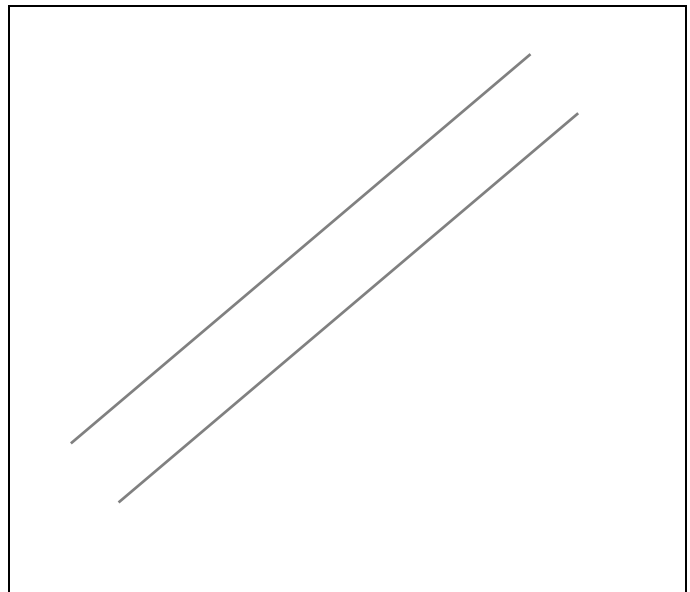


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European Commissioner for Energy

Towards Zero Emission Power Plants



European CO₂ Capture and Storage Conference

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Ladies and gentlemen,

I am delighted – honoured – to have the opportunity of speaking at this High Level international Conference on CO₂ Capture and Storage and the way towards Zero Emission Power Plants.

Energy markets are changing very rapidly, and Europe's energy policy must evolve to meet these changes. I would like to highlight the four most important of these:

- Firstly, it seems clear that we are going to see continued higher oil and gas prices, and continued volatility and uncertainty.
- Secondly, Europe's commitment to the Kyoto process, now and in the future, will not change. This will give us difficult choices in terms of our energy mix and thus security of supply, as well as the need to maintain competitiveness at a time when some of our main competitors are not taking equally determined action on the environmental front.
- Thirdly, much of the developing world, and notably China and India, will continue to grow explosively. This gives enormous challenges in terms of security of supply and, in particular, climate change. To give an idea of the scale of the challenge, energy consumption per capita in China today is approximately 14 times lower than that in the United States and 7 times lower than in the EU. Consumption per capita in India is half that of China. If India and China were to increase consumption levels to just half the EU levels, or one quarter of US levels by 2025, this would represent an increased energy demand of an equivalent of 45 million barrels of oil per day; more than the present combined US and EU oil consumption.
- Finally, as highlighted in the Commission's 2000 Green paper on security of supply, the EU will become increasingly dependent on external energy supplies, becoming up to 90% dependent on oil and 80% dependent on gas imports by 2030. These trends have not been reversed, despite Europe's commitment to developing renewable energy.

Given these challenges, it is my intention to systematically re-examine the different aspects of the EU's energy policy, ensuring that each instrument makes the maximum possible contribution to all three of the European Union's core energy objectives of competitiveness, sustainable development and security. In this light I have identified six key energy priorities for the new Commission, which I would like to briefly discuss before considering the important role that capture and storage must play. The six priorities are:

- Energy efficiency;
- The internal market in gas and electricity;
- Continued support of renewable energy;
- Nuclear safety and security;
- Further development of EU external energy policy relations; and
- Better linkage of energy, environment and research policy.

The first of these, Energy efficiency, will be my key priority for 2005. The cheapest, most competitive, most secure form of new energy for the European Union is in fact energy saved; by better regulation, by the introduction of new technology, and by providing citizens with better information.

Energy saving policies – properly implemented - will not only significantly contribute to meeting the EU's Kyoto targets, but also enhance its competitiveness.

Much has been done in the past, but the potential remains for enormous additional cost-effective energy savings. For example, if the building codes established in Denmark were generally applied throughout Europe, the energy consumption of households in some other EU countries would be halved

In 2005 the Commission will therefore lead a major European Energy Efficiency Initiative, combining cost-effective action at all levels. Europe should set an ambitious but realistic and achievable target to save, by 2010, the equivalent of 70 million tonnes of oil per annum that would otherwise be consumed. This represents a saving of 15 billion Euros per annum, a very significant reduction of CO₂ and a reduction of 4% in terms of external supply dependence. Furthermore, a successful energy efficiency policy means more jobs in Europe.

The first step will be a Commission Green Paper on Energy Efficiency in late spring. This must lead Europe to real conclusions at the end of the year, demonstrating how to achieve the 15 billion Euros saving, and committing to take the action to do so.

Much has already been achieved towards creating a Europe-wide Internal Market in gas and electricity, the second priority area. The second EU gas and electricity Directives represent the most ambitious attempt to create a large and integrated regional energy market anywhere in the world. It has already led to significant price reductions, but much remains to be done if we are to succeed in our objective of creating a real Community-wide, truly competitive market. At the end of this year the Commission will therefore table a detailed report examining the state of the markets and considering which, if any, additional measures need to be taken.

Europe is currently the world leader in many renewable energy technologies, my third priority area. Wind energy is a telling example. Over the past six years, the average annual growth rate of wind energy capacity in the European Union was of 20%. Wind power in Europe is already today saving 50 million tonnes of CO₂ a year. Continued action is necessary to continue this trend. This is why the Commission plans to publish a Communication on the financing of renewable energy sources by the end of this year, with the aim of evaluating the different support schemes implemented around Europe, and to identify current best practice.

Nuclear energy is another field in which uncertainty needs to be minimised. The future role of nuclear in the EU has to be closely linked to a solid, four-pronged strategy dealing with security of nuclear materials, radiological protection, nuclear safety and the reliable disposal of nuclear waste, my fourth energy priority. The Commission has made proposals in these two last areas. Nuclear safety will remain an essential objective, not just in the European Union but also in neighbouring countries.

The further development of external energy policy relations of the EU, my fifth priority, is a key response to the challenges to energy security of supply presented by rapidly increasing worldwide demand and high and volatile oil prices. The Union has already taken some important steps in this respect.

The EU-Russia energy dialogue, launched in 2000, is a good example of how this can be achieved in practice. It provides a framework for covering a whole range of energy issues at political, administrative and industrial level. Future cooperation with Russia should include energy efficiency and technology transfer, as well as other key energy issues.

I intend to strengthen dialogue with other producers, as well as consumer and transit countries. A new dialogue between the EU and OPEC has started, focused on common goals of stability in prices and markets, market transparency, and a good investment climate. A similar approach is being developed with Caspian countries.

Another example of how progress on international energy issues can best be pursued is the creation of an Energy Community of South-East Europe and its progressive integration into the European Union internal energy market, on reciprocal conditions in terms of trade and the environment. We are also establishing close energy cooperation with the Maghreb and Mashreq countries in the context of the Euromed Partnership.

Taking account of all these issues, the Commission will put forward a new Green Paper on the Security of Energy Supply by the end of this year, and we look forward to contribution of interested parties during its preparation and in the follow-up discussion.

Finally I should like to turn to my sixth priority, the better linkage of energy, environment and research policy, and in particular to capture and storage. You will have noticed from my remarks that one of my basic objectives for the new Commission is to promote an energy policy which contributes at the same time to our Lisbon and Kyoto objectives. The key to combining these two objectives, turning Europe's environmental commitments into a competitive advantage, rests in the development and introduction of new technologies. Without a real effort in this respect Europe risks leading the world with respect to environmental responsibility, but failing to capitalise on this by winning the race to develop the new technologies that will be a major trading opportunity over the next decades.

I have no doubt that it is only a matter of time before the other developed and developing countries that have not ratified Kyoto will also decide to take real action to combat climate change. The voices doubting the science behind climate change become fewer by the day, and the evidence of its existence and acceleration continues to grow. Furthermore, many companies not involved in the carbon trading mechanism are beginning to realise that they are missing a commercial opportunity. In this light, I believe that investment and commitment in developing these new technologies in Europe today will provide real and lasting benefits to Europe tomorrow in terms of competitiveness and employment.

This approach has been confirmed by the Commission, one week ago, when adopting the proposal for the Seventh research framework programme for the period 2007 to 2013.

In this proposal, the Commission sets the priorities for energy R&D, as:

- CO₂ capture and storage technologies for zero emission power generation,
- Clean coal technologies,
- Hydrogen and fuel cells,
- Renewable energy,
- Smart energy networks,
- Energy efficiency and savings, and
- Knowledge for energy policy making.

It is not by chance that I place clean coal technologies and on CO₂ capture and storage at the top of this list. Such technologies are not just important in order to enable Europe to meet its Kyoto obligations and the challenges of the Lisbon agenda. At the end of the day, our ability to convince the developing world to address climate change will depend on our ability to demonstrate that technology exists and can be developed that will control emissions without significantly restraining growth. Given the indigenous energy resources of China and India, capture and storage and clean coal must inevitably form a central part of the answer to this challenge.

Furthermore, it is worth noting that, at present, coal accounts for approximately 30% of electricity generation in the EU. It is important in terms of security and diversity of supplies that coal retains an important position in Europe's energy mix. However, given the carbon trading mechanism, this will require very significant improvements in generating efficiency and in the capture and storage of CO₂. If we do not invest in the necessary technologies and promote their effective penetration into the market, coal-fired generation will decline in Europe as old power plants are decommissioned. In addition to capture and storage, therefore, research will need to continue and accelerate on reducing the emissions from existing power stations and facilitating the development and market penetration of new, highly efficient, coal-fired power stations,

The same reasoning underlies the need for Europe to take the lead in CO₂ capture and storage. I personally have no doubt that in addition to increased use of renewable energy, fossil fuels will continue to be the backbone of global energy production for the foreseeable future. Given our commitment to Kyoto, now and in the future, the development of commercially viable technologies for CO₂ capture and storage must be a Community goal.

When considering the process of carbon dioxide capture, our cost objective should be to reduce specific sequestration costs to less than € 20 per tonnes of CO₂ by pursuing three technological approaches¹ that look promising, namely, CO₂ separation before combustion, after combustion and during the combustion process.

Within the Commission's R&D agenda, the options for CO₂ storage have been narrowed down to geological storage in deep underground formations such as depleted oil and gas reservoirs, saline aquifers and unmineable coal seams.

R&D activities for the capture and the storage of CO₂ are already supported by the Commission under the current framework programme and this should be continued and reinforced under the 7th. Programme.

Oil and gas fields, in particular, have proved their capabilities as a safe storage place for millions of years, and they will benefit from injected CO₂ for enhanced hydrocarbon recovery². This concept of "enhanced oil and gas recovery" could prove to be a promising way of extending the lifespan of hydrocarbon fields in the North Sea.

Ladies and gentlemen,

¹ CO₂ separation prior to combustion/CO₂ separation post combustion/oxyfuels, i. e. replacing air in combustion process by oxygen

² EOR: enhanced oil recovery, EGR: enhanced gas recovery

The next years will be a watershed period for both European and global energy policy. The issues to be discussed in this conference are of key importance for the medium and long term energy supply of Europe and of the world.

I believe that success for Europe in leading efforts on capture and storage will only be achieved if we manage to effectively coordinate and, where appropriate, integrate efforts at the European, national and international levels. I look forward to seeing the results of this conference as to how best this co-ordination should be achieved.

I greatly welcome this opportunity for reviewing progress achieved so far and discussing challenges to developing and implementing new technologies for CO₂ capture and storage, on the road to Zero Emission power generation.

Thank you.