bletso:*** You mentioned sharing capacities. What about joint technology initiatives, and not just joint technology initiatives but where do you see the issues best being dealt with within Europe or rather at a Member States level?
Dr Golby: That is a very interesting question, my Lord. I happen to co-chair with Sir David King something called the Energy Research Partnership, which has recently been set up to bring both industry, government and academia together in the UK. I have to say to you that it is quite a complicated and not terribly well thought through situation we have at the moment. We need to get more focus into this and what is happening in Europe, and I think there is a great need for greater collaboration here, and indeed my own company has set up an energy institute in Germany but with a substantial amount of the expenditure going to, as they would call it, overseas destinations, including the United Kingdom.
Mr Dolben: Could I just add that I think the European research programme has been increasingly focusing on energy, actually. There is a lot of work being done on clean coal and a lot of work on nuclear, both fission and fusion, and a lot of work on renewables. Equally, there are quite a lot of joint projects as well in power generation, so I think that is coming about as part of the market.

Q45 ***Lord St John of Bletso:*** You also expressed reservations about a European energy regulator. Could you elaborate on this point?
Dr Golby: Yes. As a matter of principle, I believe that regulation should be devolved as far as possible to the individual Member States. They have different characteristics and adding the burden of a further European regulator I think at this point in time is an unnecessary piece of bureaucracy to put into place, much as some people would love to do so.
Lord St John of Bletso: I would agree.
Chairman: Lord St John of Bletso, you have to go. Is there anything further you want to ask?
Lord St John of Bletso: No. There are other supplementaries, but I think it is open to the Committee.

Q46 ***Lord Roper:*** I have a question which really I think is linked to this. In terms of the case for having a single European approach, do you think that is important when we are coming to try and deal with Russia on gas supply, or what is the best approach as far as that question is concerned?
Mr Porter: I think, my Lord Chairman, it is helpful that we should not over-estimate what can be achieved, but it does make sense for the countries of the European Union, at a certain level, to unite to seek the best possible deal.
Mr Dolben: Could I just add one point which I think has not been mentioned? I think one of the big changes recently is the huge development for demand in China, India and the developing world. That is a new factor really, so I think that means there needs to be much more dialogue really, both with the energy producers, Russia and the Gulf States, and so on, but also with the big consuming countries to face those challenges of the enormous demand increase.

Q47 ***Chairman:*** On that issue, as I understand it, Russian gas is effectively in three different parts of Russia. The gas which they will send off to India and China are not in the part of Russia that will come across to Europe. They are separated by thousands of miles. My impression is that there is an artificiality about arguing that Russian oil can switch between China and Europe. Am I right in that? Not in the long term, but in the next 10 to fifteen years?

Dr Golby: I would agree with you, my Lord, that there are certain gas fields which, through geography and how they are connected through pipe lines, which will continue to supply Europe, so I think the media have read too much into statements from the Chairman of Gazprom, maybe interpreting his views as switching off gas supplies to Europe and sending that gas to Asia. That is not possible, except in the margins through LNG, so I think the geography of Russia will generally dictate where their gas resources are directed.

Q48 ***Chairman:*** Could I just finish on that and then pass it on again? Dr Golby, you said, I think in relation to Russia but you actually said "gas suppliers", that there should be a joined up approach at a new level. What do you mean by that? What does the private sector in energy want of governments at a European level in relation to supplying nations?
Dr Golby: I would see this really at three levels, my Lord Chairman. Firstly, the commercial relationships cannot be negotiated through governments. They are negotiated through commercial entities like mine and we have considerable commercial relationships, for example, with Gazprom, so we do not look to governments to do that. What we look for is governments to set the frameworks within which those discussions can take place and at the EU, and let me extend it to G8, I think the political dimension here is Russia's membership of that club, be it G8 or be it an extended (I do not say this in the literal sense) version of Europe. That is the political pressure which I think governments can exert, and not get involved in commercial contracts or pipe lines, that is not their role.
Chairman: Thank you, that is helpful.

Q49 ***Lord Walpole:*** How should government interact with the markets to ensure that the policy objectives are delivered, or are the market-based mechanisms alone capable of delivering all the underlying objectives, and what is the most likely impact of more regulation?
Dr Golby: I will, my Lord, start off by saying probably with caution. That is the first comment I would make. So my view would be infrequently and long, so I am back to my theme of long term policy interventions like the Emissions Trading Scheme, I agree with my previous colleagues from Centrica, like the regulation of monopoly assets, and maybe from time to time around some social issues which clearly government will seek to intervene in, but then infrequently, well-thought through and then left in place in the longer term.
Mr Porter: The Green Paper leans towards market solutions, as do many of the things which emerge from, for example, DG TREN, but every now and again they seem to forget themselves and they start talking about certain prescribed levels of interconnection between countries, or governments putting in gas storage. These things are very bad news for the commercial sector, which can be made very nervous by announcements of that kind, but broadly the trend is towards markets and we welcome that.

Q50 ***Chairman:*** That would be very interesting for the Committee to reflect upon because, as in any document a government agency has ever published in the modern era, they talk forcefully about the role of markets and then find a whole range of interventions they think they have got to make. I say again that in both of your papers I found 13 where you felt the Commission could not resist the dreaded curse of intervention. I will not embarrass you by going through all of them, but I think you will agree that the Green Paper is, as in so many of these documents, something of a curate's egg; it says it believes in one thing, but actually rather thinks that it can do better than the markets in 13 others. Is that fair?
Mr Porter: I think that is a fair comment, my Lord Chairman.
Dr Golby: I would concur.

Q51 ***Lord Walpole:*** Bearing in mind these three objectives, is it better and/or cheaper to move energy by pipe line or wire?
Dr Golby: There is no easy answer, my Lord. It depends on the relative cost of the fuel source. I think events in Italy two years ago perhaps demonstrate that moving electricity by wire over very long distances is not terribly secure, but I think the relative merits will depend on the cost of fuel, which clearly is changing quite considerably at the time.
Mr Dolben: Perhaps I could just add, with electricity you need to maintain a balanced grid. To a large degree you have to generate that locally, or at least in a Member State. With gas, obviously you have to pipe it because it is only available from a limited number of places. So I would agree, I think in general gas transport over long distances will be more common than power.

Q52 ***Lord Swinfen:*** Is there a loss by the gas or electricity by moving it long distances?
Mr Porter: There is a loss of both, I think, my Lord, electricity through a law of physics and gas through simply leaks in pipes.
Dr Golby: And the need to compress it, the energy requirement to compress gas. Gas does not flow on its own and therefore needs to be compressed at various stages, so there is an energy loss in transporting gas over long distances.

Q53 ***Lord Swinfen:*** You cannot blow it along with fans?

Dr Golby: No, it is rather more dense than that, my Lord, when you look at the pressures that gas flows under.

Q54 ***Lord Geddes:*** Could I just ask Dr Golby—I asked Centrica this question—by, let us say, 2010 what percentage of the UK market do you think will be LNG?
Dr Golby: It is a difficult question. I would have thought it probably would be in high single digits or maybe just into double digits, but it would depend on the pricing signals. One clear point with LNG is that this is gas becoming a world commodity because the vessels substantially can go anywhere, so how much comes to the UK will depend, quite frankly, just as much on the price at Henry Hub in the United States as the price at Zeebruger or the Isle of Grain. That would be my best guess, but it is a very large variable.

Q55 ***Lord Roper:*** Just to follow that up, in order for us to, let us say, get significantly more than that in the UK by 2010, we would have to be starting fairly soon to be building the LNG receiving equipment, and what is the lead time for that sort of thing? You are already, I know.
Dr Golby: We are already doing that, my Lord. Probably alongside that and probably as important as that investment is the investment in storage capacity because it is wishful thinking to believe that, Nelson-like, the ship comes over the horizon just when you need it, and planning consents are a major issue in achieving these things.

Q56 ***Lord Geddes:*** Just on a point of detail, are there just the two LNG terminals under construction at the moment, Pembroke and the Isle of Grain?
Dr Golby: I believe that is correct, my Lord. Two are under construction and I think a third and possibly a fourth are being looked at, but not actually under construction at this stage.[1]

Q57 ***Chairman:*** I think, Dr Golby, you wish to issue a word of warning about complacency that LNG is the saviour of security of supply and flexibility for the UK, that because it is a global commodity if there is a really harsh winter in the United States, LNG ships will divert or can divert? It is a pretty fierce market place out there?
Dr Golby: That is exactly my point, my Lord, that once this becomes a world commodity, world issue will set the price rather than local issues.

Q58 ***Chairman:*** Have you any additions to that?
Mr Porter: We would accept that, my Lord Chairman.

Chairman: Lord Walpole, have you anything further on your line of questions?
Lord Walpole: No, I got the answers to the questions I was after. Thank you very much.

Q59 ***Chairman:*** Just on the last point which I raised earlier on, I said that each of you highlighted 13 areas where the Commission have been tempted to intervene. Tell us the three or four most worrying or most concerning proposals or lines of thinking of the Commission where you would say, "If you are going to keep out of something, simply don't do that."
Dr Golby: I would say setting spurious targets for, for example, levels of interconnection, the fuel mix issues, where it actually is dictating policy as opposed to setting frameworks, issues like setting up the European regulator, the answer I have already given. It is those instruments which I would find most concerning.
Mr Porter: They are the three or four that we would agree with.

Q60 ***Chairman:*** Getting involved in setting levels of stocks?
Dr Golby: I think the setting of stocks again would be a wrong move, the signals it would send to people. Why would I invest in gas storage if the government was going to start dictating those decisions for me? I would wait to see what the diktat was.

Q61 ***Lord Geddes:*** How high up that priority list would you put—you have already said you do not agree with it, both verbally and in writing—the European energy regulator?
Dr Golby: I would put it fairly high up my list of unnecessary interventions.
Lord Geddes: Thank you.
Chairman: This is helpful to us because there are some things which I am sure we will conclude ourselves that really they are not good ideas. After all, the Commission told us about stocks a few years ago but it has come back with the same idea yet again and unless one if very forceful about what one says these ideas just keep coming back.

Q62 ***Lord Roper:*** This really follows on from that because we have been talking earlier about the importance of promoting the speed and scale of technology and innovation in power generation, including of course both energy efficiency and low carbon technologies. Are there things which are mentioned in the Green Paper which are likely to have any positive effect on this? I notice that in your paper you say that investment in low carbon technologies should be driven by the market within the framework of the EU ETS, so there are not necessarily other methods by which, either at a national or at a European level, one can encourage

[1] We understand that there are three LNG terminals under construction: Isle of Grain Phase II, Milford Haven (Dragon) and Milford Haven (South Hook).

this? This is something which must be driven by market forces, must it?
Dr Golby: I agree broadly, my Lord, that it should be driven by market forces. There may be reasons for some intervention or encouragement. Let me use, for example, clean coal technology. These are massive investments which are yet to be proven. Nobody has built such a plant. We need to do this on a global scale because, quite frankly, whatever we do in the UK if China and India continue to build dirty coal-fired power stations the environmental issue, which is global, is not going to be solved. So I think there is scope for some joined up thinking, maybe some European initiative or EU/USA initiative which could accelerate such developments. Apart from issues like that, I think that the market, given the right framework, will bring forward the technologies.

Q63 ***Lord Roper:*** We have talked a little bit earlier on about the Emissions Trading Scheme and at the moment there is a great deal of turbulence in the scheme, but do you think it is capable of delivering a price which would support significant investment in low carbon technologies?
Mr Porter: The scheme is still very young. It began operation in January 2005 and, as we have already said, companies do not know their allocations very far ahead. If our wishes could come true and those allocations could be made known further ahead rather sooner than appears to be the case at the moment, then that would help the scheme to mature. I am quite sure that there is a lot of common sense in the Emissions Trading Scheme and I hope that the EU will stick with it, despite the recent turbulence.

Q64 ***Lord Roper:*** What impact would you feel moving towards what is referred to in the Green Paper as a more coordinated approach have on energy prices and, as we asked your predecessors, where do you think oil, gas and carbon prices will be in the future?
Mr Porter: As a trade association, we have to be very careful not to get involved in that!

Q65 ***Lord Haskel:*** You rather skated over this business of technical innovation. You mentioned clean coal. Could you say where you think technical innovation may help in the pillars of this paper in security of supply and the things we are discussing? Do you think that innovation and new technology is going to come to our rescue?
Mr Porter: Innovation and new technology has always been doing that. In the commercial market place which opened up in the UK in the 1990s, people thought that innovation and new technology had somehow come to an end, but driven by companies' demands for more efficient gas turbines, more efficient gas turbines became available and efficiencies reached levels which people simply were not expecting, I think it is fair to say. But you can take it much further than that and, as Dr Golby has already explained, there are companies which want to have a greater diversity in their portfolio of generating plant. They do not want to become unduly dependent upon gas and we have asked our own Government to take very seriously the need for research, development and demonstration in state of-the-art coal plant, which would not only make the burning of coal more efficient energy-wise but it would also lead to the capture and storage of emissions. So there is always more which can be done and for the biggest ideas it is probably helpful that some of this effort is made at the European level, simply because of the scale of it.

Q66 ***Lord Geddes:*** Conspicuous by its absence, both with your predecessors and so far with yourselves, has been any reference to renewables. What part do you think renewables will play in the generation of electricity?
Mr Porter: In the UK they are already playing a part in probably delivering about four per cent of our electricity. The Government's intentions are quite well know, that that should rise to 10 per cent and 15 per cent, and it looks likely that if the Government maintains its policies for renewable energies those targets ought to be reached.

Q67 ***Lord Geddes:*** But not on the date which they have put on it?
Mr Porter: Possibly not exactly at the times they thought. What I thought you were going to ask about, my Lord, and which nobody has mentioned, is nuclear power. One of the points we would make, I think, is that the Commission spends a lot of time talking about its tools for tackling climate change, and indeed security of supply, but sometimes avoids reference to nuclear power and just like there are companies in the UK which want to step beyond gas and into state-of-the-art coal, there are also companies which would like to develop new nuclear power and they, above all, I think, probably need the kind of certainty attached to environmental policy which we have been talking about this afternoon.

Q68 ***Lord Geddes:*** I am very glad that you have answered the question which I failed to ask! Could you expand a bit more on that nuclear front from your Association's point of view? First of all, in black and white, are you for or against?
Mr Porter: In black and white, if you put it like that, we are for, but we are an Association which represents companies involved in all the generating technologies which are used commercially in the UK and we try as far as possible to be technology-neutral, but the board of directors of our Association decided

last summer that we ought to make a stand on nuclear power. That stand comes from companies which are not necessarily to do with the nuclear industry and the Association's position is that the UK should maintain nuclear power as part of the energy mix, that it should be commercially driven and that to make it so there were certain things which the Government could do to remove some of the obstacles to new nuclear power and we listed about six of them, many of which are talked about quite widely in the press these days.

Q69 ***Lord Geddes:*** Apologies for the fact that I do not know the answer to this next question. Did your board give any sort of percentage of that mix?
Mr Porter: No, we are averse to prescribing exact fuel mixes because I think generally everyone around the table thinks that we would always be wrong.
Dr Golby: May I add a supplemental to that, my Lord? We are very clear that diversity is important as a company and that nuclear, just as much as clean coal and renewables, must be part of that mix. We are one of the UK's biggest renewable players and renewables are more than just wind, people frequently forget that, and we are currently building what will be the UK's largest biomass generator at Lockerbie in Scotland. As a group, we also operate nuclear assets elsewhere in Europe and we have said to the UK Government that given the right policies we would be prepared to invest in nuclear in the United Kingdom.
Chairman: I think I would be right in saying that the Green Paper in this regard, while for quite obvious reasons is silent on the issue of nuclear, by setting out not as clearly as you would like a determination to stick with the Emissions Trading Scheme and to stick firmly with a carbon policy and a market technology-neutral position it is pretty clear that that opens the door should individual Member States wish that to be part of the policy mix. I think that would be a fair interpretation of the Green Paper. Could we move on to the line of questioning under the fifth question. Lord Roper.
Lord Roper: I am sorry, I thought I had raised this one. We had been dealing with it.

Q70 ***Chairman:*** I apologise, I was looking at the wrong one. Is there anything else that we need to cover? The question which was asked by Lord Geddes out of turn, at my request, is worth coming back to again at the end. There are many areas of this Green Paper. Some of us at least think there is not an awful lot that is new in the past, that there are certain driving forces, security of supply, for various reasons. Sustainability seems not necessarily new but important to re-state and competition again is not new, it is re-stating that this is very important. If you wanted us to seize upon the two most important positive areas of action and policy which you would like to see taken forward, which would they be, and if you would say to us, "Make sure that these are the two issues we say be very careful about," what would those two issues be?
Mr Porter: Be very careful not to intervene in a clumsy manner on the issues which we have discussed this afternoon, such as interconnection and storage. When you talk about markets, please mean it, and when you do want to influence the market for environmental reasons please do it in a considered way with as much long term guidance as you can possibly give.
Dr Golby: I would agree with that. I would just add to that, to continue the drive of Europe towards a European energy market, so continue the opening up of the market from national to regional and then to a European market place. That, to me, is the prime area of responsibility for the Commission to promote.
Mr Dolben: Could I agree with that and add that I think there is quite a bit more which could be done on cross-border trading to make it easier to ship gas and electricity across borders. That is certainly one area to pursue. I think one area not to pursue is that there is a proposal to have another look at the gas and electricity security of supply directives. Those have only just been agreed and I think we all think we should see what the experience is with those directives, which actually are very sensible in content, before we actually look to amend them.
Chairman: As I said to Centrica, and it is said with equal sincerity to yourselves, thank you so much for giving us your time today. Your oral evidence has been helpful, forthright and informative and it supports equally helpful written evidence. Thank you very much on behalf of the Committee.

MONDAY 8 MAY 2006

Present	Eccles of Moulton, B	Roper, L
	Fyfe of Fairfield, L	Swinfen, L
	Geddes, L	Walpole, L
	Haskel, L	Woolmer of Leeds, L (Chairman)

Examination of Witnesses

Witnesses: **Mr Jeremy Nicholson,** Director and **Dr Jim Robertson,** Director, Energy Intensive Users Group, examined.

Q71 ***Chairman:*** Good afternoon Mr Nicholson and Mr Robertson. Could I, on behalf of Sub-Committee B, extend you a warm welcome. Thank you for your written evidence and we look forward to asking you some questions both generic but also some questions that arise from that written evidence. You have helpfully given us the introduction to the Energy Intensive Users Group in your written evidence. Before we proceed, is there anything you would like to add?

Mr Nicholson: Very briefly just to say I am Director of the Energy Intensive Users Group and my colleague, Dr Jim Robertson, has a pair of roles. He is a prominent member of our group and also he chairs the working party of oil and gas for IFIEC Europe, the international federation of which we are part, and we may say a bit more about that later. I will not amplify on the introductions that have already been given, safe to say that we are very pleased to be called to give evidence. The subject of competitive secure energy supplies is dear to our members' hearts and we are very happy to comment on this.

Q72 ***Chairman:*** Before I invite Lord Swinfen to start the questions, could you give a broad idea of how many people are employed in the UK in industries that you describe as intensive energy users?

Mr Nicholson: I do not have those figures to hand, regrettably.

Q73 ***Chairman:*** If you could send us a note that would be very helpful.

Mr Nicholson: I would be very happy to. I would suggest, if this is okay with you, that I summarise both employment and expenditure on energy in turn in each of those sectors.

Chairman: If you are able to do that across the EU, not each Member State, but give us an idea of how significant it is, significant to your members and also how significant it is in the economies.

Q74 ***Lord Swinfen:*** Dr Robertson and Mr Nicholson, you will know that there have been a number of reviews on energy policy over the last few years. Why do you think the Commissioners decided to have another review at this time?

Mr Nicholson: I think there are a number of reasons why it is timely. It is evident that a number of objectives of European energy policy are not quite working out as intended both on the environmental and the economic side. There is concern about rising carbon dioxide emissions, about security of gas supplies and critically, I think, concern that the ambition to create a single liberalised energy market across Europe, which we all support, is looking rather more distant than we would have hoped by this stage. I think another factor that brought matters to a head, arguably it should have happened anyway, was the development plainly with Russian gas supplies to the Ukraine and I have no doubt this concentrated a lot of minds. I do not know if Jim would care to say a bit more about that.

Dr Robertson: I think that covers it fully. In my view, and IFIEC's view, the main concern is the very, very slow liberalisation process in the EU.

Q75 ***Lord Swinfen:*** Do you think this is an effort to speed everything up?

Mr Nicholson: I think it is a combination of factors coming together. One should remember the expectation that consumers and taxpayers will be able to absorb additional costs of environmental changes and so on, reducing carbon dioxide emissions, that part of the agenda, assumed that we were going to be moving towards a more competitive market and this would keep the underlying costs to consumers down. For a number of reasons, partly because that process has not moved forward as expected, and partly because of movements in international energy prices, the price of oil being the most obvious one, but because of a slightly artificial link through to gas prices in the way that gas is sold in the continent, that has translated into a rise in gas prices. These factors have frankly thrown a major spanner into the works and it was inevitable that policy would have to be reviewed.

Q76 ***Lord Swinfen:*** You said that there was a slightly artificial link between gas prices and oil prices, do you think if that link was removed gas prices would be increased or decreased very significantly or not so?
Mr Nicholson: I think overall and in the long run they would be decreased, however, I am sure that many of you are aware that currently wholesale prices in the UK are considerably above those in the continent which are, if you like, damped down by being indexed to oil products which, where they have risen in price, are not as volatile as the traded price of gas in the UK and ironically our liberalised market, which is effectively becoming the swing market for Europe, is losing out. For years, arguably, we have had a competitive advantage in gas and so we probably ought to have done with the resources at our disposal. That has switched around with a vengeance in the last few years. We have seen a tripling of the wholesale gas price and, hence, also electricity in this country in the last three years. We have gone from having the most competitive price in Europe on a wholesale basis to the least competitive in a very short space of time. In the short run, removing that artificial linkage would help stop summer prices being propped up in the continent which is an issue for us and in the long run it would be beneficial to all consumers. Jim is a particular expert in this sphere and I am sure could tell you more about it.
Dr Robertson: The answer which Jeremy has given is a very full one. Just to emphasise, we have seen a doubling in gas prices in most of Europe where gas has been linked to oil. We have seen a trebling of gas prices in the UK where the market is liberalised. So the UK is not really a very good advertisement to the rest of Europe for the liberalisation process. To go back to your earlier question, it reminds me of the occasion 10 years ago when I worked for ICI and at that point I was engaged in selling the business that I now work for to an American owner. I remember saying very clearly that liberalisation would be in place in Europe in the next five years, that was 10 years ago. I think if I were to make the statement now, I would doubt if we would have liberalisation in the rest of Europe in 10 years' time, never mind five years' time, the pace has been extremely slow, and I think that is the main reason that the Commission is raising the issue now.

Q77 ***Lord Swinfen:*** I do not want to delay the Committee but does taxation have anything to do with the tripling rather than the doubling of gas prices?
Dr Robertson: Nothing whatsoever.
Chairman: We will come back to the issue of prices.

Q78 ***Lord Roper:*** I would like to pursue the point that you make in your written evidence in paragraph three as well that it may be a decade or more for markets to be liberalised in Europe. I wonder whether you could say a little more about that, why Dr Robertson's prediction of five years 10 years ago has proved to be so inaccurate and why you are now as pessimistic as you are?
Mr Nicholson: I think it is based on the evidence we have seen, or the absence of evidence, of progress in a number of the key markets. It is not a secret that France, for example, is not rushing to adopt the Anglo-Saxon model generally and particularly with respect to its energy markets. Maybe that is slowly starting to change but very, very slowly. We have become aware that there are a number of bottlenecks in this process and until those bottlenecks are addressed, thinking particularly of the unbundling process separating out the regulated natural monopoly pipeline and transmission businesses from those businesses and from those areas where competition can and should work—that process took a long time in the UK with a government that was enthusiastic about doing it—when you have got 25 different states starting from a different point with different traditions not all of whom are equally enthusiastic about the directives that they themselves have signed up to, and many of whom are under a number of political constraints in terms of what they can do in the short term, it seems pretty obvious to us that there is going to be a hard task ahead even if technically speaking we have got the directives that should deliver the result.
Dr Robertson: I would add, it is certainly not clear we do have the directives that will deliver the result. The Green Paper itself does make the point, or the hope, that by the end of 2006 most Member States will have signed up to the Second Directive, and that is very slow for a start. From my perspective, having been involved in what is known as the Madrid Process, the Second Directive, which was about transportation and transmission, was forced upon the Commission because the supply side did not adhere to the voluntary agreements that it had made in accordance with the First Directive. This made the Second Directive necessary. Now we have voluntary agreements, for example, on storage access in Europe and so far it does not look optimistic that the supply side, the storage operators and the gas companies are adhering very strictly. They would say it is early days, the agreement was signed last April—that is April 2005—the signs are that the supply side does not easily honour the voluntary agreements which its associations agree to.

Q79 ***Lord Roper:*** Is this partly because large users, such as your members, comparable members in other countries, have long-term agreements with suppliers and, therefore, it is difficult for them to break those and start a market operating satisfactorily?

Dr Robertson: I do not believe that is the main reason, no.

Q80 ***Lord Roper:*** Could it be a contributory factor?
Dr Robertson: In special circumstances it might be a minor contributory factor. I could not say it is not a contributory factor at all but I do not think it is a significant contributory factor.
Chairman: We will inevitably return to a number of these inter-related issues. Lord Haskel.

Q81 ***Lord Haskel:*** The underlying objectives, according to the Commission, behind this paper are the policy pillars of sustainability, competitiveness and security of supply. You have told us that you do not think things are working out properly, so are these the correct objectives? Are they the true objectives or is there something else which we ought to be concerned about?
Mr Nicholson: I think they are the right objectives but you will be aware that contexts such as sustainability are not always especially easy to define, ranging from one viewpoint that humanity has already devised a means of sustainable development—it is called capitalism—through to a contrary view that more central planning is required and a whole raft of environmental legislation in order to achieve it. Perhaps the answer is somewhere in between the two. Even on that one area it is not straight forward. Competitiveness, again, is not always a straight forward concept. We can easily identify what we mean by competitiveness within the European Union but to what extent are we talking about that in a truly international context. Security of supply is not straight forward either because there is no such thing as a completely secure system under all conceivable circumstances. What we are talking about is an element of risk there. What I think is becoming apparent is that any sustainable policy in a general sense of the word needs an element of balance between those objectives and it is unlikely to be successful and, therefore, unlikely to be sustainable in itself if one or other of those objectives dominates to the exclusion of others. I am not sure that is an entirely satisfactory answer to your question but I think it is an honest one.

Q82 ***Lord Haskel:*** No, I think that was a very sensible response. We all know that some of the sustainability and security of supply and competitiveness in some ways are mutually exclusive so this whole question of balance is important. Where would you see the point of balance? Where would you see the compromises that have to be made so that we really can ensure that the system is working properly?
Mr Nicholson: Firstly, I think from a large user perspective it is not responsible to argue for prices which give you a competitive advantage in the short run but ultimately endanger security of supply. All our members operate capital intensive plant that has long operating lives and they are in business for the long-term, and they understand that. I would hope certainly our group's input to energy policy discussion in the UK and IFEAC at a European level is responsible about that, not asking for the undeliverable, and if we want a certain degree of security of supply as consumers we are going to have to pay for it; we understand that. Equally, to think that industry does not have a role to play as far as car production is concerned, either within its own activities or for the energy suppliers that it procures, I think would not be realistic. I do not think our group has ever argued against that, merely that one needs to bear in mind what our competitors in the rest of the world are at this moment in time prepared to put up with because the least sustainable option is simply moving industry from one part of the world to another which is not a solution to a global problem. The point of balance is most likely to be achieved where consumers get good value for money out of their energy supplies and out of the carbon reduction measures that are imposed on the energy industries. The latter I think is difficult to demonstrate at the moment with a number of policies.

Q83 ***Lord Haskel:*** You do say in your note to us, for which thank you very much, that the principal means of achieving this, and we are talking here about carbon reduction, the EU emissions trading scheme, is not functioning as intended. If that scheme is not functioning how are we going to get this carbon reduction?
Mr Nicholson: The short answer is that unless either it is made to function or it is supplemented by something else which does, we will not achieve those aims. Other people may argue that the aims were never achievable realistically in the first place but whether they are or are not we all agree that a relatively stable long-term price of carbon is key to this. We cannot expect people to invest in low carbon generation, whether it is nuclear, carbon capture, renewables or even energy efficiency, if they have not got some degree of certainty about that, and we do not have that at the moment. The environmentalists are quite right in my view to criticise a system which rewards carbon intensive generators with windfall profits, and incidentally windfall losses to our members, which is really what we are worried about. This does not strike me as a way to sell what is intellectually an attractive idea of emissions trading, achieving carbon reductions at the lowest possible

cost. Why would anyone be against that in principle? Yet we do not have something in the EU yet which one can put hand on heart and say, "We think America, China and the rest of the world ought to adopt our model". Whether we ever can do with 25 Member States allocating emissions' rights on a national basis and with other constraints operating on the system, I simply do not know at the moment. I know the Government is wrestling with this in the UK as part of its energy review but it may well be that the UK and others have to have some supplementary mechanism to support emissions trading unless and until it becomes something more efficient.

Q84 ***Lord Haskel:*** Of course we will not be able to have any supplementary or alteration to the scheme on our own, it has to be Europe-wide presumably?
Mr Nicholson: Unless it is so moderate that it is hardly going to achieve its environmental aims. It may well be that there is more scope for acting unilaterally in areas which are less exposed to international competition, that is not much use for our sectors that are, but of course emissions trading does not take in the service sector or the public sector or the domestic sector so perhaps some other mechanism is the appropriate means of dealing with emissions there.
Dr Robertson: If I can just pick up on two points. First of all, I think we have to bear in mind that the nature of energy intensive industries is that the cost of energy is hugely significant and it is these very industries who have strived to be efficient. In fact, in the industry in which I work in chemicals and fertiliser, if you compare efficiencies with those in mainland Europe, with North America, Asia, Europe is ahead of the game. We already have a very efficient plant in Europe without the need for fiscal instruments. That is just the nature of business. If you are an industrial company whose costs are energy you make sure you minimise your costs. Secondly, if I can add to a point Jeremy made, on the question "what is stopping liberalisation in Europe? What are the differences between Europe and the UK?" and an observation to your very good point about balance, I think the UK market, particularly in gas and electricity, has moved to a very short-term market whereas some of the Europeans, particularly the French, want a long-term market. The UK has become too short term; other countries are too long term. The balance is in between. That makes life very, very difficult for UK companies, UK manufacturing companies would like to be able to lock in forward prices on a long-term basis but the markets just do not exist because the market prices for long-term contracts in the UK for gas at the moment are some 50 per cent higher than in Europe and some 20 to 30 per cent higher than in North America.

Q85 ***Chairman:*** Surely two or three years ago that was not the case, why did people like you not go in for very long-term contracts? You are shouting foul now when you should take advantage of the low prices.
Dr Robertson: Two or three years ago the long-term forward market prices were still very high. Two or three years ago, and even longer, the EIUG was pointing out the problems that the forward UK market for gas, is not a liquid market and does not offer prices which are in any way competitive with just about any country in the world.

Q86 ***Chairman:*** Why is that?
Dr Robertson: Why are UK forward market prices so high?

Q87 ***Chairman:*** You are saying that for high energy users you cannot do deals on long-term contracts to be supplying enterprises?
Dr Robertson: That is correct.
Mr Nicholson: Not on a comparable basis. This is worrying for businesses that need to have a long-term stake in the future. Sometimes, of course, there can be reasons associated with individual firms why they cannot contract long-term, perhaps some of them are not sufficiently creditworthy or whatever to do it, in which case one can hardly say that is the fault of the rest of the market. This is an issue in the UK right now and it is not entirely clear how we are going to get round it. It seems that we have got this difficulty of our more volatile market operating within a less liberalised European whole and this is probably causing more volatility in our market because every swing in supply and demand for the rest of Europe seems to be having a ripple effect on our market whereas our competitors have these, if you like, damped prices linked typically to oil which do not suffer from this volatility. I am not saying that the European model is ideal, in fact I have already mentioned there are problems with it, but the stability of the prices is preferable to the level of the volatility we are currently experiencing in the UK market.

Q88 ***Lord Fyfe of Fairfield:*** I was interested in what Dr Robertson said and I am thinking about the market in the United States. We were ahead of the United States as far as, say, technology was concerned and yet when one compares the prices in the States to the prices in Europe, specifically in the United Kingdom, we seem to be so much higher. Why should that be?
Dr Robertson: The bottom line is I cannot answer because I do not know. Something is not working because for the past year or two years we have had the highest market prices in the world at wholesale price level. I can explain how the phenomenon appears to be created but I cannot really explain why it has come

about. It appears to be created because in the summer the UK is still an exporter of gas and gas is exported from the UK—and that is happening today—to the continent and the continental buyers are prepared to pay a price which is very close, presumably a couple of pence a therm, below the price of their long-term oil index contract so that sets the market price for the summer at 38 pence a therm say. In the winter we have just been through, the UK's infrastructure for importing gas, primarily the Zeebrugge-Bacton interconnector and the LNG import facility in the Isle of Grain did not operate at a 100 per cent rate despite the fact that UK prices were almost double the prices of these oil link contracts on the continent, so gas was not able to be made available or could not be brought to the UK and it is not entirely clear why that was. A small part of the reason may be due to physical bottlenecks on transportation systems in Europe. I suspect personally, but I do not know for sure, that there are also contractual problems, in pipeline capacity.

Lord Fyfe of Fairfield: I take these points. I think that is an answer which I do appreciate. The other thing I suppose is with all the quarrelling that goes on in Europe while the 25 Member States try to reach agreement on hundreds and hundreds of individual items where that does not apply in the US of course, which is one large homogenous market as opposed to Europe, that brings one inevitably to ask about the sanity of extending European borders, but that is an entirely different question.

Q89 ***Lord Roper:*** I have two supplementaries about what was said about the ETS to get back to that. First of all, why does the ETS lead to windfall losses for your members? Secondly, how far will the problems be resolved to some extent if the period for which the system worked was a longer one rather than a relatively short one? Thirdly, if the emissions rights were auctioned rather than made available freely, would this not resolve the second problem which you raised?

Mr Nicholson: If I can deal with the middle point first and the other two together. Extending the period is pretty important. If you are trying to incentivise investment in long life assets, many of which have long lead times before you can start construction, let alone complete it, the idea that we can do this with three or five year windows of certainty for investors, whether it is in the power sector or anywhere else, is absurd, we need a longer term signal. If that compromises the ability to set hugely radical environmental targets and means that we go for more realistic ones then at least they are achieved and perhaps that is a lesson we can learn. You asked specifically about windfall losses and gains. The windfall gains to the electricity sector arise entirely as a result of free allocation. The economists will tell you quite correctly that the way around this problem is to auction the permits. From a consumer point of view seeing as we get the increase in prices whether these permits are auctioned or allocated, one might say that we are pretty indifferent to it. For the traded sectors, like steel, that participate in the scheme, it would be ruinous to have to purchase those emissions rights on the open market even at the prices that carbon recently collapsed to a week or so ago. This leads one to the conclusion that perhaps the solution may be slightly different for sectors that are exposed to international competition, like the manufacturing sectors, compared with the electricity generating sector which can pass all its costs on. However, as soon as you accept that, does it make sense to have a single trading scheme for all sectors and you are back to square one. I cannot say I know the answer to that but I think that is an accurate summary of what has been going on.

Q90 ***Chairman:*** Fairly recently we concluded a report on aviation emissions and, as the Chairman said, there is an excellent example of internationally exposed business. On ETS, before we move on, you said you would like to see it for a longer period of time. Can I make an observation and ask one or two questions. Clearly, it would be desirable from the point of view of people taking making major investment decisions to have an emissions training scheme that had quite a lengthy period of time, I am going to ask you when I conclude this what length of time you would like to see the emissions training scheme adopt as being a length of time. My second point, before you answer that question, is that the longer the period you have, the more one would almost certainly have diminishing levels of emissions permitted, otherwise you would never get emissions reduced. Would you accept that if you have—I will not put words in your mouth about what the length of the period is—that would mean that people would have a diminishing level of emissions there and that would obviously lead to some interesting problems, i.e. initially allocated quotas now which are going to reduce over time. How long would you like to see the emissions trading scheme cover? Would you accept that would almost mean that the quotas issued would reduce over time? That would inevitably lead to an increase in the price of carbon and the carbon price will be much higher in 20 or 30 years' time than now. If you have a longer period you will accept that you will not have, as you put it in your paragraph seven, a firm long-term price of carbon without a rising long-term price of carbon. Can you deal with these, please?

Mr Nicholson: I think it is pretty much inevitable that if we are going to go down a continuously decarbonising trajectory for European economies that that must lead, other factors being equal, to a rising cost for carbon over time. I cannot see how it could be otherwise, unless of course technology moved on and the scheme was not necessary at all to decarbonise. This, of course, leads to exactly the dilemma and if we do not really know what the rest of the world is going to be doing by 2012 let alone by 2020 or 2025, which might be the sort of planning horizon you would need, I think if you look at the lead time for planning and construction of major projects and for running them for the first 10 years or so, which is critical in terms of the economics, you are talking about needing a 15, 20, possibly even a 25 year horizon in order to plan against. Now you said that we desired a long-term carbon pricing law and there were attractions for doing this through emissions trading, I am not allowed to advocate carbon tax on behalf of my members, who would probably sack me if I did, but in terms of certainty of price one does wonder whether carbon taxation, even though it may be less efficient for trading in certain respects, might have some advantages there. The disadvantage would be it would be difficult to lock into a very long-term high and escalating price if we do not know how far and fast the rest of the world will go. The plus side is that once Government has introduced taxation, whether you think it is a good idea or a bad idea, they are normally loath to get rid of it. A 10 euros per tonne CO_2 price in tax might actually do more for the environment than a 30 euros per tonne carbon tax which might collapse from one week to the next in a trading scheme, I do not know, that is floating a personal opinion. I think the longer that investment signal the more careful you have to be, obviously, about locking yourself into something which could prove to be fundamentally uncompetitive. Ultimately, if we did, that would be unbankable and investors would not have faith in it.

Q91 ***Chairman:*** It was said to us somewhere in evidence, or certainly perhaps in press articles that you alluded to, that some industries can be mobile and if you are high energy users and the carbon price in the emissions trading scheme was going to rise relentlessly over the years, and other countries did not join in, that would, in European terms, push businesses offshore. Is there evidence to date that high energy prices in Europe have pushed high energy user industries out of Europe to North Africa or elsewhere? What is your view about that? You must have done an analysis of this. As a politician, what is your advice to Government?

Mr Nicholson: The evidence is starting to come in, simply because of the price rises we have had. I cannot say this is all down to emissions trading or the cost of supporting renewables or climate change levy, it is due to a combination of factors, one of them being the underlying wholesale price. We have seen a number of firms go out of business in the last 12 months in the UK. Glass and paper centres and chemicals, there was a large aluminium plant closed, I think in Germany, when coming out of contract and they are very high electricity users so it is hardly confined to the UK. The real damage is that investment is going elsewhere rather than to keeping things going in the UK. The decisions do not happen overnight, obviously, but if you starve a plant from investment for long enough the decision becomes inevitable. I would add that there have been some temporary closures of plant in response to high gas prices this winter and, Jim, you might want to say something in particular about your own plant in that respect.

Dr Robertson: Yes. I think perhaps too we should attempt to provide some written evidence after this meeting.

Q92 ***Chairman:*** It would be extremely helpful.

Dr Robertson: With my chemical industry hat on, the facts are that 65 per cent of UK chemical production is now owned by overseas companies, i.e. the boardrooms are not in the UK. It is very clear from where I sit that boardrooms outside the UK have been horrified by what has happened in the last 12 months in the energy markets in the UK. My own chief executive in the financial statement with our results made a statement that the company's results had been negatively affected by high North American gas prices and exorbitant UK gas prices. Exorbitant was the word that was used. It is not just my company, there are many companies, American owned, German owned, who are either privately or in conferences making similar remarks. There is no doubt at all that industry will move to where prices are cheaper. I am thinking really in terms of gas and electricity as opposed to the carbon effect but over time the same logic would apply, I guess.

Chairman: Thank you very much for that. We have spent a long time on this. There are still issues we will come back to but can I move on now. Baroness Eccles.

Q93 ***Baroness Eccles of Moulton:*** The discussion so far has ranged over a number of aspects of the inquiry but the question is do we need a single European energy market and, if so, what difference will it make? That is, I suppose, the fundamental question which might wrap up some of the more complex discussion that we have been having so far.

Mr Nicholson: It is a fact of life that the UK is becoming progressively more dependent on imported energy. Whether it is in a European context or an international one, our days of energy independence are already over in certain sectors. Unless we see a return to indigenous coal, with everything that means, it is likely to carry on in that direction. We have an international market, of course, for gas now developing with LNG so it is not just confined to our immediate geographic neighbours through pipeline transmission. That provides another route to our markets that is not necessarily entirely dependent on what happens elsewhere in Europe. Nevertheless, we have to realise that geographically we were always going to be fairly dependent on European sources of gas, partly from Norway, partly from the Netherlands, partly either directly or by displacement from Russia, which raises interesting questions on its own. It is not essential to have a single European energy market to resolve those issues but it could help enormously in terms of collective security of supply and, indeed, ultimately bringing prices down to consumers but it does depend on there being a properly regulated, open, transparent and truly liberalised market. I think the worst of all would be to be increasingly embedded in the European whole that does not end up liberalising. That would be the worst of all outcomes. I think the idea of energy independence is a difficult one. We can never be truly independent. We can hedge our bets. We can **insure** ourselves by making sure that policy does not push us too far in terms of dependence on any one fuel or any one route to market for that fuel, and particularly so in electricity generation.

Q94 ***Baroness Eccles of Moulton:*** In the first paragraph of your evidence you talk about the very high energy consumption of the energy intensive users, which is self-evident, but you say that there is a significant variation across the EU in the wholesale price. Could you amplify that and give us a bit more detail?
Mr Nicholson: If you were to purchase wholesale electricity or gas in the UK market today for a year ahead, a typical basis of an annual fixed price contract to an industrial user, it is the wholesale price that accounts for the bulk of that supply cost, you would probably be paying about 40 per cent more than an equivalent user in continental Europe. There are differences within the rest of Europe, of course, as well, and not everybody taxes energy and the supply costs are slightly different, but of that order of magnitude. There is a similar disparity in gas and electricity. However at particular times of the year in the winter prices we have far more seasonal pricing in the UK, especially for gas, than on the continent because of the oil dampening effect there and the differences are an order of magnitude greater. I am sure, Jim, you could quote something on the basis of this winter's experience for gas prices?
Dr Robertson: On that specific, I have already stated the numbers, I think. The oil indexed contracts that are fairly well known, there are seven or eight big ones, in Europe whose prices are fairly well known and they are around about 40 pence a therm, and that is with today's high oil prices. The UK price, the day ahead or within day price which some intensive companies were forced to buy at averaged a bit more than 60 pence a therm; the day ahead price was 65 pence a therm and the month ahead price for the winter average was about 70 pence a therm. The UK was virtually double Europe for the period. That led to plant closures. The company I work for temporarily had to suspend operations for two to three months.

Q95 ***Baroness Eccles of Moulton:*** I suppose, although we have discussed it a lot, the contradiction appears to be that here we are with a liberalised market and there is Europe with a market that is far from liberalised and yet the result is that we have higher prices.
Mr Nicholson: Part of the explanation for that, as Jim has already mentioned, is the influence of the inter-connector that connects our supply to Belgium and the rest of the continental system. That seems to act like a one-way ratchet: continental suppliers can purchase gas from the UK market when it suits them and, indeed, exporters can make money out of exporting gas during the summer when we do not need to use it. The same does not seem to work in reverse so it has the effect of dragging up prices in the summer when they otherwise would be lower and in winter when we need it, even when our prices were spiking to nearly 200 pence a therm this winter on certain occasions, the gas was not flowing back in response to those short-term price signals. It is like we have connected ourselves to a one-way ratchet. If all of Europe was operating on a similar basis, the market would help even out those troughs. I am sure that some European countries would have experienced higher energy prices this winter but there would be more equity in terms of the effect on consumers, so those competitive differences in prices would tend to even out if there was a comparable state of liberalisation across the board.
Dr Robertson: Part of the answer to your question is, if for no other reason, some of us would advocate a single market because the vision in Europe is a single market and we are halfway there and the UK is caught halfway pregnant, if you like, but I doubt you can go back from where we are, you have got to go forward and I think liberalisation will deliver competitive benefits if the market is truly competitive and left to work.
Baroness Eccles of Moulton: They are big hopes.

Q96 ***Chairman:*** Are you saying that your company, or companies like yours, simply could not have signed long-term contracts to buy gas and you had to have a contract, or even absent a contract, that meant that you had to buy gas on the daily stock market? So you are saying that despite the liberalisation you cannot sign a long-term contract and get gas supply to you and your business. I am puzzled by this. You

are saying it was not a commercial choice that you left yourself in a position where you might face this knowingly, you simply cannot in this country, as a business, sign contracts that guarantee your supply at a certain price.
Mr Nicholson: Let me clarify that. You can indeed sign one, two or three year contracts with a supplier for a firm price of gas in which case you will be locking yourself into a fundamentally uncompetitive price compared with your European competitors for that period of time. That is an option for people right now. Literally speaking it is an option but whether it is practically an option for someone to do that is another matter.

Q97 ***Chairman:*** Apologies, let me go—
Mr Nicholson: You did ask whether that could have been done earlier.

Q98 ***Chairman:*** That has not always been the case. Surely at some time in the past UK prices were lower?
Mr Nicholson: Indeed.

Q99 ***Chairman:*** I am asking why did your current members not sign up to long-term contracts and take advice then. I do not say this pejoratively but it rather sounds as if you are shouting "foul now" when you should have been signing up to long-term contracts when prices in the UK were lower.
Mr Nicholson: I should have gone on to explain whilst it was possible to sign two, three or four year contracts in certain cases a few years ago, and possibly some people may have been lucky or wise enough to have done that, the expectation was at the time, rightly or wrongly, that we would be all moving in this liberalised more interconnected direction and so perhaps, one might say for all of us, there was some naivety about whether things were going to work out the way they have. One other aspect which puzzles us, and we have mentioned this to the Commission and we think it should be of interest to others, is that suppliers that operate in the continental markets will not offer their consumers the equivalent of spot-related contracts like we have in the UK, they insist on it being oil indexed. Yet the same suppliers, supplying our companies in the UK, refuse to offer oil index contracts to consumers here. An add on to your question might be if you do not like buying at the UK rate why do you not do a continental style deal? The same people who are operating elsewhere in Europe refuse to offer those deals to consumers in the UK.

Q100 ***Chairman:*** Is that not challengeable legally?
Mr Nicholson: This is what we have suggested to the Commission.

Q101 ***Chairman:*** Yourselves?
Mr Nicholson: Yes.

Q102 ***Chairman:*** Your members surely must know that is illegal?
Mr Nicholson: We cannot understand how it could be legal for a firm to offer contractual terms right across Europe on one basis but to refuse to do that in the UK market. It reminds us a bit about what used to go on in the car market and various other things.

Q103 ***Chairman:*** We will ask the Minister.
Dr Robertson: This point has been made very clearly by IFIEC and by other people in the chemical industries in the submissions which have recently been made to the EU Competition Commission. It is a fact that in the UK you cannot purchase gas forward on anything but prices that are related to the so-called spot or forward market in the UK. Can I amplify the first point? The fact is with the benefit of hindsight everyone wishes they had locked in a price for 10 years. Some companies did lock in forward prices as far forward as they thought was prudent for their businesses, three or four years perhaps, and some of these contracts are either just ending or ended a year ago or are coming to an end and that is one of the reasons that the official statistics published by the Department for Trade and Industry called "Energy Trends" do give a rosier view of what is actually happening in the UK than is the position for people who are now forced to go back to the market after having a four year contract, say, and who sign up to another four year contract.

Q104 ***Lord Swinfen:*** The further you get away from the gas field, does that significantly affect the price of gas?
Dr Robertson: The answer is a very clear yes. The economics of gas production are quite complicated, and I do not claim to be a master, but if you are producing gas in Siberia the cost of exploring, producing and so on is peanuts, it is two or three pence a therm. The added value is in the thousands of kilometres of pipeline and transmission and pumping. On a global scale distance is very important. Gas is a very expensive commodity to transport.
Mr Nicholson: Just as a qualification of that, if you are producing liquefied natural gas, the main cost is in that process and then the corresponding process at the other end, once you have decided to put something in a ship and move it, it is less important how far that ship moves, whereas for pipeline gas it is almost certainly a function of the distance.

Q105 ***Lord Swinfen:*** From your remarks a short while ago, I was wondering if you would advocate the United Kingdom stopping exporting gas?

Mr Nicholson: We have explicitly considered that during discussions internally within our group. Our view is that if there are threats to security of supply in this country, partly because of a lack of other European countries following agreements they have signed up to, then our Government ought to be putting our national interest first. Of course we are obliged to maintain open markets and it is hardly an uncontroversial thing to talk about export restrictions but we have recently produced a paper which we are discussing later this week with DTI officials and Ofgem where we explore some of these issues and I would be happy to give you a copy of it. It is a possibility. It would not solve our winter security of supply problems to restrict summer exports but it would, of course, reduce the price of summer gas. If we had expensive winter gas but cheaper summer gas perhaps some of the average price effect could be reduced in the UK. It also might help resting some of those sources in the North Sea not to have them used flat out throughout the year. I think that is probably a minor effect but it could help the security of supply.
Lord Swinfen: I think a copy of the paper could be quite useful.
Chairman: It might not be the best introduction for discussions with Putin, of course, to suggest that we are willing to cut off our supply of gas in relation to national interests.

Q106 ***Lord Walpole:*** What I am not quite clear on is this interconnector which brings gas from the continent. Is gas going down to the continent at a different price from which it is coming back?
Mr Nicholson: There are a number of things going on there. Some of that gas moves on a contractual basis which is independent of the spot price at either end of the pipe.

Q107 ***Lord Walpole:*** Right.
Mr Nicholson: Some of it moves opportunistically in response to those market signals which is part of the explanation as to why sometimes gas is moving out of the UK even when the price signal suggests it should be doing the opposite. There are a number of things going on there because of the lack of a liquid market on the other side of the pipe to the extent we have here but that explains why sometimes the physical movement of gas does not follow the price signal as an economist would expect it to.
Lord Walpole: I think that answers the question.

Q108 ***Lord Haskel:*** We have been told that in some European countries the ownership of pipes and the ownership of gas is in the same hands. Is this one reason why the market is not operating properly and, if so, what can we do about it?
Dr Robertson: Absolutely. IFIEC Europe has campaigned through the Madrid process for ownership unbundling. The second directive, if I am correct, requires legal unbundling but ownership can remain with the parent company.

Q109 ***Lord Haskel:*** How do you achieve that?
Dr Robertson: We believe that the EU ought to insist on ownership unbundling of infrastructure. Behind your question is infrastructure in gas and electricity—gas is what we are talking about here primarily—is a natural monopolistic situation. Gas pipelines are a monopoly therefore they have to be regulated and they ought to be owned by entities other than the gas supply companies. That has been IFIEC's position, EIUG's position ever since I can remember.

Q110 ***Lord Haskel:*** Does this have an aspect on the price differential? Do the owners of the pipeline have a say in what the price of the gas should be?
Dr Robertson: I would have to be reminded by Jeremy what EIUG's official policy is but certainly the interconnector back to Zeebrugee is not subject to the same regulation as the national transmission system is in the UK. The capacity is owned by gas producers, gas companies, gas supplier companies.
Mr Nicholson: EIUG's position on this is quite clear. We regard the interconnector as being the same as any other piece of infrastructure but the UK regulatory regime, because it is offshore, seems to think somehow it is subject to competition, which we think is more theoretical than actual. We cannot see why an offshore pipeline of 25 miles or whatever it is should really be treated any differently from an equivalent pipeline that happens to be onshore. It needs price regulation and without it there are all sorts of barriers to that capacity being efficiently utilised. With respect to the unbundling process in Europe, it is not as if we have not had a lesson from the UK in this. We privatised the monopoly in the UK and realised pretty early on that we needed to separate the wires out of the electricity companies and the pipes from the gas companies and have a separate system for regulating them and you need full ownership unbundling to get the whole thing to work. We learnt that lesson a long time ago in the UK so it is not as if there is not an example that should be followed elsewhere and it should not, unfortunately, surprise anyone if you do not go the whole way with that process the system will not work.
Dr Robertson: My Lord Chairman, could I add one point. The same arguments, incidentally, in the view of IFIEC Europe apply to gas storage facilities and LNG facilities when such facilities are effectively monopolies, and we believe that is the case. In the EIUG paper, which Jeremy referred to, we talk about storage. Countries like France and Germany have a

lot of storage compared with the UK and not all of that storage is needed perhaps. Some of it is there for "long-term strategic reasons" that are not very clear. In a single market there is no reason why the UK or UK consumers or UK gas suppliers should not have access to these facilities, and there is nothing in place to force that at the moment. The ownership, for example, in France, the ownership of French storage is largely still in the hands of Gas de France.

Q111 ***Chairman:*** We will come back to storage later. Was it not the case that in the last winter Ofgem did in fact talk to the different operators of the link across the Channel and effectively said "Use it or lose it" and similarly I think with the Isle of Grain they talked to them there? I will ask Ofgem about it when they come before us but I think Ofgem did in fact take the view that you are suggesting that these are resources and they are subject to the same kind of openness as other pipelines.
Mr Nicholson: That is exactly correct. Ofgem is the licensing authority for the LNG terminals and has some say in the operation of the interconnector, although it came into being before Ofgem was set up in its current form. Certainly we think Ofgem have done a very good job at trying to get to the root of the problem here about whether capacity is being withheld from the market. They are insistent that those "use it or lose it" provisions have teeth and are enforced and, if necessary, strengthened. I think we should have confidence that if Ofgem has the relevant powers it will use them. Where we have doubts is whether Ofgem does have relevant powers offshore. Of course, when it comes to international affairs it has more influence than power. I think it is doing a good job in Europe in setting the lead but ultimately what happens in Belgium is a matter for the Belgian regulator and not for Ofgem.
Chairman: That is helpful. As I say, we will discuss those issues with Ofgem and your advice is useful to us.

Q112 ***Lord Roper:*** Two points. First of all, going back to the pricing points that you were making and the liquidity of the market at the moment. When LNG infrastructure is increased will that help to make the market a bit more liquid? In terms of the figures you were talking about earlier, where does the price per therm of LNG arrive?
Dr Robertson: I think the jury is out as to what will happen. The optimistic view is that the UK will have capacity to over-supply the UK market and prices will fall. LNG by its nature—you have liquefied it and put it in ships—can go anywhere and it would normally go to the market which is the highest price. The other argument is that in order to attract LNG the UK will have to continue to be the highest priced market in the world. LNG is treated differently at the moment in most of the rest of the EU because it is subject to long-term contracts where companies like Distrigas in Belgium and various Spanish companies have long-term contracts in place to source LNG and, therefore, are less exposed to the spikiness of the market.

Q113 ***Lord Roper:*** LNG prices in the UK?
Dr Robertson: At the moment LNG prices in the world market are roughly six dollars per million BTUs which works out at around 36-37 pence a therm.

Q114 ***Lord Roper:*** Is that quite competitive?
Dr Robertson: It is very similar, as it happens, to where the UK price is this summer but the UK price in the winter we have just been through was much, much higher than the LNG price. The LNG terminal, of course, at the Isle of Grain only came into operation at the beginning of November and through the winter it is true to say that the flow increased. In November and December it was very disappointing, well below the assumptions that Ofgem and the DTI had made ahead of winter. By March the throughput was in line with what had been expected.

Q115 ***Lord Roper:*** In your paragraph five when you are talking about the single energy market you end up by saying there are capacity constraints: "so it may be most practical to establish regional markets in the first instance". Is that a sub-EU market, as it were, i.e. for a group of EU countries? Perhaps you could expand on regional markets?
Mr Nicholson: Yes, that is exactly right and, indeed, there is an emergence of something akin to that already in electricity, the French and German markets tend to move in tandem to some degree with one another and there are the normal pooled markets in Scandinavia for power. To have a single market in a commodity, you need enough flexibility to move products around and realistically, given the amount of transmission constraints in electricity in particular but also some gas transportation constraints, even if we were moving in the fastest direction towards that, it is going to be many years before all that capacity is there and I think realistically we may progress towards a single market via regional ones.
Dr Robertson: Again, we are cautious about this. The idea, the concept, was put out by ERGEG which is the association of oil regulators as part of the Madrid Process in January of this year and IFIEC Europe was keen to point out straight away that if regional markets get the thing going, if it acts as a trigger, that is great but pretty quickly you have got to join up these markets.

Q116 ***Baroness Eccles of Moulton:*** Is the Isle of Grain the only LNG plant operating or do we have others?
Mr Nicholson: It is the only LNG import terminal operating at the moment but we will be having some major facilities in Milford Haven coming in shortly and some at Bacton as well, Jim? I cannot remember. Milford Haven is the big one.
Dr Robertson: The two that are under construction are at Milford Haven, the Isle of Grain is the first one which came online in November.

Q117 ***Baroness Eccles of Moulton:*** Milford Haven will come on-stream this year, will it?
Dr Robertson: I would have to check my notes. I think it is two years, maybe in time for the 2007–08 winter.

Q118 ***Baroness Eccles of Moulton:*** It was just a question of getting some feel for the contribution that LNG will make in total to the gas consumption.
Mr Nicholson: It is going to be very considerable. DTI has some projections on this, obviously it is not absolutely certain because there is a market out there and LNG might go somewhere else and the same with some of the piped gas. Looking at the capacity that is going in, it is going to be a very significant proportion of our consumption within the next five to 10 years and I am sure DTI and others can give you figures on percentages.

Q119 ***Baroness Eccles of Moulton:*** There is a substantial capital investment so if it is not going to be used that is the bad news.
Mr Nicholson: That is grounds for optimism as far as security of supply is concerned because you would say why would people be investing billions in total in facilities that they will never use. I am sure in the long run they will be used but that does not necessarily mean that there cannot be points in time when the supply and demand balance can be tight. You might say that part of the benefit to the investors is to have the option to be able to import gas into the UK, so I think some caution is needed about translating capacity into expectations of certain volumes arriving.

Q120 ***Lord Walpole:*** How should the Government interact with the markets to ensure that policy objectives are delivered? Are market-based mechanisms alone capable of delivering all the underlying objectives?
Mr Nicholson: We support a market-based energy policy and that means market-based. We have already recognised that there are certain natural monopoly parts that require regulation and, indeed, all energy markets to a certain extent are slightly artificial, at least the gas and electricity ones are, in that the framework in which they operate is subject to some form of regulation in all cases about balancing periods and voltages and all sorts of other things, gas quality and so on. All of those markets have some degree of regulation in them and the market operates within a framework and it is government's responsibility to set that framework. We do take issue both with our own Government, other European ones and the Commission about the practice of setting targets for certain fuels to account for a proportion of power generated for a number of reasons. I think we all understand the motivation that is behind that and we may be sympathetic to it, but we are not at all convinced that consumers get good value for money by governments attempting to pick winners, or to pick losers as we sometimes say, and distort the markets in order to achieve those sometimes rather artificial ends. We would prefer the energy mix, if at all possible, to be set by the market where that framework is laid down by governments and their agents.

Q121 ***Lord Walpole:*** What do you want this Government to do?
Mr Nicholson: Above all not to artificially rule out sources of energy—that is not very subtle code for nuclear—but not entirely because I think there are all sorts of renewables which are controversial in certain areas and consumers are best served by having as many energy sources as possible reaching the market and in a carbon constrained world to have as many as possible low carbon sources. We cannot know whether in five, 10, 15 or 20 years' time coal with carbon capture is going to be an economic and viable option, let us hope it is from a global point of view. We can be sure that nuclear can be cost competitive if it is treated on an equitable basis with other low carbon technologies and we ought to be creating as much of a level playing field there and reducing unnecessary barriers through the planning system, whether it is to the deployment of renewables or whether it is to construction of new nuclear power stations or gas storage facilities or whatever. Those non-market constraints artificially restrict what the market can provide and it is Government's responsibility to address them.

Q122 ***Chairman:*** The one area where you suggested you wanted government intervention at EU level is strategic gas reserves. Almost everybody else who has given evidence to us has said this is a very good example of where the market should be allowed to operate and then if government starts intervening in this they will take away any incentive for the market to buy gas reserves and gas stocks and you should see gas stocks in the same way as, I think the phrase is, "virtual stocks", in the sense of do we use power stations and so on and so forth. I have to say I am surprised that you are about the only people who have given us evidence to say you do not trust the markets and government has got to intervene.

Mr Nicholson: You may have detected our instincts are towards the market and so perhaps it is surprising. The result is not because of any ideological position, it is a practical question: we do not have enough long-range storage in this country. We do not have any strategic storage at all. I know some people define strategic storage as being uneconomic storage but I am talking about the sort of insurance against high impact, low probability events and the possibility of political interference in the markets that led to strategic stocks being created in the oil sector. Some people would argue that those are not economically efficient, I am sure they are right, I am sure it is not economically efficient to have armies, for example, for strategic defence compared with not having to pay for them. Unfortunately, we live in a world where sometimes these things are desirable and if the price, for example, of making sure the Russians do not do silly things with Wstern European gas supplies is that we have a degree of strategic storage from a consumer point of view, as those costs spread across the consumer base, that starts to look like potentially quite good value for money but there is an empirical test there, where is the storage in the UK market? We are seeing some investment in medium-range storage but we do not have enough long-range storage. In fact, the one facility we do have caught fire this winter, fortunately at the tail end of the winter otherwise it would have been a disaster.

Q123 ***Chairman:*** Would you also like to see strategic coal reserves?

Mr Nicholson: I think if there was an issue about the storage of coal that was comparable to those in gas and the transportability it could be an issue but the reality is coal is very easy to stockpile, there are international supplies to it, it is very difficult to disrupt the international coal market. It is relatively easy to disrupt the flow of gas through a comparatively small number of pipelines from one dominant source in Western Europe, and that is the issue. An alternative might well be, as we suggest in any case, a multiplicity of supply routes and a multiplicity of sources of energy. Did you want to add to that, Jim?

Dr Robertson: I am not an expert. The US chooses to have a strategic reserve of oil.

Chairman: I thought strategic oil reserves were not just in the US, I thought under the international energy agreement this was an international element.

Q124 ***Lord Roper:*** Not a question for you, but the International Energy Agency has not done a lot to the question of there being strategic gas reserves, has it?

Mr Nicholson: I am not sure whether it has or not. Plainly the market growth in the demand for natural gas since the oil shock of the 1970s has increased enormously. Our dependence, particularly in the UK, which by default unless the nuclear question is addressed and/or clean coal, is going to be disproportionately dependent on gas for power generation. Those risks have changed now and I think our strategic thinking needs to change with it.

Q125 ***Chairman:*** Just taking your written evidence—I am sorry to press you on these things, one is trying to get at the advice you are giving us—when you take paragraph three of your written evidence you spend quite a bit of time telling us where governments get things wrong. You do not trust markets entirely and you think whenever governments do take decisions they get them wrong. You say: ". . . unrealistic expectations about fuel prices . . . the ability of renewable energy to compete without massive and continuing subsidy . . . schizophrenic attitude to the role of nuclear power . . ." This all tells me you do not trust governments and when they do take decisions they get them wrong. Where do you stand on this? You want governments to intervene but when they do you think they get it wrong. Which policy areas do you think they are getting it right on?

Mr Nicholson: I think actually—this may sound paradoxical with the prices we are experiencing at the moment—we have got quite a lot of our energy policy right in the UK, even if we have not got it right elsewhere in Europe. I think our regulatory system is pretty good for the regulated assets and there is much that government has learnt, either to intervene when it is required or to stay out when it is not. I think the environmental side has been problematic because there has been an ideological agenda pushing renewables in certain cases beyond what they can deliver at the moment, and in other cases opposition to nuclear. On the subject of gas storage, I am absolutely convinced that whatever decision government or the regulator may take about the storage would be less likely to be beneficial to consumers than one taken by a market if the market was able to deliver it. The problem with the strategic storage argument is we are in an area where almost by definition the market cannot. I would certainly recommend if you have the chance to read the paper that came out, I think in November last year, produced by UKOOA—the offshore operators' association—an organisation we do not always find ourselves in agreement with. They wrote a rather good paper produced with ILEX, the energy consultants, when they discussed the problems of our funding in long-range strategic gas storage and came to some pretty similar conclusions that we came to.

Q126 ***Chairman:*** Lord Fyfe is going to come on in a moment to the fifth theme, but if I can conclude the fourth one linking it with Lord Haskel's question in question two. When governments and the EU set out policy objectives they are not very meaningful unless they can spell out what they really are. You said sustainability is a nice phrase but what does it mean. Let us be specific. Do you know precisely what the Commission means by sustainability policy and precisely what it means by security of supply in an operational sense?
Mr Nicholson: No.

Q127 ***Chairman:*** You do not?
Mr Nicholson: I know the CBI and others have had similar discussions about what is in the paper. It is perfectly possible to read this paper, even allowing for the few areas where we disagree, and think it could really be very good. It is saying all the right things, all the things we want to hear, it is quite possible to see it implemented in a way which would be extremely attractive to the consumers and a credit to the European Union. It is also possible to interpret it in other ways, and I know a lot of people in the energy industry are worried about exactly that. The words that look fine here are so imprecise in certain cases that something which could fulfil the letter of this might end up being entirely unacceptable in certain parts of the energy industry and quite possibly to consumers as well. In so far as it goes I think it is quite good but you are absolutely right to say that there is a lack of definition in there. If it is going to mean anything and change anything and make things better it is going to have to be more precise and we are going to have to have a better idea of exactly what is meant by all this. Whether there is an equal appetite in 25 European states to get into that level of detail to be able to agree with it I simply do not know at this stage.

Q128 ***Chairman:*** Can you give us, off the cuff, an example of either sustainability or security of supply which if it meant that you would say "I do not like that"?
Mr Nicholson: I think you can approach security of supply as a risk issue, talking about potential impacts and a likely probability of them happening. I think—this might be slightly unofficial—you can talk about the days of gas or oil or equivalent demand in storage or supply margins in the electricity sector and so on, or particular degrees of capacity or over-capacity in transmission. Those are tangible numbers that one can discuss. On the sustainability issue it is much more problematic, as you know. How do you define what constitutes uncompetitive prices? I would find it hard to say if our prices on average for electricity and gas were 5 per cent higher than those of North America or Australia as a result of environmental measures. It would put our members out of business. The next question then is what is the figure, and I do not think any of us can decide that with a great deal of ease. One could have it written into policy as a target, for example, that it is an aspiration, if you like, that policy measures designed to move us towards environmental sustainability criteria should not put wholesale prices out by more than X per cent over a period of time compared with our principal competitors. I am not sure that is a perfect thing but that is the sort of thing one could have a debate about.

Q129 ***Lord Roper:*** On that point, if there were any other points of ambiguity which you felt on reflection were in the Green Paper which you would like to send us a subsidiary paper on it might be quite helpful for us in preparing our final report.
Mr Nicholson: I am happy to.

Q130 ***Lord Fyfe of Fairfield:*** Given the importance of ensuring security of supply, and indeed economic prices, what impacts are the proposals in the Green Paper likely to have in practical terms?
Mr Nicholson: As currently drafted I think it is very difficult to say. We have already mentioned the lack of precision which is perhaps inevitable at this stage. We have already got directives which say certain things should already be happening in the gas and electricity markets, and indeed in emissions trading and other environmental areas, that are not happening in the European Union. One can have all these policy documents but if there is not the political will to implement them they do not really count for a great deal. I think that is where a lot of our concerns lie. The intentions of the Commission are good and there is a good team of people working both in the Competition Directorate and in DG Transport and Energy, some great expertise there, but they are up against resistance from a number of Member States. We are yet to be convinced that there is an equal appetite across the European Union for a single energy policy. There may be more of one than there was but that is not the same as saying it is certain to succeed.

Q131 ***Lord Fyfe of Fairfield:*** If you can be specific, what would be the Member States resisting in the proposals?
Dr Robertson: I certainly do not feel able to answer the Committee.

Q132 ***Lord Fyfe of Fairfield:*** Can we say France because they are usually objective?
Mr Nicholson: It is certainly true to say that France is far less keen.

Q133 ***Lord Fyfe of Fairfield:*** You are being very polite, gentlemen.

Mr Nicholson: Indeed, perhaps too polite. It is true to say that France did sign up to the revised directives on gas and electricity and for them that was a major move. It was controversial, and it has still to be implemented of course. Maybe they are playing the game in that respect. It is not quite as simple as saying who is in favour of this or not because there will be aspects that appeal and aspects that do not appeal. Perhaps the integrated energy policy may appeal to the French more than the liberalised aspects of it.

Q134 ***Lord Fyfe of Fairfield:*** I must say in all conscience that answer does not give me a great deal of comfort, to be frank. I have become increasingly concerned not at the tone of the discussion, that would be entirely the wrong thing to say, but increasingly worried at the long-term implications for the UK of the quality or lack of policy on energy. Virtually nothing that you have said today has given me any encouragement that we are any closer to solving that. That is not a matter which I am blaming you for at all but I would have liked to have heard something, your overview, saying things as they are. Do you see any improvement at all in the situation overall from the point of view of the UK?
Mr Nicholson: The comment you made is an interesting one because Jim and I gave evidence to the Trade and Industry Committee in February last year where we made some of the same points, that the UK was in danger of being left vulnerable without a plan B if liberalisation did not proceed the way it expected it to in Europe, and we have been receiving all these assurances from DTI and others saying, "do not worry, it is all being attended to". To give you an indication of what we are up against, not only was DTI for months and months in denial about the pricing issues, which is something you can look at data on, but even on the policy side, within a couple of weeks of the issue of gas in the Ukraine bundling up in the new year, I spoke to a senior DTI official who looked me straight in the eye and said, "Of course this is good news because it will persuade other people in Europe that they really do need to liberalise their markets to ensure security of supply" and I was thinking is that the way it is going to be looked at in Paris or elsewhere? These are the sorts of people who are advising the minister. Maybe reality is starting to dawn a bit but I think the absence of a plan B here has always been a risk for the UK and where does it leave us if things do not develop as we expect elsewhere. I think we are very vulnerable.
Lord Fyfe of Fairfield: I am glad we have extracted that from you, that we are very vulnerable.

Q135 ***Lord Roper:*** We have covered quite a lot of the matters that I want to put in this question already but there are one or two points which we can continue to tease out. What key changes are required in current energy policies to facilitate strategic business decision-making?
Mr Nicholson: Clarity in the direction we are going both in this country and elsewhere in Europe with the lead times involved for energy, and bearing in mind the discussion we have just had, perhaps we are addressing some of these issues a bit late anyway. Even if we decided on the perfect answers to them tomorrow it would be many years before some of the investment would come to alleviate the problems. We plainly need a clearer indication of where we are going on the environmental side with carbon prices, perhaps less ambitious than some would like, but more certain to be delivered and deliverable and be sustainable economically so that it happens. We need some kind of certainty for large users if they are going to remain in the European Union at that price, not absolute certainty, you can never have that, but the ability to contract long-term is central for energy intensive users. Crucially, not just in the UK but elsewhere in Europe, we need explicit support for technologies. I am not talking about subsidies here but political support for technologies that are going to help, not on their own, but in combination with renewables in energy efficiency like nuclear which must be part of the mix going forward. We want security of supply and we want to reduce carbon emissions and we want competitive supplies. Politicians and others are going to have to take a stand on this and perhaps say things which not everyone wants to hear. Finland and others in Europe are already having these discussions and we are starting to have it here in the UK. That needs to be rolled out. That would help reduce the over-dependence on gas which is at the root of some of the problems in the gas market as well. I do not know if you have other points to add on that, Jim?
Dr Robertson: I do not think so at this point.

Q136 ***Lord Roper:*** There is one point I would quite like to tease out with you. In paragraph eight of your written evidence you say you are open-minded about the eventual need for a European energy market regulator, which is a rather more positive position than that of the British Government which takes the view that we do not believe the European regulator is warranted. They feel what should be done would be to get each of the other national regulators up to the level of Ofgem. Do you think that is something one could achieve? If so, how does one get other people's regulators operational and effective?
Mr Nicholson: One should bear in mind that some of these countries have only just acquired regulators in the sense that we would understand them and there is a lot of getting up to Ofgem's level in the work to be done. I have already paid tribute to the work Ofgem is doing in this respect, I would not wish to belittle the power of setting a good example and leadership they

are showing, that is important, but it is unlikely to be sufficient on its own. Can you have a single market without a single regulator? I personally rather doubt that you can, but given where we are at the moment there are probably more pressing issues that need addressing with regard to regulation than the creation of a single regulator right now. Getting other regulators to monitor their own markets, let alone regulate them as we do, even have access to the right information to regulate, those are preconditions, if you like, and I know the CBI and others take the view that it would be premature at this stage to start talking about a single regulator although we certainly would not rule it out. Conceptually I have difficulty imagining how you would have a single market without one.

Q137 ***Chairman:*** Can I just ask a broad question. So much we have heard about until the last few moments has been about gas, partly because I assume direct use by your members, partly because it is used for generating electricity. Are there any different issues involved in electricity compared with gas?
Mr Nicholson: From an economic perspective you might say not. In gas you have got quality issues in terms of joining markets together and pressure issues and so on but they are not insurmountable. In electricity I know there are issues about a common grid code and of course there is the fact that electricity grids have to be balanced on a minute-by-minute, second-by-second basis. Fundamentally I do not think that makes a difference in terms of the nature of the regulation or the need for diversity of supplies or any of these other principles that we have been talking about. It is true that one cannot store electricity in the same way as you can store gas but you can store the means of generating it which is economically an important thing. In fact, in certain respects there are more options with electricity in terms of how you can produce it in the first place.

Q138 ***Chairman:*** When you talked about what has happened to prices, you very much talked to us about gas prices but what about electricity prices?
Mr Nicholson: Electricity prices have pretty much mirrored what has happened with gas prices in the UK plus, in addition, the further price of carbon that has been passed on on top. The sort of percentage increases we have seen, the tripling approximately in wholesale prices in the last three years, the sort of order of magnitude differences between the UK and French and German prices, is pretty similar for wholesale gas and electricity prices. Both are now the highest amongst our principal competitors in the EU, which is very uncomfortable for our members at the moment. Because our market is so gas driven in electricity it has had a direct knock-on effect, indeed the price of carbon itself has been influenced by the price of gas.

Q139 ***Chairman:*** The last detailed question: how many of your members are covered by the Commission's trading scheme?
Mr Nicholson: It is a mixture. There are some sectors, like steel and so on, that are directly covered by the scheme themselves for their own process emissions. Others are likely to be brought in perhaps in the second phase or beyond in certain instances but, of course, all have been affected indirectly as a result of what has happened to electricity prices. I think although the direct effect is particularly severe for the steel sector, for most of our members it is that indirect effect on power prices that has proportionately more of an impact on our business at the moment.

Q140 ***Chairman:*** Can I thank you on behalf of the Committee. You have given us an enormous amount of your time. You have been direct and informative in your responses and they are qualities we deeply appreciate. Thank you very much indeed.
Mr Nicholson: Thank you for the opportunity and we are happy to fill in where we could not answer your questions this afternoon.
Chairman: Thank you.

MONDAY 5 JUNE 2006

Present	Fearn, L	Swinfen, L
	Geddes, L	Walpole, L
	Haskel, L	Woolmer of Leeds, L
	St John of Bletso, L	(Chairman)

Explanatory memorandum on European Community Document (7070/06 COM (2006) 105)

EUROPEAN COMMISSION GREEN PAPER: A EUROPEAN STRATEGY FOR SUSTAINABLE, COMPETITIVE AND SECURE ENERGY

Submitted by the Department of Trade & Industry on 31 March 2006

Subject Matter

1. This Green Paper arises from the request by EU heads of government at Hampton Court during the UK's EU Presidency for the Commission to develop a more coherent European Energy Policy. The request was made against a background of growing concern over the EU's security of energy supply, including increasing import dependency, rising prices, depleting reserves, the need to replace and increase infrastructure and the challenge of climate change. The Green Paper aims to help the European Union lay the foundations for secure, competitive and sustainable energy and thereby lead the global energy debate. It identifies and proposes possible action in six priority areas:

— Completing the internal market in electricity and gas.

— Ensuring the internal market guarantees security of supply.

— A Community-wide debate on the different energy sources.

— Addressing the challenge of climate change.

— Development of a strategic energy technology plan.

— Developing a common EU external energy policy.

2. The Green Paper goes wider than the Commission's previous energy Green Paper of 29 November 2000, "Towards a European strategy for the security of energy supply", but shares some of its proposals.

3. The UK favours the idea of the EU working together more cohesively to address common problems and we welcome the overall thrust of the Green Paper, in particular the emphasis on effective completion of the internal market and on energy efficiency.

Scrutiny History

4. None since this is a new document. (In relation to the previous Green paper mentioned in paragraph 2 above, DTI submitted an EM 5619/01 on 20 February 2001. The Commons European Scrutiny Committee debated it in European standing Ctte C on 28 November 2001 together with EM 7218/01. The Lords Select Ctte on the EU debated it on 23 April 2002 (Progress of Scrutiny, 29/4/02, Session 01-02).

Ministerial Responsibility

5. Primary ministerial responsibility rests with the Secretary of State for Trade and Industry, but the range of possible actions included in the document have implications for the Treasury, FCO, DFT and DEFRA— and Ofgem.

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LEGAL AND PROCEDURAL ISSUES

6. None for the moment. This is not a proposal for legislation. If any of the suggested actions are to be pursued, the Commission will bring forward specific proposals which will be subject to parliamentary scrutiny.

EUROPEAN ECONOMIC AREA

7. Specific proposals brought forward in due course may be applicable to the EEA.

SUBSIDIARITY

8. Any proposals with subsidiarity implications will be assessed once they are produced.

POLICY IMPLICATIONS

Overview

9. A number of the ideas in the Green Paper have the potential to raise legal issues such as competence and legal base. The UK will address these issues in respect of the individual proposals as they arise. The Green Paper contains the suggestion for a number of new European bodies—European Energy regulator, European Centre for Energy Networks, European Energy Supply Observatory and European Institute of Technology. The UK would need to consider carefully the potential for value added of any new bodies.

10. The Commission also seems to be pushing for a number of legislative proposals—including a new legal proposal for gas stocks and a "Renewable Energy Road Map", which includes a "new community directive on heating and cooling". The UK would need to consider carefully whether we would want these areas to be covered by a Community obligation. As regards proposals in the external field, we will need to ensure that we retain our right to speak bilaterally with other producer countries and that EU-level external dialogue with third countries fully reflects the positions of individual member states.

Completing the internal European electricity and gas markets (Section 2.1)

11. We very much welcome the emphasis on completing the internal market. An effective EU energy market is a necessary, though not sufficient condition for security of supply and for business competitiveness in the EU.

12. The Green Paper suggests that where existing collaboration between national regulators and national grid operators may be inadequate, closer collaboration involving the possibility of a European energy regulator to look at cross-border issues may be needed. Since this would require the European regulator to be accountable to the Commission and involve a major increase in Commission powers, the UK could not agree to this proposal. Subject to the legal base and further details about what this might involve, the idea for a European Centre for Energy Networks, to bring network operators together to assist work on developing a European Grid Code, could be acceptable.

13. The paper notes the need for increased physical capacity and the EU's failure to achieve the 10 per cent minimum electricity interconnection levels agreed at Barcelona. We agree on the need for increased interconnection and to stimulate investment, but we see this target as artificial.

An internal market that guarantees security of supply (Section 2.1)

European energy supply Observatory

14. The UK advocates increased information flows and transparency at the EU level, and we see a role for the Commission in providing intelligence, research and analysis. The UK may be able to accept the Commission proposals for increased monitoring by them of world energy markets, as long as this is done through the re-focusing of existing work rather than the creation of a new body, and as long as it does not duplicate work already done by others.

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Physical security of infrastructure

15. The Commission proposes a mechanism for mutual assistance and common standards for damage to critical infrastructure—set out more fully in its separate Green Paper on a European Programme for Critical Infrastructure Protection [COM(2005)576]. The UK supports the principle of improving critical infrastructure protection but our support is conditional on management of national critical infrastructure being left to each Member State and the owners/operators, and on confidentiality on national critical infrastructure being maintained.

Oil stocks and emergency response measures

16. We welcome the Green Paper's recognition that oil is a global market and that the International Energy Agency (IEA) must continue to lead in coordinating global response measures to any disruption of supplies. The IEA's action following Hurricane Katrina showed that it is well-resourced to monitor oil markets, estimate the responses needed and communicate with member countries in the EU and elsewhere. We are willing to consider proposals on how the EU's contribution to such IEA action might be better coordinated, but are not convinced that the suggested proposal for more frequent publishing of EU oil stocks data would help. Both the Commission and the Government already publish such data on a monthly basis. The consensus among industry and Government representatives at the Fossil Fuels Forum organised by the Commission in Berlin in 2005 was that weekly or fortnightly publication would require frequent amendment and might increase market volatility. Such a change would also increase the burden on UK companies of providing the Government with the data.

Gas stocking

17. Although we fully support increased transparency on individual Member States' gas stocks, the relevant Security of Supply Directive on gas has not yet been fully implemented. For this reason, the UK considers the proposed action for EU gas stocks would be premature in presupposing that the Directive is not working. It would be more appropriate to aim for increased transparency and efficient use of existing stocks.

Towards a more sustainable, efficient and diverse energy mix (section 2.3)

EU energy mix benchmark

18. The Green Paper proposes establishing a European wide strategic objective that would balance the sustainable, competitive and affordable aspects of an EU wide energy policy through the development of an EU energy mix benchmark. This would enable the EU to judge the adequacy of its mix in meeting these objectives and would reflect the risks of import dependency and provide direction for developing low carbon energy sources. Whilst the UK supports the need for a diversified energy mix, our position is that the make-up of a nation's energy mix should remain for Member States to determine. Different country situations require different energy solutions and such a benchmark could limit or restrict Member States' ability to develop different sources of power.

An integrated approach to tackling climate change (section 2.4)

19. The Green Paper recognises the importance of integrating the EU's climate change objectives with its energy policy objectives. It puts forward a number of proposals for achieving this, including a clear goal to prioritise energy efficiency (on which a separate Green Paper, COM(2005) 265, issued on 22 June 2005) and the adoption of a long-term road map for renewable energy sources. Besides these proposals, other actions to help reinforce this approach include the completion by the European Commission of the review of the EU Emissions Trading Scheme. This will provide an opportunity for improving the scheme and certainty about its future. The European Climate Change Programme will also provide an opportunity for delivering on the energy as well as the climate change agendas. The High Level Group on Competitiveness, Energy and Environment, established by the Commission in December 2005, will play a key role in identifying ways of integrating these three areas.

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20. There is, however, inconsistency between the main text where measures are referred to as "possible" and the conclusion where they become "concrete". The measures include long term targeted energy efficiency campaigns (including in buildings), a major effort for the transport sector, investment in energy efficiency projects, a white certificates system, and standard setting on appliances, vehicles and industrial equipment.

21. The Green Paper calls for energy efficiency to become a global priority, which we would agree with, but specifically proposes an international agreement involving both developed and developing countries; it is not clear what this would involve. The UK would need to consider carefully whether we would be content with an exclusive agreement where only the EU is a party, should that be what is being proposed.

22. The Commission's Proposal for a Renewable Energy Road Map, besides raising possible competence issues, envisages the possibility of further targets. However, evidence suggests that EU level targets have little impact on development of renewable technologies and that companies are more likely to take action in respect of domestic national targets.

Encouraging innovation: a strategic European energy technology plan (section 2.5)

23. The Commission proposes a strategic energy technology plan, making best use of Europe's resources, building on European technology platforms and with the option of joint technology initiatives or joint undertakings to develop leading markets for energy innovation. Further clarification on why this is considered necessary on top of FP7 is needed. Also needing to be taken into consideration are other initiatives such as the IEA Implementing Agreements, the Carbon Sequestration Leadership Forum and the Informal Partnership for a Hydrogen Economy. While there is a need to strengthen EU research efforts, there is also benefit in sharing research with the US, Canada and Japan. And further clarification is needed on the possibility of financing a more strategic approach to energy research. If the intention is to create a new R&D funding source, the question arises of how to finance it.

Towards a coherent external energy policy (2.6)

24. We welcome the role of the EU in the broad area of a coherent external energy policy and where the EU might add value by speaking with one voice. However, the UK would not want the Commission to have full competence for speaking on behalf of the EU on all energy matters, as is the case with trade for instance. While there are areas where we can speak very effectively as part of the EU, such as EU-OPEC, we would want to retain the right to speak bilaterally in relations with individual countries where we have a particular interest in their energy resources or transit routes. We have a concern over a reference in the Annex (page 39) to the EU/Norway Energy Dialogue and to possible joint exploration of the energy resources in the High North (ie the Barents Sea). The Barents Sea also encompasses part of the continental shelf that the UK and other signatory States to a 1920 Svalbard treaty believe is subject to special provisions and is disputed by Norway. For this reason, the UK will need to be vigilant as to the exact nature of EU discussions with Norway in case they should cut across or prejudice the position of individual Member States in separate talks they have with Norway or in discussions that Member States have between themselves or with other non-EU signatory States.

25. On the proposal for a new energy partnership with Russia, it would make more sense to maximise the effectiveness of existing mechanisms before any new initiatives are launched; rules-based mechanisms such as the Energy Charter Treaty (ECT) and World Trade Organisation (WTO) are also more effective in underpinning commercial activity than bilateral discussion. The Commission implicitly makes this point in 2.6 (ii) (b), with its focus on developing a pan-European Energy Community to develop common rules for commercial activity in energy, and in the reference in 6(iv) to using trade policy tools to promote non-discriminatory energy transit and a more secure investment.

26. A proposal to identify European priorities for infrastructure linking EU with third countries is made. With gas being a primary fuel and the EU a net importer, new gas import infrastructure is important to enable the EU to gain access to gas from new sources and via new routes; and to ensure competition in gas supply into the EU. It is important that new infrastructure be facilitated through a market-related approach. This means establishing a liberalised and competitive EU energy (gas & electricity) market with a light-touch regime for new "merchant"" gas import infrastructure. Outside the EU, this requires working through multilateral bodies such as the ECT and WTO to help bring about an international rules-based framework for gas supply into the EU.

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Strategic EU Energy review

27. We welcome this idea; the UK has several reports to Parliament, including the Joint Energy Security of Supply report and it seems sensible to have something at EU level as well, provided that what is included in the report is meaningful and sends the right market signals. The UK will be formulating proposals on what should be covered by the report.

CONSULTATION

28. The Commission launched a formal public consultation on the Green Paper on 25 March. Consultation at UK level will take place as and when the Commission brings specific proposals forward. In the interim, we are carrying out a more limited consultation with key stakeholders.

REGULATORY IMPACT ASSESSMENT

29. There are no formal plans for legislation in this document. RIA will be undertaken as specific proposals come forward.

FINANCIAL IMPLICATIONS

30. There are no immediate financial implications stemming from this document. As the Commission puts flesh on its various proposals, thus far provided only in broad outline, we will examine them carefully and critically for financial implications.

TIMETABLE

31. The Green Paper will be the subject of debate at the EU Energy Council in Luxembourg on 8 June. Through DTI, the UK aims to provide a formal response to the Green Paper, outlining in particular the points of concern identified in "Policy Implications" above prior to the Council.

Malcolm Wicks MP
Minister for Energy
Department of Trade and Industry

Memorandum by the Department of Trade and Industry

Introduction

The Government welcomes the Lord's Committee investigation into the European Commission's Green Paper on "*A European Strategy for Sustainable, Competitive and Secure Energy*". The Government's response to the questions in the call for evidence is set out below.

Context

In October 2005, EU Heads of Government, under the leadership of the UK Presidency, recognised that there were new and considerable challenges facing the European Union in the field of energy. Heads of Government therefore agreed to work together on an EU energy policy and mandated both the Commission and the Council of Ministers to take work forward to meet these new energy challenges. The Commission's Green Paper, *A European Strategy for Sustainable, Competitive and Secure Energy*, represents the Commission's response to this mandate.

Government submitted a paper on "A European Approach to Energy policy" to the Council in January 2006. This is attached. This paper presented the Government's view on how energy policy should be developed at the European level.

European Policy does not sit in isolation however; as the Energy Review in the UK will influence how the Government responds at the EU level, developments across Europe are being taken into account in preparing the Energy Review. Some of the proposals in the Green Paper will remain under consideration until the Energy Review is concluded—policy proposals are due by the summer. Although this presents the slight risk that the

UK might not be able to influence the process early enough in Europe, there are strong benefits to be gained from considering the future of European energy policy in light of the Energy Review, as this reduces the risk of it becoming disjointed in the future.

Questions

1. *Does the GP correctly identify the key issues for future energy policy in the European Union?*

The Green paper correctly identifies the overarching objectives of balancing sustainable development, competitiveness and security of supply. These map, almost directly, onto the Government's objectives of *Reliable, Affordable and Sustainable Energy for Europe*. It is important that these objectives are taken forward in a balanced manner. Although recent events, such as the gas interruptions from Russia, has made security of supply the focus of European energy policy, the Government believes that we need to pursue all of these objectives equally, whilst underlining that competitive markets are an essential pre-requisite, upon which any other necessary public policy instruments should be layered.

The Government also has a fourth goal for energy policy, as set out in the 2003 White Paper, of ensuring homes are reliably heated; we believe specific measures to achieve reductions in the number of fuel poor should lay at Member State measures, but that progress towards competitive markets will help to achieve these targets.

The six areas highlighted for action in the Green Paper reflect current Government thinking and were, in essence, set out in the UK Government submission to the Council. The Government welcomes the themes set out in the Green paper; they break down European energy policy appropriately and recognise the breadth of policy responses necessary to ensure reliable, affordable and sustainable energy.

The Green Paper correctly puts emphasis on the completion of the Internal Energy Market in electricity and gas and on the development of a coherent external energy policy. There are, however, some areas identified in the Government's submission "A European Approach to Energy Policy" that are either not included in the European Commission's Green Paper, or not brought out as strongly as they might have been. These are covered under the individual themes below.

2. *Does it appropriately identify those issues where, in future, the EU acting as a whole should be responsible for policy development and action?*

And

3. *Does it appropriately identify those issues where, in future, Member States should be responsible for policy development and action?*

Overall, the Government believes that the Green Paper has many good elements to it. There are strong synergies to be gained from action as a Union on energy policy and the Government is keen to reap the benefits of this. There are some specific areas where the Green Paper identifies actions or competencies for the Commission that the Government believes should remain the competence of individual Member States. As a general principle, the Government also believes that we should do more and better with the structures already in place in Europe, rather than to create new bodies and structures as is tended towards in the Green Paper. Many of the proposals in the Green Paper are at a very broad level, so until specific proposals are brought forward it is difficult to comment on them in detail.

The divisions between Member State competency and community level action are considered under the six priority areas below:

1. Competitiveness and the internal energy market

This area of energy policy is already well developed with a large body of community law aimed at putting in place a well functioning internal market in gas and electricity, in line with our Lisbon targets. However, there are still significant malfunctions that have been identified in the European market. Putting in place a properly functioning internal market in gas and electricity in the EU is extremely important to the UK, and to our future security of supply.

The UK believes that each Member state has a responsibility to put in place a functioning energy market that meets the obligations set out in the directives- in spirit as well as to the letter of the law.

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The Commission also has a competence in this area. The UK has pressed the Commission hard over the past year to enforce the current legislation more effectively; the Commission is beginning to do so and we welcome this. The Community also has competence in competition matters. The UK pressed the Commission, before our Presidency, to undertake a sectoral inquiry into the functioning of the gas and electricity markets to examine whether there were barriers to competition. The UK also gave the sectoral inquiry significant prominence during our Presidency, highlighting the functioning of the Energy Council in December 2005. The Government expects the Commission to take forward structural, regulatory, and competition-law based remedies to drive up competition in European energy markets where barriers are discovered. The Green Paper is very light on the role of competition in energy markets and, in particular, the synergies between the Commission sectoral inquiry and the European Energy Strategy.

There is also a role for the Commission is bringing greater consistency to Regulator's powers; bringing the powers of the weakest up to those of the strongest (which the Government considers to be Ofgem) and independent of government. Community level action is also required to enable Regulators to take European issues into account and work together more closely. We do not believe, however, that a European Regulator is warranted.

2. Solidarity

Solidarity, or security of energy supply has been a key theme of the debate at European level, prompted by issues of gas interruption from Russia and an extremely cold winter across the continent.

The Government believes that there is a need for the European Union to come to a collective understanding of our energy challenges and security of supply needs. To this end, there is a role for the Commission in providing intelligence, research and analysis to aid common understanding, especially of EU and international infrastructure needs to help provide a clear investment climate for the market to deliver the necessary infrastructure. We are therefore examining the proposal for a European Energy Supply Observatory carefully, but remain sceptical about the additional need for a Centre for Energy Networks.

With respect to physical security of energy infrastructure, the Government believes that this should remain an issue tackled at Member State level. The protection of our critical energy infrastructure is a matter of national security. In the UK, protection of critical national infrastructure is conducted using a risk—based approach; therefore the Government does not believe that adopting common minimum standards would add benefit.

3. A community wide debate on different energy sources

The Government believes that further diversification of the energy mix is an important element of security of supply, furthermore low and zero carbon technology is a key facet of meeting the Government's Climate change objectives.

The Commission Green Paper calls for diversification of the energy mix and suggests setting benchmarks for different fuel types in the European Energy mix. The Government firmly believes that the fuel mix should be left to the individual member state and/or the market to set. At the UK level, the question of fuel mix, including whether nuclear power should be part of the fuel mix, is being considered as part of the Energy Review.

4. Sustainable Development and Climate Change

The Government supports the central role that energy efficiency can play in making cost-effective reductions in energy demand and contributing to climate change goals. The Green Paper contains a raft of measures, including measures to deliver improved energy efficiency in building, appliance and transport sectors, minimum performance standards and initiatives to bring renewable energy sources closer to markets. The Green Paper correctly recognises that many of the tools to deliver more efficient energy use rest at Member State level; action at Community level should remain focused on areas where this has demonstrable added value and subject to rigorous cost-benefit analysis. The Government is pressing for an ambitious and realistic EU Energy Efficiency Action Plan, with concrete energy efficiency proposals, to be published by the Commission in the autumn.

The Government believes that the Emissions Trading Scheme (ETS) is an effective market-based instrument for meeting carbon objectives and is currently looking at how the scheme should operate post 2012. This will be critical to establishing long-term certainty for the market. The Green Paper also considers the possibility of an EU-wide White Certificates Trading Scheme. The Government is currently carrying out an assessment of a number of options to deliver energy efficiency in the sectors in question and would not wish to be constrained by the introduction of proposals for an EU wide scheme.

The Commission is also currently undertaking a review and consultation of the European Climate Change Programme (ECCP). The expected Phase II of the ECCP, expected in the autumn, will undoubtedly contain proposals in the energy policy sector.

5. Innovation and Technology

The Green Paper proposes the development of an adequately funded strategic energy technology plan. Whilst there may be merit in this proposal, the Government is seeking further clarification on how this initiative would interact with other R&D programmes including Framework Programme 7, also taking into consideration other international R&D programmes including the IEA implementing agreements, the Carbon Sequestration leadership Forum, and the Informal Partnership for a Hydrogen economy. The Government will also be seeking further clarification on how such a plan would be financed.

6. Towards a Coherent External Energy Policy

The Government believes that there are significant benefits to be gained from developing a more coherent external energy policy at the Community level. The EU already has a constructive dialogue with Russia and OPEC at the EU level and this should be extended to dialogue with other major supplier and producer countries. The Government welcomes the proposals for a pan-European energy community and believes that is appropriate for this work to be taken forward at the Community Level. The institutional arrangements underpinning the Community level dialogue are not elaborated in the Green Paper; it is important that these arrangements properly include Energy and Foreign Policy Ministers, as well as the Commission. Furthermore, the Government does not believe it appropriate to cede competence to the Commission in this area, as is the case with trade policy.

It must be recognised however that the UK has a number of constructive bi-lateral relationships, for example with Norway, which should neither be undermined by the EU-level dialogue nor undermine the EU-level dialogue in return.

Concluding Remarks

The European Commission's Green Paper on "A European Strategy for Sustainable, Competitive and Secure Energy" has correctly identified the central objectives of a European Energy Policy. The Government will remain fully involved as the proposals in the Green Paper are developed further to ensure that our objectives of reliable, affordable and sustainable energy are met and that an appropriate balance between Community and National competencies maintained.

2 May 2006

Examination of Witnesses

Witnesses: Malcolm Wicks, a Member of the House of Commons, Energy Minister, Mr Hergen Haye, Director, European Energy Policy, and Ms Nicola Douce, Assistant Director, European Energy Policy, Department for Trade and Industry, examined.

Q141 ***Chairman:*** Good morning, Mr Wicks. Thank you for fitting this into your busy schedule. I know you have to be away by 1.15.

Malcolm Wicks: If that is possible, my Lord, I would be very grateful.

Q142 ***Chairman:*** We will certainly aim for that. I wonder if you would care to introduce your colleagues and if there is anything you would like to say by way of introductory remarks.

Malcolm Wicks: Thank you very much, my Lord Chairman. I am with Nicola Douce, Assistant Director for European Security of Supply and the Energy Council from my Department. Also, we have Hergen Haye, who is the Director of European Policy in our Energy Markets Unit. I think from time to time it might be helpful if they help me in terms of the questions you are going to raise. If I could just make a preliminary statement, as you suggest, my Lord, and it will be brief. The energy challenges facing us at European level are, of course, formidable ones. I guess that is one of the reasons

for your important inquiry. Ensuring that our energy policy is flexible enough to respond to the global environment, meeting climate change goals, ensuring security of supply for our citizens and our businesses, and, of course, delivering competitive energy prices are all among the reasons why energy is now high on all the agendas that count, not just in Europe but around the world. The UK set an ambitious agenda for energy policy at Hampton Court last October and the Green Paper from the Commission represents the European Union's response to that mandate. It is important for EU Member States and the Commission to work much more cohesively to address the common problems we all face in energy. There is already much to build on, for instance the agreement to a single internal market in electricity and gas, but, of course, there is still a long way to go. There is much the UK can agree with in the Green Paper. We certainly agree with the overarching objectives of sustainability, competitiveness and security of supply. We agree with the importance of effectively implementing a competitive internal market in order to deliver secure affordable supplies, and also the emphasis on energy efficiency and climate change goals is one we readily agree with. We welcome the focus too on adopting a transparent, coherent EU external relations strategy to engage major energy providers in transit states, not least Russia. With our dependence on energy imports forecast to increase very substantially by 2020 this is a very important aspect of our future energy security. In conclusion, I should say that there are contentious areas of course. Some proposals could affect national competence. For example, in the UK's energy mix we do not believe an EU regulator is necessary nor a new Centre for Energy Networks. We would rather focus on making existing mechanisms and arrangements work better than setting up new bodies. We are also considering the Green Paper in the light of our ongoing Energy Review here in the UK. I think a good debate is taking place at EU level now, my Lord, about the focus on energy policy in the Union and the Government is keen to remain closely involved. I will submit an initial response to the Commission on the Green Paper which we will supplement further once the Energy Review here in the UK is published. Thank you.
Chairman: Thank you very much indeed. That is very much to the point.

Q143 ***Lord Swinfen:*** Mr Wicks, good morning to you. You have already partially answered my first question but you may wish to expand on it. Why has the European Commission decided to review energy policy now?

Malcolm Wicks: I think there are a number of factors. As I said in the introduction, you can trace the initiative back fairly immediately to our own Prime Minister's remarks and statements to the Heads of Government at Hampton Court last year when, of course, Britain held the Presidency of the European Union. The Prime Minister then said that the agenda included the need for diversity in terms of sources of energy. He talked about a properly integrated European grid and also a coherent and operational approach to EU dialogue with major energy suppliers. I have mentioned Russia already but I could also mention OPEC, where I have attended two summit meetings between the European Union and OPEC, as another example of that external dialogue. He talked about the need for a shared vision of our needs and our capacity to refine, process and store energy. Also, very importantly, the Prime Minister at Hampton Court focused on the need for energy efficiency and clean energy technologies. I think that is one factor. Of course, there are other factors: the critical relationship between the European Union as a whole and Russia is something that deserves an especial mention, I believe. All of this is against a backdrop where global energy demand is increasing most dramatically. Although I believe it has slowed down now, a year or so ago Russia's energy demand was increasing by some 15 per cent per annum. We are aware that energy has become an even more critical issue all around the world and I think that is an international backdrop to the Commission's own concerns.

Q144 ***Lord Fearn:*** Good morning. What are the underlying objectives behind the Commission's policy pillars of sustainability, competitiveness and security of supply? Have these objectives been identified correctly, and are they sufficiently clear?
Malcolm Wicks: I know we feel they have been identified correctly and they are clear ones. They are very much in line with our own concerns here in the United Kingdom. For once, when politicians and ministers say that something is the biggest issue facing the planet, they do not exaggerate. I think they are scientifically accurate when they talk about climate change and, therefore, sustainability is absolutely critical. Of course, all around the European Union, and certainly here in the United Kingdom, we are very aware of security of supply issues. We have faced one difficult winter here in the United Kingdom in terms of security of supply for reasons I could discuss if it seems relevant. The difficulties facing Russia and the Ukraine have highlighted the importance of security issues across Europe. I think the Ukraine-Russia issue sent a collective shiver down the energy spine of Europe and people are now very aware—if they were not

before—of security of supply issues. The third priority that the Commission has identified in terms of competitiveness is one that we have led the debate on here in the UK in terms of the European Union. We believe that the logic of a common market is a logic that applies to energy policy. We believe that competition works, it has worked in the United Kingdom for a dozen years bringing lower prices than in much of continental Europe and we feel that more competition, in Germany for example and elsewhere in continental Europe, would be good for British customers but also good for continental customers. Of course, we could then say alongside those three things there are other issues that are important to us, and here in the United Kingdom I would mention the terrible problem of fuel poverty. There is no point in us talking about global warming theoretically if we still have a situation where some of our citizens, not least the eldest, can still be cold in winter in Britain, and therefore making sure there is a fair distribution of energy and that energy efficiency is brought to the homes of our eldest, and, indeed, other vulnerable people, is a critical social policy dimension to energy policy.

Q145 ***Lord Fearn:*** On that competitiveness, does that happen at the moment?
Malcolm Wicks: No.

Q146 ***Lord Fearn:*** You mentioned Germany.
Malcolm Wicks: No, I do not think it does. Much of continental Europe has been very slow to liberalise, there is still a hankering after the concept of national champions. If you look at certain countries I do not think you would see that competition really exists. It is European Union policy. The Energy Council, certainly the one I chaired back in December when we had the Presidency, strongly restated the case for market liberalisation and the benefits of competition in terms of price. I am very pleased to say that within the European Union we have now got two very determined Commissioners—the Energy Commissioner, Andris Piebalgs, and the Competition Commissioner, Madame Kroes—who are not just talking tough but are acting tough. Indeed, three weeks ago[1] there were dawn raids on energy companies where I understand documents were seized. That shows the Commission are very determined to take this one seriously, and we are backing that.

Q147 ***Chairman:*** When one talks of security of supply, for example, Minister, do you think there is an agreement amongst all the Member States on what is meant by security of supply? It is a bit like we are all against sin. We are all in favour of security of supply and competitiveness, but does everybody mean the same thing? What would Germany mean by "security of supply", would it be the same as the UK?
Malcolm Wicks: I suppose, with respect, you may have the wrong European Minister here. I do not know if your parliamentary powers enable you to call German ministers, it would be an interesting convention to test. I have spoken to many ministers across the European Union and depending on their geographical position, their sources of supply at the present time and how heavily dependent they are on imports, they mean different things, and understandably so, just as there will be a strong British nuance to my description of energy supply. People are very conscious with this huge global demand for energy, with the great competition for resources and with certain parts of the world being pretty dominant in terms of gas supplies, and for example one thinks of Russia's importance in parts of Europe, people will talk about this in different ways. All I would add, my Lord, is whereas perhaps a few years ago if you were talking about energy supply you would simply mean the rather routine stuff of where you get your gas from, or your coal or your oil, increasingly people are now thinking about energy security in a fairly troubled world as well. I think that is why that is on the political agendas that count more and more.

Q148 ***Chairman:*** One last supplementary before Lord Swinfen asks his question. Can all the objectives be achieved at the same time? Are there not trade-offs here in competitiveness and security of supply and sustainability and competitiveness, and so on?
Malcolm Wicks: I think if you looked at the objectives singly they could point in very different directions. I think the test for governments here is how we ensure that we are hitting the targets together. For example, you could have a situation where you have secured your energy supply by importing more and more gas, importing more coal, but in terms of sustainability, in terms of global warming, you could be moving in the wrong direction and, therefore, you have got to relate the future of coal, for example—I am not just thinking of the European Union, one particularly thinks of China when one mentions coal—to the need for clean coal and clean coal technology. Yes, just achieving one of the objectives might be relatively easily but trying to achieve three or four together—I mention fuel poverty again—is not so easy. Having said that, I think it is far from impossible because, to take one example—it is just one example—renewable energy would guarantee some pretty secure supply in Britain which we could produce

[1] *Note by Witness:* The European Commission visited selected energy companies in Germany, France, Italy, Austria, Belgium and Hungary on 16 May 2006.

ourselves, and you could think of marine power as another example or solar power, the development of photovoltaics. That would help us with our own internal supply and it would certainly help us in terms of climate change objectives. The reason why I think not just in Britain but in some other parts of Europe there is a renewed interest in nuclear power is because, again, this could guarantee supply and help in terms of climate change and global warming, which is one of the reasons why the Prime Minister has asked us in our energy review to take that possibility quite seriously.

Q149 ***Lord Swinfen:*** Mr Wicks, you mentioned in your initial response to this question a fair distribution of energy and you coupled that with keeping the elderly warm.
Malcolm Wicks: Yes.

Q150 ***Lord Swinfen:*** Are you really seeking an increase in cheap energy?
Malcolm Wicks: Cheap energy?

Q151 ***Lord Swinfen:*** Yes.
Malcolm Wicks: No, I think that is unrealistic. It would be foolish for an Energy Minister or, with respect, any of us to second-guess the market in terms of where prices might be. Having said that, I do not think we are going to see a return to low energy costs and prices. When it comes to elderly people, and others who are vulnerable to the cold, some of those with disabilities for example, we have got to focus on energy efficiency and, indeed, throughout this discussion we need to re-emphasise the importance of energy efficiency. It may be that we should start to move from talking about energy efficiency across sectors to talking about energy reduction because we waste a huge amount of energy, not least in these buildings; I have sometimes thought that as I go around in the evening waiting for votes with all the lights on. In terms of industry, the service sector, our own buildings and our own dwellings, we need more energy efficiency. I think energy efficiency measures like insulation and draught proofing and all of those things are particularly important for older people because when you look at the evidence, as I recall from the English House Conditions Survey, sadly, the older you are in Britain, as a generality, the more likely you are to live in energy inefficient ways. There are measures tackling that. There is an Energy Efficiency Commitment whereby supply companies have to improve energy and there is a government programme called Warm Front which brings the benefits of insulation and better heating appliances to elderly people, but we need to work harder at those measures in my judgment.

Q152 ***Chairman:*** What has this to do with a European energy policy? I can see the relevance of an energy policy in a Member State but are you suggesting the European Union Commission should get involved in deciding how fuel poverty should be tackled in all 25 Member States, or is that not a matter for the UK? I think we are getting mixed up here. There is a UK review and a European one, I am trying to keep to the European one.
Malcolm Wicks: Quite. That is always the danger in answering questions honestly.

Q153 ***Chairman:*** It is very helpful but it is also—
Malcolm Wicks: I would say that our old friend subsidiarity is very important here. As I hope I implied earlier on, when we are discussing the Green Paper from the European Union, and of course that discussion will proceed over a number of months, the critical issue is this: what things are now best developed by the European Union? I think relations with some major energy suppliers like Russia is probably one of the issues there. Equally important is what things are best left to the nation state. The answer is many things are best left to the nation state, hence our Energy Review on how Britain will gain its energy in future and some of these details about energy efficiency. However, if the European Union could encourage research and the sharing of information about energy efficiency, and particularly about renewable technologies, so that Europe can maintain its world lead as a developer of renewable technologies then I think that is a useful role the European Union can play.
Chairman: That is very helpful.

Q154 ***Lord Haskel:*** I wonder if we could probe just a little bit further and enquire whether we do really need a single European energy market and what difference it will make. After all, you have told us that you do not want an EU regulator and you have told us about the different attitudes towards competition and we are going to have to change people's minds. We could just as easily find diverse sources of energy on our own. As far as technology is concerned, yes, we could co-operate with Europe on technology for new sources of energy but we do not need a single European market for that. I just wonder whether you could explain what difference having a single European energy market will make?
Malcolm Wicks: To take a rather specific example: I think we all know that the winter that is now mercifully over with the arrival of a late summer was a very difficult one for the United Kingdom and there were many reasons for that, but a simple answer would be the run-down of oil and gas from the North Sea was happening at a faster rate than many experts were projecting a couple of years ago and, as a consequence, some of the new

infrastructure that is being planned, and indeed built, the pipeline from Norway, for example, the LNG—liquefied natural gas—that will flow soon from Qatar to arrive in boats at Milford Haven, has been a year or two behind where I would hope that it would have been as Energy Minister. What was the relevance of that? The relevance of that was we experienced some very high prices this year—when I say "we", those companies that buy gas short-term often on the spot market—and it is in that kind of situation where a fully liberalised European energy market would have benefited British industry because more gas would have flowed efficiently in response to price through the interconnector with continental Europe. We did get some gas from the interconnector but when we really needed it, it was not flowing. In a proper market with the price of a therm of gas really being very high the gas should have been flowing into Britain but it was not, and I think that reminded us, if we needed reminding, that in much of continental Europe you do not have a proper market as we understand it where there is competition which is responding to price signals. That is a very specific example of why I think across the whole European Union if there was more competition, if the French consumer or the German business person could buy gas from a number of different companies, as people can do here, then as with any other market the prices would be under pressure and would be reducing and you would have the benefits of competition. It is of benefit for the whole European Union but also it would be beneficial to the British consumer.

Q155 ***Lord Haskel:*** I can see that it would be of benefit to French and German consumers if they liberalised their markets but, in fact, what happened, as I understand it, was gas did not flow to Britain because other countries wanted to conserve their own gas in case the weather got colder and they ran out. The price of domestic gas in Britain still remains much the same as it is in France or Germany. As far as the other sources of supply are concerned, like liquefied gas from Qatar, we could just as easily arrange this on our own without being a member of a single European market.
Malcolm Wicks: But I think with greater difficulty. It is important that we do not have all of our energy eggs in one basket in the future. My Lord Chairman, the backdrop to this is that at the moment still 80 or 90 per cent of our energy comes from within our own resources: North Sea, coal and so on. We have just become a net importer of gas and really over the next few years we will be in and out of becoming a net importer or exporter of oil. An interesting project—I say "interesting", that is an understatement—is by 2020 maybe 80 or 90 per cent of our gas could come from foreign parts. It is very important that it is not just one country, that it is Norway, it is Qatar, but some of it will come from elsewhere in continental Europe and the prices are reasonable and supplies flow when price dictates. I think those issues about competition are probably even more important for some of the Eastern European countries which will not experience the diversity of energy sources that we hope to experience here in the United Kingdom in the future.

Q156 ***Lord Geddes:*** Minister, you have already mentioned Russia on a number of occasions and I would like to home in on what I call the Russia factor. There are so many different facets to this. Picking up from the question that Lord Haskel asked, is there any conflict between a liberalised gas market within the EU and ensuring a strong negotiating position with Russia? Coupled with that, will moving towards a single European energy market help or hinder relations with Russia? I am talking commercial relations now, not political necessarily.
Malcolm Wicks: They are extraordinarily important questions, hence your asking them, and they are ones we are all thinking through and working through, not least at the European Union level. I think where we are in Europe at the moment is that there is inevitably a tussle going on between the proponents of market liberalisation, such as us here in Great Britain, and some countries who looking over their shoulder worried about energy security, looking back at the Ukrainian episode, are saying to themselves "Now might be the time to hold on to our existing practices and our more duopolistic", or whatever they are, "supply situations". I just say that honestly, that in terms of ideas and issues that is where we are. What we have got to argue for, hence what we have just been saying, is to continue to talk about the virtues of competition for perfectly traditional and important reasons. This is not ideology, it is practice, and in Great Britain until the last year or so we enjoyed far lower prices for both our domestic customers and industries and businesses than they were enjoying in much of continental Europe. This was worth billions of pounds to British industry, for example. This is demonstrated practice, not mere ideology. The strengths of liberalisation are very, very important. Given that, and given the strategic importance of energy to Russia now and the future—it is its major resource, of course—we do need mechanisms through the European Union to have a strong dialogue with Russia. I think that is one of the major reasons why we are seeing this interest in a European Union energy policy.

Q157 ***Lord Geddes:*** I have just two supplementaries but on the same subject, if I may. Given what you have said, how important is it in the government's

opinion that Russia ratifies the Energy Charter Treaty?
Malcolm Wicks: We believe that is very important. I do not know whether one of my colleagues would like to add to that, if that is all right.

Q158 ***Lord Geddes:*** I would like to probe as to what you think the likelihood of that is. I have asked how important it is, but what do you think the probability is.
Mr Haye: My Lord Chairman, the Energy Charter Treaty has been around for quite some time. Some significant additions in the transit protocol have been negotiated in the last six or seven years with Russia and apparently we are pressing collectively with other Member States for Russia to ratify. It is one of those levers which will ensure that Russia takes certain issues seriously in terms of infrastructure, access to infrastructure, access to third parties, transparency arrangements, which will allow a much more coherent and open energy flow of Russia's gas to the Union and also will help competition immensely. You asked about the likelihood of that. Russia has the chairmanship of G8 and this will be a significant subject for the G8 deliberations in due course. At various times Russia has indicated they want stronger relationships with the Union but it is also fair to say that they have been stalling on signing the Charter Treaty for years. It is very much undecided whether or not they will sign the Energy Charter Treaty.

Q159 ***Chairman:*** They have actually signed it but not ratified it, is that not the case?
Mr Haye: Indeed.
Chairman: I will come back to that later.

Q160 ***Lord Geddes:*** I am told, but I am basing it on second-hand knowledge, that there is much discussion about Russia playing Europe off against China/India as far as the exporting destination is concerned. I am told that geographically it would be immensely difficult and expensive for Russia to do that, to get gas through to either China and/or India in significant quantities. Is that correct?
Malcolm Wicks: I think the situation is that Russia will require massive investment in the future in its pipelines and its energy infrastructure. My understanding is also your one, my Lord, that this would be an extraordinarily expensive operation at least under any reasonable timescale to move in that direction. Of course, looking over future decades it would not be unreasonable to expect Russia to be looking not just west but also east, just as those of us who will become major consuming countries as opposed to exporters need to look around the world in order to ensure that there is diversity. We are at an interesting and rather difficult stage in terms of relations with Russia, not least because of the Ukrainian dispute, but we do have the St Petersburg Summit coming up in July and Russia themselves have said that energy is crucial to that G8 Summit they are chairing. One implication of some of this debate which we should not forget is that here in the United Kingdom the UK is very much a centre of excellence when it comes to energy, not least in terms of oil and gas. We want proper opportunities, hence our emphasis on competition and liberalisation, for British companies, BP for example, to play a full part in the different economies which are producing energy, not least Russia where BP and Shell are major players already.

Q161 ***Lord Haskel:*** The other side of the argument about this dispute with the Ukraine is that this is just a rather clumsy effort to try to get the price up because the price of gas from the Ukraine was historically very low. Do you think that is partly the explanation for some of the discussions which are going on with Russia at the moment?
Malcolm Wicks: Certainly any major supplier of energy will be aware of what is happening to price, and that is perfectly understandable, indeed it is a major fillip really to further investment in our own North Sea. It becomes far more possible for companies to explore in difficult terrain in the North Sea with the price of a barrel of oil as high as it is. I do not think it is for the United Kingdom to make a judgment about what happened between Russia and the Ukraine but I think the implications of that are ones that we are still discussing across the European Union.

Q162 ***Chairman:*** At a European policy level, how should the Commission interact with markets to ensure that the policy objectives are delivered? For those who advocate market mechanisms very strongly, are market-based mechanisms alone capable of delivering all the underlying objectives at European level?
Malcolm Wicks: No, I do not think market mechanisms alone are capable of delivering objectives either within one nation state, such as the UK, or across the European Union or, dare I say, across the world. However, I think we need to approach this issue very carefully. I say that because there are always people calling for government or the European Union to intervene in a very direct way in terms of price or whatever it might be. I think the challenge here, and indeed Europe is rising to the challenge, is to produce a framework based on proper objectives for democracies about climate change, for example, and then to enable market mechanisms to deliver. A very good example of this is the European Union's Emissions Trading Scheme which I think is of truly historic and international importance

because by putting a price on carbon and, as it were, producing a new tradable commodity this is a major way of incentivising the energy sector and industry to become more energy efficient. I think it is a fine example of a market mechanism helping to fulfil public policy objectives.
Chairman: You have gone on to the Emissions Trading Scheme and if we have time I will come back to it, but thank you for that.

Q163 ***Lord Walpole:*** Minister, given the importance of ensuring security of supply and economic prices, what impact are the proposals in the Green Paper likely to have in practice? Will the Green Paper make any difference to security of supply in the UK as we are always at risk of being "at the end of the pipeline"? Does the expansion of LNG change the problem? Can the gas distributors in the UK currently obtain full and transparent access to gas supplies from the rest of Europe and beyond through the cross-channel interconnectors, the second of which is now about to reach Bacton?
Malcolm Wicks: There are quite a few points, let me try to pick up on one or two of them. I might ask my colleague, Nicola Douce, to pick up on the ones I do not cover. In no particular order, I think liquefied natural gas is the very new kid on the block, if I can put it in those simple terms. Historically it may have been there for some while but it is becoming very, very important in terms of the world energy market, not being dependent on the pipelines there is greater flexibility, and certainly I am struck by the fact that we were helped out this winter by the timely opening of the Isle of Grain terminal which receives quantities of LNG by ship from Algeria and also supplied by British Petroleum, and very significant is the huge LNG resource in Qatar which I was able to see myself when I visited there a month or so back. Once we have the Milford Haven terminal up and running, if that is the correct term—I do not think it is—up and delivering, in time it could produce 20 per cent of the UK's gas demands. LNG is very, very important. Generally, in terms of the European Union and price I think it is back to the argument about market liberalisation and why that is very important.

Q164 ***Lord Walpole:*** Is not the trouble with LNG that once you have got it on a boat it is fairly cheap to send it anywhere in the world, is it not, so it has a more flexible market that might go against us?
Malcolm Wicks: Certainly one is aware of that. In general terms one is aware of this global competition for energy resources, hence the need to be really very smart and the markets need to be very smart about diversity of supply.
Ms Douce: I was just going to add on to the first part of the question, my Lord Chairman. The Green Paper has a lot of emphasis on extending our external relations in energy and that is looking at setting a future framework much, much further into the future. By putting the EU's relations with other major consumers and supplier nations on a more equal footing, giving the EU more weight to speak with one voice at the global level, we are looking much further into the future, 20 or 30 years, that sort of distance, to secure our energy. That is just one extra point I would like to bring out from the Green Paper.

Q165 ***Lord Walpole:*** We will still be at the end of the line so far as the gas pipe is concerned.
Ms Douce: That is true, but having a single market in the middle—if you consider getting gas from Russia, for instance, you have Russia, Ukraine and 15 Member States and then the UK, by putting in place a single market in the middle. In theory, bringing the gas in and bringing it across should only be one market, but it would be coupled with a push towards extending our single-market approach down into the Balkans, through the extension of mechanisms such as the Energy Community Treaty for South East Europe, bringing in that transit corridor. Into the future we would really like to look to the EuroMed states to extent our single-market principles more into that area. For instance, our relations with Algeria in future—if we bring single-market principles into that we will be on a much more equal footing and easily enhance the energy trade between us, thus enhancing our security of supply.
Malcolm Wicks: If I could just add, if Lord Walpole will allow me—and we must not stray too much into the UK as opposed to Europe—certainly we are in that sense at the end of some lines and I think we are very conscious of that, not least, to repeat myself, if we look ahead to a situation whereby in 2020, 80 or 90 per cent of our gas could come from abroad. It is therefore very important that we ask ourselves a strategic question as to whether we should not become a little more self-reliant than the projections suggest. That raises issues of course about renewable energy. It could raise difficult issues about British coal, and of course the controversial issue about nuclear power. However, it also certainly raises—and these are not alternatives –the need for us to source our overseas energy from different countries in different parts of the world, and different sources of energy.

Q166 ***Lord Walpole:*** It is fairly obvious to me from travelling in Europe that there are small areas in Europe, particularly in some new Members, where electricity systems are very, very local. In other words, people use a lot of photocells; there are a lot of little bits of wind; and really they are not joined up to a grid in any way. Do you think we ought to be going that way? For example, at Great Yarmouth

there are miles and miles of cable joined on to the rest; if you have the wind there, and if you have the possibility of tide and the possibility of the whole station being run on liquid fuels still, would it not be a more economical treatment to have that as a little separate unit?
Malcolm Wicks: Although some people seek to set up a debate, as it were—you either have your old-fashioned power stations and National Grid; or you have decentralised energy sources. In practice, as is often the case, there will be the need for development. Certainly in terms of our cabling and grid system, there is an important challenge—and it is a good challenge—in terms of how we relate the grid and the regulatory environment around this—the role of Ofgem, for example—to the fact that there will be more renewable sources of energy. At the moment, only 4 per cent of our energy is from renewables. We hope that it will be as much as 10 per cent by the end of the decade, or thereabouts. It could be double that by 2020. Also there is the issue that across Europe you will see more housing, particularly new-build housing, having increasingly as a common feature, part of their roofing as photovoltaics, and maybe the wind turbine, heat pumps and all these wonderful things that we are now hearing about and seeing more of. Grid systems and wiring systems have to allow for this, and this is very important.

Q167 ***Chairman:*** You said in your introductory remarks that you were puzzled about the role of the Commission in securing a properly integrated European grid, cross-border and so on. I think that is what you said. What is it that needs to be done and what role do you see for the Commission?
Malcolm Wicks: I must check the record. I hope I did not say I was puzzled by that!

Q168 ***Chairman:*** I thought you were supportive. I thought you felt there was a role at the European level.
Malcolm Wicks: Yes.

Q169 ***Chairman:*** It follows on from the question of the interconnect and so on, which is one example of the whole question of a European-wide grid and cross-border infrastructure and so on. What is the problem, and what role do you see for the Commission?
Malcolm Wicks: I think the problem at the moment is that even if tomorrow—it is not going to happen tomorrow—we had a full market liberalisation, with more competition and more companies, we probably have not got the grid system—and I use the term "grid" generically to include both gas and electricity, as it were—to ensure that energy supplies can move as efficiently as we would like. That is one of the reasons behind the problems with the interconnector this year, because apart from all sorts of other factors—and we have asked both the Government and Ofgem to ask the European Union to investigate why the interconnector did not work as it should have done last year—there are probably some issues about pipelines in Belgium, which was one of the problems. My colleague will add to that.
Mr Haye: You asked what are the problems. There are issues around cross-border investment, to give companies the assurance that, for example, regulations from two Member States are applied in the same way and that there is not double regulation. There is the issue of transparency, knowing the facts. With a lot of the issues around the interconnector we do not know exactly the facts because we do not have information about existing gas storage capacity and the flow of gas. If we had more of that information, that would encourage the market to future investment, because they would know where the *impasse* is, or where the opportunities for future investment are. There are different powers of regulators. You want, if you are a company that invests cross-border, to deal with regulators that have equal powers and apply regulations in an equal manner, and to have all the information available. By removing these barriers the Commission can play a key lead role, and is already doing so in its competition investigation.

Q170 ***Chairman:*** Minister, you said you were not in favour of there being an EU-wide regulator, for example; how do you overcome the problem of different regulators having different powers and using them in different ways if you do not have a Europe-wide regulator?
Malcolm Wicks: It is not an objection in principle; it is just a pragmatic judgment. We in this country have a strong regulator in Ofgem. I will not name names, but I think in some other countries they are not as strong and are perhaps much more an adjunct of the government or part of the system, and, frankly, are relatively weak. The future we would see is for the existing regulators—as they do—they meet—but we would like to see much closer co-operation between the existing nation state regulators. At the moment, we are not persuaded that, as it were, that a new tier of bureaucracy is important.

Q171 ***Lord Fearn:*** Are long-term contracts for gas supply available to UK companies on the same basis and terms as their continental counterparts?
Malcolm Wicks: There is quite a significant difference between the situation in the United Kingdom and parts of Continental Europe. In Germany, my understanding is that many companies—and indeed that situation being the local municipalities—that would be the issue here—have quite long-term contracts with the major energy suppliers; whereas in

the United Kingdom certainly my experience this winter, talking to some very significant users of energy, is that people who make chlorine for example, or people who make ceramics or glass bits—are often buying their energy from companies over a very short-term period, sometimes literally on the daily spot market. Of course, if you are needing to buy your gas on a daily basis, and one minute it is 60 pence a therm, and then it goes up to over £1—and one day £1.60 or a bit higher—£1.80—if you are using huge amounts of the stuff, then commercially, you have a very difficult situation. When I talk to companies about this—my colleagues can join in on this conversation—I do not get the impression that it is that they cannot buy long-term; but they make a commercial judgment to buy short-term. I often fear that they are locked in long-term for a very high price for a long period. It seems simply to be a commercial judgment.

Q172 ***Chairman:*** Some witnesses have told us that they could not get long-term contracts of supply from across Europe into the UK. That is not a problem that you have been aware of, or that has been drawn to your attention?
Malcolm Wicks: I am certainly aware of the frustration that many companies feel that in principle—in theory—although theory is not worth very much—in terms of electricity or gas supply they might be able to buy energy somewhere else but cannot because of pipelines, *et cetera*, restrictive practices, getting it into Britain. There does seem to be a difference of practice between many of our own intensive users of energy. I can think of one big company, Ineos Chlor, based in Runcorn, which produces so much of our chlorine, which is used for so many purposes, and who consume as much electricity every day as the whole city of Liverpool. Often they are buying on a very short-term basis. A major German energy company has told me that this puts them in difficulty because when supplies are relatively short in a harsh winter, they feel they have a contractual obligation—well, they have—to the industries in Germany which have the long-term contracts; and in that sense the companies in Britain buying on a shorter term or even on a daily basis will always come second.

Q173 ***Lord Swinfen:*** Given the importance of the speed and scale of technology and innovation in the power generation sector, in which I include energy efficiency and low-carbon technologies, what impacts are the proposals in the Green Paper going to have?
Malcolm Wicks: Can you just spell that out for me?

Q174 ***Lord Swinfen:*** The importance of promoting speed and scale of technology innovation.
Malcolm Wicks: I feel myself, without encouraging the Commission—because sometimes they do not need much encouragement to get involved in decisions which are best left to the individual countries—that nevertheless the Commission could play a useful role in terms of keeping abreast of technologies, doing research, promoting the sharing of information, to ensure that the countries of the European Union maintain their position as—which I think is the case very often—world leaders in renewable technology. I am not sure I would go much further than that. Many European countries are pretty good at this—there are the Scandinavian countries, for example, in terms of wind turbines—Denmark in particular; and the photovoltaic industry in Germany is very important. Although I think we need to get more precise on that, in terms of what the role of the European Union might be, I see myself a need for a greater sharing of information about technological developments across the European Union. I do not know whether my colleagues could add more to that.
Mr Haye: Collaboration between different countries on research projects. The Commission had consulted on a Green Paper last year on energy efficiency, and we are very much looking forward to the energy efficiency action plan that is promised by the end of September. That will present Member States with a number of innovative ideas and new technology in order to advance in terms of energy efficiency; so as the Minister says, information-sharing, collaboration and harnessing ideas across the Union.

Q175 ***Lord Swinfen:*** How much do we really have to do to make low-carbon technologies commercially viable on a large scale?
Malcolm Wicks: There is certainly a great way to go. When you look at the information on this, I guess partly from a UK perspective—where we are is that the onshore wind farms that we are becoming more used to are now very close to proving themselves commercially. They are supported of course by the renewables obligation, which ensures that the supply companies have to source a certain and indeed rising percentage of their energy from electricity from renewables. Out in front by a lot, I would say, in Britain, is the onshore wind turbine. Rather further behind, because it is more expensive, is the offshore wind farms. We are trying to understand the reasons why some of that development has slowed. A few laps behind are a range of competing technologies. Clearly, as an island people, marine has great potential, both tidal power and wave power, but it is still in its infancy. Some of the interesting technology has not been tested literally in the water for very many months, and will need more encouragement, which is one of the reasons why the DTI, my department, has a new £50 million marine fund to

encourage that kind of development. The other way in which these things can be encouraged is by mechanisms like the renewables obligation, and generally developing further the ETS, the Emissions Trading Scheme, which is still in its infancy and not without its problems, by developing mechanisms which, by putting a price on carbon, enables energy supply companies to be encouraged to source energy from renewable and other sustainable sources.

Q176 ***Chairman:*** Would you include nuclear generation there as a low-carbon technology?
Malcolm Wicks: Yes. It is not a renewable, strictly speaking, but certainly—"yes" is the answer; I would include nuclear.

Q177 ***Lord Haskel:*** What key changes are required to current energy policies so that businesses can make strategic decisions regarding the future? You have already referred to the way business is dealing in the spot market and having volatility of price, rather than dealing in the long-term markets. Are there any other changes of policies which would enable business to make some long-term decisions?
Malcolm Wicks: Soon after I became Energy Minister, which was about one year ago—and we have had so many Energy Ministers that I am almost a veteran—I was told that whereas a year ago the big worry for business was pensions, it was now energy. As a year before I had been the Pensions Minister, I felt some responsibility for this burden on business! Seriously, I spent much of the last year talking to businesses, these intensive users of energy, in many, many sectors—steel to paper, and ceramics and chemicals—which had had a very difficult time over the last year. There is no doubt about that. Energy costs, always important to them, have doubled or more. I feel I have a very real understanding of that. On the emissions front, the good news is that when you look at the different trends in terms of carbon-dioxide emissions, the energy sector is now moving in the right direction. Emissions are coming down and the emissions of intensive users of energy are coming down as well. Elsewhere in the business, in the service sectors, emissions are still rising. I think the high prices, which I do not welcome, nevertheless are concentrating the minds of the boards of directors in terms of issues around energy efficiency, which may not have been on their agendas before—although there are some industries, in chemicals, where it is not easy; they still need to consume huge amounts of energy. My Secretary of State, Alistair Darling, announced recently the establishment of a new business energy forum, which will enable us to meet regularly. The new Director-General of the CBI is co-chairing it with me. We will be able to meet regularly, so that government can come together with the industrial users of energy, plus the energy sector—people like Ofgem and National Grid, to better understand their concerns and to see whether we can accommodate some of them. For example, it is often put to us that there are planning restrictions, which means that new infrastructure, new storage facilities, are delayed; and we are very sensitive to that issue. It is an issue that we are looking at in the energy review, and of course many businesses and their representative bodies have put in evidence to the Energy Review, advocating different scenarios about the future of energy supply; so we have a very close dialogue with the business sector. We recognise that energy is now very high on their agendas as well.
Lord Haskel: I wish you every success in your new forum and watch with interest what your next job is going to be so that we know where the next crisis will be!

Q178 ***Chairman:*** The Emissions Trading Scheme is one of the frameworks, is it not? At the moment that is a very short time away, and on the face of it completely outwith the timescale in which business investment decisions must be taken. There is a complete mish-mash on that, both on the timescale and of course the path of expectation of the reduction in the emissions levels. I appreciate that it is not just your own department that looks at these matters, but do you have a view about the direction of change that is required in the Emissions Trading Scheme to make it more coterminous with strategic business decisions?
Malcolm Wicks: It is always good, my Lord, to end with an easy one! (the transcript does not do irony very well, but I was being ironic!) Certainly all the evidence we have heard from the business sector and many other sectors—the energy sector—for our Energy Review emphasises to us this point about the need for not just a clear framework of public policy at British and European levels, but one that is very, very long-term for the important reasons that you have noted. We are certainly very conscious that there needs to be clarity about the future of the Emissions Trading Scheme as soon as possible. However, it has to be negotiated across 25 Member States. In Britain, we need to balance our climate-change objectives against issues of competitiveness in terms of British industry. These are issues that we are very, very conscious of. The encouraging thing is that by enabling development of a market mechanism to help us fulfil societal objectives, we are moving in the right direction. The future, I think, has to include other sectors coming in to the ETS, like transport. We need to think how the really interesting development of technologies around carbon capture and carbon storage relate to the ETS as well; and beyond that we need to move towards an ETS that becomes—maybe this is too idealistic at the

moment—an international Emissions Trading Scheme. There is no reason why the ETS should only accommodate European Union nations in future.

Chairman: Minister, thank you for your time. I apologise that we started late. Through you, I thank your colleagues.

Memorandum by the Office of Gas and Electricity Markets (Ofgem)

1. Ofgem is the regulator of gas and electricity industries in Britain. Ofgem's principal objective is to protect the interests of present and future gas and electricity consumers, where appropriate by promoting effective competition. We also have important duties relating to sustainable development and security of supply. Ofgem welcomes the committee's inquiry. Our response to the questions in the call for evidence is set out below.

Summary

(a) *Does the Green Paper correctly identify the key issues for future energy policy in the European Union?*

2. Broadly yes. The Green Paper correctly identifies the three key pillars comprising energy policy goals—competitive prices, security of supply, and sustainable energy use and production.

3. Ofgem suggests the following supplements:

- The key delivery framework for delivering these three goals in an efficient manner is a liberalised and effectively competitive EU wide energy market, particularly for gas and electricity.
- More could be said regarding what needs to be done to achieve EU wide competitive gas and electricity markets. In particular:
- Ownership and control of monopoly pipes and wires networks must be properly separated from competitive production, generation and retail activities.
- A better framework for investment in pipes and wires needs to be in place, both in order to deliver security of supply and to strengthen possibilities for competition in gas and electricity production and retail.
- Gas and electricity regulators need appropriate and independent powers to introduce and enforce the development of competitive markets.
- EU Competition law is not addressed in the Green Paper. Merger and acquisition activity in the energy market at a national level increasingly affects the EU energy market. Present EU merger and competition law is not sufficiently flexible to deal properly with this.

(b) *Does it appropriately identify those issues where, in future, the EU acting as a whole should be responsible for policy development and action?*

4. The strong role for EU wide action concerning most of the issues identified in the Paper is appropriate, particularly in relation to the need for solidarity between Member States, external relations, and climate change issues. The EU should also retain a role in order to oversee the coherent development of the EU gas and electricity markets—for example ensuring that national market developments complement EU wide market development, and that powers of regulators are consistent across the EU. In Ofgem's view Member States should retain roles as in (c) below.

(c) *Does it appropriately identify those issues where, in future, Member States should be responsible for policy developments and action?*

5. Ofgem also sees a continued and strong complementary role for Member States in terms of:

- Completing the internal market through implementing the existing EU legislation in law and in spirit (principally Directives 2003/54/EC and 2003/55/EC), particularly regarding unbundling monopoly network activities.
- Further bilateral or regional approaches to identifying and building further cross border gas and electricity interconnections.

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— Developing the role and work of independent national regulators, who have the necessary local expertise, powers, resources and independence to oversee the development of the competitive markets.

— Choosing the extent of support to be given to strategic energy technology initiatives where this is consistent with the continued development of competitive markets.

Introduction

6. This short response follows the six key areas identified in the call for evidence. The Committee's three questions are addressed under each heading.

7. The European Regulators' Group for Electricity and Gas (ERGEG) will submit a response on the Green Paper directly to the European Commission in May 2006. The Chairman of Ofgem, Sir John Mogg, is also Chairman of ERGEG. The views expressed in that response are likely to mirror Ofgem's views here.

8. The Commission's Green Paper should be seen as wholly complementary to the Sectoral Review being undertaken in parallel by the Commission's Directorate General for Competition (DG Competition). Any views on the Green Paper must therefore also take account of the Sectoral Review.

9. It is worth noting here too that a High Level Group on Competitiveness, Energy and the Environment has been established by the European Commission. The Group is tasked with, among other things, with helping to identify how EU energy markets may be made more competitive. It is expected to deliver interim reports before the end of 2006.

Competition and the Internal Energy Market

10. In addition to the actions set out in the Green Paper, we consider that the completion of the internal energy market requires further measures:

— Increasing competition within the EU, notably by reducing the market power of incumbent energy companies notably through effective unbundling of network operation.

— Making the operation of energy markets and the networks transparent.

— Investing in and integrating the development and operation of the gas and electricity networks so that they operate as "European Grid".

— Independent and strong regulatory oversight, that is coherent across the EU.

— Addressing market concentration issues.

11. The Green Paper identifies these issues. However it does not discuss in depth the need to effectively unbundle (ie separate) network companies and activities from those companies in the potentially competitive parts of the market. Unbundling (preferably by ownership), in our view, is central to the achievement of a competitive single energy market as it is key to the delivery of non-discriminatory access to networks, efficient investment and transparent markets. However, this is also an area where the Sectoral review by DG Competition can be expected to make progress. Action is also required by Member State governments in order to achieve progress in each national market.

12. The development and operation of the gas and electricity networks to operate as "European Grid" will require investment in network infrastructure across Member State borders. At present there is a "regulatory gap" in identifying and financing such investment. It is not always clear for example what rules and jurisdictions apply to a cross border investment, and so this "regulatory gap" can impede the necessary investment.

13. We think that investment in gas infrastructure is of particular importance in the short and medium term, both for the UK and for many other European countries, and yet the Green Paper seems to be written with the medium to long term electricity market in mind. A major omission is the issue of how to encourage essential investment in gas pipelines, Liquefied Natural Gas (LNG) terminals and other infrastructure outside the EU's borders, and therefore outside its jurisdiction, when that infrastructure is essential for the supply of gas to the EU. The Green Paper proposed a "priority interconnection plan" which would be unlikely, in our view, to be an effective mechanism to address the "regulatory gap" issue. Significant investment is needed and an appropriate and more comprehensive framework (particularly regarding across national borders) needs to be developed to facilitate it. These issues will require closer co-operation and more harmonized arrangements

between regulators and Member States on a bilateral or regional basis rather than an overarching approach at the EU level.

14. ERGEG has therefore initiated a number of projects across Europe to tackle some of these issues on a regional basis where progress might be made more quickly. However, this initiative, although recognised as important, receives little further development by the Commission.

15. Regarding regulatory oversight, we take the view that each Member State must enhance the powers and independence of regulators so that they have the tools necessary to oversee the operation and development of competitive markets. Collectively regulators also need to have the responsibility to take into account the development of the single European market when fulfilling their functions and look beyond their current national duties. To achieve a competitive single European market we think that it would be better to build on existing structures rather than create a new single European regulator.

16. Gas and electricity markets in many parts of the EU, particularly at the national level, have been characterised by heavy market concentration. Further merger and acquisition activity appears to be entrenching this concentration. Liberalized and competitive EU gas and electricity markets therefore require competition policy that recognises that M & A activity at a national level often has EU wide effects. EU competition law should therefore be, in Ofgem's view, a legitimate part of the scope of the Green Paper.

Diversification of the Energy Mix

17. The Green Paper proposes a Community-wide debate on the different energy sources, to be sure that, overall, the EU's energy mix pursues the objectives of security of supply, competitiveness and sustainable development.

18. We welcome such a debate. The Green Paper does not suggest that Member States should cease to determine their own energy mix. However, we are concerned that the Green Paper suggests a strategic overall energy objective relating to fuel mix with little discussion of the relationship between the interventionist policies of Member States that might result from such a proposal and the achievement of a competitive single market. There is, we think, a risk that intervention could undermine the operation of the market and so at best result in increased costs for security of supply, and at worst undermine security of supply itself.

Solidarity

19. The Green Paper proposes a review of the existing EU legislation on oil and gas stocks, enhanced transparency on security of energy supply, improved network security through increased cooperation between network operators and possibly a formal European grouping of network operators, greater physical security of infrastructure, possibly through common security and reliability standards.

20. We think that the main focus of a European approach to energy supply security should be to help markets to deliver security of supply. As such, good information on security of supply issues is welcome. However, the focus of the Green Paper is on ways in which Member States and the Commission might intervene. The Green Paper's focus on a review of rules relating to fuel stocking seems to focus disproportionately on gas. We think such a review should be comprehensive and should not discriminate between different fuels. Thus, in respect of electricity generation, coal and fuel oil stocks should be treated in the same way as gas stocks, and account should be taken of the ability of some power stations to switch between gas and other fuels.

Sustainable Development

21. The Green Paper identifies the EU Emissions Trading Scheme (ETS) as a flexible and cost-efficient framework for more climate friendly energy production. Ofgem supports the use of such broad market-based instruments as a way to work towards environmental objectives at least cost to consumers and in a way that is compatible with liberalised markets. It is appropriate that the Green Paper gives priority to such measures.

22. Ofgem also supports the view of the Green Paper that the Commission's review of the Emissions Trading Directive provides an opportunity for expanding and further improving the functioning of the scheme in Phase 3 and beyond. This may allow improvements such as coverage of more sectors, a longer term framework and greater use of auctioning as the most efficient way to allocate allowances. The establishment of a longer term framework will be important in order to minimize uncertainty for generation project developers.

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23. The Green Paper proposes a goal of saving 20 per cent on energy use by 2030 through a series of measures, including financial instruments and agreeing a series of concrete measures to meet this objective, including a "white certificates" trading system, minimum performance standards, and initiatives to bring clean and renewable energy sources closer to markets. Where programmes are established to achieve such objectives they should be subject to rigorous cost-benefit analysis and should be implemented in a way that is compatible with the developing liberalised markets in gas and electricity.

Innovation and Technology

24. The Green Paper proposes an appropriately funded strategic energy technology plan be developed.

25. We consider that there may be arguments in favour of supporting technology research and development relevant to achieving public policy goals relating to climate change, diversity, energy efficiency and security of supply discussed above. However, it is important that publicly funded support for such R&D is additional to, rather than a replacement for, R&D carried out and paid for by energy companies.

26. In developing a strategic energy technology plan, it may be helpful to consider what experience already exists in supporting particular technologies and how the regulatory and other frameworks surrounding this have contributed to the efficiency and success of any relevant initiatives. Experience of network regulation in Britain for example contains examples of incentives to promote particular objectives which have led to innovations and investments in relevant technologies.

27. Liberalisation of, and effective competition within, European energy markets will deliver increased efficiency, in part by accelerating innovation and technical progress.

External Policy

28. The Green Paper proposes that a clearly defined external energy policy be established including identifying European priorities for the construction of new infrastructure necessary for the security of EU energy supplies, developing a pan-European Energy Community Treaty, a new energy partnership with Russia, a new Community mechanism to enable rapid and co-ordinated reaction to emergency external energy supply situations impacting EU supplies, an international agreement on energy efficiency.

29. Many of these areas are outside Ofgem's remit. However, the UK and most European countries rely on gas supplies from outside the EU. Improved political relations with supplier countries must, therefore, be helpful to the interests of all Member States. The Green Paper omits discussion of the mechanisms for attracting investments in external infrastructure on which the security of the EU's gas supplies rest.

30. Ofgem would be happy to provide further evidence or briefing if the Committee would find it helpful.

21 April 2006

Examination of Witnesses

Witnesses: Sir John Mogg KCMG, Chairman, Gas and Electricity Markets Authority, Mr Steve Smith, Managing Director of Markets, and Mr David Halldearn, Director of European Affairs, Ofgem, examined.

Q179 ***Chairman:*** Good afternoon, Sir John. I apologise for keeping you waiting. We started late and finished late with the Minister. Would you like to introduce your colleagues? We have CVs, which are exceptionally useful. If there is anything you would like to say by way of introduction, please do so.

Sir John Mogg: On my right is David Halldearn, who is Director of European issues; on my left is Steve Smith, who is the Managing Director for markets, who has been a little busy! I have a few remarks to make, not to touch on any of the general issues, but rather to give you a sense of the pace of the current discussions, partly because I had the good fortune to be in Brussels on Thursday and Friday of last week. As you will know, there is an Energy Council envisaged for next week, which will be followed by another Energy Council in November of this year, followed by the European Council and the European Council in March next year. That timetable implies if not a stately process, at least a process that gives time, but I think the reality is a little different. The reality is that the Commission proposals will go into their own internal procedures in September, which means the consultation deadline of September is a little artificially late for them to take account of this. Therefore, from your Lordships' perspective, any comments that you may wish to make could be made sooner rather than later. Second, this is a much-loved subject, as you can see from the papers, and there are one or two groups that perhaps I should mention that also will have some perspective on this. One is the so-called High-Level Group, on competitiveness, energy, which covers quite a wide range including the environment. I am a member of that Group in my own personal capacity. This Group has already made its first report after two meetings, covering energy efficiency and the issue that we are discussing today, the Green Paper. It brings together stakeholders and one regulator—in the minority but vociferous nonetheless—and the Commission itself; so that too has relevance. The European Parliament is also making a report on the Green Paper. I saw the rapporteur this morning and she was surprised by the urgency of preparation. It is almost as though this has crept upon us all by stealth. Finally, we as regulators in the European Union—I chair the bodies of European Union regulators—will be making some comments in response to the Green Paper but also separately in addition to some of the questions that you have teasingly put forward.

Chairman: That is extremely helpful, and I am most grateful on behalf of the Committee for that background advice. I am hoping to be meeting with the Member of the European Parliament also this afternoon to make sure that we are comparing notes, but that we understand where we are both coming from.

Q180 ***Lord Swinfen:*** Sir John, why has the European Commission decided to review energy policy now?

Sir John Mogg: I would perhaps omit the last word, "now". Why it is doing it now and why it is doing it at all is almost self-evident, in terms of the pressure on prices most immediately, in terms of the difficulty of supply, and the political/geopolitical problems that have occurred with Ukraine. The issues abound with the overlap in terms of the climate-change agenda and the energy focus. The distinction I am making between most of your sentence, omitting the last word "now"—to underline that one might ask why should they have not done it more thoroughly and more generally earlier, because there is not much in that range of comments I have just given that does not point the way towards the need for a Commission initiative, perhaps at an earlier stage.

Chairman: I think you will find a lot of agreement with that at this table.

Q181 ***Lord Fearn:*** What are the underlying objectives behind the Commission's policy purposes: sustainability, competitiveness and security of supply—and have these objectives been identified correctly? Are they sufficiently clear?

Sir John Mogg: This triangle that is the basis of the approach is a difficult thing to tackle, as we find in our own task, as the UK regulator. Taking due account, as we must, of sustainability issues, they often raise issues of competitiveness and particularly in terms of price levels. The choice that the Commission has made of its range, albeit challenging, is a very good one. I think their approach, as set out in the Green Paper, is generally a good one. I will just give you comments in regard to the issue. What is probably a less obvious comment about what the Commission has brought forward is an attempt to bring together the Commission as an institution. From my CV, your Lordships may know that I was in the Commission. Where there is almost a US administration struggle between the different departments. What is particularly noticeable here is an effort, with some considerable success, to bring together the competition side, the industrial side, the energy side, so that you have a much more coherent and much more targeted approach towards the problems, taking account of these—and of course the external relations too. The broadness of this approach is well met by its terms of reference.

Q182 ***Lord Fearn:*** Security of supply?

Sir John Mogg: In terms of the security of supply, recognition has been made of national responsibilities. The difficulty of achieving it is even more so in terms of the supplies from the Union and through the Union. I think your Lordships will come to this in some while—the difficulties we have had with supplies from the Union as our offshore supply has reduced—in terms of the energy networks, the gas networks on the mainland—how they have developed and are inappropriately generous to the western lying countries.

Q183 ***Chairman:*** How far is it necessary to seek to spell out more clearly what is meant under each of these objectives? Do you think it is clear enough? We will come later to problems of getting agreement between the 25 Member States, but at the end of the day, if it is meaningful at the European level, there has got to be an agreement on what is meant by "security of supply". It does not take a lot of wit to realise that that it might look very different depending where you are and what is sustainability—how far down that line one wants to go. To convert those concepts into meaningful policy parameters is clearly difficult if you are then to get agreement—or am I inventing a problem that does not exist?

Sir John Mogg: I think the challenge is enormous at national level, as you are implying, but also between Member States. We mentioned the timing earlier, but under the pressure the benefit of the later timing is that there is clearly considerable pressure towards resolving these issues. The Commission sets out many of its policies, which we may touch on; but underlying this is the realisation that there is a need for a much more common approach in terms of definitions and solidarity of approach towards external EU countries, and in terms of the problems we face in developing a single grid—and the issues to which we may return. These issues are now being seen in the context that if we do not get it right, both in terms of level of investment—there has been talk about a trillion of steady investment—in terms of the shape of our needs in future, in terms of development of renewable energy, we will be into great difficulty. Pressure may yield a reduction, but at the heart of this the real problem that I would like to alert you to, particularly as a regulator, is the need for a political will to deliver this. The clarity that the sectoral review displays of the problems that we face, from a competition point of view, is there; so I do not think any more analysis is necessary. The clarity we have in terms of the sustainability challenges are there. We may disagree on the levels, but in terms of successful delivery, that is a major challenge—hopefully, the political will will deliver that outcome.

Q184 ***Lord Haskel:*** Do we actually need a single market in Europe for energy? What difference would it make because, after all, we have already heard the Government is against a single European regulator? You have told us about the problems of a single grid. There is a lot of technology now moving towards local generation of electricity, and that would overcome that problem. As far as diversity is concerned, we could arrange that ourselves. We do not need the European Union to do that. If we can achieve our energy objectives ourselves, without help from Europe, would that not be the way to solve our energy problems?
Sir John Mogg: Had you not asked the last question, I might have been starting from first principles. I think Lord Haskel may know that I have spent a good deal of my life seeking to secure a single market generally. The benefits of a single market as an economic generator with benefits to the community and its citizens are well recognised—I refer particularly, not to energy yet, but in terms of the single European market from 1985 to 1992 and the establishment of that, and more recently the financial services benefits. The first principle, the economic validity of an integrated economic community, is well demonstrated. In energy, we have both external and internal enlargement. Externally, the threat is that we have developed the wrong sort of regulations as a threat. The benefits are that we should get better supplies in terms of gas, and hopefully potentially electricity too, as the continental market becomes more integrated, from its present rather Member State-focus and lack of developed networks. As the UK's indigenous supplies decline—offshore gas supplies decline—we will need major investment. The benefits of the single market are often shown in terms of the price. We have our own estimates—but they have not simply been calculated on the back of an envelope—that within the UK our liberalised market has meant a benefit, since privatisation, from 1990 of something like £70 billion compared with the German market and £35 billion compared with the French market. Our consumers have thus already benefited from a competitive market. The export of the competitive market to the liberalised EU market, will bring those benefits too and will break down some of the cartelised anti-trust arrangements that exist on the Continent now. The single energy market is desperately needed for Europe as a whole, in terms of its competitiveness, and for the UK in particular because of its shifting energy mix requirements. It will be good for our competitiveness and thus for our citizens.

Q185 ***Lord Haskel:*** I accept your argument as to why we need it. Do you think it is possible? Are we going to get the people on the Continent to change their attitude towards liberalisation? You particularly mentioned gas supplies. In February or March of this year there was an enormous incentive to send gas down the interconnector to Britain but nothing happened. They wanted to conserve it for themselves, I guess, because of cold weather. Does that not indicate that although a single market might be desirable, it is just not feasible; and that we ought to set about ensuring supplies of our own?
Sir John Mogg: I think it is a fair question, but without being disrespectful one should ask: will it ever? The term of art that is used in the Commission thinking is that the single market has been completed. The single market, in my mind, is never completed. Therefore, if you define it in terms of a single market, it is unachievable, because there are always improvements. In terms of delivery and the timescale, that would depend very much on the political will. The levels of prices and the economic stability offer to bring us together in a common cause; and that political will is of central importance, in my view. As to the timescale of that, it is very difficult to judge. Progress has been made in the last two or three years, which is at least more than Minister Wicks' tenure—I have at least seen out a few more Ministers, as he mentioned, in the time period! I see that there is a shift in attitude. There is even a shift in the most entrenched of markets, the German market, where I know of one major company which is thinking much more positively towards liberalisation. Without misrepresenting in any way, or showing myself as wearing rose-coloured spectacles, I cannot believe that we will not see quite major changes that will indicate the possibility. If I may make a reference to an initiative that we, as regulators—I am now talking about European regulators—have taken, the regional initiative. There is an argument that because of the relatively low state of integration, we cannot make a very big step—and I think this is a very compelling argument. As regulators, we recognise

that the political decisions are those for governments, often on proposals by the Commission. But in our case we also see often practical, adaptation possible, in confronting common challenges, making people much more ready to make a movement towards for example independent regulation towards greater powers for regulators, which we in this country take very much for granted now. We now have seven regions in electricity, and four, in gas, where we are, in practical terms, trying to develop greater integration so that as a second phase you will move towards a more integrated European market. That will be both useful in its own terms, but also as a "demonstration project" towards achieving the objective of a single European energy market.

Q186 ***Lord Haskel:*** If we accept what you say, how should the Government interact with markets to ensure that these policy objectives are delivered? What can the Government do to speed the whole thing up and achieve the objectives that you have painted for us?
Sir John Mogg: One might almost say it is what the government should not do—and I am not talking about this particular government. If I may step sideways slightly and then go back to the markets, what characterises regulation in many continental countries is a lack of genuine independent regulators. By law they are only required to be, in the terms of the directive, independent of industry. What you find therefore are regulators, at the most extreme, having no powers, and their activities are basically to prepare for a government to take a decision on tariffs, for example, which is often the most sensitive issue. The Spanish Government takes all the decisions. Even the French Government, where there has been a strong independent regulator, has quite a hold over those tariffs. Governments' intervention in the process make it more difficult for the natural development of investment within markets. On that, perhaps I should emphasise, in response to your earlier question, the aim is competitive single markets—not the free-for-all—energy is a very different animal from most markets that I have had to deal with—but to let the market run its course, to provide, in terms of investment, signals that there is a coherent, independent set of rules that will be followed—not exposed to the intervention of perhaps short-term government concerns. That attracts the massive investment that is needed for the rule changes that will occur in the next twenty years. How should governments achieve that? They should demonstrate political will. I apologise for constantly saying this. This is a big step for government, to lose powers to the independent regulator, to allow operation of the markets, to trust when things in regard to security of supply become uncomfortable. However, I can see no other way of allowing the market to get the confidence to make the investments. The levels of investment are so high that they will never come from any exchequer.

Q187 ***Lord Haskel:*** We were told by the Minister that a lot of the large energy users had come to discuss with him the fact that they were buying energy on the spot market whereas their competitors overseas were buying long-term energy; and of course the price of the spot market goes up, drops, halves, doubles, as it does in any spot market—and people overseas had less volatility of price. You would say that the Minister should say, "If you want to deal in the spot market, that is life in the spot market" and not try to intervene in the market at all.
Sir John Mogg: I thought this was on an earlier point, and I did hear the Minister say this, and of course I would never disagree with the Minister in his observations. The energy-intensive industry has suffered, as he rightly said, very, very severely in the last two or three years. Industry of course will always look at the process that is currently confronting them, particularly if its effects are adverse; but if you look back, since privatisation they have enjoyed extremely favourable levels of prices because of the over-capacity that was in the UK market. I do not believe that any of my predecessors had their doors battered down by people saying the price was much too low! That may also indicate a predilection to play the spot markets. At some point, a commercial decision has to be made that that may be uncomfortable, and that therefore there is greater certainty. Of course, if you go in late, you will suffer. This is an issue that is being discussed by the High-Level Group that I mentioned earlier, about how energy-intensive users can ease the strain and the pressure on them. For example, there are examples in practice of where energy-intensive industries have clubbed together. In Finland, for example, long-term arrangements have been developed which do not fall foul of the competition laws—again a difficult triangle! There are ways of easing the process. There was another difference—and I am not sure whether I am anticipating anything—with regard to long-term contracts. In the UK they are indexed, but they are indexed against gas prices, not against oil. Therefore that can work both ways. It can dampen the crisis. Steve Smith has done a lot of work, so perhaps he could answer.
Mr Smith: I agree obviously with what Sir John said in terms of contracts. I suppose the only thing that you could say in the large industrial customers' defence about why they might have found themselves in the spot market is the overall lack of transparency, partly to do with the North Sea, but more to do with Europe, which means they were lulled into a false sense of security. Had you had more transparency in European markets, they would have seen the supply

squeeze coming. Maybe some of them could have taken those decisions. I think it just warms to the themes about why the European market is so important because that is obviously a real cost to the UK economy now, and we need to make sure that in future, when they are taking decisions about how and when to contract that they are completely informed and that they are taking proper decisions. That is why we keep banging this transparency drum.
Sir John Mogg: I should really underline that. The capacity of the continental market on supply and availability is astonishing. You would have thought that in terms of gas storage we would know what was going on—we do not. Even in the UK, our commitment to transparency, which is very, very high in gas—real-time transparency—even when we have made efforts, that are not always popular, for the offshore industry to provide greater transparency, we have had a pretty tough time, and under some pressure we have proceeded. Transparency in the markets will be vital. The particular example which you gave in terms of price—last winter, in relation to our high price—we have asked the Commission to explore that, and we have ourselves explored that in very great detail. Steve has looked at this in great detail from the UK perspective. Part of the answer is emerging from the sectoral review that you have now received from the Commission. There are wider problems. They were committed to the gas that they had within their own arrangements, and they used higher levels of storage too, and we believe this is part of the answer.

Q188 ***Lord Haskel:*** Are the market-based mechanisms alone, even though they are transparent, capable of delivering all the underlying objectives?
Sir John Mogg: I think it is such a good question. I believe that you have to rely upon market-based mechanisms and allow the market to operate. However—and in that "however" one must be very careful not to allow a tendency either to stand back from an ideological point of view, or to retreat—and that it does not develop into a massive retreat. I think the Government has an interesting discussion with regard to the future of—the Minister mentioned when I was present the ROCs, the renewable obligations, which are very expensive interventions, but are necessary to start the process. It is that balance of how much you are going to attribute. I believe—if you could say, "basically 'no'—however . . ."—having a little bit of my cake and eating it!

Q189 ***Chairman:*** At the European level, because we are here considering the European Green Paper, what if any intervention or action other than market-based remedies, is justified or may be required over the coming years in the energy field? Are there any at all?
Sir John Mogg: It is very difficult. There may be on nuclear; there may be in terms of perhaps environmental considerations when you wish to tilt what the market would not deliver. I think that the continental approach would be much more inclined to give a more positive answer to you than I would. There are countries that are fairly ready to resist. There could perhaps be an intervention in terms of planning and licensing of facilities, which might require intervention to shift the balance slightly away from mechanisms that are slowing the process down. That might be for another occasion—

Q190 ***Chairman:*** That is not the European level intervention.
Sir John Mogg: You are no doubt touching on the interconnector problem! Part of the difficulty is the slowness of identifying the need for the interconnector, the investment. Another part is the fact that there are disparate processes, and the third is the different interests. It may be one needs to intrude there in order to achieve greater integration of the market.

Q191 ***Chairman:*** I thought the Commission was half suggesting they should be involved in "investment decisions", interconnectors and cross-border arrangements.
Sir John Mogg: I noticed that too. No Green Paper from the Commission is complete without an observatory, a list and an action plan, and this has all of them.

Q192 ***Chairman:*** Absolutely, so we have the boxes ticked! Your answer to Lord Haskel, in a nutshell, is that it is much more preferable to pursue the single market, the competitive route, the market solution; but it will take some time. It can take quite a bit of time in some countries compared to others, but meanwhile the single market is not complete; inquiries go on; the dawn raids increase, and various things go on; but come next winter and come the winter after we are not going to have a fully working single market, fully competitive. Let me make that proposition and for the moment ask you to accept it. Given that the market is working perfectly elsewhere in the rest of the European Union, what steps need to be taken to protect the UK's interests over a period until this idealised situation were reached?
Sir John Mogg: Taking your hypothesis, first of all they are being taken in terms of the Green Paper, to make the political moves that are necessary to achieve a more appropriate legislative and regulatory framework. As a regulator, I probably could say more, than you would like me to. On the needs of the regulatory front I think there is a fundamental

difficulty. The first step is just to deliver. The second is intelligence. Because of the opacity of the information, we did not know last year what was available, particularly gas, and we have not been able to communicate as well as we perhaps should have done to the users, in terms of demand-side responses and availability, to get people ready. This year Steve and his team have been much more hyperactive in terms of visits, to other countries.

Q193 ***Chairman:*** I do want you to touch on the regulatory matter. To some people it would come as a surprise on the interconnector issue, for example, that the UK regulator—you can regulate what happens if something ever gets to you; but you have in fact no influence whatsoever on whether it gets there in the first instance. This is an interconnector, with gas, going in theory backwards and forwards; and yet you are helpless to get anything done to ensure that the interconnector works. After all, it was there in part to get gas into this country—as indeed I am sure you will ensure the market works for gas to go the other way, and taking the LNG situation at the Isle of Grain interconnection, there was a terminal there. It was there in time and LNG did not come in at the levels expected. What can you do, as the UK regulator, to better protect the UK interests over the next two, three or four years, whatever it is, until this idealised situation, which we are all supportive of, comes about throughout Europe?

Sir John Mogg: That naturally ties in with some of the activities that Steve mentioned before. On LNG, I would not be so pessimistic as your Lordship in that respect, because we really did have a major impact of some significance, in terms of the Isle of Grain and the interconnector. That is partly because we intervened with the Commission very publicly.. Normally I believe in operating below the public level. But I think that then we gave a very clear signal to the operators of the Grain facility that it was "use it or lose it". From the moment of intervention until the end of the winter there was no shortage. So I think we can intervene in that way, using some of our existing powers.

Mr Smith: Just to pick up on that, on LNG we were very active. We had a very powerful sanction over that terminal. If we think the company is not using it properly, we can actually withdraw an exemption and introduce formal regulation and use that quite effectively, and they have brought forward changes to the way that the terminal is used in the event that they are not using that slot. There were problems in November, however. Unfortunately, those problems related to BP bringing gas into the terminal and it actually had problems with its production facility in Trinidad, so it simply did not have the gas until later in the winter. I can understand the perception, but once we delved into it, there were good reasons why people were not getting it, and once the gas was there it did come in. In relation to the interconnector, again having done detailed investigations, the basic story is that there is a range of constraints on the other side in Belgium and at the German border, and now investments are being made to release them, but in essence gas gets locked in Germany or in other areas of the EU. What we are seeing is people investing to go around that: the Norwegians, who currently supply gas to us either up in the north of Scotland or through that interconnector pipe, built a massive pipe to deliver directly into the UK at Easington for this winter; we are seeing the Dutch invest around those constraints so that they can come straight into the UK. I can understand the concerns about last winter, but the prognosis for a year or two ahead gets much better as the infrastructure comes in. All we can do is make sure that infrastructure is built, that people can build capacity; so if there are people with gas in Europe who want to use it, we will get that capacity into their hands and have the mechanisms on all the interconnectors to do that; and also make sure that the UK remains an attractive place to deliver gas, because the reality is that there is over 10 billion of investment being made in the UK over the last two years and over the next two years, and it is on a level and at a scale that we are not seeing in any other European country. For the Norwegians the UK is their number one market of choice precisely because it is transparent. They understand the rules and they also understand that there is a stable regulatory regime and that you do not get government interference. The other things we have done to try and help industrial customers is that we run a number of seminars around the country which are ongoing to make sure that they are better informed about what is going on in the market this year and next year, and to try to bring the supply side of the market, both at the European level and at the UK level, together with industrial customers, to see what the options are and what they can be doing on the contract side. We have made a number of visits to the large European suppliers and have been openly critical of them where we think that their actions are leading to gas not arriving; and that kind of pressure is having an impact. E.ON, to take an example does not like it when we stand up at one of his seminars and say, "why can you not give us this information? Why do you not tell us why you are not flowing the gas?" That is not very subtle, but that sort of softer use of formal powers has been highly effective at persuading some of these companies to be more transparent—and shortly afterwards they put out announcements for how much gas they were sending—and how German customers were going without gas because they had commitments in the UK. There is a lot we can do but there is a lot we are doing to deal with the difficult circumstances we find ourselves in.

Q194 ***Lord St John of Bletso:*** Sir John, we have read a lot about the increasing dependency on gas supplies from Russia and the dispute over gas prices between Russia and Ukraine. What is your assessment of the position of liberalisation of the gas market and relationships with EU Member States and EU-based gas pipelines and gas supply companies?
Sir John Mogg: The UK is very little reliant—a few percentage points—on Russian gas. As you look forward—we can provide some information that would give you a feel for the way in which the shift of mix is going. From a purely gas-supply scenario, we are in a far less exposed position concerning the Russian situation than particularly the Germans and the French—all those that have been very anxiously looking at the possible turning-off or reduction of gas in a diplomatic way. From that perspective, purely from the regulator's point of view, I am going to limit my direct answer to the question, because a lot of this is, from the UK perspective, a decision of government. Our role is to advise on competition issues. There is speculation about the Gazprom interest, and we would advise the competition authority with regard to that. We would be advising from a competition perspective rather than from an ownership perspective. We have less to contribute from the UK perspective. From the European point of view, where Russian gas is obviously of such huge importance, solidarity on issues in the Green Paper are compelling provided they do not imply that there will be an intrusion into governments' attitudes on fuel mix and decisions with regard to their own governments' perils of supply, which are essentially sovereign issues. To meet the Russians with a solid EU position certainly helps. Whether it is of decisive help is a matter for the EU governments and my own government to decide. I am sorry to draw a boundary, but as a regulator you will appreciate that I am bound by statutory responsibilities.

Q195 ***Lord St John of Bletso:*** I certainly appreciate the sensitivity when it comes to Gazprom having aspirations of running 20 per cent of the UK gas market. Is there any conflict between liberalising the gas model in the EU and ensuring a strong negotiating position in relation to Russia? You have mentioned the position of the UK, but is the UK in a different position compared to the EU Member States? We hear about the growing import of LNG.
Sir John Mogg: The last point is undeniably true for the UK. The LNG situation is very comforting in the medium and long term, because you then have a global market rather than one that is regional. That reduces the natural gas linkages. It helps, but I do not think the UK has a particularly special position. I think it plays its part as a Member State inside the solidarity fronting in the negotiations with Russians and takes its own position at the level of the Council of Ministers. My personal reaction would be that it would play its part in deciding what powers the Commission should have in establishing the boundaries for the Commission on negotation. I am convinced that collective—I was going to say confrontation, but that is absolutely wrong—collective discussion with the Russian authorities is as good a way as any of seeking to minimise any greater exposure.

Q196 ***Chairman:*** You said that Russian gas is very modest in terms of its proportion in the UK. In what I call idealised—that is not meant to be a pejorative term—the move towards a single market—it is irrelevant where gas comes in, because presumably more gas will come in from Russia into the European Union; and the more that comes in, the easier it is for gas prices and gas supplies throughout the whole of the European Union, I assume; so the idea that it is not of significance to us because it is a small proportion of our gas seems to me rather an odd way of looking at it in a single market. How will regulation work with the development and then operation of pipelines that come across from Russia into Europe? How are regulators going to work on a trans-European basis? Maybe you say we do have an interest in that, just as much as the 24 Member States because of the single market with gas coming from all over the place; you do not say "this is Russian gas" when you turn your gas cooker on; it is just gas, is it not? Are you saying that Ofgem is going to play no part in the discussions going on about how to develop the regulatory framework to ensure that investment does take place and that the terms and conditions and transparency on which that is offered for sale meets your current requirements?
Sir John Mogg: My Lord Chairman, what I meant was the significance in terms of the level of the amount of gas we receive and use of gas. You are absolutely right that it can, particularly because of the significance it has on prices, because lack of gas in continental Europe, will, as we have seen demonstrated in the recent past, obviously mean you get high prices. The volatility of the prices and height of prices reflects that uncertainty. In that sense it does matter and is of relevance to us. With regard to your question on the pipelines, I am not sure what each individual country does, but certainly this is one of the interesting issues in relation to interconnection, transportation and systems. It is one that regulators collectively—because I tended to talk as though the UK regulator is the guiding light in terms of the way forward for all my continental colleagues—and I am sure they would string me up if I felt like that—but in our two organisations, the Council of Europe and energy regulators and again the energy regulators' group, we have a process in which potentially we could make a significant impact into the sort of issues

you have just mentioned because we are very interested to make sure that the obstacles towards a trans-European system are reduced—going back to the regional initiatives that I touched on a little earlier. We also want to ensure sensible investment levels, either as a result of the money that companies are awarded in their price reviews, or to attract private-sector money. We are very interested to make sure that things happen anyway, and that they happen in a sensible way, and that the direction is driven by needs and not by particular political considerations. We are constructively seeking to develop that process.

Mr Halldearn: If I could add a few words, you mentioned in particular the issue of building infrastructure to bring gas from where the gas is located to the borders of the EU, which of course is outside of the immediate jurisdiction of the Union; and the way that that infrastructure has been underpinned has been through long-term contracts. We know that there is the potential for those contracts to be used to the advantage of the people who hold the contracts, who are monopolists. There is a challenge there in creating a framework which will first ensure that we can still have those contracts as a basis for underpinning investment; but that the contracts are framed in a way which still allows competition to take place within the Union; but also that the framework is sufficiently encouraging to investors that it enables infrastructure to be built, so that we can get gas from other sources of supply than Gazprom. It seems to us that if we have that diversity of resources, that, in itself, puts pressure on the ability of Gazprom and other monopolists who may abuse their position to the disadvantage of the Union. We think it is quite important that we, as regulators, come forward and help to create a framework to enable those things to be delivered.

Q197 ***Lord Fearn:*** I have talked about security of supply before, but given the importance of ensuring security of supply and economic prices what impact are the proposals in the Green Paper likely to have in practice?

Sir John Mogg: In practice, if they are delivered?

Q198 ***Lord Fearn:*** Yes.

Sir John Mogg: Considerable, in practice. Going back to this issue of political will, there is a slight nervousness as to how much the Commission seeks to intrude into this process of providing the interconnector, lest it is in some way seeking to guide the way in which the mix is achieved—proposals like that, which we would resist. We certainly want to see interconnection throughout mainland Europe developed, but we do not wish to see in some way some generously guiding hand by the Commission towards achieving that. What is necessary are the Commission proposals in regard to the development of the liberal EU competitive market as the basis for the development and the response, and not in some way moving—especially on security of supply, towards some sort of centrally-managed process, which we have now experienced with both its problems and its very few advantages. I would see it in those terms.

Q199 ***Lord Fearn:*** For instance, in the Green Paper will it make any difference on security of supply, given the UK supply risk because we are at the end of the pipe?

Sir John Mogg: We have LNG. Unfortunately not even the British regulator can change the position of the United Kingdom. If we could shuffle it around a little bit and make it fit in a bit more, we would be rather better! In a less jokey way I should say that if we make the transportation of gas—if the policy that is set out makes the transportation of gas easier, if it makes the market more transparent, if it makes the collaboration between regulators, between governments, in terms of confronting the external suppliers—and in parenthesis, I should say that there is a great emphasis from EU regulators who are now developing links with those regulators outside, but—I cannot remember precisely, but beyond the borders towards Russia, including Russia—ERRA—and also into the Med. We are trying in North Africa to establish links which will facilitate those. If all of those things happen, it will ease pressure on not getting the right gas because LNG does not rely upon those for the transport of gas. In those facilities, the UK will be very well served, possibly even becoming a hub for Europe.

Q200 ***Lord Swinfen:*** Sir John, given the importance of promoting the speed and scale of technological innovation in the power-generation sector, including energy efficiency and low-carbon technologies, what is the impact of the proposals in the Green Paper likely to be on those?

Sir John Mogg: Can I take energy efficiency and allow Steve to respond? The Green Paper does not go into much detail but promises an action plan. I must say that experience of what many governments and the Commission have done on energy efficiency is disappointing. It seems that what is always called the "win, win, win" seems never to result in a win; it is always qualified and not actually achieving something in this. It seems to tick every box! I hope in that sense that what is said in the Green Paper is more than simply yet more exhortation of the past. I make my own comment on this, and it is certainly something I suggested and tried to push inside the High-Level Group. Energy efficiency needs to have the modalities of delivery all clearly thought through. The energy-intensive industry does not need advice in terms of saving energy; its energy efficiency is second to none; whereas manufacturing industry that uses a lot of energy but is not energy-intensive, or major suppliers or public buildings or small and medium sized enterprises, need different sorts of help in the development of energy-efficiency services. Sharing advice and sharing in the profits of the benefits seems to me a good way forward. I do not claim any credit for this; I point you to the Carbon Trust's writings. That is the sort of thing that I believe. Inevitably the paper is so wide-ranging that it is touched on, but your question rightly asks whether it will have an impact. I think it could, if it is not more exhortatory lists.

Q201 ***Chairman:*** What has this to do with the European Union as a whole? Is this for Member States? If we have ways of improving the efficiency of offices and homes and so on, why on earth do we need something with 25 nations? They are all so different. You are never going to agree with Greece taking the same approach as the UK simply because of the different circumstances. I am puzzled by—not your enthusiasm for things to be done on energy efficiency, but at the European Union level. What has this to do with the European Union?
Sir John Mogg: There are different reasons for having Union involvement. Some is to help provide the legislative basis for improved ways of operating, for example. In this case it is to provide experience from different markets—and there is considerable experience. The Nordic markets, for understandable reasons, have very, very high levels of energy efficiency, and we can learn from them to some considerable extent. I suspect there may be some scepticism as to whether you need the Union intrusion. Again, it is very useful to have some enforced looking. Here I criticise my own country: there is still a tendency to look to ourselves to sort out problems. In fact there are some very good initiatives on the continent, in Germany for example, which would give good ideas to developers. I think Britain is looking in terms of bringing in the experience of different parties to be able to extend best practice, and possibly benchmark improvements, be they at building level or whatever. The benefit of being in a community is that you also look to individual countries, as well as collectively to produce benefit. There may be some efforts to provide some fiscal incentives. I am not sure whether the present Chancellor would be interested in that. I do not say I support it—heaven forbid I would have the Treasury on to me!

Q202 ***Chairman:*** Energy efficiency in vehicles is a European-wide responsibility and no doubt more could be done.
Mr Smith: My basic answer to technology would be that the main thing the Green Paper is doing is reinforcing the central importance of the Emissions Trading Scheme, and that and that alone is beginning to drive huge investments. I was in Germany last week, and there was an announcement there about building clean coal stations with carbon capture and storage. The German companies are quite clear that it is on an expectation that the Emissions Trading Scheme will be here to stay. Although they cannot have absolute certainty on what the carbon price will be, the fact that they expect that carbon price to be greater than zero is driving those sorts of investments. There is more that can be done to emphasise, as the Green Paper, does the importance of that scheme and the centrality of it, and beginning to tackle the teething problems that there inevitably are. That will begin to drive investment, not just in conventional generation and carbon capture, but it will begin to underpin renewables—marine and everything else. If you look at most of the companies, either responding to the Green Paper or to our own Energy Review, they are saying that putting carbon into the electricity price is unleashing a lot of that innovation and R&D. There is also discussion in the Green Paper about where the Government or the Commission need to do more than that. Certainly in the US, the Government is pump-priming investments in some of these technologies by offering specific targeted funding for R&D. Those sorts of issues are addressed in the Green Paper, about whether you need that as well as the underlying incentive that is created by the Emissions Trading Scheme.

Q203 ***Lord St John of Bletso:*** What key changes are required to current energy policies to facilitate strategic business decision-making?
Sir John Mogg: In the past there has been a hesitancy to look beyond an immediate future, probably because experience suggests that if you do get it wrong, therefore—but there is now a greater awareness and our comments on the Government's review suggest that we ourselves will look beyond that. That is something that will help. Hopefully, it will not be taken as though we know, because if we did we would not be in this job. That is the first point. The second point is greater transparency. I cannot stress this enough. The more people who know about the markets, the more people gain from that information. What has struck me particularly is that it is amazing how market participants can devise ways round it which central legislation or policy cannot. Where energy markets are not particularly beneficial from having such information is in terms of assessing price levels and where there is uncertainty in providing more stability and more investment—so those sorts of decisions. When there is intrusion, in

terms of the Emissions Trading Schemes, what most energy companies will—most industry requires more certainty. It is not what it was going to be—and of course they would have arguments—but they dislike uncertainty. I think I did hear the Minister referring to this, and I do agree. All of these help strategic planning. The Energy Review itself should be useful in identifying for the UK and eliminating some of that uncertainty. In the strategic balance, the community can also eliminate some uncertainty. Providing more information will be helpful.

Mr Smith: On emissions trading, I would echo something the Minister said. You need to extend the coverage of the scheme. You mentioned transport as an obvious area. I think you need to try and make the length of period aligned better with investment timescales, particularly in the energy industry, to give people more certainty so they can say what the target is in 15 years' time and see how allowances will be allocated. As Sir John says there is this is issue about networks as well; they have probably not been looked at particularly at European level in terms of how to regulate them effectively. They take a long time to build. If you have capacity constraint it is three to four years to solve it—the idea of a European grid and beginning to think about whether we have enough interconnection, not just for the bulk flows but also flexibility to produce security of supply, so that we also have a system of works when things go wrong—that they are planned properly with major facilities. That is an area where the Commission is beginning to focus, and that is something that we should be focusing on.

Sir John Mogg: I am reminded by David that there is also the aspect of unbundling, which has hardly passed my lips but which I should really emphasise. I am now speaking from the UK perspective, not from European regulators—because we are still discussing how far we can go towards that. We will also provide greater clarity as to where the problems lie in the chain and what should be done about it. There are many other reasons too, but in terms of strategic planning everything becomes clearer the more you know it.

Q204 ***Lord St John of Bletso:*** Our time is up, and one would be tempted to probe more about nuclear energy because it raises many opportunities in terms of nuclear proliferation, for example, but—

Sir John Mogg: To reassure you, my Lord, I would say that we are neutral with regard to the choice of the source. It may have been a fairly futile discussion!

Chairman: We would certainly agree with your last point, which is almost not the last point but a central theme running throughout your contribution, really unspoken. I assume that unless unbundling does take place, the hope and aspiration for transparency and all the other things we have been talking about are as nothing because it simply will not happen. We are greatly heartened by that and you can be reassured that we totally agree with you. Thank you very much indeed. We have kept you beyond the call of your duty and we are most grateful to you and your colleagues. It has been genuinely helpful evidence and advice to us.

Written Evidence

Memorandum by British Nuclear Fuels PLC (BNFL)

BNFL welcomes the opportunity to comment on the Commission's Green Paper. The issues of energy policy—both nationally and internationally—are becoming of increasingly greater concern to policy makers, industry and the public as the issues of climate change, security of supply and energy prices rise up the agenda.

This submission concentrates on the three questions explicitly raised by the Committee.

Does the Green Paper correctly identify the key issues for future energy policy in the EU?

The Green Paper is right to highlight the three objectives of energy policy as being sustainability, competitiveness and security of supply and to stress the urgency with which these have to be addressed. It is also right to recognise that these objectives are inter-related and therefore need to be tackled in an integrated way across Member States, for example via an over-arching framework, such as the proposed Strategic EU Energy Review.

We believe that all of the key issues of energy policy are encompassed by the six themes identified by the Commission, namely:

— Competitiveness and the internal energy market.

— Diversification of the energy mix.

— Solidarity.

— Sustainable development.

— Innovation and technology.

— External policy.

We are however disappointed that in section 2.4 ("An integrated approach to tackling climate change") the Green Paper fails to highlight the substantial contribution that nuclear energy can make—and already makes—in helping to tackle climate change. Nuclear energy avoids the emission of over 700 million tonnes of CO_2 annually in the EU.

Does it appropriately identify those issues where, in future, the EU acting as a whole should be responsible for policy development and action?

We support the view that collaboration between Member States is essential in several areas of policy if common energy policy challenges are to be addressed effectively. In particular we support an EU-wide approach to the following:

Establishing a genuinely open and transparent single market for energy in Europe. As a net importer of gas, the UK is now increasingly affected by developments in the European gas market, which have consequential implications for the electricity sector. EU-wide liberalisation and transparency are seen as pre-requisites if this situation is to operate effectively. The benefits of competition need to be accessible to all.

Diversification of the energy supply mix. We recognise that decisions by one Member State over national choices for energy supply have implications elsewhere. For instance, as more Member States become dependent on gas supplies, both the likelihood and the potential impact of a shortage of gas supply to the EU as a whole becomes more significant for **all** such nations.

Whilst we support an EU-wide approach to delivering diversity, this should be based on removing barriers to entry for energy technologies, and/or on identifying a minimum proportion of the mix to come from (unspecified) secure and low-carbon technologies, as is proposed in the Green Paper. We would not support an approach based on defining a particular mix of specified technologies, either at EU or national level. The aim should be for flexibility whilst respecting national circumstances and preferences.

A well-informed and evidence-based energy debate. We support the proposal for an objective EU-wide debate on the merits of different energy sources, and specifically the issues around nuclear energy, as proposed in the Green Paper. The EU needs to ensure that such discussion is well-informed and a clear commitment to deliver this would be welcome. This should include raising awareness of the fact that nuclear energy is currently the largest provider of largely carbon free energy in Europe, accounting for around one third of EU electricity production. Choices about the use of nuclear energy in individual Member States must however remain with the Member States themselves.

A concerted approach to climate change. Climate change is a truly global issue, and an international response helps to ensure that Member States do not meet their national targets at the expense of other nations, for instance by simply importing electricity (with no associated net reduction in global emissions). An EU-wide approach also shows important leadership and commitment to those countries outside the EU who are yet to establish their own programmes for emission reduction. Care needs to be taken in formulating an EU approach which will encourage those countries with great potential to make reductions to do so, whilst still keeping pressure on those countries which have the lowest emissions to make further improvements. This is discussed further in our response to the next question. In an energy sector currently dominated by short-termism it is becoming more urgent for the EU to take a longer-term view on the means to address the global climate challenge.

We support the proposed extension of the EU Emission Trading Scheme—a technology neutral mechanism, based on the "polluter pays" principle—as a basis for a global market for carbon.

The integrity of transmission infrastructure. An open single market requires the infrastructure to allow electricity and gas to be moved around according to the market needs. It is clearly sensible to have an integrated approach to network development and management across the EU to help ensure that investment can be optimised to deliver the most effective system. Similarly, we support the harmonisation of access conditions to energy networks.

Solidarity. A co-ordinated response plan to deal with unexpected major disruption to energy infrastructure in one or more Member States would be a welcome approach to increasing energy security.

Innovation. We welcome support for pre-competitive collaboration between EU Member States and more widely, in order to allow cost-effective development of new energy technologies which can help to meet the challenges we face. The long-term nuclear fusion project, ITER, and the Generation IV international initiative on development of advances nuclear fission reactors are both good examples of this, as noted in the Green Paper.

External energy policy. As the EU overall becomes more reliant than ever before on energy imports it is more effective for discussion with key supply countries to be undertaken at an EU level. This helps to achieve maximum bargaining power and to ensure an outcome which is equitable to all Member States. This issue is particularly important in respect of gas, where recent events have raised very real concerns over the prospect of politically motivated disruption to supplies, beyond the control of Member States.

Does it appropriately identify those issues where, in future, Member States should be responsible for policy development and action?

In general the Green Paper is less explicit about those aspects of policy which should remain the responsibility of Member States. Whilst we acknowledge that EU-wide action is appropriate in many respects, we recognise that there remain many other aspects of policy which must remain for Member States to decide.

We welcome the Green Paper's statement that Member States should retain their own freedom to choose between different energy sources in order to best meet the energy policy challenges. In particular, the decision as to whether or not nuclear energy might play a part should remain one for Member States. National circumstances and preferences differ and these must continue to be respected in order to achieve the best balanced approach to energy policy.

Given this, it will be difficult for targets to be set at EU level relating to the proportion of energy coming from different technologies. For this reason we do not support EU-wide targets for the share of electricity generation which should come from renewable technologies. Such a target will be difficult to meet without compelling Member States to impose their own targets. Deployment of renewables *per se* is not a policy objective, and it should be left to Member States to decide for themselves what approach they wish to adopt to reduce carbon emissions—choosing between renewables, nuclear, fossil fuels with carbon capture and steps to reduce energy demand.

For the same reason, we do not support the suggestion that EU-wide targets for energy saving should be introduced. Such a measure would again have to lead to individual Member States being asked to cut their energy consumption. This in turn could unnecessarily penalise those Member States which already have very low-carbon emissions associated with key parts of their energy supply portfolio. For instance in both France and Sweden, around 90 per cent or more of the electricity sector is very low-carbon (nuclear or renewables) and correspondingly their average carbon emissions per unit of electricity generated are up to 10 times lower than countries such as Greece and Ireland, where less than 10 per cent of the electricity mix is low-carbon.

It is appropriate for the EU to set a broad framework for the key energy policy goals of reduced emissions, improved security and affordable supplies, but it should be left to individual Member States to decide which combination of approaches best suits the circumstances of that nation.

April 2006

Memorandum by BP

Summary

— EU countries share many energy objectives in common, relating in the main to security of energy supply and the reduction of CO_2 emissions.

— Such objectives can be progressed in part through the implementation of EU competition and environmental policies where EU competence already exists.

— Energy policy at a European level should thus be concentrated on delivery of a competitive internal energy market, reliable and diverse supplies of energy to the European borders, efficient use of energy within the European market, and reduction of greenhouse gas emissions to mitigate climate change. It should enable the full range of available, material technologies to compete on a level playing field.

— There is a need to promote more investment for the development of new technologies—such as Carbon Capture and Storage—which have a vital role to play in both securing energy supplies and reducing CO_2 emissions, and EU policies need to be mindful of this reality.

— Energy efficiency should be an important objective in every EU country, and market mechanisms should underline its importance. While sharing the Green Paper's emphasis on energy efficiency, it will be important to ensure it is based upon full recognition of market behaviours and that it avoids ineffective policy prescriptions.

— In addition, the EU can assist in developing enhanced international energy relationships, and through ensuring that EU's involvement in foreign affairs, both by states individually and collectively, is aligned with energy policy considerations.

Introduction

1. Both in the European Union as a whole, and in EU nation states, there is often imprecision over what is meant by "energy" policy. For example, much of what can be achieved to secure EU energy objectives may best be pursued through the exercise of competition, environmental or foreign policy. In this respect energy policy can be seen principally as the gathering together in a more coordinated fashion of a range of related policy objectives and instruments. This is particularly so when addressing the issue of climate change in the context of other energy related concerns such as industrial competitiveness and security and diversity of supply.

2. Nevertheless, growing interest in policies which are related to energy is both undeniable and understandable. The economic and political consequences of disruption or failure in energy markets—especially if these threaten security of supply—are a major source of concern to all EU governments. While energy markets should not be regarded as different in kind from any other, they do carry unusual political and economic sensitivity. Moreover, most energy resources are under government ownership.

The Principles of Energy Policy

3. EU nation states will wish to tailor their national energy policies to their own particular circumstances and needs. But whether at EU or national level, there are some principles which, in BP's view, should underpin any energy policy. These include:

— The need to safeguard energy supplies and ensure a sustainable long-run global climate at the lowest possible cost.

- The need to attract adequate investment, technology and skills to meet agreed policy objectives on a sustainable basis.
- The need to ensure that mechanisms are in place to imply a market price of carbon, thus encouraging and permitting the full range of available technologies to compete on a level playing field in order to address greenhouse gas emissions and direct the flow of investment and skills in the energy sector.

4. For the EU, this would mean in particular that:
   - Energy policy at a European level should be concentrated on delivery of a competitive internal energy market, reliable and diverse supplies of energy to the European borders, efficient use of energy within the European market, and reduction of greenhouse gas emissions to mitigate climate change.
   - In terms of Security of Supply, principal areas in which the internal market could be strengthened may include further removal of barriers to investment, and greater interconnectivity and access to infrastructure and storage.
   - In terms of environmental objectives, it is important to recognise those areas where material progress is both least costly and most easily achieved; and this in particular will be assisted by:
     - Creating a level field based upon a market price of carbon, so that technology competition between the various options such as Carbon Capture and Storage, Renewables and Nuclear is fully encouraged and facilitated. The development of new technologies have a vital role to play in both securing energy supplies and reducing CO_2 emissions and EU policies need to be mindful of this reality.
   - One aspect of policy which is crucial in this regard is the full development of the EU Emissions Trading Scheme (ETS) which should continue and which should be broadened both in geographical scope and technology breadth. It may also need to be complemented by other incentive mechanisms in order to provide sufficient investor confidence.
   - In this context, it is desirable that any EU (or indeed national) Energy Policy should be based upon a fiscal and regulatory framework in which Research and Development into new energy technologies is encouraged. Much of this falls to national governments, and there should be no attempt to prescribe a technological "solution" (or indeed a "mix" of technologies or of energy) for the EU as a whole. But so far as EU approvals can facilitate the process—such as, for example, whether Carbon Capture and Storage should be included within the EU ETS—it is important that they should do so.

Implications for Practical Policy

5. The three key questions identified by the Committee should be addressed with the above principles in mind, and it is clear that at least some of them are acknowledged by the European Commission's Green Paper, "A European Strategy for Sustainable, Competitive and Secure Energy". For example, the Green Paper acknowledges:
   - the importance of "competitiveness" through the Lisbon initiative;
   - the need to complete the internal market in energy;
   - the need to develop effective and well-connected European gas and electricity grids; and
   - the need to consider the impact of existing contractual arrangements, ETS and taxation of energy products.

6. If these four points were acknowledged in practice, they would move the EU's Energy Policy in the direction of the global principles outlined above. The "global" element is something which BP would emphasise. There are certain realities which are crucial and which *any* energy policy should reflect, namely:
   - Global energy growth will continue and fossil fuels will continue to remain the principal source of primary energy supply for the foreseeable future.
   - Global energy demand will be underpinned by increased global prosperity and demographic shifts.
   - The future energy mix is less certain than the growth of demand. Because many of the decisions necessary to meeting some 40 per cent to 50 per cent of power generation needs in 2030 are still to be taken, one of the biggest uncertainties relates to the choice of fuel in new electric power plants.
   - The power sector is crucial for another reason, because it is responsible for some 40 per cent of global CO_2 emissions, and offers one of the few practical options of making a material and immediate contribution to achieving CO_2 reduction targets.
   - There are no shortages of energy resources to meet demand, but many of these resources lie in regions that are not generally open to international investment.

7. This last point has special relevance to a policy which is not strictly "energy", but rather the EU's role in foreign relations. Foreign Policy has a vital role to play in terms of security of supply, since enhanced foreign relationships based around energy can help to bring about greater diversity of supplies to EU borders. That is why, within the international context, particular attention needs to be given to relations with neighbouring suppliers and transit countries including Russia, the countries of the Caspian and south Caucasus, Turkey and North Africa. The Green Paper also appears to accept the desirability of agreeing a common approach towards third countries between EU Member States and the Community as a whole in the energy sphere. HMG in particular has promoted the advantages of a "more collective" EU approach to energy dialogue.

8. The area BP would wish to highlight and support in the Green Paper is the emphasis given to market mechanisms, which are the key to enhancing economic competitiveness. We believe that energy markets are no different in kind from other markets. Provided the regulatory and fiscal climate allows, properly functioning energy markets will, in the absence of catastrophic disruptions of supply, provide consumers with adequate security. In terms of Climate Change and CO_2 emissions in particular, the sooner a market price for carbon can be established, the greater is the likelihood that significant environmental improvements will be identified and achieved at the lowest possible cost. Where the Green Paper does appear to indicate a preference for particular solutions—for example, in the strong emphasis placed on energy efficiency—it will be important to ensure full recognition of market behaviours and to avoid ineffective policy prescriptions. If the EU can agree to adopt an approach based on market mechanisms, questions concerning the balance between member state and collective EU action become less relevant since the role and influence of governmental intervention will already be implicit by virtue of a market approach.

Conclusion

9. This also has relevance to perhaps the most politically contentious and fundamental of the questions raised by the Green Paper—namely, the required balance between EU and member state competences and instruments in order to achieve the goals of an EU Energy Policy.

10. As mentioned above, it is not always clear what is meant by an "energy" policy at either member state or European Union level. However, there do appear to be policy areas of relevance to energy where there may be a case for more concerted action. The issue of strategic gas stocks is sometimes cited as one such example. In the case of the UK, BP has acknowledged that it would be prudent to consider measures to stimulate additional gas storage provision. Whether greater transparency on stocks and greater confidence in stock release procedures at EU level would also be beneficial is a legitimate question. From a UK standpoint, with the country's need for additional "swing" supply and seasonal storage, increased EU transparency and robust market operations would enable consumers to determine whether the Continental system were able to fulfil UK requirements. It is BP's view that HMG should concentrate its attention on such issues as gas transmission and storage access, unbundling, transparency provisions and public service obligations, in order to enhance security of supply for both the UK and the EU as a whole. In this respect, Article 3 of the Gas Directive states that public service obligations should be "clearly defined, transparent, non-discriminatory, and verifiable and shall guarantee equality of access for EU gas companies to national consumers". This merely underlines that energy policy objectives would be greatly enhanced if existing directives and regulations, agreements and undertakings—and not necessarily only those related specifically to energy—were more rigorously enforced.

11. In all cases policy makers must continue to take account of the inescapable realities of the global energy market. Security of Supply cannot in the long-run be achieved in one continent at the expense of another, even though national governments will always reserve the right of taking independent action when they judge this to be necessary. That is why the best chance of securing an energy policy for the benefit of the EU as a whole, is most likely to be achieved through policies which promote competition and transparency, and through consistency of approach to countries outside the EU. In this context, it is also worth emphasising that energy policy at the European level must also be consistent with those international mechanisms and obligations—such as those associated with the International Energy Agency—to which countries are already committed.

12. In addition there is the critically important environmental dimension, which is a distinct and separate area of public policy but nevertheless strongly linked to energy policy thinking . The EU has already made a choice, through its adoption of the EU ETS, to achieve its environmental goals through a market-driven approach based upon an EU price for carbon. It should be the goal of EU policy to export this approach and framework to the rest of the world, so that eventually an international trading system will allow the greatest global reductions of CO_2 to be achieved at minimum cost and with maximum efficiency. In our view any temptation to supplement the workings of a Trading System by "picking winners" and defining outcomes, irrespective of the cost to national economies, should be carefully avoided. As already suggested, a necessary (though not sufficient) approach would be to enhance the scale and credibility of the EU ETS—for example through the inclusion of all carbon free and low carbon technologies such as CCS.

13. Finally, it is clear that foreign policy thinking needs to be carefully aligned with energy policy considerations, in order to contribute to enhanced international energy relationships and maximum diversity and reliability of supply to the EU borders. This will require co-ordinated attention not only to principal energy supply and transit regions but also to the maintenance of well-functioning global energy markets and the secure flow of energy products, services and investment on a global basis. A shared understanding of these issues at member state and European Union level is fundamental to achievement of future energy security and competitiveness and to effective action on Climate Change.

27 April 2006

Memorandum by the International Association of Oil & Gas Producers

1. The International Association of Oil & Gas Producers (OGP) represents upstream interests before international regulators and legislative bodies, and identifies and disseminates best industry practice in health, safety and the environment. OGP members produce more than half of the world's oil and over a third of its gas.

2. OGP deals with global issues out of its London office but is aware that regional developments, whilst important in themselves, can also have a worldwide impact on our industry. This is particularly true of the European Union (EU). Therefore, and to work towards a favourable environment for European operations, OGP maintains a Brussels office and engages with the EU on a wide range of issues, including security of supply.

3. Prior to the publication of the EU's Energy Green Paper, OGP was already active in the debate; providing facts as well as points of view. In many cases, OGP arguments are reflected in the finished document and the Association is in general agreement with the Green Paper. In a few instances, OGP takes issue with conclusions and recommendations. Overall, there are six priority issues covered in the Green Paper which, as far as OGP is concerned, bear further comment.

I. **The Internal Gas Market**

4. OGP fully supports the implementation of a well functioning single European gas market. This will help cope with projected growths in European demand (up to 1.8 per cent annually). The internal market notwithstanding, gas will remain a global commodity and therefore prices in Europe are bound to reflect prices of gas in other regions where demand is also growing.

5. As the internal gas market develops, substantial investment will be required to complete the physical integration of the European gas network. This will have to include the development of a single gas grid with full interconnection capabilities.

6. Establishing a competitive market with a level playing field and attracting infrastructure investment on the necessary scale will require enabling regulatory regimes. OGP supports the Green Paper's two-step approach in which the Commission would first review the powers and independence of national regulators and then promote greater regulatory cooperation among the Member States.

7. Long-term contracts are another important gas issue raised in the Green Paper. Though EU directives on the gas market and security of gas supply acknowledge the importance of such contracts—and financial institutions predict that such contracts will continue to be essential to secure necessary infrastructure financing—the Green Paper raises doubts. This creates uncertainty and is therefore a matter of some concern for OGP.

8. Long-term contracts exist to manage investment risk and contribute to security of supply. Fundamentally, the substantial capital commitments and long time scales of the investments undertaken in the gas industry require long-term contracts. Taking into account Europe's increasing import dependence and the need for security of supply, OGP believes that a major part of gas supplies for Europe will continue to be on long-term contracts.

9. That being said, other contract types are, of course, conceivable and do exist. In an effective market, buyers should have a range of supply options, be they long-term, short-term or spot purchases. By entering into a mix of commercial arrangements, buyers are able to set their own level of supply security.

II. **Security & Storage**

10. OGP welcomes, in principle, the Green Paper's reference to a European Energy Supply Observatory as a complement to existing market information systems and as an attempt to bring greater transparency and predictability to the internal market. However, any such scheme should limit itself to monitoring short and long-term developments and avoid any interference with market dynamics.

11. An EU-wide approach to protecting critical infrastructure against external hazards is also promoted in the Green Paper. In previous OGP discussions with the Commission and Member States on a European Programme for Critical Infrastructure Protection (EPCIP), OGP has stressed the importance of differing approaches to handling crisis management and crisis prevention. By extension, there should also be a clear regulatory distinction between the prevention of damage from natural disasters (safety) and from terrorist activity (security), as the two are practically approached in very different ways.

12. Of some concern is the EU's proposal to compile a list of EU critical installations. Any benefits would need to be weighed against the security risk that the existence of such a list would constitute in itself.

13. The Green Paper raises another issue linked to crisis prevention and management: emergency storage of oil and gas. As OGP, we shall comment on gas. The concept of emergency storage may appear to be a reliable insurance policy against any failure of the current system. It is worth noting, however, that European gas distribution systems are designed to handle supply/demand fluctuations (eg in cold winters) and even disruption, thanks to the flexibility of the physical infrastructure—including pipelines and existing storage—as well as commercial arrangements. With respect to more strategic storage, account has to be taken of the risk of undermining the market, potential lack of transparency and the question who would bear the cost of additional storage and its related infrastructure. Any decision on how supply disruption should be addressed should be based on a sound analysis of requirements and options.

III. **Towards a More Sustainable, Efficient and Diverse Energy Mix**

14. OGP believes that one of the cornerstones of security of supply is energy diversification in its widest sense: by type, source, transportation route, technology, contract category, producer and supplier. Moreover, the Association is convinced that the best way to achieve this diversity is through response to market forces and by operating under sound policy frameworks.

15. As such, OGP recognises the potential value of the proposed Strategic EU Energy Review—particularly if it is able to use its findings to level the playing field among different energy carriers.

16. The Green Paper is oddly reticent about indigenous European oil and gas production. The EU and Norway are currently the fourth largest producing oil and gas region in the world (after Russia, the US and Saudi Arabia). European production is meeting some 40 per cent of the EU's need for oil and about 55 per cent of its demand for gas. OGP estimates that there is a potential of up to 100 billion barrels of oil equivalent remaining in the EU and Norway (equivalent to 25 years of current EU/Norway production).

17. Given the right investment climate, OGP is confident that despite the challenges of mature producing basins, European oil and gas will continue to make a significant and reliable contribution to Europe's energy supply. A balanced regulatory approach, both at EU and at Member State level, (including the EU Marine Strategy, the implementation of Natura 2000 at sea and taxation) is required to enable optimal indigenous production.

IV. **Tackling Climate Change**

18. The EU's efforts to keep alive the worldwide debate on climate are commendable. Only a strategy that includes all major emitting countries will be able to address the issue of climate change in any meaningful and effective way while safeguarding the competitiveness of European industry.

19. Investment in the upstream oil and gas sector is characterised by lead times of up to 15 years and needs to take climate change policy into account. Similarly, carbon reduction projects require clarity for a period of up to 10 years. Long-term clarity about the post-2012 climate change regime is therefore important. This would include the required level of emission reductions and greater certainty about the future of the flexible mechanisms under the Kyoto Protocol.

20. The current uncertainty at global level translates into uncertainty about the future of the EU Emissions Trading Scheme (ETS). To inspire greater confidence, OGP recommends that the length of the next trading period be extended to 10 years, with decisions on allowances made three years before its start.

21. Another way to reduce carbon dioxide emissions is through increased use of renewables. OGP supports the Green Paper's call for the development of economically sustainable additional energy sources and user technologies. The Renewable Energy Roadmap could provide a useful impetus in this respect. Development of these sources and technologies into robust and competitive industries will inevitably take time: infrastructure will need to be built; environmental impacts fully assessed and commercial safety and operating practices developed.

22. None of this should risk the level playing field between the different energy sources and subsidies must be limited in time. Consumers should not be penalised through undue taxation of hydrocarbon use—particularly gas, which is itself a low carbon source.

23. Another way to reduce carbon dioxide emissions is through capture and geological storage. The potential for this currently uneconomic solution is considerable. In Europe, there is ample storage capacity beneath the North Sea. As an additional benefit, the storage process itself can help improve the recovery of oil and gas from mature fields.

24. The Green Paper rightly refers to the legal complexities of geological carbon dioxide storage. When existing international, regional and national laws were adopted, the option for such storage did not exist. Legal certainty is essential to enable the private sector to make a full commercial assessment. New rules are also needed to give carbon dioxide storage the same emissions trading credit as other emission reductions.

V. **Encouraging Innovation**

25. OGP supports a strategic European technology plan. However, the plan as described in the Green Paper does not adequately reflect the importance of oil and gas for EU competitiveness, nor does it recognise that world energy supply will continue to be dominated by oil and gas for the foreseeable future.

26. A key challenge will be to develop improved technologies to find, produce and use fossil fuels in ways that minimise negative impact on the environment. Business opportunities will come about for companies that can enhance recovery rates in mature oil and gas fields, develop ultra-deep water resources, produce from unconventional reservoirs and exploit the economic potential of hydrogen as an energy carrier. All this will fuel economic and social development in Europe on the one hand and enhance security of supply on the other. But it will require significant investment in hydrocarbon research and development. The EU can help ensure an enabling environment.

VI. **Towards a Coherent External Energy Policy**

27. OGP agrees with the Commission's prediction that hydrocarbons will continue to play a major role within the European energy mix and that Europe will continue to be dependent on imports. A coherent external energy policy can improve Europe's access to resources and assist in ascertaining that the necessary transport capacity is built and available. To that end, OGP advocates continuation and expansion of the EU's dialogue with producers and other consuming regions.

28. Both internally and externally the EU, as well as individual Member States, can help ensure the political and regulatory framework that businesses need to undertake hydrocarbon projects and to maintain Europe's attractiveness as an importing destination in the light of other competing importers. This could require the removal of regulatory barriers and constraints.

29. Should supply emergencies occur, OGP suggests that the Gas Coordination Group (as established by Council Directive 2004/67/EC) deal with coordination tasks. The monitoring obligations of Article 6, in conjunction with information from Member States and market participants, should give sufficient information to enable effective crisis management.

30. Finally, OGP members support the intention of the EU to raise the profile of energy efficiency in development programmes. Such programmes should enable developing countries with limited financial capability to obtain access to modern energy services in an intelligent, non-wasteful way.

2 May 2006

Letter from the International Energy Agency

Thank you very much for the invitation to provide evidence to the inquiry of the House of Lords Select Committee on the European Union into the European Commission's Green paper, "A European Strategy for Sustainable, Competitive and Secure Energy".

May I first say that the IEA works closely with the Commission and that I met with President Barroso and his staff in February to discuss the then draft Green Paper. In general I am supportive of the final product and believe it appropriately addresses the various energy challenges confronting Europe.

On energy efficiency, whilst I commend the emphasis this is given in the Green Paper I am convinced the European Commission could play an even stronger role in terms of norms and standards. Norms and standards are crucial to obtaining energy efficiency improvements in end use consumption when market signals are not strong enough to be fully taken into account. This is often the case in households, buildings and transportation. Contrary to what is sometimes argued norms and standards do not hamper competition. I believe the Commission should take the opportunity to boldly press ahead in this area.

On renewable energy, this is essential in any sustainable energy mix. Nevertheless I caution against setting ambitious targets without outlining the potential costs involved and without placing sufficient emphasis on the need to improve the competitiveness of renewables through additional research and development.

I welcome and support the objective of improving energy sector data quality and transparency through a European energy supply observatory. However as much has already been accomplished with Eurostat I suggest any new initiative be closely coordinated with what has been achieved or endeavoured so far.

On energy security of supply, I really agree with the Green Paper that investment in capacity and transmission facilities is crucial in gas and electricity markets. Within Europe a clear signal must be given to industry that the internal market will be fully implemented and that the regulatory framework will be streamlined and harmonized. I therefore do not disagree with giving consideration to establishing a European regulator with responsibility for cross-border investment and trade issues.

Let me reiterate my thanks for involving the IEA in your inquiry and stress our preparedness to assist further if need be.

14 April 2006

Memorandum by Sir Donald Miller F Eng. FRSE

My evidence is directed primarily towards questions of electricity supply although many of the same considerations will apply where they involve the supply of fuels.

1. Competitiveness and the Internal Market

Clearly there are different considerations in regard to the market in energy companies and the market in the supply of energy to the consumer. As the EU recognises, the present constraints on the sale and purchase of energy companies cannot be justified but I would argue that it has not yet been established that competitive markets in energy supply on the lines of the UK system are necessarily in the interests of the consumer.

As I understand it the EU does not envisage that electricity will be traded under common rules throughout the EU. There are good reasons why this should not be so. An electricity system, unlike other energy supplies, is in a state of dynamic stability, the maintenance of which requires constant monitoring and adjustment on a minute to minute basis. Electricity grids are therefore designed and controlled on a national basis (except in very large countries such as USA and Russia where there are many grids with or without interlinking) and given the importance of electricity in a modern society no Government is likely to hand this responsibility to any other power or agency. In deed the EU recognises the sovreignty of National Governments as regards decisions on their own energy supplies.

It is generally more economic and enhances security if electricity is generated close to the demand so that power exchanges between neighbouring grids are justified only when there are circumstances that make this economic or, within limits, to increase security of supply. Examples of these are:—

- A site specific power source, such as water, so that the power must be generated where it occurs.
- Remote location of power plant to take advantage of siting or cooling water availability.
- Profitable sales from low cost power sources not presently available in neighbouring countries; exports from French nuclear plant are a case in point.

— Power exchanges to take advantage of differing times of peak demand.

— Energy exchange in time of a system emergency. Here it should be recognised that; should the exchange reach excessive levels liable to hazard the security of the supplying system, the link will be disconnected.

It is doubtful that any revised market framework offering greater competition between suppliers will by itself have a significant impact on the security of our electricity supplies. In the UK, virtually the only country which has introduced an electricity market, prices are now higher and rising faster than on the continent. The numerous diverse companies (increasingly owned by large integrated overseas utilities) operate independently in difference areas of the supply system. None of these companies has responsibility for the longer term security of supplies and investment by each company in new generating plant takes little or no account of the overall requirements of the system. Especially serious is the fact that we now have a historically low standard of security of supplies, training is minimal and there is virtually no expenditure on R and D for major technologies, such as next generation nuclear plant.

In terms of security there can be no substitute for a statutory obligation to maintain supply both short term and longer term, with any failure subject to heavy penalties. Until this is recognised we shall continue to be at risk of supply failure, as in recent concerns over gas supplies, by comparison with the Continent where suppliers are subject to such disciplines in one form or other.

2. Diversification of the Energy Mix

This is of crucial importance not only for the security of our electricity supply but also to achieve minimum generation costs. This is because fuels have different costs (which vary over time) and operational characteristics so that particular types of generation and fuels are thus better suited to supply base or peak loads.

The form of electricity market in the UK in which generators have no guarantee of sales for their output (even when it is competitively priced) inevitably skews investment decisions away from high capital, low operating cost, generation such as nuclear in favour of low capital generation such as gas, even when this is not overall the most economic choice.

I would argue that the proper role for the EU and Government is legislation and regulation, not determining exactly what the energy mix should be. Government needs to ensure that the legislative framework under which the Industry operates is such that it is in the Industry's interest to make investment decisions which do not conflict with the long term requirements of a secure and economic electricity supply. While the EU can provide encouragement along this path, there is little doubt, as they recognise, that the crucial decisions will continue to be made by National Governments.

3. Solidarity

While the EU seem to have been active in developing a large number of protocols with energy supplying states, they give little information about these in their Paper. It seems doubtful whether any such protocols could be relied to prevent a serious energy supply situation developing although they could no doubt provide a useful framework for discussions with supplier states in an effort to mitigate their effects.

In this connection, the EU might usefully set guidelines for security of supplies (spare capacity, fuel storage etc) to which National Governments would be required to adhere as a conditional of receiving EU assistance in an emergency.

4. Sustainable Development

Government needs to adopt a more disciplined and professionally informed approach in dealing with "solutions" advanced by the environmental lobbies. These are seldom, if ever, adequately quantified or properly costed and so far from meeting our energy needs, the effect of the majority of such proposals would be to greatly increase energy costs and the difficulties of those who already struggle to meet their energy bills. Indeed the more extreme of such proposals could only be realised by reducing our standard of living to that of the 1930's.

The EU Paper, while frequently mentioning costs, is silent about the costs of renewables or their limitations in an electricity supply system. The cost of wind power in the UK, (taking into account the energy sale price, subsidies, stand-by power and heavy transmission costs), is typically four times that of bulk power on the market or new nuclear build. These costs are not well known and although the 2003 UK Energy Paper carries the important qualification "subject to these costs being acceptable to the consumer" no measures have been put in place by Government or their agent Ofgem to disclose exactly what these costs are.

5. Innovation and Technology

The trusting belief in the development potential of renewable energy sources has meant the neglect of the massively greater potential of established technologies such as nuclear and coal generation to benefit from new developments in their respective fields. Statements about the development potential of small scale and renewable energy display little appreciation of the inherent cost penalties of low density energy sources, characteristic of renewable energy, nor of the economics of scale in engineering structures. The laws of physics, being unalterable, will determine that development can make no more than marginal improvements in the inherent cost disadvantages of diffuse energy sources. With a more balanced approach, we would be making the point that large scale, high intensity power sources, such as coal or nuclear, have much to offer from technological improvements, already well defined, and which guarantee improved performance and cost reductions, as well as reduced CO_2 emissions, greater can be achieved with small scale distributed and low intensity energy sources.

On the supply side there is much that can be done. The main gains will be from the continued application of technology in such areas as new nuclear build, carbon capture and biofuels for transport. With nuclear, third generation designs such as the PR1000, are simpler to build and operate, make better use of the uranium fuel, produce less waste and offer low energy costs. Fourth generation helium cooled reactors, such as recently announced are to be developed in France offer still further improvements in safety, higher efficiencies, use spent fuel from earlier reactors and, depending on the design burn-up, can consume their nuclear waste. Until the recent sale of BNFL's Westinghouse subsidiary to Toshiba, the UK had a lead position in these technologies. The technology and trials of carbon capture and disposal has received strong support from the Department of Energy in the United States with a British company, BP Oil, appointed as the lead operator of a consortium of oil Companies. The technology for biofuels is well established in S Africa and Brazil and with the high oil fuel taxes in the UK, could be introduced here without massive cost penalties for the consumer. It is to be hoped that the EU will come forward with proposals for joint projects to gain, or regain, the initiative in these areas.

With distributed energy systems, those with the best chance of achieving acceptable costs are those that utilise high intensive energy sources (and are therefore of reasonable size) and yet have something to offer which centralised technology finds it difficult or expensive to provide at the point of use. Small scale gas fed Sterling engines and solid oxide fuel cells deployed on a domestic scale and giving both heat and electricity outputs come into this category.

The proper place for EU and Government development expenditure on energy systems is in R and D programmes until such time as they can demonstrate, if they can, that they have something significant to offer in terms of effectiveness and cost. It is unproductive to channel huge continuing subsidies, now exceeding £30 billion for wind power alone, into the production of power by means which by their nature are inherently costly whilst ignoring those areas where professional knowledge and experience has demonstrated there are large gains to be made.

6. External Policy

In so far as a common external policy on energy tends towards centralised or coordinated purchasing of imported fuels I see a risk of creating even more powerful cartels by fuel supplying nations. Any measures which could be so construed by the suppliers therefore need to be approached with caution. Nevertheless, having regard to the vulnerability of the European nations in the energy field there are no doubt good arguements for some understandings that individual EU nations would do what they can to ease supply difficulties in the event of any one country being exposed to severe shortages as a result of market forces or supplier actions.

7 April 2006

Memorandum by National Grid

Introduction

1. National Grid is pleased to have this opportunity to contribute to the House of Lords' Inquiry. Through regulated subsidiary companies, National Grid plc (National Grid) owns the electricity transmission network in England and Wales, operates the electricity transmission system throughout Great Britain, owns and operates the gas transmission network throughout Great Britain and four of the eight gas distribution networks. Our primary duties are to operate, maintain and develop our networks in an economic, efficient and co-ordinated way and to facilitate competition in the supply and generation of electricity and in the supply of gas respectively. We are also responsible for the residual balancing of the national electricity and gas markets.

2. Through our regulated and non-regulated subsidiaries, National Grid also owns and maintains around 20 million domestic and commercial meters, the electricity interconnector between Britain and France (in co-operation with RTE), a Liquefied Natural Gas (LNG) importation terminal at the Isle of Grain and the short range LNG gas storage facilities in Great Britain.

3. National Grid is very active in European energy policy development, principally through its membership of the Transmission System Operators (TSO) Groups ie the European Transmission System Operators (ETSO) and Gas Infrastructure Europe (GIE) for electricity and gas respectively. National Grid chairs the Security of Supply working groups in each of these associations.

4. In responding to this call for evidence, we have focussed on the specific issues raised within the European Commission's Green paper, that are relevant to National Grid. Where applicable, we have sought to identify for the various issues whether the Commission or Member States should take the lead. However, in many cases, such as for the development of regional initiatives, this distinction is not always helpful.

Implementation of the current gas and electricity Internal Market Directives

5. National Grid supports the development of liberalised, competitive markets and supports the action that DG TREN has recently taken to bring infraction proceedings against Member States who have not implemented the existing gas and electricity liberalisation Directives. Although the Green Paper does not explicitly propose any new legislation at this stage it does state a need to evaluate the current regimes and assess if any additional legislative measures are needed, which it would intend to bring forward by December 2006. Full implementation of existing measures should be the priority of DG TREN, with the need for any additional legislative measures evaluated at a later stage. We otherwise run the risk of very prescriptive and detailed legislation being developed to address perceived problems that full implementation of the letter and spirit of the existing legislation would resolve.

Unbundling of infrastructure companies

6. Of particular concern with the implementation of the Internal Market Directives is the inconsistency of the unbundling of infrastructure companies. National Grid believes that many of the current problems with the European energy markets would be solved if network activities were properly unbundled, in accordance with the Directives, from competitive elements of the gas and electricity markets. This would ensure that all market players could obtain non-discriminatory and transparent access to infrastructure and of equal importance it would provide the necessary confidence that the market needs. This is an area that the EC, individual Member States and relevant National Regulatory Authorities need to focus their efforts on in order to ensure the existing gas and electricity Directives are effectively implemented.

Information provision/Proposed European Energy Supply Observatory

7. To operate effectively in the future, the British energy markets will require accurate and timely information regarding the European markets. There are a number of suggestions in the Green Paper, such as the initiatives to monitor and report on the outlook for gas supplies and generation adequacy, as well as developing other information provision through greater transparency. These proposals could provide a vital piece in the jigsaw, enabling all market players to better plan their investment and commercial strategies. In principle these EU initiatives to improve information provision should be fully supported.

8. However, we need to carefully consider what information the market and policy makers need and over what timeframe. We also need to ensure that commercially confidential data is protected. Before developing new institutions we should consider the information currently available, for example Generation Adequacy Reports are being taken forward by ETSO and information obligations on gas transmission operators are part of the Gas Regulation 1775/2004, and then identify the gaps. Based on this review, a framework should be developed which builds on the existing information sources and avoids duplication of effort. Part of this framework could include the establishment of a European Energy Supply Observatory, however until it is clear what the precise role of the Observatory should be, it is difficult to determine whether it would be beneficial. It would perhaps be better to ask the existing TSO groups, ETSO and GIE, what information could be provided under today's climate, before creating new structures which may not be necessary.

Investment

9. National Grid is encouraged by the Green Paper's recognition of the need for significant investment and ensuring that there is an appropriate regulatory framework. There will be significant change in the UK gas market going forwards with the decline of the UK Continental Shelf (UKCS) and the development of significant new gas importation facilities. It is widely acknowledged that substantial investment is needed in the UK's gas network to accommodate this and to maintain the levels of safety and reliability to which everyone has become accustomed, through the replacement of ageing assets. Appropriate investment should be made in infrastructure to ensure sufficient network capacity and diversity of supply underpinning effective market operation and meeting security of supply objectives.

10. The investment needs of individual Member States are determined by issues such as its individual generation mix, its current levels of interconnectivity with other Member States, security standards etc. It is inappropriate to impose EU-wide mandatory targets for interconnection (such as the 10 per cent interconnection level) which could well result in nugatory investment being made, which is not in the interests of UK or other EU consumers.

11. It is of the utmost importance that a conducive investment climate is created which fits into the liberalised environment. We believe that there needs to be flexibility in how investments are funded and that forms of remuneration should remain open. As the investments to be made are long-term assets this factor in particular must be recognised within the overall framework. New infrastructure should be largely determined by market signals, underpinned by binding financial commitments. We see that use of long term contracts/Article 22 Exemptions are vital for the viability of many projects. We believe that these contracts are compatible with market liberalisation, it is just a case of putting into place the appropriate checks and balances. In general, a non-discriminatory and transparent open season/capacity auction should be employed to allocate the initial capacity, coupled with the use of appropriate anti-hoarding measures during operation.

European Energy Regulator

12. There are significant differences between the powers and remit of energy regulators within the Member States across Europe. Achieving consistency in this area will go some way to achieve a level playing field in EU energy markets. In addition, greater co-operation amongst regulators on cross-border investment will better encourage the development of any necessary interconnection. However, we see that these improvements can be delivered through the existing structures and under the prevailing European legislation. The benefits of a European Regulator are currently unclear and there is a risk that it could well add another layer of bureaucracy, which would slow down any necessary action at an EU level.

European Centre for Energy Networks/European Grids/Regional Initiatives

13. As per our comments above on the European Energy Supply Observatory, until the precise role for the European Centre for Energy Networks is known, it is difficult to judge whether it would be beneficial. Again we would suggest considering the roles undertaken by the existing TSO associations to see if they could satisfy the intended objective.

14. The Green Paper includes proposals to create "European Grids" in gas and electricity. The paper envisages the main mechanism for this would be a common European Grid Code. However, it is very unclear what the EC mean by a Grid Code, in Britain our "Grid Codes" are highly detailed technical contracts. Due to the different operation and regulatory frameworks in the 25 Member States it seems unlikely that it would be practicable or cost effective to harmonise such conditions. The focus should be on arrangements at cross border points.

15. The ambition to create seamless European electricity and gas grids should be supported. However this does not necessarily mean harmonisation. It is compatibility between grids that is required to deliver effective, functioning and interconnected European energy markets. To this end, National Grid supports the proposal for developing regional initiatives in electricity and gas. These European Regulators Group for Electricity and Gas (ERGEG) led initiatives provide the opportunity to quickly and pragmatically evaluate and address barriers to cross border trade, ensuring that we identify and address only areas where harmonisation is strictly necessary to facilitate the interaction of near markets. It will be important for Member States to support these initiatives.

Solidarity

16. The Green paper discusses the potential need for a mechanism to prepare for and ensure solidarity between Member States. The Gas Security of Supply Directive 2004/67 provides for the formation of a gas co-ordination group. This group should be formally established once the Directive comes into full force on the 19 May 2006. This mechanism provides an opportunity to seek solutions to manage a crisis at a Member State or EU level. We therefore consider that we should wait and review how effective this group is and then determine whether further measures are needed.

Concluding Remarks

17. National Grid welcomes the publication of the Commission's Green Paper and is pleased to have this opportunity to contribute to the House of Lords' Inquiry. Many of the initiatives proposed in the Green Paper should be beneficial in establishing the right balance between sustainability, competitiveness and secure energy. However we need to be sure, and clear, who is responsible for what and how a co-ordinated approach can be ensured. At present we see a range of initiatives, such as the ERGEG regional markets, DG Energy and Transport's benchmarking study and DG Competition's Energy Sector Inquiry, along with various Member State initiatives in the Iberian Peninsula, North West Continental Europe and Ireland. Many of these potentially overlap and therefore there is a risk of significant duplication and confusion. We would urge the Commission and Member States to rationalise these initiatives to avoid overlaps and distractions, which in our view will otherwise inhibit progress being made.

April 2006

Memorandum by the Nuclear Industry Association

The Nuclear Industry Association (NIA) is the trade association and representative voice of Britain's civil nuclear industry. It represents over 120 companies including the operators of the nuclear power stations, those engaged in decommissioning, waste management, nuclear liabilities management and all aspects of the nuclear fuel cycle, nuclear equipment suppliers, engineering and construction firms, nuclear research organisations, and legal, financial and consultancy companies. Among NIA's members are the principal nuclear power station operators—as well as companies engaged as contractors and manufacturers in the forefront of nuclear technology.

We welcome the EU's decision to focus on this important topic and to seek to address it in an open and "non-ideological" way and in particular its acknowledgement that all sources of generation have a part to play in the EU's energy mix. However despite this stated approach it then seems very curious that nuclear should be featured so little in the document. Given that it states an objective of setting a minimum level of the EU's energy production from secure, low-carbon energy sources within 20 years it is bizarre that nuclear is not even discussed in this context given that it is as secure, low-carbon form of generation. As we will set out in our answers to the specific questions that the Green Paper poses below, nuclear closely meets the criteria that the Commission states it is looking for in energy sources and increases our energy diversity (which directly increases energy security). It also currently provides a third of the EU's electricity. In this context it is bizarre in the extreme that the paper makes almost no mention of the contribution of nuclear to the EU's energy mix.

The Green Paper also poses six questions as being in need of addressing in order to deal with the energy challenges facing the EU. In this submissions we have included our answers to these points, although we have of course focussed on the electricity sector.

1. **Competitiveness and the Internal Energy Market**

A genuine single market will of course be of great importance in supporting a Common European strategy for energy, especially in ensuring that bottlenecks in the gas supply network do not occur. However in the case of the electricity sector in the UK there are infrastructure barriers that occur primarily for geographical reasons. The UK's grid is not synchronous with the rest of Europe and has only one interconnection with the European synchronous area and it is unlikely that other interconnectors will be constructed due to the cost. In this respect the UK is in perhaps a different situation to the other Members States (except Ireland, Cyprus and Malta) in that extensive interconnections to other countries at varying locations is not possible. The key to ensuring that European citizens have access to electricity at reasonable prices is to ensure that the EU continues to enjoy a diverse range of generation types producing its electricity. This will help counteract the intermittency of renewables and the price volatility of fossil fuel prices. In this regard nuclear provides a stabilising role in the market at a highly competitive price.

2. **Diversification of the Energy Mix**

The EU should extend the emissions trading scheme and ensure that the emission caps are set for the medium to long term unlike the current short term phases which are set at intervals far shorter than that any energy infrastructure is planned or constructed over. If this was done then it would create a stable market framework in which investment can take place in a range of low carbon electricity generation. This should also be implemented without any ideological bar on any technology so that a diverse range of low-carbon technologies are deployed not just one, which would damage security of supply.

3. **Solidarity**

As well as having a fully functioning energy market across the EU which works well under normal circumstances, Member States should not be able to intervene in times of crisis. In particular gas supply pipelines which for the most part supply gas from East to West across the EU could be vulnerable to Member States in the East diverting gas supplies purchased by countries further West in times of shortage. At present they could do this in order not to start using their reserves with the effect that the Westernmost states run short of gas long before the Eastern ones (which could still have substantial reserves).

4. **Sustainable Development**

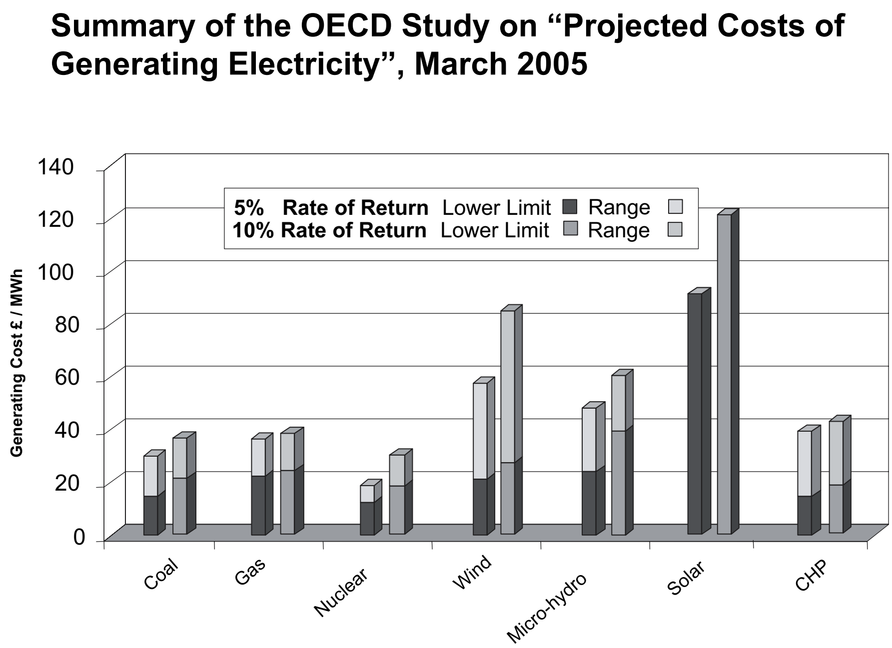
The best way to achieve an energy policy that addresses climate change, environmental protection, competitiveness and security of supply is to have a balanced mix of energy sources. However if looking at these objectives it should be noted that nuclear has extremely low CO_2 emmisions. The study conducted by ETSU for the DTI in 1999 concluded that the whole lifecycle emissions for various types of generation as:

1 kWh of electricity generation produces:	
Nuclear	4g CO_2
Wind	8g CO_2
Large-scale hydro	8g CO_2
Small-scale hydro	9g CO_2
Energy crops	17g CO_2
Geothermal	79g CO_2
Solar	133g CO_2
Gas	430g CO_2
Diesel	772g CO_2
Oil	818g CO_2
Coal	955g CO_2

Source: ETSU, 1999

It is also a large scale secure form of generation. Uranium is abundant and available from a wide range of sources including from reprocessing if required. Also if required it would be possible to purchase the entire lifetime fuel supply for a reactor and stock pile it next to the reactor if it was considered there was any danger to supplies. Nuclear is also competitive with alternative forms of generation as has been demonstrated by a range of academic and industry studies.

OECD analysis of power generating costs for different technologies (2005)[8]



5. **Innovation and Technology**

Both the Commission and Member State governments should be involved both in order to maintain technology levels in the EU but also to ensure that the skills base in the workforce does not deteriorate. The sort of projects that should attract support would include technology development programmes such as the Generation IV research programme and the National Nuclear Academy here in the UK. The logical route for funding such projects at an EU level is through the research and development framework programme.

6. **External Policy**

The energy needs and policies in the Members States vary markedly and therefore a single energy policy is unlikely to be fit for purpose. Some element of coordination would however be beneficial for security of supply and mitigating against climate change. Some coordination on the climate change issue already exists through the emissions trading scheme (although this needs to set its caps over a longer time frame as at present the short time frames hamper investment decisions and therefore damage our security of supply objectives). However the area where increased cooperation could be of benefit is by trying to ensure better security of supply by speaking with one voice when dealing with supply sources on which the majority of Member States are dependent upon for a large party of their supply. This will prevent large energy suppliers playing one Member State off against another and allow companies in the EU to have access to supplies on a more level playing field.

April 2006

Letter from RWE npower

RWE npower welcomes the European Commission's aim to develop a strategy to balance the energy sector's needs for competitiveness, security of supply and sustainability. We support a high level initiative aimed at co-ordination of Member States' approaches to energy issues where it is possible, adds value and complements their policies.

We address the three questions you have raised:

[8] "*Projected Costs of Generating Electricity*"; OECD/NEA/IEA; 2005.

(a) **Does the Green Paper correctly identify the key issues for future energy policy in the European Union?**

We consider that the Green Paper does cover the challenges facing the sector, and comment briefly as they are described:

- *Competitiveness and the internal energy market*—we support the development of the internal energy market as a means to promote EU competitiveness and to provide security of supply through the market with increased competitiveness encouraging market-based approaches to sustainability.
- *Diversification of the energy mix*—promotion of diversity will enhance security of supply but any process must leave the energy source and fuel mix choice to Member States and companies.
- *Solidarity*—solidarity between Member States is desirable as long as it does not lead to intervention in the market.
- *Sustainable development*—environmental protection is generally best enhanced through high-level targets achieved through market-based mechanisms that allow for national flexibility.
- *Innovation and technology*—measures that facilitate research, development and deployment of new energy technologies, such as clean coal, will benefit energy policy.
- *External policy*—establishing a common policy to enable the EU to speak with one voice will benefit external relations in particular with Russia.

(b) **Does the Green Paper appropriately identify those issues where, in future, the EU acting as a whole should be responsible for policy development and action?**

As the Green Paper makes clear and was reiterated by the Energy Council in March, the choice of fuel mix and energy sources is for Member States and companies. In this context, we support a Strategic EU Energy Review, to be presented to the Council and Parliament on a regular basis, where this offers a framework for national decisions by analysing the advantages and disadvantages of different energy sources and offers the possibility of opening up debate on sources such as nuclear. As an overall EU strategic objective all options to meet energy demand should be kept open for individual countries' as well as companies' choice. Therefore no specific targets should be set since they would constrain the energy decisions of Member States and companies.

An EU External Energy Policy, drawing on the common vision of the Strategic Energy Review, would also be beneficial to co-ordinate the approach of Member States with regard to relations with external producers, suppliers and competitors, and particularly with Russia in terms of security of supply.

As noted above, we support the completion of the internal market of electricity and gas. However, we consider the existing frameworks are in place to take this forward. DG Competition and DG Energy and Transport are working hard to ensure the implementation of the current legislation. Additionally, the European Regulators' Group for Electricity and Gas, including Ofgem, as well the Florence and Madrid processes are developing the framework for cross border energy trade. We see no need for further EU institutions such as a single energy regulator or a European Centre for Energy Networks or in relation to other areas, the proposed European Energy Supply Observatory and the European Technology Institute.

On measures that guarantee security of supply, we support measures that will facilitate co-operation and exchange of information between Transmission System Operators (TSOs). In principle we are supportive of the proposal that "a mechanism could be developed to prepare for and ensure rapid solidarity and possible assistance to a country facing damage to its essential infrastructure" provided this did not impact on the market. However, solidarity could be taken to mean that a country does not take care of its own future energy requirements and relies on the support of other Member States. We are thus firmly opposed to the review of the existing EU legislation on security of supply that sets out a framework compatible with a competitive internal market. In particular, any new legislation that imposes levels of gas storage on Member States will prevent the market from operating to provide security of supply.

We would argue that standards of infrastructure protection are an issue for Member States. In contrast, there may be a role for EU measures that would facilitate cross-border planning of interconnection infrastructure which at least is an issue to be tackled by the TSOs.

On tackling climate change, we are in favour of high-level market based mechanisms for CO_2 reduction and so look forward to the review of the EU Emissions Trading Scheme and proposals for a long-term mechanism beyond 2012. On energy efficiency, we are supportive of the approach that provides flexibility at national level as well as proposing EU-wide market based measures. We also support long-term campaigns to educate all consumers and to improve efficiency in other sectors such as transport. We would prefer the current approach on renewables as relates to support schemes of sharing best practice rather than harmonisation. We would be concerned about the development of the Renewables Roadmap that seeks to extend overall targets for renewables beyond 2010 if these were to constrain Member States' and companies' choices where certain renewable sources and technologies were set even indicative targets, which would seem to conflict with the principle that the energy mix is a matter for individual Member States.

On innovation and technology, we are in favour of support for R,D & D in such areas as clean coal technology. In principle we support of the aims of accelerating the development of promising technologies and avoiding overlaps in Member States' research, provided these do not require substantial funding and the effect is not to remove control of national projects from Member States.

(c) **Does the Green Paper appropriately identify those issues where, in future, Member States should be responsible for policy development and action?**

Our view is that the main benefits of an energy strategy will derive from improved co-ordination of Member States' approaches to their energy policies given that the objectives of competitiveness, security of supply and sustainability will generally best be achieved through market-based arrangements. This means that each Member State and energy company must be able to choose its own energy mix which the Green Paper supports. Furthermore, it supports national choice in areas such as energy efficiency.

However, we are concerned that the Green Paper still contains aspects which are not compatible with competitive market principles. The interconnection target of 10 per cent established at the Barcelona Energy Council in 2002 has been repeated and was accepted by the Energy Council in March. We would reject a set target but support the approach of improved interconnection. Additionally, on interconnection, the Green Paper also states that the European Commission intends to "look at individual measures that it considers important at the level of Member States". In general, we believe that level of security of supply should be determined by Member States and achieved by market forces which will determine whether generation, interconnection, LNG terminals or other arrangements are the most appropriate means.

Lastly, we agree with the Green Paper that Member States need to fully implement the existing EU energy legislation to create a competitive internal energy market and to additionally deliver security of supply and encourage market-based means of promoting sustainability.

18 April 2006

Memorandum by Shell U.K. Limited

Shell is pleased to respond to the House of Lords' inquiry into the European Commission's Energy Green Paper.

Shell welcomes the publication of the European Commission's Energy Green Paper. The EU has an important role to play in securing sustainable energy supplies and the efficiency of European markets, by supporting enterprise initiatives and ensuring coordination across national governments. EU energy policy can also contribute to both national and global efforts on; energy efficiency, energy diversification, making the best use of indigenous resources and reducing carbon emissions.

Q.1 **Does the Green Paper correctly identify the key issues for future energy policy in the European Union?**

The Commission's Green Paper summarises the challenges in achieving a genuinely secure, sustainable and competitive energy policy for the members of the EU. Shell believes that more focus is needed on how the EU will meet the challenges of medium-term energy supply, the need to reduce carbon and how the energy efficiency goals might be achieved.

Energy efficiency

1.1 Energy efficiency will mitigate carbon and is required across all sectors, whether power generation, the built environment or transport. Measures should be based on market incentives but would also include encouragement of more energy-efficient behaviours and regulation, where appropriate. The proposed "white certificates" system bears significant resemblance to an Emissions Trading Scheme (ETS) for energy efficiency. It is unclear what the impact of this would be on the competitiveness of European industry.

Energy diversification

1.2 Diversification of energy supply is the proper response to risk and uncertainty. Diversification provides resilience. The available mix of primary energy sources comprises oil and gas, coal, nuclear and a range of renewables including bio fuels, wind, hydro and marine. A policy of diversification can enable all of these sources to play a part. In the process, best use should be made of indigenous resources both of oil and gas and renewables, particularly offshore wind.

Maximising indigenous oil and gas production

1.3 The North Sea is a vital asset and a significant contributor to security of supply. It is important that the EU's regulatory regime enables this contribution to be maximised into the future.

Gas as a key component of the energy mix

1.4 It is clear that gas is going to continue to be a crucial provider of primary energy both for electricity generation and domestically. A diversified set of gas supply sources coupled with gas storage, based on market mechanisms, is available. Well maintained international partnerships at multiple levels, provide a foundation for gas security of supply.

1.5 It should be noted that energy projects are long-term in nature with significant front-end capital expenditures that will need to earn their economic returns over 20 years or so. Therefore, the notion of long-term contracts can well be appropriate in such circumstances. It should be recognised that there can be appropriate commercial arrangements between willing buyers and sellers. Long-term contracts may well contribute to ensuring full use is made of infrastructure once constructed. The role of long-term contracts is also reflected in the Gas Directive and the Security of Gas Supply Directive.

1.6 Market mechanisms can ensure that there is sufficient investment in gas storage. Regulatory certainty is required for the development of storage projects and the planning regime needs to support such developments to ensure timely delivery of any new storage projects.

Greener fossil fuels

1.7 Fossil fuels are likely to be a substantial part of the energy mix at least into the middle of the century. Measures are therefore required for "greener fossil fuels" and in particular for carbon capture and storage.

1.8 Gas is the least carbon intensive of the fossil fuels. It has other environmental advantages including low nitrogen and sulphur components. It also has relatively high energy conversion efficiency. Gas can be obtained from a range of sources within the EU and internationally.

1.9 Clean coal technology is going to be vital as coal is also likely to figure in the energy mix. Technologies such as IGCC need to be deployed in order to improve the conversion efficiency of coal and also to minimise other environmental impacts. However, clean coal technologies can be more capital intensive. Market-based incentives are needed to ensure that clean coal will be commercially deployed.

1.10 Globally, carbon capture and storage is going to have to be associated with the use of coal, and possibly also gas, in power generation if climate change is going to be effectively tackled. This is also likely to be true if the EU is to meet its carbon reduction targets. Investment levels would be significant and it needs acknowledged that CCS would add to costs of energy production.

1.11 Carbon capture and storage comprises a wide range of technologies. These technologies need to be developed and applied quite rapidly. Focused support should be provided for doing so.

1.12 In addition, proper credit needs to be given for the carbon captured in this way. This means inclusion of carbon capture and storage in the ETS and in the clean development mechanism. However it should be noted that, with CCS as an emergent technology, the present value of carbon credits may not be sufficient to stimulate investment and additional support will be needed.

Renewable energy

1.13 Wind, particularly offshore, offers the opportunity to deliver a substantial portion of renewable energy targets and so make a substantial contribution to carbon mitigation. Wind also makes use of a valuable indigenous resource and contributes to security of supply. Offshore wind will require initial support to bring it to the market.

1.14 Bio fuels offer the opportunity of reducing carbon emissions associated with road transport. In the introduction of bio fuels, focus should be given to the best means by which the maximum amount of carbon can be mitigated. In particular this means providing recognition of the benefits of so-called "second generation" bio fuels. Second-generation bio fuels are based on crop waste and biomass and so provide much larger net carbon mitigation benefits than the first generation bio fuels that are made directly from crops.

1.15 Technologies such as hydrogen and solar are unlikely to play a significant role in energy supply in the next two decades. But they may well be important for the long term. Given the length of their development periods and the lead times for technology innovation and turnover, it is important that work progresses in the short term.

EU Emissions Trading Scheme

1.16 A well functioning, long-term market in carbon is needed. EU Green Paper proposal for increased certainty in this scheme is welcome. The EU ETS programme should be developed to provide the necessary long-term assurance needed by investors. It should also include carbon capture and storage (CCS).

1.17 The long-term aim should be to have international agreements for market based emissions trading schemes, developed on the EU ETS model. Current uncertainty regarding the EU ETS is heightened by the lack of targets post 2012. CCS should be included within the Clean Development Mechanism (CDM).

Using both market mechanisms and more direct support mechanisms

1.18 Market mechanisms, based on level playing fields and with externalities priced in are the best means of finding the right technology solutions and having them deployed as efficiently as possible. Strong preference should be given to deploying market-based mechanisms wherever possible. This should be the case throughout the value chain from the production of primary energy, to energy conversion, to carbon mitigation, to storage and resilience and to energy efficiency.

1.19 However there is also a case for direct support for new and emerging technologies needing to be developed and deployed against relatively tight timeframes. This is a feature of meeting the challenge of climate change. Examples are in offshore wind, solar, hydrogen and CCS. This should enable them to be available to join the market within required timescales.

Technology and skills

1.20 Creating international connections on science and technology is going to be crucially important. Preferentially forming partnerships internationally could be of benefit to EU and industry alike.

Q.2 **Does it appropriately identify those issues where, in future, the EU acting as a whole should be responsible for policy development and action?**

2.1 The Green Paper identifies a number of issues in both the internal working of the EU and the way the EU, as a whole, relates with non-member states.

2.2 Shell recognises that there is a growing need for governmental co-operation at the EU level as markets become more integrated and thus welcomes proposals to improve external relations with major energy producing and consuming countries. Any dialogue with producer countries should be based on reciprocity, giving EU energy companies fair access to upstream resources as much as non-EU companies to the EU downstream.

2.3 Shell believes the EU should exert effort on fully implementing the existing Gas Directive, which should be enforced and allowed to achieve its intended results. The Green Paper acknowledges that "a truly competitive single European electricity and gas market would bring down prices, improve security of supply and boost competitiveness", we support the focus on this issue.

2.4 Moreover, the regulatory framework must be well-designed, stable and predictable, allowing for both short and long term arrangements in which parties are free to negotiate the terms that best suit their economic needs. Any specific policy proposals for energy must, for example, take full account of the importance of appropriate long-term contract arrangements. Regulatory clarity and stability is vital.

2.5 Shell supports the proposed increased stability in the European Emissions Trading Scheme (ETS) post the end of Kyoto in 2012 and the development of a Renewable Energy Roadmap. This enables the prediction of the regime, price of carbon and thus the value of low carbon/efficiency investments. In addition to this the paper is supportive of Carbon Capture and Storage (CCS), which Shell views as a business opportunity and has developed technological solutions. Shell is disappointed that support for the expansion of the ETS to other nations is not expressed.

2.6 Shell remains concerned that there is currently no action plan covering how the EU intends to make domestic energy production more competitive or how diversity of energy mix will be assured.

Q.3 **Does it appropriately identify those issues where, in future, Member States should be responsible for policy development and action?**

3.1 The Energy Green Paper represents the need for policy development and action at three levels. Internal to the member state, such as a nations' resource holding responsibilities. At a bilateral level, such as the coordination of infrastructure linkages. At a EU wide level, such as the use of collective strength when dealing with non-EU producers.

3.2 Shell believes that different issues can be best managed at different levels. However, an understanding of the challenges associated with delivering sustainable, competitive and secure energy must be understood by all member states. This is particularly pertinent given the proposed freedom of member states to choose their own energy mix.

3.3 The benefits of a coherent EU energy policy are not dependent on the loss of state control over resources and reserves. There is also a need to ensure that EU level action does not impose additional fiscal or regulatory burdens, over and above the member state level, as this could damage investment confidence.

3.4 In addition to the direct role of member states Shell believes market mechanisms, based on level playing fields and with externalities priced in are the best means of finding the right energy solutions. Strong preference should be given to deploying market-based mechanisms wherever possible.

3.5 Shell recognises that there is a growing need for governmental co-operation at the EU level as markets become more integrated and thus welcomes proposals to improve external relations with major energy producing and consuming countries. While there are significant economies of scale with interactions at the EU level it is important to recognise that member states will continue to have a significant role to play in this area. Where possible national government interactions should be aligned with the overall EU framework.

Conclusion

Shell believes that the EU can add most value on energy policy on two levels: implementing the internal market and using its collective strength to build strong relationships with non-EU producer countries.

The challenges of energy efficiency, security of supply and sustainability are interdependent and require a market orientated approach aimed at increasing energy supply, improving energy efficiency and conservation.

The further development and strengthening of dialogue with energy producer, transit and consuming countries is vital to long-term European energy security. This dialogue should be based on fair reciprocity.

In order to attract investment it is essential for countries to have open and favourable investment regimes including stable and predictable regulations, clear tax laws and efficient administrative procedures.

20 April 2006

Printed in the United Kingdom by The Stationery Office Limited
7/2003 340021 19585