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# FUELLING OUR FUTURE



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

Over the past two years the cost of oil and energy has risen to almost historic levels while energy prices are becoming more volatile and unpredictable. Even so, we are using more and more energy, emitting ever larger quantities of greenhouse gases, and relying on energy for more and more basic tasks. Yet our own supplies of oil and gas are in terminal decline. How can we secure the necessary "fuel" for our society?

Outside the EU, global energy production has failed to keep pace with rising demand, producing dramatic price rises, and in some cases, shortages. The race for the world's limited fossil fuels is on. The EU, as the world's largest energy importer, is an important player while the playing field includes some of the world's least stable regions. The rules of the game are, at best, opaque.

It is for this reason that the European Council asked the European Commission to develop ideas for a common, coherent energy policy, which would bring Europe together to deal with the challenges we all face.

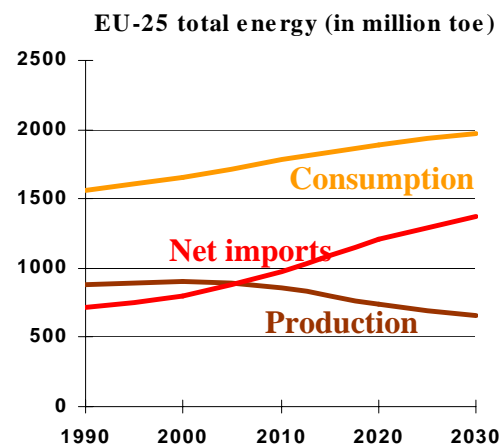
### Energy: the lifeblood of modern society

If energy supplies are not reliable, society and economy cannot function. Therefore, following the devastation of the Second World War, there was a drive to develop a common approach to energy. The resulting European Coal and Steel Community and Euratom brought peace and prosperity to Europe's people. Today, the public are once again looking for strong action to tackle today's challenges to security and stability. A forward-looking and sustainable framework for energy can once again help Europe to take advantage of its political strengths and harness European integration for the common good.

## Stronger together than apart

### An uncertain future

Within the EU, despite many years of efforts to be more energy-conscious, energy demand continues to rise by 1-2% per year. In ten years' time, we could be consuming 10% more energy than today, of which around two thirds could be imported. Over 80% of our energy use is based on oil, gas and coal. This share is rising, as the use of traditional fuels is growing more quickly than renewable energy. As a result, greenhouse gas emissions could be up to 5% higher in 2012 than they are today, compared to the Kyoto target of an 8% reduction.



The developments which affect energy supply are international – rising global prices, rising demand in Asia and the Americas, inadequate investment in new production and climate change. The impact which a single country can have is limited. **Working together, the EU will have a far greater effect than working apart.**

Around the world, demand for energy is rising at record rates, despite rising prices. In 2004, global demand rose by 4.3%. However, developing countries account for the majority of new demand. In 2004, China alone accounted for 75% of additional global coal demand. Energy demand per head in Asia, Africa and South America is a fraction of energy demand in the EU. What would happen in the EU if these countries continue to develop along the industrial model of Western countries in the 19th and 20<sup>th</sup> centuries?

**In recent years, the EU has adopted a unique combination of energy related rules to help economic and environmental development.** Competitive gas and electricity markets, support for innovative energy technologies, market-driven schemes to tackle pollution, such as emissions trading, and targets for renewable energy in transport and power generation as well as for energy efficiency are changing the lives of individuals across the EU. The EU has shown that it has the political clout to make a difference – providing all Member States pull together.

### EU targets for renewable energy and energy savings

- **Double the share of renewable energy** in national gross energy consumption from **6% to 12% by 2010**
- **Increase the share of green electricity** in total electricity consumption from **14% to 22% by 2010**
- **Raise the share of biofuels** in the transport fuel market **to 5,75% by 2010**
- **Reduce our energy consumption by 20% by 2020**

**The EU represents 25 countries and 450 million energy consumers.** As such it deserves to have considerable weight as a customer in today's global energy market. We need to make sure that our message is clear and that we can all speak with a common voice. In this way, we will have a much greater influence on our partners. **The effectiveness and coherence of the EU's global position depends on the success with which we develop policies within the EU.**

A more integrated approach would also give the EU a greater impact in international discussions on climate change (particularly in the post-Kyoto negotiations) and sustainable trade (for example through the WTO).

A more consolidated approach, where we are all moving in the same direction and in solidarity, will make it easier for Member States, industry and individuals to make the tough decisions which will be necessary if we are to improve the prospects for everyone's future. The first steps are the most difficult, but they will be easier if we do it together.

### What does the European Commission propose?

There are a number of areas where the Commission believes Member States will achieve more if they work together as the EU, rather than as single countries. These are set out in the new Green Paper. Taking account of the public response to the Green Paper, the Commission will develop more specific suggestions which will subsequently be published in an Energy Policy Communication in Spring 2007.

**The areas which the Commission identifies for common action are:**

- ***Energy for jobs and growth in Europe***
- ***Tackling security and competitiveness of energy supply***
- ***Solidarity among Member States***
- ***Tackling climate change***
- ***Encouraging innovation***
- ***Relations with third countries***

## The Commission's proposals in brief

- **Fully developing the internal gas and electricity markets.** This includes interconnections, the development of a European grid code, a level-playing field including effective unbundling, better investment conditions and possibly a European energy regulator as well as a European Centre for Energy Networks dealing with cross-border exchanges.
- A **review of policy to deal with oil and gas stocks** to deal with potential supply disruptions.
- A **European energy observatory**, enhancing transparency on energy supply and demand issues within the EU.
- **Improving network security.** This could be achieved through increased cooperation between network operators and possibly through a new formal European grouping which could develop into a European Centre for Energy Networks.
- A **new mechanism** to prepare for and ensure solidarity and possible assistance to countries facing difficulties following physical damage to such infrastructure.
- A **Community-wide debate** on the different energy sources, including costs and contributions to climate change. This in turn could ensure that the EU's energy mix pursues the objectives of security of supply, competitiveness and sustainable development.
- An **action plan on energy efficiency** with commonly agreed objectives. In addition, the Community could propose an international agreement on energy efficiency.
- A **road-map for renewable energy sources**, to ensure a predictable framework for the long-term development of renewable energy sources in the EU. It could encompass a proposal for renewable targets for 2020 and a clear short, medium and long term plan to stabilise and gradually reduce the EU's dependence on imported oil.
- A **strategic energy technology plan**, building on European technology platforms and possibly leading to joint technology initiatives to develop leading markets for energy innovation.
- A **coherent European external energy policy**, effectively co-ordinating Community and national instruments having a bearing on external energy supplies.
- A **strategic EU Energy Review**, for presentation to the European Council and European Parliament in Spring 2007. This would cover external energy policy and the possibility of limiting dependence on imports of oil and gas, the future of the internal gas and electricity markets, diversity in the EU energy mix and a Road Map for renewable energy.
- An agreed list of **priorities for the construction of new infrastructure** necessary for the security of EU energy supplies, notably gas pipelines and liquefied natural gas (LNG) terminals, with concrete measures to ensure their implementation. Examples include independent pipeline supplies from the Caspian region and North Africa into the heart of the EU, and new LNG terminals.
- Priority should be given **to a revamped EU-Russia framework**, the conclusion of **the Energy Charter Treaty** and negotiations on the Transit Protocol.
- A **Pan-European Energy Community Treaty**. This should be based on the South-East Europe Energy Community model, progressively including European neighbourhood countries.
- A new Community mechanism to enable rapid and co-ordinated reaction to **emergency external supply situations impacting EU supplies**.

## Security, competitiveness and environmental protection: the eternal triangle

Countries across Europe agree upon the basic principles which should influence energy policy: **secure and reliable supplies, competition to assure the best deal for consumers and sustainable energy practices which reduce the environmental damage from energy.** Energy policies have, at different times, pursued more strongly one or another of these key objectives. But when this happens, the risk is that other goals are missed. The three aims are complementary – we cannot have one without the other. This is fundamental to the Commission's Green Paper.

- Each of the ideas developed in the Green Paper is intended to help promote each of these goals. Saving energy at home, at work and in our transport movements for example brings concrete economic benefits, on the micro- and macro-levels: it cuts energy and import bills, makes the energy we have go further (a direct benefit for supply security) and brings environmental benefits by reducing pollution and the need for new infrastructure. Using EU-produced biofuels instead of oil in vehicles is good for Europe's farmers and for our industry, bringing jobs and new investment, is good for the environment and for Europe's trade balance. It is no wonder that renewable energy is also widely popular among the public.

### Biofuels



Renewables must continue to grow in our energy mix. They cannot replace hydrocarbons. But they can, in the case of biofuels, be blended with them.

## A revolution in how we think about energy

**The world of energy is changing and we have to change with it.** Energy independence is no longer possible for most countries of the world – and certainly not for Europe. Energy imports account for half of all the energy we use, and within a generation, we could be importing almost all the oil we use and 80% of our gas. There is an alternative, but the EU needs a common purpose and common political will to achieve it. It will also take public commitment.

The EU is not alone in seeking to change today's energy assumptions. Countries from North America to Asia are questioning an energy model based on limited fossil fuels. With the right political framework in place, the EU will be able to lead the global search for solutions. It would enable us to demonstrate to our partners that it is possible to have a strong economy and benefit from market competition, while protecting the environment and safeguarding energy supplies.

## Everyone can help

**Policies are important, but they rely on individuals to make them work.** We can all find ways of cutting energy use and using energy more efficiently. We can also invest in home-grown energy sources – wind, solar, biomass, geothermal.

The EU can help to bridge national barriers which prevent EU countries from working – and trading - together as effectively as they might in the energy area. We can also improve our relations with the countries on which we depend for energy supplies – oil and gas producers and transit countries, such as the Ukraine. We can encourage our partners to pursue more sustainable energy policies – more efficiency, cleaner technologies and fairer trading practices.

Employees and employers, in both manufacturing and services industries – can also help in the search for more efficient and clean ways of using and producing energy – not only in Europe, but across the globe. Success at home will create new markets overseas, bringing jobs and prestige to Europe.

### Energy savings in buildings



With a few basic insulation measures, a household can easily save €200 on average on its annual energy bill. €40 more can be saved each year by replacing the old fridge with a more recent and more economical model.

## Moving forward together

**The European Commission will be consulting widely on the Green Paper** before making concrete proposals to the Council of Ministers for future action. The Heads of States and Government will discuss the Green Paper at their Spring Summit on 23-24 March 2006. The Green Paper will be discussed by ministers from energy and related policy areas in the Council of Ministers throughout the first half of 2006. It will also be debated in other EU institutions, particularly the European Parliament.

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