



Energy for a Changing World

An Energy Policy for Europe – the need for action

Energy is a vital part of our daily lives in Europe and we have come to rely on it. But the days of secure, cheap energy are over and we are already facing the consequences of climate change, increasing import dependence and higher energy prices. In order to ensure a **sustainable, secure and competitive** energy supply, a common European response is needed. A new European Energy Policy must be ambitious, effective and long-lasting – and involve everyone.

Tackling climate change

Energy is the main factor in climate change, accounting for some 80% of EU's greenhouse gas emissions. It has been estimated that, without real efforts to reduce emissions, there is a real chance that global temperatures will rise by several degrees, dramatically altering the world's landscape and the way we live.

The **EU is committed to reducing greenhouse gas emissions**, but its present energy practice will result in increasing them by 5% by 2030. The EU's current energy and transport policies are not sustainable. Acting now to tackle climate change is essential.

Ensuring security of supply

Rising, volatile prices, blackouts and difficulties in supply have all illustrated the risks of being overly dependent on oil and gas. With global need on the up, this pattern is set to continue. The International Energy Agency expects worldwide demand for oil alone to increase by well over a third by 2030 – so how will this be met?

If energy trends and policies remain as they are, the EU's **reliance on imports** will jump from half to almost two-thirds in 2030. 84% of gas would have to be imported, as would 93% of oil. But from where and how these supplies would come is unclear. Add to this the fact that several EU Member States are essentially dependent on one single gas supplier and factor in the lack of a crisis support structure between countries, the EU's **growing vulnerability** is evident.

There is also a need to **increase capacity**. Electricity demand continues to mount by around 1.5% each year, but existing infrastructure and electricity plants are reaching the end of their useful life.

Over the next 25 years, around €900 billion will be needed to invest in new coal- and gas-fired power plants, along with wind turbines. Even if we increase our energy efficiency to limit growth in demand, **major investment in infrastructure** is vital.

Making the EU economy more competitive

The EU's increasing dependency on imports threatens not only its security of supply but it also implies higher prices. If, for example, the price of oil rises to 100\$/barrel in today's money by 2030, the EU-27 energy import bill will be around 50% (€170 billion) higher. While Europeans would have to pay a lot more for their energy, few additional jobs in the EU would be created this way.



In contrast, **boosting investment in energy efficiency, renewable energy and new technologies** has wide-reaching benefits and would contribute to the EU's strategy for growth and jobs. Such an initiative would cut import spending, provide many **long-term employment opportunities**, and improve the EU's economy as a whole.

Such investment would also help expand knowledge in this field via **research and development** in new energy technologies. The EU is already the global leader in **renewable technologies** – it has, for example, 60% of the world market share in wind energy. In fact, these technologies account for an annual turnover of €20 billion and employ 300 000 people in Europe. Now the EU has the potential to lead the rapidly growing market for **low carbon technologies**, combating global warming while pushing international research forward.

Setting core energy objectives

To respond to these challenges, the European Commission has just proposed a common energy policy, which should be built around the central aims of combating climate change, limiting the EU's dependency on imports, promoting jobs and growth in Europe, and providing secure and affordable energy to all consumers. **This means transforming Europe into a highly efficient, low CO₂ energy economy.**

The EU is proposing that, under a comprehensive new global agreement to prevent climate change from reaching dangerous levels, developed countries including the EU should collectively cut their greenhouse gas emissions to 30% below 1990 levels by 2020. As a concrete first step towards this collective reduction, the EU has made a firm commitment to cut its own emissions by at least 20% over the same period, until a global and comprehensive global climate agreement is concluded.

Leading a new industrial revolution

Europe's new Energy policy amounts to a **new industrial revolution**. The EU now needs to show it can be a global leader in launching this fundamental change. It has to accelerate the trend towards low-carbon growth and dramatically increase the amount of **local, cleaner energy** produced and used.

At the same time, the EU must do this in the most cost-effective way possible, ensuring that Europe achieves its competitive potential. In fact, promoting alternative, domestic energy sources is not only implicit in achieving emissions targets, but it will also mark improvements in Europe's security of supply – and ultimately its competitiveness.



Taking action: a plan for a Common European Energy Policy

An **Action Plan** is needed to help the EU achieve its energy goals. The European Commission has drawn up such a plan using the many contributions gathered from public consultations.

The plan is comprised of several clearly defined aims which, together, will shift the EU decisively towards a more sustainable, secure and competitive low-energy economy, representing the core of a **new Common European Energy Policy**.

Taking global action

While pursuing its own targets for greenhouse gas emissions, the EU will strengthen efforts to get global action in combating climate change. Member States should **speak with one voice** on international energy issues. The EU will take the lead in designing international agreements (initiate for example an agreement on energy efficiency), work for a new partnership with Africa, and back moves to make international energy markets more transparent.

Making better use of the new internal energy market

The move to competitive and open European electricity and gas markets would stimulate fair energy prices and savings provided that the **right policy and legislative frameworks** were in place. It would also generate more investment in clean, sustainable energy technologies and renewable energy. Not all the conditions to achieve this exist, which prevents EU citizens and the EU economy from receiving the full benefits of energy liberalisation like the right of consumers to easily choose their supplier for electricity and gas.

Enhancing energy efficiency

An estimated **one fifth of all energy could be saved**, and everyone can make a difference when it comes to cutting down on the amount of energy we use. Everyone needs to join in the Europe-wide effort to

cut down on energy waste. Several new measures are to be taken: minimum efficiency requirements for energy-using equipment, stronger actions on energy use in buildings, transport and energy generation.

Increasing the use of renewable energy

Far more could be done to promote renewable energy sources – wind, solar, photovoltaic, biomass and biofuels, geothermal and heat pumps. Several EU Member States are not delivering on their commitments in this area. Europe should aim to **triple the share of renewable energy** from under 7% today to 20% in 2020. This will of course be easier if individuals try to use less energy and if more people choose renewable energy for their homes, electricity supply and cars. Another aim is to increase the level of biofuels in transport fuel to at least 10% by 2020.

Developing technology

Better use must be made of **existing energy-efficient technologies** such as low-energy light bulbs, solar panels for hot water, hybrid cars and insulation. But it is also necessary to develop **new technologies** that will help replace oil and gas when these become either too scarce or too expensive for most people.

Meanwhile, even if the EU succeeds in making significant changes to its energy mix and energy needs, it will still be highly dependent on oil, gas and coal for the foreseeable future. This means **low carbon technology for fossil fuels** is also badly needed. Carbon capture and storage is a promising technology which deserves to be tested on a commercial scale: twelve large-scale demonstration plants need to be promoted.





Promoting EU energy solidarity

It should be easier for EU Member States to help one another in the event of an energy crisis. This might include helping Member States to diversify when they are highly dependent on a single supplier, or improving the way the EU emergency oil stocks system works.

Ensuring nuclear safety and security

Deciding whether or not to use nuclear power is up to Member States. But the EU must ensure that, where it is employed, nuclear power respects the highest standards of safety, security and non-proliferation. The EU will continue to ensure that such high standards are observed internationally.

Proposed EU Energy Policy Targets and Objectives

- Reducing **greenhouse gas emissions** from developed countries by 30% by 2020; the EU has already committed to cutting its own emissions by at least 20% and would increase this reduction under a satisfactory global agreement
- Improving **energy efficiency** by 20% by 2020
- Raising the share of **renewable energy** to 20% by 2020
- Increasing the level of **biofuels** in transport fuel to 10% by 2020

Keeping tabs on energy trends

To provide a clear understanding of what is happening to Europe's energy supply and demand, the European Commission will review developments every two years. It will also provide a new service - an Office of the Energy Observatory - which will pool all data and improve transparency on EU energy markets.



For more information see:

http://ec.europa.eu/energy/energy_policy/index_en.htm

Published by: European Commission, Directorate-General for Energy and Transport, BE-1049 Brussels.

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