World Energy Council

CONSEIL MONDIAL DE L'ENERGIE

EUROPE'S GROWING ENERGY DEPENDENCE: MANAGING THE CHALLENGE

A STATEMENT BY THE EUROPEAN MEMBERS OF
THE WORLD ENERGY COUNCIL
ON
THE EUROPEAN COMMISSION'S GREEN PAPER
ON ENERGY SECURITY

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The World Energy Council (WEC) commends the European Commission for promoting debate on the important subject of secure and affordable long-term energy supply – a critical issue for Europe's future economic performance. The WEC, a global, multi-energy organisation with particular focus on long-term energy sustainability issues, and the WEC Member Committees in Europe, place prime importance on letting energy sources find their place in the market. The risks of dependence are best countered by the market-based strategies of building stable reciprocal commercial relationships and diversified supply within a transparent and reliable policy and regulatory framework.

WEC believes that the prime focus of the European Commission with respect to energy should be on providing strategic leadership, enhancing the sound operation of the market and, externally, promoting stable commercial trading partners. Its present powers already permit it to perform these functions.

WEC's comments on the Green Paper take into account recent discussion by the World Trade Organization in Doha on energy trade and how it can play a role in more balanced economic development throughout the world. The comments which follow also take into account the agreement reached at COP7 in Marrakesh regarding the rules, which might allow the objectives of Kyoto Protocol to be achieved. It is important also for the European Commission to be aware of initiatives by individual European countries to prepare sustainable energy projects for the United Nations World Summit on Sustainable Development in September 2002.

A welcome initiative

The World Energy Council (WEC) welcomes the initiative by the Commission to launch a public debate on future European energy supply through its Green Paper, *Towards a European strategy for the security of energy supply* (COM/2000/769 of 29.11.2000). WEC fully endorses the importance to society of uninterrupted physical supply of energy at an affordable price and appreciates the clear and generally balanced way in which the paper sets out the basic facts for public consideration. Encouraging a long-term focus, at a time of increasing short-term pressures, is important. The WEC also appreciates that the Commission, rather than promoting particular solutions to the issues it raises, defines questions and identifies options. Such an approach stimulates open debate and enhances the involvement of stakeholders – energy users and producers, EU member states and the public at large – in the formulation of strategy.

Security of supply – an ongoing challenge

The Green Paper strongly emphasises the increasing dependence of the European Union on external energy sources – with its present 15 members, dependence on external energy sources is projected to reach 71% in 2030, compared with 50% in 1998. It also points out that the level of dependence would be similar for an enlarged EU, unless Norway, a major oil and gas producer, is included, in which case dependence moderates to 60%. The Commission

raises the question of whether the risks involved in such dependence call for greater central powers to formulate a coherent Community energy policy.

The WEC acknowledges that increased external dependence is likely, but points out that European energy autonomy could only be bought at an unacceptably high price. No major industrial region of the world has implemented such a policy. WEC believes the risks of dependence are best managed through a market, in which diversified supply is developed through mutually inter-dependent commercial relationships, price signals are transmitted, and regulation focuses on long-term issues. Indeed it is unlikely that secure supplies can be associated with stable prices as sought by the Green Paper. The adaptation – up and down – of prices to demand is a prerequisite for securing physical availability, for all price volatility is politically unpopular.

Disruption to supply, on the other hand, has serious consequences for a modern high-tech economy. The recent terrorist attacks in the United States give added reason for careful consideration of the security of energy systems. Such threats to energy infrastructure require long-term risk management and contingency planning by industry, but it is the role of governments to cooperate in combating them. More generally, diversification of supplies by origin and source, integration of networks and, most importantly, mutual interdependence of energy producers and customers will continue to be the most effective mechanisms to enhance the reliability of energy services.

Commission role

The past performance of Europe's energy economy in terms of security of supplies, affordable prices, reduced costs, enhanced efficiency, network integration, and reduced pollution, suggests that there is no need for a basic change of present EU practices.

Instead the Commission should lead in setting the broad goals that will promote the uninterrupted physical supply of environmentally-friendly energy at an affordable price, summarised by the WEC as the three goals of energy accessibility, availability and acceptability[1]. In particular, it should monitor and analyse energy developments across Europe and internationally. Given continuing and probably increasing external dependence, Europe's energy supply must be understood in the global context, as must international efforts to constrain greenhouse gas emissions. The Commission should then bring its findings to the attention of the stakeholders – as it is doing in this Green Paper – so that a long-term vision can be developed and a consensus built around it. Long-term concerns should be reflected in broad policy settings, with appropriate regulation sparingly used to moderate short-term market pressures where they are counter-productive and to correct the inevitable deviations from the intended market outcome.

As guiding principles, the WEC places particular importance in the European context on the following measures.

Keep all energy options open

Diversification is crucial to energy security for an energy-dependent region. Four broad options are available for building a sustainable energy future – energy conservation, cleaner fossil fuel systems, nuclear energy (whether by new plants or extending the life of existing

[1] Energy for Tomorrow's World; Acting Now! World Energy Council, 2000

ones) and renewable energy (including large and small scale hydroelectricity). There is no case for arbitrary exclusion of any of these options. Globally it is especially critical to keep all energy options open, if the need for increased access to energy services in developing countries is to be met. Europe's example is important in this respect.

The appropriate mix for individual European countries will differ, however. For example, countries with well developed nuclear capacities will wish to benefit from the fuel security stemming from the ease with which nuclear fuel can be stockpiled, while other countries, and in particular Accession States will wish to use their indigenous coal resources (which WEC research[2] suggests is more viable than the Green Paper indicates) in clean coal systems. With diversified energy sources (some of which can be indigenously sourced), Europe can also develop a satisfactory diversification of suppliers.

Promote market reform and appropriate regulation

The Commission should continue to work towards the creation of free and open European energy markets, including working with the Accession States to integrate their markets increasingly with those of Western Europe. The further strengthening of energy transport networks is especially important to this process. It should generally be left to market forces, however, except in special cases such as south east Europe.

Externally the Commission should foster good international relationships and trading partnerships, through encouraging the development of market-based systems and mutual inter-dependence.

Advance education and public information

A further action area highlighted both by the Commission and by WEC is that of advancing education and public information. Pursuing sound and stable public policy is not possible without building a broader public consensus about the pertinent facts and priorities. The Commission's Green Paper makes a very worthwhile contribution to this goal, but much more is needed.

Dialogue proposed

As the only global, non-governmental and non-commercial body covering all energy sources, the WEC is well placed to assist the Commission in the necessary monitoring and analysis of regional and global energy developments. In particular, the WEC's European members would welcome an open discussion with the Commission on the following topics:

- the conditions for long-term energy security
- practical aspects of energy diversification
- appropriate regulation for market harmonisation
- the role of the Commission and other actors in the context of the subsidiarity principle
- special considerations relating to Accession States

Accordingly, the WEC's European members invite the European Commission to join them in an on-going dialogue on the critical issue of energy policy.

[2] Restructuring and Privatizing the Coal Industries in Central and Eastern Europe and the CIS, World Energy Council, 2000

THIRTEEN QUESTIONS

The Green Paper proposed that the debate on future energy strategy be structured around thirteen questions. The WEC offers the following comments on these questions:

1. Can the European Union accept an increase in its dependence on external energy sources without compromising its security of supply and European competitiveness? For which sources of energy would it be appropriate, if this were the case, to foresee a framework policy on imports? In this context, is it appropriate to favour an economic approach; energy cost, or geopolitical approach; risk of disruption? The WEC supports the market-based approach to this issue: diversification of supplies by origin and source; producer-customer interdependence; integration of networks; and in particular: keeping all supply options open, including coal, large hydro and nuclear. A selective policy for energy imports into the EU would diminish the competitiveness of its energy supply and should be ruled out. For Europe, security of supply rests essentially on a sufficient availability of energy sources on the world markets, which can be best secured if investments in energy production are profitable. This can be supported through international agreements fostering stable trading relationships, guarantees for investments and exports, attractive tax conditions within the EU and developing new energy technologies. An "economic approach" and a "geopolitical approach" are not alternatives. Rather, a balance has to be established between the three criteria: security of supply, competitiveness and environmental acceptability.

2. Does not Europe's increasingly integrated internal market, where decisions taken in one country have an impact on the others, call for a consistent and co-ordinated policy at Community level? What should such a policy consist of and where should competition rules fit in? While recognizing the benefits of consistency between Community policies in energy and other fields, national and regional particularities need to be recognised, not least between present and future Member States. This situation cannot be solved by a centrally-planned approach. For instance, with respect to the proposal made in the Green Paper to increase strategic oil and natural gas stocks under the control of a European Authority, it should be recognised that attempts to stabilise prices with such instruments have failed in the past. We are still learning about the regulation of electricity and gas markets. Harmonisation of the current national approaches should allow for this learning process. The creation, for example, of a European Super Energy Regulator would be counterproductive. In addition, the Californian example demonstrates the risks of politically-influenced regulation.

3. Are tax and state aid policies in the energy sector an obstacle to competitiveness in the European Union or not? Given the failure of attempts to harmonise indirect taxation, should not the whole issue of energy taxation be re-examined taking account of energy and environmental objectives? It should be recognised that taxes and state aid policies affect more than energy security and therefore can only be properly considered in the broader context. Thus, financing public budgets in the EU through high energy taxes does not add to security of energy supply. On the contrary, high energy taxes make it difficult to pay adequate prices for energy imports from world markets. They, therefore, work against security of energy supply. WEC supports full

cost pricing of all energy sources[3], but recommends regulatory charges rather than taxes, as it is easier to ensure they will be used for the purposes specified.

4. In the framework of an ongoing dialogue with producer countries, what should supply and investment promotion agreements contain? Given the importance of a partnership with Russia in particular how can stable quantities, prices and investments be guaranteed? These should be left to market players; such agreements cannot be "guaranteed". The framework agreements of the Energy Charter and the provisions of the WTO, should they be extended to energy, can play a helpful role, but the most effective "guarantee" is mutual benefit. Russia, for example, has a good record as a reliable supplier of energy resources.

5. Should more reserves be stockpiled – as already done for oil – and should other energy sources be included, such as gas or coal? Should the Community take on a greater role in stock management and, if so, what should the objectives and modalities be? Does the risk of physical disruption to energy supplies justify more onerous measures for access to resources? The WEC sees no need for increasing present stockpiles for oil and imposing new ones for gas and coal; much of the residual supply risk will be moderated by the ongoing extension of port terminals and oil and gas pipeline interconnections. As to oil in particular, the existing stocks held under the regime managed by the International Energy Agency are sufficient and the mechanisms have proved efficient.

6. How can we ensure the development and better operation of energy transport networks in the European Union and neighbouring countries that enable the internal market to function properly and guarantee security of supply? The existing networks within the EU have developed according to supply and demand. They function well and their further extension should be left to market-based investment. In special cases instruments such as those of the European Investment Bank can be used. Where there is a need for transport/transmission networks to be restored and developed, this is to secure, not "guarantee", supplies. The lack of compatibility of west and east European networks, problems with cross-border fees and the sharing of transmission capacity in congested areas require a common approach. Above all, energy transport networks must be able to operate on the basis of free access in all member states.

7. The development of some renewable energy sources calls for major efforts in terms of Research and Technological Development, investment aid and operational aid. Should co-financing of this aid include a contribution from sectors which received substantial initial development aid and which are now highly profitable (gas, oil, nuclear)? Leaving aside the question of whether gas, oil and nuclear energy were really subsidised in the past, it should be recognised that "co-financing" is another term for "cross-subsidies". It is already practiced to some extent, but would – if expanded significantly – seriously bias interfuel competition. Where deemed desirable to kick-start renewable energy, the subsidies should be transparent and should be for limited duration.

8. Seeing that nuclear energy is one of the elements in the debate on tackling climate change and energy autonomy, how can the Community find a solution to the problem

[3] Pricing energy in Developing Countries, World Energy Council, June 2001

of nuclear waste, reinforcing nuclear safety and developing research into reactors of the future, in particular fusion technology? As the Green Paper says definitive storage of nuclear waste is feasible and the techniques concerned are mature enough to be applied. Applied research to bring such systems into operation and leadership in developing a political and public consensus for action are what is needed. The suggested policy support for developing reactors for the future is also desirable, with work on fission reactors likely to yield quicker results than work on fusion. Life extension of existing reactors will also be important where applicable. It is hard to conceive how the EU should achieve its Kyoto-objective without continuing to use nuclear energy.

9. Which policies should permit the European Union to fulfil its obligations within the Kyoto Protocol? What measures could be taken in order to exploit fully potential energy savings which would help to reduce both our external dependence and CO2 emissions? There are three key measures to help the EU fulfil its obligations within the Kyoto Protocol:
   (1) Keeping energy options open so that nuclear power, clear coal technologies, hydroelectric and other renewables maintain or increase their share of the global energy mix is the best way to address global environmental goals in the short to medium term. The global governance of greenhouse gas emissions reductions should be pursued by governments, in consultation with industry, so that the regulatory treatment of voluntary industry measures is consistent, and clear rules for emissions trading and clean development mechanisms can come into play quickly without upsetting national economies or excluding any energy option. Clean Development Mechanisms should be part of energy planning so that investments in new energy projects in developing countries, which link commercial energy access with emissions reductions, can be increased. It is important to acknowledge that the effective mitigation of global warming is the responsibility of all citizens as well as energy companies and governments. WEC regrets the agreement reached at COP7 in Marrakesh continues to encourage countries to refrain from using emission reduction units generated from nuclear facilities to meet their commitments;
   (2) Increasing energy efficiency has to be at the heart of all environmental protection policies. A recent WEC report[4] shows that new modern technologies account for about 25% of the potential improvement in power plant performance, with 75% coming from better management and operational decision making. If the substantial gap between worldwide average performance and the top performing plants could be eliminated through the application of best practices, this would result in an estimated saving of up to US$80 billion per annum in building and operating capacity and a reduction in CO2 emissions of one GT per annum, as well as a reduction in other pollutants. In a number of EU member states, industry has itself taken on obligations to reduce CO_2 emissions through measures such as improved energy efficiency. Such voluntary agreements including emissions trading arrangements are preferable to direct government interventions; and,
   (3) The EU should promote research in and deployment of advanced clean coal technologies, CO_2 sequestration and other advanced fossil fuel technologies. For example, if one third of the world's installed simple cycle turbine plants

[4] Performance of Generating Plant, World Energy Council, October 2001

were converted to combined cycle, the increased power output would equal the need for additional generation capacity for the next 4-6 years, with no additional greenhouse gas emissions. In Central and Eastern Europe, in particular, clean and efficient coal technologies would stabilize CO_2 emissions from power stations in the next two or three decades more cheaply and quickly than new carbon-free sources.

10. Can an ambitious programme to promote biofuels and other substitute fuels, including hydrogen, geared to 20% of total fuel consumption by 2020, continue to be implemented via national initiatives or are co-ordinated decisions required on taxation, distribution and prospects for agricultural production? Bio-fuels, including hydrogen, can certainly make, over time, an important additional contribution to the energy mix. Setting a fixed percentage of electricity generation for specific renewable energy is not ideal. If such measures are used, they should give maximum play to market forces (for example, letting the different alternative fuels compete within the fixed percentage) and should have a clear finite life. Apart from this, the 20% objective appears to be too ambitious.

11. Should energy saving in buildings (40% of energy consumption), whether public or private, new or under renovation, be promoted through incentives such as tax breaks, or are regulatory measures required along the lines of those adopted for major industrial installations? This is not a question of either/or: correct pricing of energy, individual metering and billing, involvement of energy service companies, building codes and insulation standards are the right mixture to enhance energy savings in buildings. Another recent WEC report[5] shows that competition and trade induce progress in efficiency of end use appliances. Framework conditions are improving and could foster efficiency gains of 20-30 percent. The Large Boiler Directive should be supplemented by standards for small and medium-sized boilers. These issues will be of particular importance in the Accession States.

12. Energy saving in the transport sector (32% of energy consumption) depends on redressing the growing imbalance between road haulage and rail. Is this imbalance inevitable, or could corrective action be taken, however unpopular, notably to encourage lower use of cars in urban areas? How can the aims of opening up the sector to competition, investment in infrastructure to remove bottlenecks and intermodality be reconciled? Rising energy demand and the related pollution make the transport sector a most critical one, but the existing "imbalance" between road haulage and rail has developed over a long period of time and is influenced by many factors, of which energy use is only one. Measures to respond to energy use issues must also take into account the long timeframes involved, as well as economic, environmental and social aspects. Diversification of transport technologies is highly desirable. Public transport should be encouraged, as should maritime and rail transport. Priority has to be given to planning and building appropriate infrastructure. The desirability of full-cost pricing applies to transport as a whole, just as it does to energy use. Finally, transport has a strong regional dimension and should be considered on this basis.

[5] Energy Efficiency Policies and Indicators, World Energy Council, October 2001

13. How can we develop more collaborative visions and integrate the long-term dimension into deliberations and actions undertaken by public authorities and other involved parties in order to evolve a sustainable system of energy supply. How are we to prepare the energy options for the future? To enhance security of supply for the EU, governments of member states and other public bodies such as the Commission should concentrate on creating a favourable and reliable framework for private investments as the prerequisite for an efficient, competitive and environmentally friendly energy supply. Based on such a framework, the structure of energy supply should be the result of fair competition between the various energy forms. The instruments already available to the Commission should be sufficient for it to fulfil the objectives cited in the Green Paper relating to security of supply and efficient protection of the environment.

    The Commission should lead in setting the broad goals for energy development, for which purpose it should monitor and analyse energy trends across Europe and internationally. The Commission should then bring its findings to the attention of the stakeholders – as in this Green Paper – so that a long-term vision can be developed and a consensus built around it.

    For its part, WEC can contribute through its studies, publications, debates, members' activities, practical actions, international exchanges and partnerships.