

EUROPEAN PARLIAMENT



COMMITTEE ON INDUSTRY, RESEARCH AND ENERGY

PUBLIC HEARING

on

"Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy"

Chaired by Mr Giles Chichester
Chairman of the
Committee on Industry, Research and Energy

Mrs Eluned Morgan
Rapporteur

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1. Agenda
2. CVs of Invited Speakers
3. Written Submissions by Invited Speakers

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*European Parliament,
Room 3 C 50*

Brussels, 12 September 2006, 14.30 - 18.00

AGENDA

14:30 Opening Giles Chichester, Chairman

14.35 - 16.15: *What needs to change to encourage one trillion Euro of investment in Europe's single market in energy?*

Dr Johannes TEYSSEN, Chairman, E.ON - Energy
Mr Arvid GRUNDEKJØN, Chairman, STATKRAFT
Mr Jorge VASCONCELOS, Chairman, ERSE
Mr Graham SMITH, Managing Director, PGS-Europe (Poland), BOC

Open Discussion

16:15 - 17:40: *What is Missing from the Energy Green Paper?*

Ms Coby van der LINDE, Director, Clingendael International Energy Programme
Mr Pierre RADANNE, former President of ADEME
Mr Allan ASHER, CEO, Energy Watch
Mr Mark JOHNSTON, Greenpeace European Unit

Open Discussion

17:40 - 18:00: *Conclusion*

Commissioner Andris PIEBALGS
Mrs Eluned MORGAN, Rapporteur

PANEL 1.

What needs to change to encourage one trillion Euro of investment in Europe's single market in energy?

Dr. Johannes Teyssen

- Since 2004 CEO of E.ON Energie (E.ON's market unit for power and gas downstream business in Central Europe) and Member of the Board of E.ON (global downstream segment, i.d. trading, retail and distribution of power and gas).
- 2001 – 03 CFO of E.ON Energie
- 1998 – 01 CEO (and previously other roles) in Avacon AG and some of its predecessors (the largest German regional utility for power and gas residing in Helmstedt)
- 1988 -98 Various management responsibilities in PreussenElektra (the Northern German predecessor of E.ON Energie, an integrated power utility).

Johannes Teyssen has a law degree and a PhD from Göttingen university with scholarship in Boston, Massachusetts. He is 45 years old, married with 4 children and resides in the Munich area of Germany.

Arvid Grundekjøn

**Chairman of the Board
Statkraft AS**



Mr Arvid Grundekjøn has been the Chairman of the Board of Statkraft AS, Norway's largest power company, since 2004. During his tenure Statkraft has expanded its production portfolio from a strong position in hydropower, and is currently developing new gas fired power capacity in Germany and Norway, as well as being active in power and gas trading across Europe.

Mr Grundekjøn is also the Chairman of the Board of the Anders Wilhelmsen Group, comprising activities in cruise, shipping and oil services, real estate and financial assets. He has been the Group Chairman since 2005, after having held the position as President and CEO for a number of years. Mr Grundekjøn is a Member of the Board of The Royal Caribbean Cruise Line (RCCL). He is the founder and Chairman of the Board of Creati AS (IT and real estate), as well as founder of several other companies. He is also the Chairman of the Advisory Council of Storebrand ASA, a leading Norwegian financial services company.

Arvid Grundekjøn, born in 1955, holds an MBA (siviløkonom) from the Norwegian School of Economics and Business Administration (NHH), in addition to a Master of Law (cand. jur.) from the University of Oslo, and is a licensed attorney. He is married and has two children. Mr Grundekjøn has been the Honorary Consul General for Latvia to Norway since 1992, and holds the Latvian Three Star Order.

Statkraft is Europe's second largest company within renewable energy. We produce hydropower and wind power, we build gas-fired power plants and we focus on innovation with a clear ambition to deliver the energy solutions for the future. We are a considerable actor on the European Power Exchanges, with special expertise within physical and financial power trading. For 2005 we had a total balance sheet of about 11 billion Euros. We control power from 156 power plants. More than 2000 employees in Norway, Sweden, Finland, Germany, the Netherlands, Great Britain and Bulgaria create value every day. Together we strive to be a European leader in environment-friendly energy.



CURRICULUM VITAE

Jorge Vasconcelos is Chairman of ERSE, the regulatory authority of the Portuguese electricity and natural gas industries.

Mr. Vasconcelos was born in Porto, Portugal, in 1959. He graduated from the State University in Porto and holds a degree in Power Systems Engineering. He also holds the degree Doktor-Ingenieur from the Erlangen-Nuremberg University, Germany, where he was Research Assistant from 1982 to 1985.

He was invited to set up the Portuguese Electricity Regulatory Commission in 1996 and joined ERSE as Chairman of the Board in 1997. Following his appointment to a second term, the scope of ERSE was enlarged to natural gas.

Prior to joining ERSE, Mr. Vasconcelos was in charge of program development for the dynamic simulation of power systems in the electrical networks department of AEG, in Frankfurt, Germany (1986-1989). From 1989 to 1996 he was Deputy Secretary-General of EURELECTRIC (European Association of Electricity Industry). He was Guest Professor at the University of Pavia, Italy (1990-1991) and also lectures at the University of Coimbra since 2001.

Mr. Vasconcelos is co-founder and the first Chairman of the Council of European Energy Regulators from 2000 until December 2005. He also chaired the European Regulators Group for Electricity and Gas, set up by the European Commission in 2003 until December 2005. He is co-founder and member of the Executive Committee of the Florence School of Regulation.

Graham Smith – Biographical details

Title: Managing Director, Process Gas Solutions Europe. Started in this role in January 2006.

Graham has been with BOC for over 30 years. Prior to joining PGS Europe, Graham was based in Sydney, working for BOC Gases Australia as MD of their Industrial & Special Products business. He has also held the position of Programme Director - Project Renew and also various senior roles in BOC Distribution Services (now GIST).

Graham is married and has a son and two daughters. He loves music and sport, particularly cricket, rugby and football.

PANEL 2.

What is Missing from the Energy Green Paper?



Coby van der Linde

Clingendael International Energy Programme

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Prof. dr. Coby van der Linde is head of the Clingendael International Energy Programme since September 2001. She has been a senior researcher at Clingendael from 1998 onwards, on secondment from Leiden University. Her career before joining CIEP was predominantly an academic one at the Universities of Leiden and Amsterdam, where her research focussed on international energy markets. In the 1990s, she was a visiting scholar at the Oxford Institute for Energy Studies (OIES, Oxford UK), at the Energy and Environment Programme of the Royal Institute for International Affairs (Chatham House, London, UK) and the Colorado School of Mines (Golden, CO., US). In 2004 she was appointed to the Chair of Geopolitics and Energy Management (part-time) at the University of Groningen. She is also a member of the Dutch Energy Council (Energieraad).

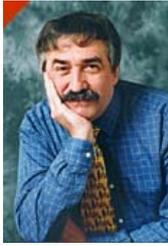
Her main focus in research is on international oil and gas markets, international energy policy-making, international energy co-operation, EU energy policies, OPEC, Russia, Caspian Sea region, Middle East, economics of energy producing countries, geopolitics and geo-economics of energy relations.

Prof. van der Linde holds a BA degree in Political Science (University of Amsterdam, 1979) an MA degree in International Relations and Public Law (University of Amsterdam, 1984) and a doctorate in Economics (University of Amsterdam, 1991).

The **Clingendael International Energy Programme (CIEP)** is affiliated to the Netherlands Institute for International Relations Clingendael. CIEP acts as an independent forum for governments, non-governmental organizations, the private sector, the media, politicians and others who are interested in changes and developments in the energy sector. CIEP organizes seminars, conferences and roundtable discussions. CIEP research and activities agenda focuses on three themes:

- Regulation of energy markets (oil, gas, electricity) in the European Union;
- The international economic and geo-political aspects of oil and gas markets, particularly with respect to the European Union security of supply;
- Energy and sustainable development.

CIEP staff also give lectures about various subjects in a variety of courses and training programmes.



Pierre RADANNE

Biographie

B) *Situation personnelle*

Né le 19 janvier 1950 à Fleury sur Andelle - Eure.
Célibataire, père d'une fille, Marie de 20 ans.

C) *Adresse*

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D) *Expériences professionnelles*

- Permanent des Amis de la Terre de Lille (1974-1978).
- animateur et chargé d'alphabétisation en milieu migrant à L'APTE – Lille (1978).
- Directeur de la Maison de la Nature et de l'Environnement de Lille (1979-1982).
- Délégué régional de l'Agence Française pour la Maîtrise de l'Energie pour le Nord-Pas de Calais (1983-1987).
- PDG de l'Inestene (Institut d'Evaluation des Stratégies sur l'Energie et l'Environnement en Europe) (1987-1997).
- Directeur adjoint de cabinet du Ministère de l'Aménagement du Territoire et de l'Environnement (Ministre : Dominique Voynet) - 1997.
- Président de l'ADEME (Agence de l'Environnement et de la Maîtrise de l'Energie) de janvier 1998 à janvier 2003.
- Chargé de la prospective long terme à la Mission Interministérielle de l'Effet de Serre auprès des services du Premier Ministre (2003).
- Créateur d'une EURL « Futur Facteur 4 » en septembre 2004 (activité de conseil, d'étude, de formation et de communication concernant la maîtrise de l'énergie, la lutte contre le changement climatique et le développement durable).

Formation

Baccalauréat D en 1969.

E) *Principales références*

- A participé à toutes les négociations internationales sur le climat dans le cadre de L'ONU entre la Convention de Rio de 1992 et le Protocole de Kyoto.
- Formation des négociateurs francophones pour le compte de l'Agence de la francophonie pour les conférences successives de l'ONU sur le climat.
- Rapport au gouvernement « La division par 4 des émissions de dioxyde de carbone en France d'ici 2050 » pour la MIES (Mission Interministérielle de l'Effet de Serre) – mars 2004.

- Animation de « L'Initiative Climat » pour la Région Poitou-Charentes et l'ADEME et préparation du Livre Blanc des acteurs de cette région sur le Climat (mars 2006).
- Préparation avec le Cabinet Synagir du Plan Climat de Paris (en cours).
- Commissaire Scientifique de l'exposition sur l'énergie et le climat « Energies, mode d'emploi » de la Ville de Paris au parc de Bagatelle (juin 2006).

Autres activités

- Multiples conférences publiques et interventions dans les médias.
- Expert auprès d'institutions internationales (Commission Européenne, Banque Mondiale...).
- Président du Clip (Club d'ingénierie prospective).

F) *Principales publications*

- « L'énergie dans l'économie » - Editions Syros – mars 1989.
- « Energies de ton siècle » - Editions Lignes de repères - octobre 2005.
- Evaluation de la politique française de maîtrise de l'énergie en réponse aux chocs pétroliers (modèle Enercompta) – 1992.
- Conception du modèle MURE (Modèle pour l'Utilisation Rationnelle de l'Energie) développé pour la Commission Européenne et l'Ademe – 1992 – 1997.
- « Détente » (Diminution des Emissions de CO₂ et des Tensions sur l'Environnement induites par les Transformations Energétiques) publié par l'INESTENE – juillet 1993.
- Rapports d'introduction au séminaire de Montréal de mars 2004 et aux Conférences des Parties de l'ONU de Buenos-Aires et Montréal de décembre 2004 et 2005 sur les négociations à venir sur le changement climatique dans le cadre de l'Agence de la Francophonie.



Allan Asher is Chief Executive of energywatch, the independent action group committed to improving the consumer experience of energy markets.

Allan joined energywatch from the Consumers' Association where he was Director of Campaigns and Communications. Allan was previously Global Campaigns Director for Consumers International, a worldwide NGO comprised of 240 consumer groups from 110 countries.

For more than 20 years Allan has worked with national and international agencies committed to improving the welfare of consumers in developing countries and to champion sustainability.

Prior to his move to the UK, Allan was deputy chair of the Australian Competition and Consumer Commission, the national competition and consumer agency and energy regulator.

Allan, a barrister and a solicitor of the Australian High Court, is also a board member of the Office of Fair Trading. He is also chair of the British Standards Institute, Consumer Policy Committee."

Mark Johnston, Greenpeace European Unit

Mark Johnston is an energy policy specialist in the Greenpeace European Unit in Brussels.

He has ten years experience of legislative and policy developments in the energy-environment field, initially based in London and more recently in Brussels.

Mark's current work focuses on the capital structure and cost base of the nuclear electricity sector in Europe and, in particular, the case for introducing effective and consistent financial provisioning for decommissioning reactors and managing radioactive waste, thus avoiding further recourse to subsidies and/or market distortions.

Previously (2002-04), he led NGO work on the status and future of the Euratom treaty in the context of a new EU constitution. (On current proposals, the Constitution and Euratom would exist alongside each other.)

At the UK level (1999-2001), Mark contributed to the introduction of new legislation requiring stronger market-based action by the energy utilities in delivering national policy objectives on renewable energy and energy efficiency.

At university (1990-93), Mark studied philosophy and environmental ethics.

3. WRITTEN SUBMISSIONS

E.ON AG

Statement
on

“Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy“

General comments

The Green Paper on “*A European Strategy for Sustainable, Competitive and Secure Energy*” is a valuable contribution to the discussions on the future direction of European energy policy. E.ON particularly welcomes the approach taken in the paper to achieve the central objectives of energy policy – sustainability, competitiveness and security of supply – in a well-balanced manner. Furthermore, the notion, articulated in the paper, that energy policy should favor cost-effective options and be based on thorough economic analysis provides a sound foundation for the development of an effective and sustainable European energy policy.

Companies, such as E.ON, will deliver the investments needed in the EU provided that there is a long-term stable policy framework in place within a competitive market environment. This means that the EU or its Member State governments must not create distortions in the market which will reduce returns on investment. Key elements in this regard are a level-playing field for investments and the avoidance of politically-driven regulation of energy prices. Therefore, the Green Paper’s recognition that a functioning and competitive market is necessary for a sustainable and secure energy supply is a particularly positive development. Likewise, an objective economic and ecological analysis of the different energy sources, as the paper proposes, will be essential to the formulation of a sound energy policy.

While the Green Paper addresses many of the elements needed for a comprehensive European energy policy (e.g. an integrated internal market, energy efficiency, climate protection and external policy), it fails to put all of these elements into a coherent whole. Many of the issues in the Green Paper are already addressed by current policy. Moreover, an effective energy policy will not be created through a proliferation of new institutions, groups and organizations. It is incumbent upon the Commission to convincingly articulate how each of these bodies will further European energy policy goals, rather than simply lead to bureaucratic overstretch. More disturbing is the contradiction between the acknowledgement of market principles and the various targets proposed in the paper. Despite the Green Paper’s promotion of open and competitive markets, this commitment is undermined by a catalog of targets, benchmarks and plans. Such targets are inconsistent with a functional, liberalized market.

As the intent of the Green Paper is to form a basis for further discussion, it has achieved that goal quite well. Many of the proposals and ideas put forward in the paper are a welcome and objective contribution to a debate which is often characterized by emotional and ideological arguments. There remain, however, a number of inconsistencies that could very well inhibit the creation of a comprehensive European energy policy.

Completion of the internal electricity and gas markets

The successful completion of the European internal energy market is the greatest energy political challenge facing the EU right now. The integration of the market can be achieved by the further

development of liquid and transparent wholesale markets and their integration first at the regional and then European level. E.ON stands by, ready to support these developments in a constructive manner.

The Green Paper correctly points out that sustainable, competitive and secure energy in Europe can only be achieved through open and competitive energy markets. The Paper is also correct when it says, that this can only be achieved by companies looking to become EU-wide competitors rather than dominant national players. The confidence placed by the Green Paper in the ability of open markets and the liberalization process to improve security of supply, competitiveness and achieve environmental goals deserves whole-hearted support. E.ON fully agrees with the assertion that a properly functioning market, which provides the necessary price signals, is paramount to bringing forth timely and sustainable investments.

At present, trust in the market has declined, and national protectionism as well as re-regulation are genuine threats. Regulated prices, special regimes for national customers, and the expansion of regulators' competencies (beyond grid issues) endanger the further development of an integrated European energy market. We believe the internal energy market will come to completion via the establishment and integration of regional markets with harmonized rules. E.ON supports this approach and is committed to its successful implementation.

We do not see a case for the proposed European Centre for Energy Networks given that ETSO (European Transmission System Operators organization) already exists to discuss and advise on high voltage issues. E.ON fully supports the full implementation of the unbundling provisions in the second electricity and gas Directives, and rejects the call for further measures. Structural unbundling would entail a massive intervention in the configuration of enterprises, be legally questionable and would not necessarily bring forth greater investment in the grid. Unduly long permitting procedures are a much more serious hindrance to network development.

Security of Supply

E.ON fully concurs with the Commission's recognition that liberalized and competitive markets promote security of supply by sending the right investment signals. In case of crisis, the EU already has an effective set of coordination instruments, both within the Member States and via the IEA. The proposal for new legislation on gas stocks is unnecessary, interventionist and could prove to be disproportionately costly. European utility companies, such as E.ON, have spent considerable resources in building up and maintaining supply infrastructure. Therefore, there must be no provision for "free-riders" of security of supply assets.

The proposal to re-examine the existing Directives on gas and electricity security of supply is irrational. Security of supply depends *inter alia* on a stable regulatory framework. In the case of the security of electricity supply Directive, it only entered into force in February of this year, and the Member States have until 2008 to comply. Likewise, the transposition period for the security of natural gas supply Directive ran up only in May of this year. A review of legislation before it has even been implemented is nonsensical.

A sustainable, efficient and diverse energy mix

E.ON would embrace an open and impartial debate on the future role of various sources of energy. Therefore, an objective analysis of the advantages and drawbacks of different energy sources would be a welcome addition to a much emotionalized debate. This is particularly true in regard to the future role of renewables and nuclear energy.

There is, however, a contradiction in the role of the Strategic Energy Review with regard to the principle of national determination of the energy mix and its compatibility with a liberalized market. A liberalized market can only be effective if investors have a free choice of technologies and fuels. This allows for the most economical employment of resources and a means of diversifying risk. It is not clear how an “overall strategic objective” in the European energy mix or a “European framework” for national decisions would be put into practice, and not have a distorting effect on investments in generation. Any obligation for Member States and/or companies to meet specific targets would contradict both the freedom of Member States to choose their own energy mix and the right of companies to invest in the most appropriate technologies.

Similarly, a set minimum level of “secure and low carbon” energy sources in the overall EU energy mix is at odds with a liberalized market. Investment in low carbon technologies should be driven by the market within the framework of the EU Emissions Trading Scheme.

An integrated approach to tackling climate change

E.ON supports the objective of taking on the challenges of climate change in an integrated manner that promotes the EU’s Lisbon objectives. Climate protection can only be achieved if the costs to the economy are sustainable. In our view, emissions trading is best suited to realizing the politically desired reductions at the lowest possible economic cost. The EU ETS requires further development, however. The scheme must first be improved by increased transparency on allocations and market reactions. Beyond that, allocation rules should be harmonized to avoid distortions of competition within Europe and to provide long-term incentives for investments in low-emission power plants.

The Green Paper’s assertion that energy efficiency can increase competitiveness is a sound one. Any measures to promote energy savings and enhance energy efficiency, however, must be oriented on the basic principles of a market economy.

E.ON supports the expansion of renewable energies and will be making substantial investments in this area in the coming years, and while the contribution of renewables is significant, in many cases they are a very expensive way of reducing CO₂ emissions. A European-wide expansion of renewable energies with the lowest possible economic burden requires a modification of the framework conditions for promoting renewable energies. The current situation, in which each Member State has its own support system, contradicts the objectives of an integrated internal market. A European harmonization of renewables support is urgently necessary to remove distortions to competition and eliminate inefficiencies. Investments in renewables must be allowed to take advantage of differences in locations in Europe; for example, investments made in wind power and photovoltaic where the wind blows and the sun shines, not where subsidies are the highest.

Encouraging innovation

Increased research and innovation must make decisive contributions to affordable climate protection and long-term security of supply. Energy research should be oriented toward all possible technologies and comprise all energy options. It should, however, also become more focused and concentrate on certain areas which encourage the aims of efficiency and climate protection. E.ON supports the approach to concentrate the "strategic plan for energy technologies" envisaged in the Green Paper on technologies which could achieve the threshold of

economic feasibility in the medium term. Given the considerable proportion of fossil fuels used in the electricity generation and heating in Europe, efficiency increases and limiting greenhouse gas emissions in conventional power plants represent an important focus. With regard to future climate protection, fundamental research should focus on "CO2 separation and sequestration" – particularly the accompanying power plant efficiency increases required for these processes. This investigation should include energy generation based on fossil fuels without CO2 emissions or with low carbon emissions.

A coherent external energy policy

E.ON supports the Commission's proposal to pursue security of energy supply as one of the central issues of a common foreign policy. Precisely when competition for limited energy resources is increasing worldwide, import-dependent regions such as the EU must rely on their strong market position as a buyer.

A common voice on energy issues, would arguably be advantageous, but at the same time the EU must be realistic about its capability to influence events and any efforts undertaken must add value to actions taken by the individual Member States. Each Member State will continue to conceive and pursue questions concerning security of energy supply as a national interest.

A common foreign energy policy should primarily enable investments in growth markets and co-operation on infrastructure projects. Whereas energy companies will continue their efforts to increase the security of supply by diversifying sources, modernizing and expanding infrastructure and by opening up further options such as LNG, and thus bearing the associated economic risks. The task of politics is to accompany and support these activities. In doing so, the basic division of roles between politics and business must remain intact.

The dialogue with non-EU countries should be led by existing institutions and discussion fora (e.g. G8, WTO, IEA, Energy Charta, etc.). These platforms should be used intensively and extended where necessary before any new initiatives such as a "European Energy Supply Observatory" or an "EU external crisis monitoring mechanism" are set up. In this context it is important to strategically define and focus the requirements of the EU and its partners in order to achieve an effective convergence of mutual interests. Thus, the creation of a reliable framework between the EU and its international partners should have priority.

E.ON welcomes the initiative which Europe has taken, for instance, to integrate the South-East European energy community and the Maghreb energy market into a Europe-wide energy community. This kind of co-operation not only creates trust in partner countries, but also facilitates entrepreneurial engagement between the EU and these countries.

Securing investments in environment-friendly energy in Europe

Statkraft submission to the public hearing on "Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy", European Parliament, Brussels 12 September 2006

Introduction

Statkraft endorses the vision of a coherent European energy policy. The foundation for Statkraft's views is a fundamental belief in the ability of open energy markets to deliver key policy objectives of sustainability, competitiveness and security of supply, given an appropriate level of regulation.

The vision of Statkraft is to be a European leader in environment-friendly energy. In addition to expanding our position as one of the largest producers in Europe of renewable energy, Statkraft is investing in gas power, the fossil fuel with the lowest emissions. With three gas fired power plants under construction in Germany and Norway, Statkraft is currently the largest investor in new gas fired power in Northern Europe. In total, these projects will bring some 1600 MW online next year. Statkraft is also an active trader of electricity, certificates and gas across most borders in Europe, contributing to liquidity in the European energy markets.

Statkraft has 15 years of experience in the liberalised Nordic power market, and is, as a Norwegian company, part of the Internal Market through Norway's participation in the European Economic Area (EEA). As a consequence, all relevant directives for the internal market for energy are part of Norwegian legislation.

Market based mechanisms support investments

Stability in policy framework

As in other industries, investments in new environment-friendly capacity are a question of commercial attractiveness and risk profile when power companies evaluate potential projects. Power plants usually have a life span of over 25 years, emphasising the long term nature of this sector. In order to reduce climate emissions, there are two sets of policies agreed upon at Community level that are used to direct investments towards fuels with low emissions. Firstly, Member States have targets for the share of renewables in their electricity consumption, followed by various forms of support mechanisms. Secondly, the EU Emission Trading Scheme puts a price on climate gas emissions, thereby changing relative costs of production. Securing a stable and predictable framework for investments is also a key prerequisite to ensure security of supply.

Research and development

There are many technologies aiming at carbon reductions, which are not yet technically or economically viable. Investments in such technologies are, therefore, mainly a question of research and development with a medium to long term perspective. This underlines the importance of an ambitious European R&D policy on low and zero emission energy sources.

The Green paper specifically discusses the possibilities of carbon capture and storage. Statkraft believes that this has a potential to reduce emissions not only for coal, but also for gas fired power. In Norway there are several initiatives to look at what can be described as a value chain for CO₂, catching the CO₂ through a gas fired power plant and exploring the possibilities to use the CO₂ to increase the petroleum production in the North Sea. The European Technology Platform Zero Emission Fossil Fuel Power Plants (ZEP) and other initiatives on a Community level can make important contributions in this regard. Statkraft participates in two large R&D projects aiming at developing technology for CO₂ capture from gas fired power.

Cost-effective support schemes

There is a multitude of support schemes within and across countries for renewable energy. In Sweden, the green certificate market secures a twenty year horizon on the support element. In the Netherlands, the industry has seen more of a stop-and-go policy, illustrated by the abrupt close of the current support scheme (MEP1) about four weeks ago. Following large government programmes on wind development in some countries, there is a rather large discrepancy between where the best wind resources are found, and where the most attractive support schemes have resulted in substantial wind power development. Statkraft believes that a stronger harmonisation of support schemes could stimulate investments in the most cost-efficient renewable power, and thus provide more renewable power per Euro spent.

The proposed Action Plan on Energy Efficiency in the Green Paper addresses several measures to reach ambitious energy efficiency targets. It is a question whether there should be a stronger link between the energy efficiency policy and the policies to promote a higher share of renewable energy, as they both share the same policy objective of reducing the emissions per kilowatt hour produced. Rather than separate initiatives, a combined effort can make it easier to let the market decide where energy savings are less costly than investments in new capacity.

Emission Trading Scheme

Since the introduction of the EU Emission Trading Scheme (ETS) power prices have increased substantially, partly due to the price of the emission certificates. As a power generator Statkraft is used to managing the market risk of volatile power prices, not least when making major investment decisions. However, as the carbon market is dependent on political decisions both at national and Community level, Statkraft would like to underline that a five year horizon, as seen in the second phase of the ETS, is in itself too short to safeguard large investments in plants with a long life span. In addition to a long term view, clarity regarding allocation plans, mechanisms for new capacity, and the allocation principles for different technologies across Member States is very important.

Investors therefore need long term stability and commitment to the Emission Trading Scheme if it is to bring about substantial new capacity with low emissions of climate gases. Consequently, Statkraft strongly supports the further development of the EU ETS, and agrees with the Commission that this system has the potential for a gradually expanding global carbon market.

Hydropower

As the currently most important renewable energy source, hydropower plays a considerable role in several countries' electricity mix. Historically, there has been substantial development of hydropower in the Nordic region as well as in other parts of Europe. Still, there is a sizeable hydro power potential in Europe, which can be developed in order to provide flexible and CO₂ free electricity. Throughout the past 100 years, the power industry has developed advanced methods to maximise the resources, while minimising the environmental impact. With untapped hydro resources in South East Europe, the establishment of the European Energy Community is a positive contribution to new investments in flexible and renewable energy resources. This will also support European security of supply.

Equal conditions for all market participants

Securing equal conditions for all market participants will promote new investments. Creating an "equal level playing field" has been an important policy objective for a long time, as shown in the electricity and gas market liberalisation directives currently under implementation. However, the goal is not yet reached. A liquid and well functioning wholesale market is essential for successful competition and also for new investments.

1 MEP: Stimulering van de Milieukwaliteit van de Elektriciteitsproductie

Transparent data

Immediate publication of crucial and transparent data on production and emissions to all market participants is vital for cost effectiveness and competition. To many, it is a new concept that maintenance programmes in a power station or emission statistics in a country is market sensitive information. However, wholesale trading will only have a future if it is based on non-discriminatory information. Establishing common rules for market participants is in this respect a key task.

Third party access

Access to transmission of electricity and gas on equal terms is crucial for new generation capacity to come on stream. Having to negotiate the cost of access to the grid can have an aversive effect on investors in new capacity. Possible conflicts of interest between the regulated business of a grid operator and the operation of a power generator in competitive markets can be avoided through the definite unbundling of these business activities. Statkraft therefore urges the European Parliament to support the efforts of the Commission and the Member States to secure the rapid and full implementation of the second package in all Member States. The EU Commission has the necessary mandates to proceed and succeed.

We have good experiences with non-discriminatory point tariffs in the Nordic electricity market. Tariffs are published and transparent and all consumers and generators have access to the market, regardless of who they buy from and how far the electricity is transported. Thus, distance is not of concern in the choice of supplier. As transmission is a natural monopoly business, independent and stronger regulators are essential. Statkraft also believes there is room for more and closer cooperation between national regulators and transmission system operators (TSO), and that this at present should have priority to further work on a European regulator.

Cross border trade

It is important that existing cross border transmission capacity is available and accessible to all players on equal conditions. Statkraft is convinced that generation capacities are optimised with regard to costs and emissions through trade within and between markets, thereby also promoting security of supply. Increased investments in cross border capacity are considered necessary for increased trade and a better utilisation of power plants in the whole internal market. In some instances investment in new cross border capacity may not be regarded as profitable to one TSO alone. Closer cooperation between TSOs and regulators across borders is needed in order to stimulate and secure the necessary investments in new infrastructure. Statkraft also believes that the Green paper's proposal of time limits to planning permissions for cross border projects needs further consideration.

Based on the experience from the Nordic market, Statkraft believes that the regional initiatives currently ongoing also support the development of integrated wholesale markets. Between the French, Benelux and German markets an integration process is ongoing. When the NorNed cable comes in place in 2007, linking the Netherlands and Norway, there will be increased opportunities for market based power exchange between these regional markets. This is a good example of how regional wholesale markets can be interlinked, and shows the way to one internal power market in Europe.

Increase transmission capacity between the Nordic hydro-based and the Continental fossil-based power markets could also support an optimal co-utilisation of these systems with regard to CO₂ emissions, costs and need for reserve capacity.

Site availability

Sites for new power plants must be available for all companies wanting to invest in new capacity. In some areas this is mainly a question of streamlining the permission processes, in other areas

the most attractive sites are close to already existing power plants. This can make it a question for the incumbent companies whether to allow a new competitor to introduce new capacity or not. Statkraft believes the issues of site availability and planning processes need to be addressed further, particularly at local and government level.

Financial markets to manage risk

An important aspect of the Nordic market is the development of a financial power market alongside the physical market. The financial markets are well adapted for both buyers and sellers of electricity wishing to manage the price risk. Risk management is as important for utilities as for large industrial companies. With standardised financial products and settlement procedures, the financial market attracts more market participants and contributes considerably to market liquidity. A basis for such a development is a well functioning physical market, underlining the need to proceed with market liberalisation.

An open and transparent gas market

The development of the gas market must not lag behind the electricity market. Access to the gas grid and storage systems increases the availability of gas, which is important for new generation capacity to be developed. Long periods for application of capacity and cumbersome procedures in several grid zones make quick movements in the market difficult. Further, the lack of transparency of capacity utilisation of existing pipelines makes it virtually impossible for others than the owner and operator to identify the real bottlenecks and find alternatives, stifling not only market liquidity but also new investments.

A role for a European energy policy

There is a role for a European energy policy in supporting the substantial amount of energy investments needed in the years ahead. There are a number of other important topics in the Green paper that fall outside the scope of this paper, and Statkraft would like to refer to the position paper of Eurelectric in this regard.

There is a need to further improve the investment climate for new environment-friendly energy in Europe, by establishing and enforcing a predictable and stable regulatory framework. Non-discriminatory access to infrastructure is essential in this context. Securing well functioning wholesale markets in power and gas will increase competition, limit the environmental impact of energy production, and strengthen the security of supply for Europe.

Statkraft is Europe's second largest company within renewable energy. We produce hydropower and wind power, we build gas-fired power plants and we focus on innovation with a clear ambition to deliver the energy solutions for the future. The Statkraft Group consist of several power companies in Norway with activities in production, distribution and retail sale of electricity. With our subsidiaries in Germany and the Netherlands we are a considerable actor within physical and financial power trading on the European Power Exchanges. For 2005 we had a total balance sheet of about 11 billion Euros. We control power from 156 power plants. More than 2000 employees in Norway, Sweden, Finland, Germany, the Netherlands, Great Britain and Bulgaria create value every day. Together we strive to be a European leader in environment-friendly energy.

Public hearing on
“Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy”
European Parliament - Committee on Industry, Research and Energy
September 12, 2006

Jorge Vasconcelos

First of all, I would like to thank the Committee on Industry, Research and Energy of the European Parliament for the kind invitation to attend this public hearing on energy policy and in particular on the European Commission “*Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy*” 1.

All my professional life has been dedicated to energy, in different areas (research, development, electricity utilities and regulation) and in different European countries. Since 1989 I have been closely involved in the construction of the internal energy market. Over the last years, I had the privilege to set up and to chair the Portuguese Energy Regulatory Authority and the Council of European Energy Regulators (CEER). The personal views I would like to express today inevitably reflect my professional experience and my current regulatory responsibilities but they do not commit any institution. In particular, I would like to point out that the official CEER “*Response to the Energy Green Paper*” was published in July 2006 and can be downloaded from the CEER website 2.

My short presentation is divided into three parts:

- first, I will emphasize the global nature of our energy problems;
- second, I will briefly describe the current European energy situation;
- finally, I will assess the proposed EU strategy and I will suggest some implementation priorities for a sustainable, competitive and secure energy future.

1. Europe in the global energy context

The three major energy related concerns we face today in Europe are common to the world community. These concerns are: a) scarcity of fossil fuels - i.e., security of energy supply; b) impact of energy production and consumption on the environment - i.e., sustainability of the current system; c) prices - i.e., competitiveness of the economy.

Improving the competitiveness of the EU economy through better energy prices and services implies a high degree of competition, both internally, i.e., competition among EU energy undertakings within an efficient internal energy market, and externally, i.e., competition between EU and non-EU energy undertakings in terms of economic and technical efficiency. Only fierce, effective competition among undertakings involved in the production and supply of energy, as well as yardstick competition (and regulation) among utilities responsible for energy transmission and distribution can deliver to European energy consumers the best results, both in absolute and in relative terms, hence improving EU competitiveness.

Energy prices for final users also depend on primary energy prices and these are established in international markets. However, we know that especially oil and natural gas markets are very

1 http://europa.eu.int/comm/energy/green-paper-energy/doc/2006_03_08_gp_document_en.pdf

2 http://www.ceer-eu.org/portal/page/portal/CEER_HOME/CEER_PUBLICATIONS/CEER_DOCUMENTS/CEER-ResponseToGP_2006-07-11.pdf

sensitive, not only to the balance between supply and demand, but also to political factors. Therefore, the EU must cooperate with other energy producer and consumer countries in order to provide these international markets with the necessary degree of transparency and stability. Otherwise, competition for scarce fuels can be distorted and EU consumers may suffer in terms of both price and security of supply. The “*St. Petersburg Plan of Action Global Energy Security*” adopted at the G8 Summit in July 2006¹ provides a comprehensive list of initiatives for a “*strengthened partnership between all stakeholders to enhance global energy security*”. It remains to be seen whether this Action Plan will be properly and quickly implemented.

Cooperation is also inevitable while addressing the sustainability concern. Many environmental problems and climate change in particular are global - they cannot be solved individually by the EU or by any single country.

In 2003 the EU represented 16% of total world energy final consumption, second to the United States (22%) and ahead of China (14%), Russia (6%), India and Japan (5% each). The EU average degree of energy import dependency is 50% (77% for oil, 53% for gas and 35% for solid fuels). Although not a major producer of primary energy, the EU is a major supplier of innovative energy technologies. Therefore, the EU is a major player in the world energy scene. Indeed, the EU is the largest economy in the world (GDP 10,380 billion € in 2004) and it is also the largest exporting economy (1,025 billion € in 2004)².

In summary: strong competition among EU energy undertakings and strong multilateral cooperation with other countries and organizations are essential for achieving EU strategic energy policy goals.

2. The EU internal energy situation: consumers, suppliers, markets and policies

From 1990 to 2003, final energy consumption in the EU increased by 12%. The largest increases happened in transportation (+26%) and in households (+16%), while industry consumption decreased by 4%.

EU final energy consumption is mainly related to transport (30%), industry (28%) and households (27%). It is mainly covered by oil (42%), natural gas (24%) and electricity (20%).

In 2003, fossil fuels accounted for 55% of total electricity generation. The major contributors were coal (31% of total) and natural gas (19% of total); oil accounted for just 5% of total electricity generation. Nuclear and renewables accounted for, respectively, 31% and 13% of total electricity generation³.

These figures clearly show that if the EU wishes to change its pattern of energy consumption, reducing both demand and oil imports, it must address the transport sector in first place. This was recently recognized in the *Mid-term review of the European Commission's 2001 Transport White Paper*⁴.

1 <http://en.g8russia.ru/docs/11-print.html>

2 European Commission, *Energy and Transport in Figures 2005*, March 2006, http://europa.eu.int/comm/dgs/energy_transport/figures/pocketbook/doc/2005/etif_2005_general_en.pdf

3 Ibidem

4 http://ec.europa.eu/transport/transport_policy_review/doc/com_2006_0314_transport_policy_review_en.pdf :

“Transport policy is closely intertwined with energy policy, on the basis of common objectives: lowering CO2 emissions and reducing EU import dependency on fossil fuels.

A major user of energy, transport accounts for some 71% of all oil consumption in the EU. Road transport uses 60% of all oil; air transport accounts for some 9% of overall oil consumption. Rail transport uses roughly 75% of electricity and 25% of fossil fuels. The high cost of fossil fuels and the need to reduce our strategic dependency should mean a optimisation of the potential of each mode of transport.

Improved energy efficiency, both in generation, transmission/distribution and use is of utmost importance for Europe. End-use efficiency concerns not only transportation, but also households, services and industry.

In the 1990s, the EU launched the most ambitious energy restructuring programme in the world. According to the EU objective, national energy markets (electricity and natural gas) should be fully liberalized and simultaneously integrated into one single European market.

The main features of this project are: freedom of investment and freedom of energy trade throughout Europe (i.e., full wholesale competition), freedom of choice for all energy consumers by July 2007 (i.e., full retail competition) and regulated access to all transmission and distribution networks, as well as to LNG facilities. The legal framework was established in 1996/1998 and substantially reviewed and improved in 2003.

The EU energy regulatory framework has been jointly developed by the European Commission and by national energy regulatory authorities through the CEER, sometimes via voluntary industry agreements.

Although not perfect and not yet complete, the legal and regulatory frameworks provide a good basis for the development of a competitive energy industry in the EU. However, so far practical results are below expectations. This is due to two main factors:

a) Industry structure and competition policy

While some Member States decided to split the former national incumbent utilities into several undertakings, other Member States allowed their “national champions” to grow abroad without reducing market share at home and even without proper unbundling. In some areas, namely in the EU geographical centre, market power is very high. This problem is composed by insufficient unbundling of generation/supply and network activities, thus creating important barriers to the development of a truly integrated and efficient EU energy market.

Application of competition policy to the energy sector is not always consistent, both as regards differences between national and EC authorities, as well as differences in the application of different instruments at EC level (merger control, state aid, anti-trust). Improved consistency and clear guidelines are urgently needed.

b) Regulatory gap

Although independent national energy regulatory authorities have now been established in all Member States, their powers vary from country to country. This makes regulatory harmonization difficult. Moreover, regulation of cross-border issues (cross-border trade, transmission tariffs, congestion management, etc.) is performed under comitology procedures which have proved to be totally inadequate. While at national level regulation is performed by independent authorities, at EU level cross-border regulation is performed by Member States. This regulatory gap hinders and delays completion of an efficient internal energy market. An institutional solution to overcome the regulatory gap - either through innovative schemes of collective decision-making involving the EC and national regulatory authorities or through the classic EU Agency model - is also urgent.

As regards EU energy policy, it is well known that there is none, in spite of regular calls for such a common policy in moments of energy crisis (from 1973 to Hampton Court, 2005).

These challenges reinforce the environmental priority of mastering energy use. Initiatives such as those announced in the Green Paper on energy efficiency need to be pursued with urgency; the Commission will come forward in autumn 2006 with an Action Plan on energy efficiency. A European energy policy which aims at ensuring competitiveness, security of supply and environmental protection has to focus, inter alia, on further transport policies which reduce energy consumption by improving fuel efficiency on the vehicle side and gradually replacing oil by other fuels be it biofuels, natural gas, hydrogen, electricity or others.”

In summary: improved end-use energy efficiency is much needed, especially in the transport sector; inconsistent application of competition policy to the energy sector enabled a few large undertakings that also control network facilities to dominate electricity and natural gas supply; the regulatory gap must be overcome in order to enable the development of truly integrated and efficient EU energy markets; a conclusive debate about EU energy policy is welcome.

3. European Strategy for Sustainable, Competitive and Secure Energy:

assessing the overall approach and priorities

In my view, the “*Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy*”, issued by the European Commission on March 8, 2006, is a very good basis for discussing the future of energy policy in Europe. It identifies the main challenges and it contains many interesting and new ideas.

I believe that the future EU energy policy - whatever political and institutional shape it will assume - should include two major lines of action: 1) complete the internal energy market; 2) improve coordination of EU initiatives within the framework of bilateral and multilateral cooperation in the global energy context.

Just before the 2006 Spring European Council, together with some former EC Energy Commissioners and EU energy regulators, I publicly supported a paper that contains practical and simple suggestions to complete the internal energy market¹. I believe these suggestions remain valid and should be assigned the highest priority:

- 1) Apply, implement and enforce all relevant directives and regulations.
- 2) Remove all political and administrative barriers which prevent or delay construction of much needed interconnectors and LNG terminals, promoting investment in such infrastructures.
- 3) Facilitate the physical and operational integration of national grids into single European electricity and natural gas networks.
- 4) Prevent the growth and reduce the market power of supply companies which have a dominant position within the borders of every distribution network.
- 5) Enable EU and non-EU companies to compete in all wholesale and retail energy markets while separating the network companies from the interests of all users.
- 6) Do not interfere in mergers and acquisitions beyond the strict application of competition law.
- 7) Facilitate customers' choice of supplier across all network and political borders.
- 8) Enable the active participation of consumers in energy markets and promote new market mechanisms for energy services aimed at improving energy efficiency.
- 9) Harmonize the competences of national regulatory authorities, reinforce their independence and give their European body regulatory implementing powers on cross-border issues at EU level.
- 10) Internalize environmental costs into energy prices in the most transparent way, using the electricity and gas markets as much as possible and harmonizing all relevant instruments (emissions trading, green certificates, taxes, subsidies, etc.), according to European law.

The challenges we face today in the energy field require innovative solutions. Innovation is needed at different levels: technological, institutional and entrepreneurial. The EU energy strategy should

¹ Published in the Financial Times, March 23, 2006.

actively support innovation in all these areas.

Technological innovation is needed regarding the way we manage energy systems, produce, transmit and use energy. EU support is important not only to promote more R&D and to invent new technologies, but also to apply already available technologies (for instance, the current IT potential is not sufficiently exploited in the energy industry).

Institutional innovation is urgent as regards regulation and governance of the internal energy market (e.g. through the proposed European Centre for European Networks), as well as inclusion of the energy dimension into EU external policy.

Entrepreneurial innovation is essential for stimulating competition and efficiency. Therefore, the EU should facilitate through appropriate incentives the development of small and medium size pan-European undertakings providing innovative energy services.

Identifying the challenges of a sustainable, competitive and secure energy future is a matter of common sense; however, pretending that “common wisdom” will deliver the necessary solutions and create a new energy paradigm is just wishful thinking.

Imagining a future EU energy policy based on the common denominator of Member States past energy policies is a futile exercise the Green Paper carefully avoided. I hope that the ongoing debate it has triggered will allow the EC and the European Parliament to be consistently forward-looking.

A written statement by Graham Smith Managing Director, BOC Process Gas Solutions – Europe, a member of The BOC Group on the occasion of the Public Hearing on Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy at the European Parliament on 12 September 2006

I am Managing Director of BOC Process Gas Solutions – Europe (BOC) and I am delighted to be able to take this opportunity to provide the Committee on Industry, Research and Energy (the Committee) with a written statement in addition to my presentation.

My presentation is in response to the question “*What needs to change to encourage one trillion Euro of investment in Europe’s single market in energy?*”

Here, I should like to make some general remarks about some of the key areas in the Green Paper and then make some more specific ones on the development of, or more properly the lack of, development of fully competitive internal energy markets.

A) *Diversification of the energy mix*

Primary energy supplies should be diverse in order to minimise risks to both supply and price, and to provide inter-fuel competition. I am very concerned by the projected growing dependency on gas. I believe that renewable sources alone will be unable to make up for the closing ageing nuclear and coal-fired stations, and look to both a new generation of nuclear plants and clean coal technology as means of providing baseload power.

G) *External Policy*

I believe there should be European coordination of infrastructure planning and construction, and there should be discussion at European level with major energy suppliers. Thus it should be possible to diversify the EU’s sources of energy. There is major new investment required to ensure the security of EU energy supplies, especially new gas and oil pipelines and liquefied natural gas (LNG) terminals as well as the application of transit and third party access to existing pipelines.

The relationship between Russian and Europe is increasingly important for especially in relation to the Energy Charter Treaty and the Transit Protocol.

H) *Sustainable development*

I believe that measures such as emissions trading can be a cost effective and flexible means of securing reductions in greenhouse gases and recognise that a key concern is that UK companies are paying for their indirect CO₂ emissions from electricity more than once and this is placing industry at a disadvantage to global competitors. This arises because the EU ETS leads generators to pass through full costs to electricity prices but companies also pay energy tax through the Climate Change Levy, which meets the requirements of the Energy Products Directive. In combination with the UK’s Renewables Obligation, these instruments add around 20% to the cost of electricity.

Europe needs to deal with the challenges of climate change in a manner compatible with its Lisbon objectives

I am attending to cover the following the subject areas in the statement on the final key area D)
“*Competitiveness and the internal market*”

- 1) An introduction to BOC’s industrial gas business
- 2) Remarks about the state of energy competitiveness within the European Union
- 3) To provide some commentary on the electricity and natural gas markets as they affect BOC’s business in the UK

1) An introduction to BOC's industrial gas business

I believe it is helpful to provide some information about BOC in order to put my remarks in context.

BOC is a member of The BOC Group plc¹. The BOC Group employs over 30,000 people in some 50 countries. Over 80% of the groups revenue comes from industrial gases. We serve customers in fields as diverse as steel, chemicals, refineries, medical, food and electronics. Industrial gas products include the atmospheric gases (nitrogen, oxygen and argon) produced by air separation plants.

In Europe BOC operates large air separation plants in the UK, The Republic of Ireland and Poland². Air separation is highly energy intensive and BOC regard electricity as the raw material used to drive the process. In the UK BOC uses approaching 2 TWh hours of electricity per annum making us one of the very largest industrial electricity consumers in the country. Smaller but still significant amounts are used in Poland and Ireland.

These plants are capital intensive costing tens of £ million, and are usually located near to a large customer or number of customers who take large amounts of gas supplied by connecting pipeline systems.

It is worth noting that while it is not normally cost effective to import air derived industrial gases and many of BOC's customers compete in world markets where product prices are subject to competition. So access to energy at internationally competitive prices is essential to the long-term health of these businesses.

2) Remarks about the state of energy competitiveness within the European Union

When European leaders met in a summit in Lisbon in March 2000 they set the European Union the goal of becoming "the most dynamic and competitive knowledge-based economy in the world" by 2010 (the Lisbon Agenda).

Amongst this agenda were goals on enterprise there was to be more competition in telecoms and liberalised gas and electricity markets. It has been accepted that European member states have not made the necessary progress with the Lisbon goal.

In particular with respect to the gas and electricity markets the European Commission's Energy Sector Inquiry, Preliminary Report published on 16 February 2006 details five main barriers to a fully functioning internal energy market.³ They identify these as are (i) market concentration, (ii) vertical foreclosure, (iii) lack of market integration, (iv) lack of transparency and (v) the lack of a transparent and effective method of prices formation.

From my perspective it appears that BOC has a very limited supplier choice. The electricity prices offered are almost identical and are derived from an illiquid and opaque mechanism seeming bearing little relation to the underlying power generating costs. In addition the number of candidate suppliers have been shrinking and no suppliers have been entering the market.

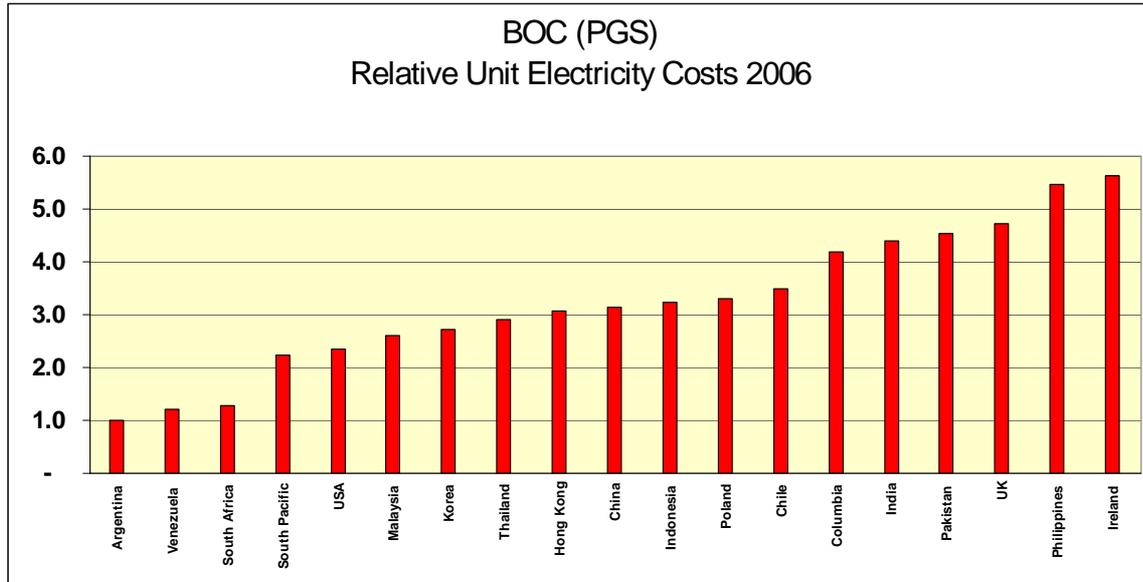
I show below a chart showing relative electricity costs to BOC facilities operating around the world and it can be seen that prices in the Europe are high.

¹ At the time of writing The BOC Group is subject to an agreed offer and it is expected to be acquired by Linde AG of Germany. Control of control is expected to occur on 5 September 2006.

² In order to comply with European competition legislation, Linde has announced that it would sell BOC Gazy, Poland, in its entirety.

Accordingly, BOC is starting to prepare for the transfer of BOC Gazy, initially to the interim position of being an independent stand-alone company. This would enable a smooth transition to a new owner as and when required.

³ http://ec.europa.eu/comm/competition/antitrust/others/sector_inquiries/energy/execsum.pdf



UK market effects

I am especially concerned about the relative level of year-ahead UK gas and power prices when compared with those in mainland Europe.

In the last 3 years has the price BOC pays for its electricity has increased 2.5 times, the amount of the increase cost being many, many £ millions each year.

The cost of electricity in the UK to industrial gas manufacturers is significantly higher than in other countries in Europe for example the annual wholesale price for the England Wales and Scotland is about 30% higher than France or Germany. Our UK customers are disadvantaged versus their European competitors as a large proportion of the industrial gas production cost is electricity.

It seems to me that this is a European problem on two levels. First as I have mentioned many of BOC's customers trade in world markets, steel and chemicals for example. So to the extent that energy prices put them at a competitive disadvantage then this is a loss not only to the UK but also to the European Union.

Secondly, the non-liberalised markets in mainland Europe are having the effect of pushing up the price of UK gas supplies with a knock on effect on electricity prices.

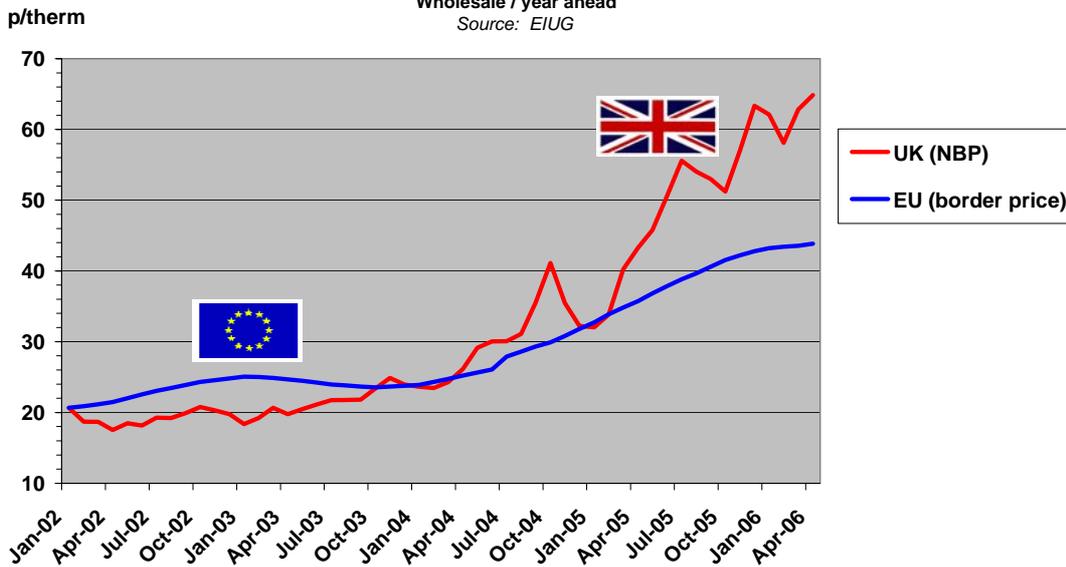
For the past three years there have been a series of price shocks in the UK gas market. These price shocks have been getting progressively worse and reflect an underlying issue with the UK gas market. The UK is increasingly dependent on imports of gas during winter months to supply all the needs of households, power generation and industry.

Import infrastructure is being built to bring in the new gas and some of that infrastructure has already come on line. However the gas has to be sourced from countries that have not reformed their energy markets and as a result operate to a different set of priorities to the UK market. During cold winter periods the European countries reserve their gas for their own use, just in case they need it, regardless of the price they could get for that gas in the UK. This results in lower imports at exactly the same time that UK demand increases.

The chart below shows comparative UK and European gas prices

UK v. EU Gas Prices

Wholesale / year ahead
Source: EIUG



In response to this situation The Energy Intensive Energy Group of which BOC is a member has published a discussion paper with suggestions for reform of the UK Gas Market. A copy of the paper is published on their web site at <http://www.eiug.org.uk/publics/index.htm>

In summary the EIUG's suggestions for improvement are

- Improve the use of import infrastructure
- Improve the use of storage
- Implement common commercial terms
- Improve access to market information
- Increase demand side response

Finally I should like to say that BOC as a very large energy user doesn't feel much like a customer and I urge you to bring your influence to bear such that an integrated competitive European market evolves with as little delay as possible.

Graham Smith, Managing Director, PGS Europe – BOC

25 August 2006

**Contribution of Coby van der Linde,
Clingendael International Energy Programme, CIEP, The Hague, The Netherlands
to the 12 September 2006 Hearing of the European Parliament
on the Green Paper
A European Strategy for Sustainable, Competitive and Secure Energy
COM (2006) 105 final**

Contribution to the session: What is missing in the green paper

1. Introduction:

Energy has been rapidly elevated on the national and EU political agenda. Increasing energy prices on world markets, partly due to high political risk premiums on energy, increasing demand in newly emerging economies, under-investments in all parts of the value chain, rising cost of new oil and gas flows, access to resources and markets, and renewed sentiments of energy or resource nationalism, among other things, have contributed to the intensifying international and European energy debate. Since 2005 a certain degree of willingness among the MS began to develop to achieve closer cooperation on energy policy issues. In the Council meeting of 23/24 March 2006, when discussing the latest Commission green paper, they called for an 'Energy Policy for Europe'. However, from the statement of the Austrian chair, it is also clear that the 'Energy Policy for Europe' has to be realised within the confines of the current competencies of the EU. Furthermore, the statement of the Austrian presidency after the Council meeting, stressed that the national sovereignty on key strategic decisions such as the choice of energy mix - including nuclear - would be preserved at the member state (MS) level.

The sovereignty issue over energy has cropped up repeatedly in the history of European integration.² Based on the 1994 upstream directive, access to upstream activities in the MS could be denied to third countries or third country nationals on the ground of national security. The national agenda in energy has always been important and based on the statement of the Austrian Chair, this has not much changed. The energy mix of the EU MS

Presidency Conclusions- 23/24 March 2006; 7775/1/06 REV 1.

² Also in the so called 'upstream directive' 94/22/EC, OJ L 164, 30/6/1994, p.0003-0008, the sovereignty of MS issue was addressed. In this directive the sovereignty over hydrocarbon resources on the MS' territories was confirmed and allowed MS to determine their own depletion policy but also allowed MS to refuse access to and exercise of these rights to any entity which is effectively controlled by third countries

or third country nationals, on the grounds of national security.

widely varies and also in terms of import dependency there are persistent structural differences among the MS. How then can and want the MS to shape their energy policy in the context of the new internal and external challenges?

These challenges are fashioned by the more numerous membership of the EU and the larger variety in approaches, preferences and strategies, by the larger dependence on imports from third countries, by the competition for resources with other consuming countries and regions and by the foreign policy dimensions that shape energy relations today.

2. Issues:

In this contribution, I will first focus on the general expectation and message that the green paper raised. The expectations were high due to several reasons: a new sense of urgency to manage the energy agenda as a result of high oil and gas prices, the competition for scarce resources with other consuming countries, among which India and China, the changing geopolitical climate, the upcoming resource nationalism in some producing countries, the instability of the Middle East, a resource rich region, the expected decline in non-OPEC production and the subsequent larger dependence on OPEC, the increasing import dependency of the EU in oil and gas, and more.³ The 2000 green paper on security of supply and the subsequent conclusions had already unearthed many of the challenges that lay ahead of the MS. Any new green paper after that one would have to answer to the raised expectations of an integrated approach on the internal market, security of supply and the environment, and that inconsistencies among these three policy areas and approaches would be tackled. An intense energy debate was suggested to help overcome the MS reluctance to create a common energy framework that would be suitably dressed up with competences. Such a debate would not only involve discussing the internal market design but would have to include a thorough analysis of the value chain of energy, its organisation, the dynamics within and between the various energy resources and the interaction with demand and supply management. With more and more energy imported from Third countries, energy policy in the MS and the EU would increasingly require, an external relations approach. The lack of a consistent external energy policy and the weaknesses still prevalent in the common foreign policy approaches posed an additional challenge to the new

³ Study on Energy Supply and Geopolitics, final report, January 2004, TREN/C1-06-2002, CIEP; Coby van der Linde, *Energy in a Changing World*, Clingendael Energy papers 11; Femke Hoogeveen and Wilbur Perlot, *Tomorrow's Mores, The International System, Geopolitical Changes and Energy*, CIEP, all available

at www.clingendael.nl/ciep/publications.

green paper. These issues had not become easier to tackle with the 2004 enlargement of the EU, and the entry of 8 East European countries that were highly dependent on Russian resources.

3. Political message:

Perhaps the green paper was not intended as a political document, but after the gas crisis between Russia and the Ukraine in the beginning of the year, the green paper became an important political document, particularly with regard to the external energy (gas) relations. Prior to the crisis, the impact of the internal gas market on the interests of third country suppliers had been intensely discussed without much progress. This exchange intensified in the weeks after the crisis. *It is therefore a pity that the Commission chose to present this green paper first and foremost as a paper addressing internal market issues and that this opportunity to reach out to the EU external energy suppliers was missed.*

Reversing the order of the topics presented in the paper, and thus starting off with external energy relations, would already have been an important political signal that the EU takes its external energy relations very seriously indeed, despite the importance of the outstanding internal market issues. Third country energy exporters to the EU are concerned about access to the EU market, long term contracting, and regulatory approaches that may benefit the EU energy markets but do not necessarily represent the approach nor preferences of the (gas) exporter countries' sovereign interests.⁴

That third countries have reason to be worried was underlined by the invitation of the Council, by word of the Presidency Conclusions to: "Developing a strategy for exporting the internal energy market approach to neighbouring countries." The message that came across was therefore not a message of cooperation and seeking structural win-win solutions for both producer and consumers but rather fed into the suspicion of gas producing countries that only EU interests are pursued.

⁴ Coby van der Linde, Aad Correlje, Jacques de Jong en Christoph Tonjes , The paradigm change in

4. State of the discussion:

The current green paper on energy (A European Strategy for Sustainable, Competitive and Secure Energy COM (2006) 105 final) mainly addresses the same issues raised in a previous green paper, namely Towards a European strategy for the security of energy supply Com (2000) 769 final. To some extent, the 2000 green paper presented a more balanced view on how to manage the trade offs between the internal energy market, the environment and security of supply than the current paper, perhaps because it took a longer term view as opposed to the current green paper where longer term and short term issues are mixed.

The new green paper does not show how to strike the balance between competition, sustainability and security. This is largely due to the fact that each issue in the 2006 green paper is addressed separately, and insufficient argued attention has been given to the interdependencies that arise from the internal market, environmental policies and external energy relations. For instance, high prices are helpful in energy saving and the introduction of cleaner fuels, but do not serve the consumers' short term interests; a stable and intense relationship with a large energy supplier which supplies a large share of the market may help security of supply, but may limit diversity of resources and competition on the market. What we do know is that the internal market approach alone will not secure results in the other policy areas. The market is a coordination mechanism for scarce resources but cannot by itself produce the transition to a larger sustainable fuel base nor generate a consistent crisis policy mechanisms or other public goods such as long term security of supply. The large time lag between investment and consumption, the dedicated assets in an energy system and the life of the capital goods creates a different market organisation and development than a market for chocolates. The interaction between the market and government intervention should reflect these dynamics.

EU energy policy must seek for positive trade offs among these policies rather than approaching them from predominantly the competences of the internal market alone. The

current green paper does not reflect enough awareness that internal energy policy and external policy-making requires a fundamental willingness to weigh the costs and benefits of balancing the policies, to consider adapting policies to the developments in the international markets, to accept that there are more models of competition and that policy-making should also attempt to synchronise with sector developments to let markets develop. On weighing the costs and benefits of policy-making, the past rather unyielding approach to long term contractual arrangements, for instance, for the sake of the consumer, does not concur with the cost of obliging all MS to maintain strategic gas reserves. Other flexible options, such as stimulating dual-firing capacities, are considered for security of supply policies, but are not considered to be part of crisis management policies. The strategic energy review can be helpful in learning more about other MS energy options and mechanisms to deal with market disturbances. However, it should not be used to create a one solution for all approach but as a learning and information tool. The market will greatly benefit from these insights. It all comes down to create a proper mix of market and government instruments to optimise the balance between the market and public interest issues, such as security of supply, and understanding that the asymmetries in fuel mixes and import dependencies require different local policy mixes. In a recent study by CIEP and Energy Research Centre of the Netherlands (ECN), an attempt was made to quantify security of supply measures in a market environment.⁵ Although this approach and discussion is only a beginning in tackling this complex issue, it is clear that a more thorough understanding of the interlocking dependencies within our energy systems, the costs and benefits of various policy options, and the impact at the MS level, will greatly help in finding balanced trade offs.

Seeking these positive trade offs and synergies can truly help convince MS that a balanced approach is best left to the Community and that national interests can be enhanced by a Community approach. However, these benefits must be demonstrated by sound and workable proposals and not mere words alone. The outcome of the discussion in the Council, to stress the sovereignty over energy supplies and energy mix is a telling signal that support for a common energy framework is far from accepted.

⁵ See **EU Standards for Energy Security of Supply**, Jacques de Jong, Hans Maters (CIEP), Martin Scheepers and Ad Seebregts (ECN), The Hague, Clingendael Institute/ Petten, Energy Research Centre of the Netherlands, CIEP/ECN, June 2006, ECN-C-06-039/CIEP, 68 pp (available at

5. Real debate:

The 2000 green paper also concluded that: "The European Union must take better charge of its energy destiny. We are obliged to acknowledge that, despite the various crises besetting the European economy in the last thirty years, there has been no real debate on the choice of energy resources and even less an energy policy regarding security of supply." (p.3) The current green paper does address the issue of an external energy policy but with respect to the choice of energy resources, the Council, according to the Presidency Conclusions of 23/24 March 2006, has again underlined member state sovereignty over primary energy resources (including nuclear) and the choice of energy mix. The MS wish to keep the right to intervene in the fuel mix, in addition to their right to employ their own depletion policies.

The MS wish to maintain sovereignty over the energy mix without interference of a common energy framework, just as much that they wish to let the market work without such a framework. The consequence of this decision to acknowledge this sovereignty reflects the absence, as referred to in the 2000 green paper, of a real debate on energy market models. Such a debate is a prerequisite for understanding the current and future dilemma's and to properly enable policy-makers to make the trade offs between the market, security and the environment.

Such a debate should bring forth the proper arguments why and how a common energy framework would work best for the EU and its MS. The emergence of 'a new energy landscape', (which is introduced on the basis of a few short and general bullet statements and without referring to the 2000 green paper) must provide the conclusive argument why a common energy framework is the only answer. That appears to be a rather slim argument. Europe owes it to itself to conduct a thorough and real debate on energy market models and energy frameworks. In such a discussion the Commission should demonstrate what the positive trade offs for individual MS of EU policy-making could be and uncover those policy areas where asymmetries in benefits and costs for individual MS lie in order to give an

honest account. Only then the long-standing reluctance⁶ of MS to give up sovereignty over energy policy matters could be overcome and a transfer of more competency to the Community level will truly be possible. *It is a pity that the 'new energy landscape' did not lead to an effort to engage a real energy debate, given the international context and given the asymmetries in structural import dependence among the MS. Issues such as energy and competition, the impact of buyer's and seller's markets on the robustness of the EU market model, competition for external energy resources, the trade offs between environment, security and the market, which crisis management policies, what is needed in an external energy policy deserve such a debate.*

6. Convergence or divergence:

The reluctance of the MS to transfer their competency in energy matters fully to the EU level is understandable against the background of the important role governments play in facilitating trade in energy. It is an illusion to think that the market can fully replace the role of the government in energy, as much as it is an illusion that government alone can operate the energy sector. The energy sectors are a typical example of a sector where government and markets meet continuously, for instance to issue permits for pipelines, generation capacity, LNG terminals, influence the energy mix and negotiate complex gas trade deals with governments and companies from Third countries. The market and government do not have strictly defined spheres of operation but rather function in a dynamic relationship, where market is introduced where government used to rule and *vice versa*, depending on the prevailing political and economic conditions. The boundaries are therefore unclear and need to be confirmed or adjusted continuously, while at the same time maintaining a stable and predictable investment climate.

The EU market model is not yet set in stone. Policy-makers, politicians, regulators, academics, companies and other organisations differ in what they see as the preferred market structure or market model and the way in which security of supply

6 Rene Lefeber en Coby van der Linde, Europese Integratie vergt Energie(k) beleid, in: *SEW (6) juni 1987* en nawoord, in : *SEW 7/8, full/augustus 1987*; Coby van der Linde and Rene Lefeber, International Energy Agency Captures the development of European Community Law, in *Journal of World Trade*, vol. 22. no. 5, October 1988.

and environmental policies and the costs they incur, should fit into this model. More importantly, MS are still uncertain how the model will deal with the asymmetric security off supply risks and different energy mix preferences.

The differences of opinion are strengthened by the different national interpretations of the directives on national market models. Among the MS and other stakeholders, the preferences vary between those that are proponents of de-integration of the value chain and those that favour more integration of the value chain, and they vary between those that prefer a national champion and those that do not. Very often in the EU debate, those that are proponents of a certain level of integration of the value chain are denounced as being anti-competitive, thus denying the merits of models of competition in which for instance vertically integrated firms compete for markets. The level of integration or de-integration (or unbundling) can be particularly important with a view on efficiency and reliability of the European energy sector. Particularly with regard to the dependency on foreign supplies in markets that are very concentrated and/or suffer from resource nationalism, a certain degree of purchasing power on the part of companies, can help secure flows for the European market. Such a model, with larger companies competing for resources and markets, is possible within the rules and regulations of the EU. It is clear that some MS prefer this model, over a market structure that is more atomised.

The discussion about the preferred organisation structure of the market also reflects the desire to capture both short term and long term benefits in an industry that has typically longer term cycles. The outcome of this struggle also impacts on the way the external energy relations are conducted because of the apparent attempt to move the long term costs on Third countries. Both consumer and producer countries are engaging in rent-seeking behaviour. The producer countries are aware of this process to offload the long term costs of security of supply on them and respond with strategies that secure their

return on investment in production and transportation. Forward vertical integration and producer co-operation become options in the face of developments in consumer markets that appear that the costs and benefits of the energy trade become unbalanced.

Denouncing the proponents of a certain level of integration of the value chain in gas and power markets as anti-competitive or as supporting the incumbents interests is not very helpful in a debate about which market structure or model would help to optimise the trade off between the priorities of energy policy (price, security and environment). Rather, by effectively only accepting a discussion as valid as long as they address the unbundling of the value chain, makes policy-makers and certain stakeholders blind for other, more optimal, solutions. In the words of the Commission/SG/HR for the Council: " External energy relations cannot be separated artificially from the wider question of what sort of energy policy the EU and its Member States want." However, we cannot expect Third countries to wait indefinitely for this discussion to produce a result and not pursue their own interests. The EU has shown a certain insensitivity to neighbouring Third country protests that they wish to maintain sovereignty over production, the fuel mix and their external relations too. Rather than seek to agreements on how best to link up two different regulatory models and help further external energy relations, the EU has persisted in promoting the dominance of its model over the models chosen in other jurisdictions. In the words of the Commission/SG/HR for the Council: " This could be achieved (well-functioning world markets, author) by the EU extending its own energy market to include its neighbours within a common regulatory are with shared trade, transit and environmental rules. More widely, the EU should advocate reciprocity in market opening and respect for market rules: non discrimination, competition, transparency and enforcement." The point is not that this goal is wrong, but that producer countries, among which Russia, cannot be satisfied in their desire to receive a proper long term return on their investments. The investment efforts of producing countries to guarantee future supplies are enormous and must be realised within the constraint of majority ownership to the producer state. Because many of the producer countries, including Russia, have many other sectors of society competing for investments, the concern is understandable from the perspective of their national interest.

The sort of regulatory power play that the EU wishes to engage in could of course bring a

desired result, but it is a risky strategy, particularly when we have to conclude that the sellers' market has strengthened the producer countries in their position.

The green paper and the documents and statements following the green paper show some sensitivity to this jurisdictional dilemma but the construction of the EU itself and the political position of the MS prevent them from resolving this issue. The strategic partnership has not been showered with content.

7. Oil and gas value chains:

The point of departure in creating the internal energy market has been the gas and electricity end-consumer market as it was organised in most MS by *local public distribution companies*. Taking the relatively small public distribution companies as a point of departure for regulation, in particular, the gas value chain (as far as that chain falls under the jurisdiction of the EU; i.e. foreign production and sovereignty over production and depletion policies in MS) is a completely different approach than the one prevalent in other fossil fuel markets.

The oil value chain is largely self-regulating. Risks, investments and competition are managed through international vertical and horizontal integration, and mergers and take-overs along the value chain. Why gas is not treated like the other fossil fuels, particularly because international oil companies perceive gas also as their core business and develop business models based on their experience in the oil industry, is increasingly hard to understand against the background of the development in the international gas market. The differences between the power sector and the gas sector are also interesting from a market organisation point of view.

Electricity production is relatively local to the market it wants to serve and can take gas, oil, nuclear, bio-fuels and coal as an input. Some plants have dual-firing capacities. The markets for input fuels, except for gas, are largely self-regulated or at least are not part of the internal energy market regime. The inputs can compete for access to the power market. This competition depends on the price, CO₂ emissions, investment cost and output flexibility, depending on which market segment the plant wants to serve. Electricity networks were and still are mainly a national affair, with few interconnections. These interconnections are and need to be enlarged to allow electricity to be traded across member state borders and

increase efficiency. Other differences that warrant a special regulatory treatment of electricity are: Electricity cannot be stored and therefore requires a different value chain management and electricity cannot be transported over long distances as compared to primary fuels. The 'revolution' in the organisation of the electricity sector in the past 30 years is that local, sometimes city specific, companies were linked in larger national networks, and are now increasingly integrated in cross border networks to capture economies of scale and scope. TPA helped to connect consumers to markets for power production outside the local and increasingly national network. In this case, taking the end-consumer as a point of departure increased efficiency.

Gas is increasingly produced outside the EU and the value chain of gas shows many similarities with the oil value chain, albeit with oil at an earlier stage of development of the oil market. Gas has recently been developing, because of the growing importance of LNG, into an international market for gas. Prices will increasingly be determined in the international market. At the current prices, LNG from any source can be delivered anywhere in the world, although producers will remain sensitive to the length and cost of the trading route. This sensitivity exists because the cost of setting up an LNG train is still high compared to oil tanker trading. The flexibility of oil trading is partly due to the availability of oil tankers and existing wide spread capacity for oil processing. Any tanker can be diverted to any market to fetch a higher price.

In the oil sector, the value chain is to a large extent part of vertically integrated companies that explore, produce, transport, process and distribute oil products in many countries around the world and thus also manage their risks in the oil value chain. The international oil sector is considered competitive and rightly no intentions in the EU exist that wish to separate oil production and export transportation from processing. Crude oil is traded before and after processing, and refineries can be built without asking for exemptions to the Commission, at the risk of the investor. Furthermore, the international oil companies are considered important market participants that help secure flows of oil to the EU market and that have become experts in dealing with oil market related risks. As a matter of fact, access to reserves (of these companies) is a main issue in external energy relations in order to support the efforts of the international oil companies.

Compared with oil, gas is still a relatively young international market and LNG a youthful offspring. Gas transport used to be very inflexible and depended largely on pipeline routes from gas fields to regional markets. Only recently, LNG has added to the flexibility of sources with the possibility to transport gas overseas at a competitive price. However, LNG terminal capacities are only developing. In the future, when more shipping and terminal capacities are available around the world, trading before and after the terminal can materialise on a wider scale than currently possible. *The question is how these capacities are best allowed to materialise, through the international market or through regulation?* Currently, the European Commission treats for instance LNG terminals as part of the pipeline network on which a TPA regime rests (like electricity). Already the Commission had to acknowledge (for political and economic reasons) that export pipelines and terminals could best be exempted from TPA in order to attract investors in these capital intense projects. The fact that they opted to continue the exemption policy and not for a general ruling that any investor who wants to built a terminal and could get a permit from the local planning commission, could built one, shows that government and Commission wish to keep their options open for management of the market for LNG terminals. Apart from the question whether they are equipped to sufficiently synchronize their decisions with international gas market developments, exemptions can also make the governments and Commission susceptible to lobbying for specific stakeholder interests. *The green paper could, on this relatively small issue, have shown its intentions to create a positive investment climate and, like the US authorities in their Hackberry decision, could have announced that TPA is not applicable to LNG terminals. Moreover, such a signal would have been important for public and private foreign stakeholders too and could have taken away some of the concerns of Third country exporting countries on access to the EU market.*

8. Paradigm Change:

The concept of the internal market has been designed in an energy buyers market, which by hindsight created favourable conditions for the structural changes envisaged. At the time, in oil and gas, the domestic production levels were substantial and in electricity production spare capacity was available. In such circumstances, it is easy to imagine that with ample supplies available, removing barriers to trade and with competition in and between MS, the energy industries could become more efficient. However, ample supplies are a precondition for competition in the mid- and downstream to materialise to produce the price levels for

consumers that reflect the efficiency gains. It is in this context that a wish to break up long term contracts and destination clauses arise, because consumers do not have to pay for long term security of delivery and supply nor for the investment risks. In a seller's market however, particularly when at the same time domestic supplies are declining, ample supplies are no longer available and competition for scarce resources can actually produce higher prices when security and investments become priced in again. An important precondition for the internal market, as it was politically imagined, is now missing. The gas market, like oil, has also changed into a seller's market, and gas producing countries seem keen to avoid investing in export overcapacities, thus hoping to prolong the duration of the sellers market. Competition has now moved from the mid- and downstream part of the value chain to the upstream part of the value chain and has changed from competition for consumers to competition to secure enough supplies to the market. It is in such a market that the conditions that suppliers wish to attach to their deliveries become important again, particularly when certain consuming parties are keen to secure long term supplies and it is harder to play off producers off against each other.

Ownership of reserves plays a significant role too because national depletion policies, investments and demand and supply developments do not necessarily match the needs of the EU market. Most of the oil and gas reserves in the world are preserved for development by national oil/gas companies and only about a third is available for foreign direct investments. The current debate between the EU and its external suppliers is a debate over who can capture the economic rents, where end-user taxes compete for the consumers wallet with premiums on prices. In a buyers market, it is usually the consuming countries that capture these rents (through taxes and excises/duties) and in a seller's market it is usually the producer country that can capture a large share of these rents.

The producer countries have no interest in creating over-supply, which is very costly, and therefore wish to assure market access for their product, security of demand, either through long term contracts or the ability to vertically integrate into the consumer market. Due to the (partial) state ownership of many producer country oil and gas companies and the idea that foreign governments will use their ownership to further the national interests runs counter to the idea of open markets with a level playing field.[?] The resistance to mergers and takeovers by (partly) state-owned companies can be explained from the fear for foreign political

pressure. The paper of the Commission/SG/HR for the European Council phrase their fears the following "Increasing dependence on imports from unstable regions and suppliers presents a serious risk. Some major producers and consumers have been using energy as political lever. Other risks include the effects on the EU internal market of external actors not playing by the same market rules nor being subject to the same competitive pressures domestically." Although not mentioned this section summarises the discussion about Russia after the gas crisis at the beginning of 2006. Yet, the green paper, at the same time, calls for a strategic partnership with Russia. With so much distrust present in the EU administration, one must fear for the outcome of the discussions on the new Partnership and Cooperation Agreement.

From this perspective, long term gas contracts between upstream suppliers and mid-and downstream companies in the EU, endorsed by the Member State governments, where price and volume risks are shared, all over a sudden could become an attractive alternative to the potential political arm wrestling between the EU and Russia.

It is unfortunate that the 2006 green paper avoids discussing the changing energy landscape and the consequences for the functioning of the internal market. A document that would have addressed the paradigm change more thoroughly could have made a more serious step towards outlining a strategy to secure supplies for the European market in these new circumstances. By not clarifying these issues, it may have convinced MS to hang on to their competencies in energy. Moreover, the external energy relations in the near abroad of the EU seem to be dominated by the idea that exporting the internal market rules to jurisdictions outside the EU, regardless of their phase of development and preferences for their national energy industries, will solve that what is not solved within the EU.

9. The boundaries of the EU and external relations

Energy policy making increasingly includes foreign policy issues. A strategic partnership with Russia cannot be considered without firm ideas about the foreign policy approach to the Caspian Sea region, the Caucasus, Belarus and the Ukraine. Also the discussions with Turkey about EU membership, however far

away from consumption, also influence the foreign policy approach to Russia. Moreover, the issue of where the EU begins and where its membership will end are at the root of any successful partnership with Russia. Europe must be able to define and present itself to any potential partner. And again competency plays a role too.

In the paper from the Commission/SG/HR for the European Council of 2 June 2006, the legitimate rights of MS to pursue their own external relations for securing security of energy supplies, in addition to their rights over supplies and the energy mix, is confirmed. This greatly limits the possibilities to come up with a common energy structure in which solid external energy relations can be embedded and that goes beyond voluntary and, sometimes, menu driven co-operation.

Large MS will consider their external energy policy as part of their foreign and security policy, and prefer different outcomes from MS that pursue only an external energy policy. In this respect larger MS are no different from the US, China and Russia. The different approaches of Russia by various MS are telling in this regard, some wish to secure their energy and other political and economic interests by strong bilateral ties, while others are indifferent because they rely less on these relations.

7 An external policy to serve Europe's energy interests, paper from Commission/SG/HR for the European Council, 2 June 2006.

Since the 1990s, foreign relations on the post-Cold war European continent have exhibited rather digital characteristics, a country is a potential member state or not. This digital approach to relations on the continent have replaced the more diverse relations among European countries in the period prior to 1990, when free trade agreements and other types of relationships tailored foreign relations. Apart from the internal difficulties that enlargement has brought the EU (institutional and support), the fact that the (politically inspired) enlargement strategy was not sufficiently backed up with a strategy for relations with important non-potential MS now haunts policy-makers, particularly

when they are important energy resource holders.⁸

Moreover, the EU has attempted to export its *acquis communautaire* in energy matters to these same non-potential MS without showing the positive trade offs, both in energy and in the wider political and economic relations, to those Third countries. Rather, the only reasoning seemed to have been the positive trade off for the EU that increasingly realised that they did not have jurisdiction over the upstream part of the value chain. This attitude of the EU has fed the idea in potential partner countries that strategic partnerships with the EU serve only the interests of the EU and are not based on equality or win-wins for both sides of the partnership. It is no wonder that in his summary of the G8 Summit Putin refers to the interests of the producers to share risk in the face of the huge investment requirements: " We also stressed the need for better risks sharing between all stakeholders in the energy supply chain through economically sound diversification between different types of contracts, including market-based long term and spot contracts, timely decision-making and appropriate adherence and enforcement of contractual agreements."

The green paper stresses that the regular talks with various producer groups, such as OPEC, should be continued. They should be seen as important instruments to create trust among producers and consumers. The Commission is right in stressing the importance of these relations. However, at some point, discussion partners of the EU expect to talk with mandated delegations and it is in its mandate that the EU's external energy relations are weak. In a world where the economy can talk, the construction of the EU is strong, in a more politicised world, the construction of the EU, which is not a state, become a weakness. Together with the undefined borders of the EU, the construction of the EU is the main hindrance to external energy relations.

⁸ Coby van der Linde, *Energy in a Changing World*, Inaugural lecture 22 November 2005, Clingendael Energy Papers no. 11 at www.clingendael.nl/ciep/publications

European Parliament Committee on Industry, Research and Energy
Public hearing on 'Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy'
Tuesday, 12 September 2006, 3.00-6.30pm

Allan Asher, Chief Executive, energywatch
'What is missing from the Energy Green Paper?'

energywatch is the consumer body in GB representing the interests of energy consumers both current and future and both domestic and business. We have a pro-market philosophy, and believe consumers are best protected by vigorous competition in fair and informed markets.

Across Europe, as the Commission has recognised by producing the Green Paper, there is a pressing need to address Europe's current and future need for secure, sustainable and affordable energy. In the UK, the DTI is consulting on its Energy Review, amongst other things asking how the UK can adapt to its new status as a net gas importer after years of being in the enviable position of having abundant indigenous supplies from the North Sea.

The Green Paper appears at a time when energy prices across Europe are hitting new heights on a regular basis. Year-on-year price increases on the scale we have seen in recent years are an alarming indictment of what passes for a competitive market, particularly in gas.

These are vital issues across Europe, and we welcome the opportunity to provide our views.

a) *Energy efficiency*

It is disappointing that the Green Paper makes no real mention of consumers except as the passive recipients of energy efficiency advice or campaigns. Consumer engagement and action is the key to energy saving. Consumers need to see energy efficiency as something they can embrace and benefit from rather than something that is done to them. An understanding of consumer motivation is vital to any strategy.

Simply providing individuals and communities with information is not sufficient to engender behaviour change. Large-scale media campaigns designed to get energy saving messages across to the largest number of consumers often suffer because consumers cannot make the connection between the messages given and the information and understanding they have about where and when they use energy.

But energywatch believes any strategy must acknowledge that the provision of useful individualised information can help consumers become aware of how they use energy, make responsible choices and change their behaviour. The recent End-Use Directive will, we hope, mark a step change, giving consumers information about the energy they use, when they use it and helping them to understand how their consumption decisions can make a difference.

A comprehensive action plan to enable consumers to change their behaviour toward their energy use must have at least three starting points:

- giving consumers the tools to understand their consumption and its consequences, their carbon production and when they use their energy;
- gas and electricity bills that help consumers cut carbon by providing accurate information on the price and quantity of the energy they have used;
- the development of innovative energy services products – changing the industry from one which simply sells gas and electricity to one that is rewarded for providing energy solutions (heat and light) in the most sustainable fashion.

b) Consumers and the competitive market

Similarly, the Green Paper also does not seem to recognise that consumers are not merely the passive subjects of future energy policy, competition is created through their actions.

Completing the liberalisation process is vital. Partial liberalisation in Europe has been and is causing huge detriment to consumers. In the UK a report by Global Insight published towards the end of last year estimated that the slow pace of liberalisation in continental Europe could be costing UK consumers up to €4 billion a year. With the implementation of full liberalisation still some way away, there is little recognition in the Green Paper of the need to have interim arrangements to deal with the problems that occur as a result of operating interconnected markets at different stages of the liberalisation process.

Consumers need results. At the beginning of the year DG Comp produced its report, identifying “*serious malfunctions*” across the board. The report was right, there are, and these need to be effectively addressed. The current state of many European gas markets is one of dominant, vertically integrated operators holding equity positions in transmission, storage and the Interconnector and able to exercise market power to the detriment of consumers. Unless and until there is unbundling of the equity and operational links between production, transmission and storage, as well as a concerted approach to refreshing third party access schemes and a thorough review of anti-competitive long-term supply contracts, the conduct of major European gas operators will continue to cause serious problems for consumers.

c) Lessons from the UK

When the UK’s expensive, inefficient and unresponsive gas and electricity monopolies were broken up and exposed to competition, initially it appeared that the experiment had been a success. There was a dramatic fall in prices. As well as British Gas, electricity suppliers, heating oil companies, gas producers and water companies had entered the market, so new entry was plentiful. In December 1999, at the time of the first review by the regulator, Ofgem of the development of retail market competition, 26 companies were licensed to supply gas to domestic consumers. And there was product innovation as well, with affinity deals between suppliers and trusted household brands, green tariffs and discounted tariffs for consumers who agreed to provide their own meter readings.

We now have six major gas and electricity suppliers in the UK, down from British Gas and fourteen Regional Electricity Companies at the outset – all vertically integrated and, in electricity, totally balanced in their supply and generation, keeping the quantities of power traded on the wholesale markets low. The UK electricity market is not truly national – former regional incumbents retain high market shares, especially in Scotland, where 80 to 90 per cent of the market is held by Scottish and Southern Energy and ScottishPower, and switching rates are stalling nationwide. In addition, consumers find that two-tier pricing, where consumers staying with their regional incumbent are essentially penalised with higher prices, is still present in the market.

Market liberalisation, aided by lax competition regulation, led to the emergence of vertical integration as the dominant approach in the sector. When the fourteen Regional Electricity Companies held their franchises, there were specific constraints on their ownership and control of generation assets, designed to prevent a company dominant in one part of the supply chain distorting markets by cross-subsidising another part of the chain.

There is a better story in the retail gas market, as British Gas’ market share has gradually reduced. But the benefits here have been eroded by the failure to maintain an effective competitive market in the upstream sector, where a small number of companies are effectively almost completely dominant.

Liberalisation of the retail markets was supposed to address the issues arising from vertical integration by exposing the supply business to competition but the combination of liberalisation and changing the trading arrangements has in fact favoured the development of large, vertically integrated suppliers and has been a factor in the consolidation of the industry. An industry in which merger and acquisition soon became the

central feature, presenting now insurmountable barriers to entry.

For UK consumers, in the early days of domestic retail competition, low prices came at a cost. The burdens placed on consumers, particularly vulnerable consumers, were enormous. The issue in the UK was that there was no provision at the outset to prevent the serious market problems that later occurred. These problems – inaccurate billing, transfer failures, chronic mis-selling and disconnection to name a few – were only solved after the involvement of energywatch, demonstrating the need for effective consumer representation.

But higher prices are causing burgeoning debt amongst energy consumers in the UK, disproportionately affecting those who can least adapt – the poor, the elderly and the sick – and consumers in Scotland and Wales. In the rest of Europe, as you move towards the situation already experienced across the Channel, it is necessary to understand that, unless these problems are addressed in advance, they will happen here. Without adequate regulatory control and effective consumer advocacy and protection it is a certainty.

d) *Cross-border cooperation*

A Europe-level approach to the regulatory issues that affect trade and investment across borders is important as a means of removing current barriers. However, establishing a European energy regulator, as opposed to simply encouraging more and better cooperation and information sharing between national regulators, would appear to be unnecessary. However, national regulators should not be limited in their powers to take into account relevant issues occurring outside their geographical area. And DG Comp should be encouraged to maintain its interest and vigilance over the energy market, and to take whatever action it deems appropriate to ensure its effective functioning.

Clarity and consistency in the regulatory framework is essential if the market is to have the necessary signals for investment in interconnection. In addition to the broadening of the remit of the national regulators outlined above, this should include a greater level of clarification of the regulatory attitude to long-term contracts and also, as came out strongly in the UK as part of the Energy Review consultation, streamlining planning procedures.

ERGEG's regional cooperation programme, and other initiatives, can act as prototypes for this new era of cooperation, and energywatch believes this will help to successfully establish and develop an efficient and effective internal market in energy.

e) *Russia*

During the recent Austrian Presidency, Martin Bartenstein, the Economics Minister referred implicitly to attempts by Spain and France to protect their national champions from foreign takeover. He asked how Europe could call on Moscow to open up markets, end Gazprom's monopoly and grant better market access when protectionism was still such an issue within the borders of major EU states. But, at the same time, Russia needs to be told these are requirements if it is gain continued access to the huge European market for its gas.

Unless there are serious, enforceable commitments from Russia on third party access all Member States will be no better off than the UK is now. We are operating a fully liberalised market alongside the seriously malfunctioning markets of many of our neighbours. If Russia does not reform Europe will be trying to operate a fully liberalised market alongside a Russian market that reflects many of the problems prevalent in continental Europe now and impacting so seriously upon the UK. The only difference will be in scale.

f) *Conclusions and ways forward*

The future will be a European and a global voice for utility consumers. Many of the companies we are dealing with in the UK are pan-European and have investments and interests across the globe. They have influence. They provide power and they have power. They are acquiring multi-utility businesses,

supplying gas, electricity, water, telephony. Consumers by contrast have enormous potential for influence but negligible central organisation and focus. Some equalising of power has to happen. Consumer bodies have to think in terms of multiplication: of resources, of influence, of action. Consumer representation needs the critical mass of multi-networks with regulators, with other consumer bodies, across borders and across utilities. Consumer representation in the utility markets is a European challenge and it should be seen as a particular challenge to utility regulators.

Member States moving towards competition in the retail market should try to learn from the UK experience, or the same problems will occur, and are likely to cause huge disadvantage to consumers for years. By learning the lessons from what happened, the experience of consumers in other Member States in the first years of a fully competitive energy market can be vastly different to the UK.

Governments have a key role in ensuring liberalisation generates real benefits for consumers. In the UK liberalisation policy lacked two essential elements: adequate regulatory control and consumer protection. The impact on energy users had not been considered, and the Government had not enabled consumers to make the choices that would have applied pressure on the industry to innovate and improve efficiency.

In the UK, liberalisation promised much, but a decade on it has still not delivered a fully competitive market or the benefits consumers were entitled to expect. Relying on market-based mechanisms to safeguard individual consumer welfare was always going to fall short of the ideal. More choice does not automatically empower consumers to make the best choice. Education, information, cost-effective regulation and transparency have to be part of the consumer protection package. Consumer rights are not an imposition on a competitive market, they are a pre-condition of its success, and the Green Paper should recognise this.

EU ENERGY STRATEGY

ITRE Hearing, European Parliament, 12 September 2006

Mark Johnston, Greenpeace European Unit

OUTLINE OF MAIN POINTS

Chairman, thank you.

Two introductory remarks:

- ◆ the Green Paper is by definition a discussion paper. What matters more than what might be “missing” from it are the conclusions and actions that shall follow it. So it is specific policy recommendations that are the main focus of my contribution;
- ◆ I also focus on what the EU can and should do now or soon. Even without an ‘energy chapter’ in the existing treaties, the EU still has substantial yet underused capacity for legislative and enforcement action using both the environment and other treaty powers in order to ensure that our energy objectives will nonetheless be met.

I) *Climate*

- ◆ 2005 Spring Summit endorsed goal to keep average global temperature rise to < 2°C;
- ◆ < 2°C → concentration target → emissions reductions: 30% by 2030 & 80% by 2050;
- ◆ energy strategy & decisions, at all levels, must reflect pre- and post-2012 targets;
- ◆ in ETS review: caps must be stricter; allocation by auctioning, not by grand-fathering;
- ◆ globally, maintain EU leadership towards an ambitious, effective 2nd commitment period;

J) *Renewable energy and efficiency*

- ◆ renewable energy and efficiency must be the leading elements of the new strategy;
- ◆ efficiency: target reduce overall primary energy demand by at least 20% in by 2020;
- ◆ renewable energy sources are indigenous; they increase security of supply; they increase investment & employment; and they are diverse both by technology and by geography;
- ◆ ambitious & legal binding sectoral targets:
- ◆ electricity: 35% by 2020, by reviewing and strengthening the existing directive;
- ◆ heating & cooling: 25% by 2020, with new legislation;
- ◆ the forthcoming renewables Roadmap must give clear signals that both such targets will finally be developed during 2007;

K) *Nuclear*

- ◆ Mr Rubig in 2005 said: “*We must know the present, before we can plan the future.*”
- ◆ EU priority action: understand costs of decommissioning & waste management, and to legislate to ensure that in all cases funds will be available when needed;
- ◆ this is the practical application of the treaty principle that the polluter should pay;
- ◆ just less than 150 NPPs at 67 locations, run by 20 undertakings, on 16/27 MS territories;
- ◆ in 2003, the EC promised an annual report; so far only one;
- ◆ in 2004, the EC promised in 2005 a Recommendation; so far it has still not appeared;
- ◆ the absence of adequate regulation leads to market failures, distortions & state aids;
- ◆ UK is the most well known but not the only example e.g. SK deficit;
- ◆ also e.g. in DE, EON plans to buy Endesa using, in part, its decommissioning reserves.

L) *Coal*

- ◆ firstly, ETS to remain the primary instrument for reducing emissions;
- ◆ in the context of climate, granting subsidies for coal production is perverse;
- ◆ EU priority is the phase-out of remaining protectionist subsidies in few MS, within 4 years;
- ◆ consistency with general policy, “less and better targeted aid”, “sectoral to horizontal aid”
- ◆ latest data = €5.6B/yr in 2004. Cumulatively €125B since 1992;
- ◆ from 2011, all subsidies will become unlawful; EC must ensure no reversal;
- ◆ the world market works well; diverse sources and stable prices; there is no supply threat.
- ◆ DE presidency & 2007 spring summit action plan! (lower costs in neighbouring territory).

M) *Conclusion*

- ◆ actions speak louder than words; so we hope that conclusions will come soon, and then we can move on swiftly with EU action leading to the transformation of the energy sector that is so urgently needed. Thank you.

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Energy Revolution: An EU25 energy scenario for 2050 is available at: www.greenpeace.eu

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