

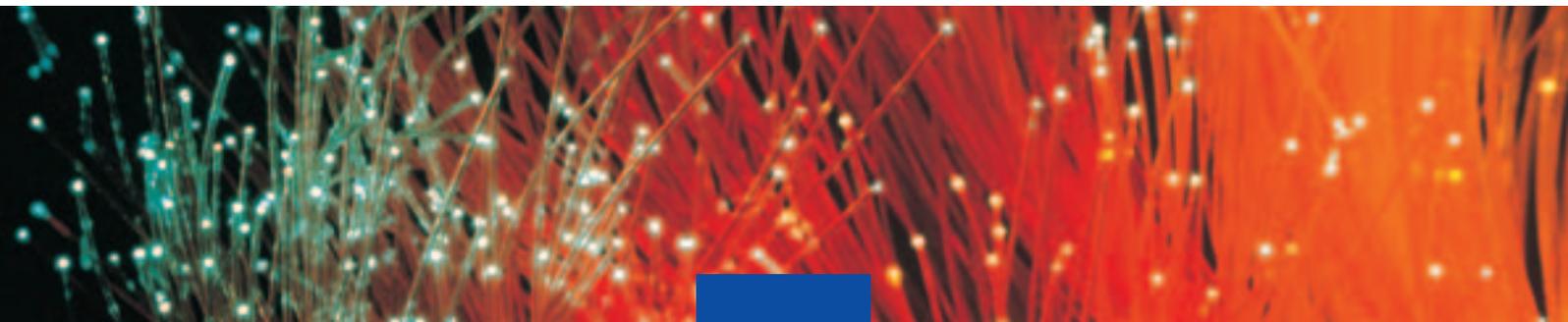


THE EUROPEAN  
UNION EXPLAINED

# Energy

Sustainable,  
secure and  
affordable  
energy for  
Europeans

Europe must prepare now for a radical change in its energy production, transport and consumption.



# THE EUROPEAN UNION EXPLAINED

*This brochure is part of the series 'The European Union explained' that explains what the EU does in the fields where it has powers, why it does this and what it achieves.*

*You can find the brochures here:*

[http://europa.eu/pol/index\\_en.htm](http://europa.eu/pol/index_en.htm)

## CONTENTS

### Why do we need a European energy policy?

Common interests in a strategic field. . . .3

### What steps is Europe taking to prepare?

A European energy strategy . . . . .5

### What is Europe doing?

Empowering consumers and stimulating the energy sector. . . . .8

### Work in progress

2020 and beyond: future challenges . . .13

**Further information. . . . . 14**

How the EU works  
Europe 2020 — The EU growth strategy  
Founding fathers of the EU

Budget  
Climate action  
Competition  
Consumers  
Culture, audiovisual and sport  
Customs  
Development aid  
Digital strategy and information society  
Economic and monetary union and the euro  
Education, training and youth  
Employment and social affairs  
**Energy ✘**  
Enlargement  
Enterprise  
Environment  
Farming  
Fisheries and maritime affairs  
Food safety  
Foreign and security affairs  
Fraud prevention  
Humanitarian aid  
Immigration and asylum  
Justice, citizenship and fundamental rights  
Public health  
Regional policy  
Research and innovation  
Security and home affairs  
Single market  
Taxation  
Trade  
Transport

## The European Union explained Energy

European Commission  
Directorate-General for Communication  
Publications  
1049 Brussels  
BELGIUM

Manuscript completed in July 2012

Cover and page 1 photo:  
© Digital Vision/Getty Images

2012 – 14 pp. – 21 x 29.7 cm  
ISBN 978-92-79-24116-1  
doi:10.2775/4819

Luxembourg: Publications Office of  
the European Union, 2012

© European Union, 2012  
Reproduction is authorised, provided the source is  
acknowledged. For any use or reproduction of any of  
the photos, permission must be sought directly from the  
copyright holders.

# Why do we need a European energy policy?

## Common interests in a strategic field

Lighting, heating, transport, industrial output: without energy we would have none of these essential day-to-day services without which we and our businesses cannot function. Our stocks of fossil fuels (oil, gas and coal) will not, however, last forever. They need to be judiciously managed while we look into new sources of energy. Europe is consuming, and importing, increasing quantities of energy. Europe's countries are well aware of the advantages of coordinated action in such a strategic field. That has led to common rules throughout Europe and a pooling of Europe's efforts to secure the energy that it needs at an affordable price, while generating the least possible pollution.



*Generating energy and transporting it to consumers requires huge technical, logistical and financial resources.*

## A complex sector

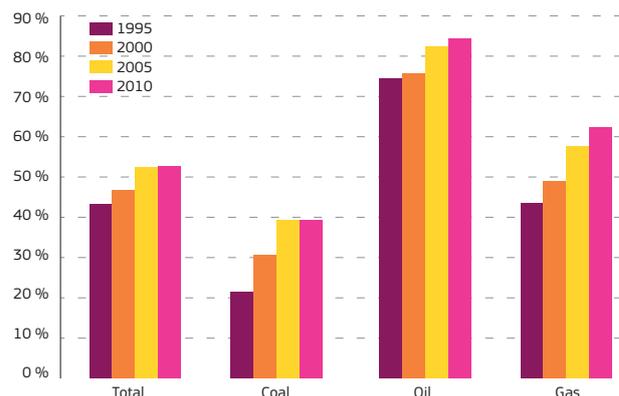
While turning on our computers or starting our cars are actions that we take for granted, they are nevertheless the final stage of a complex process. First of all, energy resources, such as gas, oil and coal, have to be extracted from the ground. Wood can also be converted into heat and electricity generated from wind, water and sunlight by wind turbines, dams and solar panels. This energy then has to be transported, sometimes across continents or under the sea, to the place where it will be used. That requires power plants able to guarantee an uninterrupted supply of energy for many decades. Massive technical, logistical and financial resources are therefore involved.

Energy is a strategic sector, as we cannot do without it. It is vital for lighting, protecting against the cold and transporting people and goods, and also underpins all the sectors of the economy — agriculture, industry and services — as well as scientific progress. Our standard of living requires huge amounts of energy and that obviously generates pollution (air, water, soil and climate), whose impact needs to be reduced as far as possible.

## The world's largest importer

Europe depends on the rest of the world for its energy. The European Union, the world's second largest economy, consumes one fifth of the world's energy but has very few reserves of its own. Fortunately, here in Europe, our portfolio — known as the 'energy mix' — is very diverse: from Austria's many dams, Poland's coal mines or France's nuclear power stations to the oil rigs of the North Sea and the gas fields of the Netherlands

**CHANGES IN THE PROPORTIONS OF EU FOSSIL FUEL IMPORTS (1995–2010)**



Source: Eurostat.

and Denmark, none of Europe's countries are alike, and that is no bad thing. Provided, of course, that those countries work together to make the most of their diversity.

Europe's energy dependence has an impact on our economy. We buy our oil from OPEC (Organisation of the Petroleum Exporting Countries) and Russia, and our gas from Russia, Norway and Algeria. Europe's coffers are depleted to the tune of over €350 billion every year to pay for it. Energy costs are also continuing to rise. That leaves us with no other option: Europe has to be effective, set ambitious goals and work together if we are to diversify our energy sources and their channels of supply.

### Europe's goals

*The European Union has the powers and instruments that it needs to implement an energy policy geared towards:*

- *securing Europe's energy supplies;*
- *ensuring that energy prices do not make Europe less competitive;*
- *protecting the environment and in particular combating climate change;*
- *improving energy grids.*

*EU countries are free to develop whichever energy sources they want. They must, however, take account of European renewable energy objectives.*

## Climate constraints

Leading experts have shown the exorbitant cost of climate change if the world does not immediately start to reduce its greenhouse gas emissions. The energy sector is directly involved here as over 80 % of its output comes from fossil fuels. They emit CO<sub>2</sub>, the main greenhouse gas, when they are burnt. In future, therefore, the European energy sector will have to cut down on fossil fuels and make much more use of low-carbon energy sources.

## Europe can act together

The importance that EU countries attach to the energy sector is nothing new. Its importance was recognised immediately after the Second World War, when it was resolved to 'place the instruments of war at the service of peace', to use the words of Jean Monnet, one of the founding fathers of the EU. Coal and steel and atomic energy were the starting point for the first European treaties: the European Coal and Steel Community (ECSC), which came to an end in 2002, and Euratom, which is still in force today.

In the 1960s, the EU countries realised they had to work together to resolve energy supply problems. As a result, they pooled strategic oil stocks and set up a crisis management procedure. Nowadays, energy policy also has an impact on many other fields: industry, the environment, transport, research and innovation, even external relations.

*A single market of half a billion Europeans.*



# What steps is Europe taking to prepare?

## A European energy strategy

As Europe has few energy reserves, it currently has to import over half of its energy. As the price to be paid is decided by world markets, Europe has no choice but to pay up. The only way of cutting our energy bill is therefore to reduce the amount of energy that we consume. That may seem obvious. Can we consume less, however, while maintaining our standard of living and our modern conveniences?

### Saving energy

Although it is no easy matter, the answer is yes: by using energy in better and more efficient ways. A win-win solution: CO<sub>2</sub> emissions can be prevented, we become less dependent on energy imports and it may well be possible to create local jobs and export our expertise. Energy efficiency is therefore one of the European Union's main objectives for 2020. European leaders decided that forecast energy consumption in 2020 needed to be cut by one fifth. Such a substantial cut would be tantamount to turning off the output from over 400 power stations. If it is to achieve its objective, the European Union has to encourage its member countries to stop energy from being wasted by electrical appliances, industry, transport and buildings. Buildings are a key area, as we consume 40 % of our energy in them, 80 % in the form of heat. EU countries are all having to draw up plans to achieve the European energy efficiency objectives. In a climate of economic recession, the European Union has to be imaginative if it is to encourage investment in energy efficiency. Even

*The challenge for Europe: lower consumption with no drop in living standards.*



if that investment is profitable and is soon recouped, the money has to be made available in the first place. The European Union, through its budget and its financial institutions, can help its member countries finance their energy efficiency plans.

### A genuine European energy market

In principle, electricity and gas can flow freely through the grids which criss-cross Europe. In a single European energy market, all producers and suppliers are competing with one another. In theory, it is therefore possible to buy and sell electricity and gas wherever you want, the aim being to obtain high-quality energy at the most competitive price. However, this market of 500 million consumers has yet to become a reality, as the development of cross-border energy businesses is still being hampered by a raft of national rules. The prices of gas and electricity for businesses, set by governments, are just one example. Some players even have an unfair privileged access to energy grids. Investors are therefore being put off because the outlook is not very promising. The knock-on effect of that could well be to delay the renewal of power plants that have become too old. Competition therefore needs to be managed in a better way and common rules on the equitable use of grids introduced. The European Union has a paramount role to play here as, if it sets the rules, it also has extensive powers to supervise markets to prevent certain players from unjustly exploiting any kind of monopoly.

### Up-to-date energy grids

Energy grids also need to be modernised and developed to cope with the growing demand for energy and to diversify existing resources and make the market more fluid. Over the next 10 years, a massive investment of around €1 000 billion will have to be made in energy grids. The EU can give its Member States a real helping hand here, as it is in all their interests to develop high-voltage lines and gas pipelines connecting them to one another, and to store energy. Not only does that promote trade, it also promotes solidarity were demand to outstrip supply

within Europe's borders. High-voltage electricity grids, built originally to connect the large electricity power stations to their neighbouring consumer areas, must also be connected up to further-flung power stations intermittently generating electricity from renewable sources. Lastly, distribution grids must make it possible to use electricity in a more flexible way so that peaks in demand can be better managed and must allow for individual micro-generation (solar panels for instance).

It still takes too long, however, to obtain the permits needed for grid projects. The European Union should therefore encourage the development of energy grids by laying down priorities at European level, speeding up the construction of any 'missing links' and modernising grids, especially in eastern Europe. The role of the European Union should not just be one of overall coordination, as it should, in some cases, help out with certain projects that are essential but involve too many economic risks.

### Consumers are central to concerns

All that has one ultimate aim: to benefit consumers, whether they are individuals or small or large businesses. Consumers have rights and must be better informed about them if they are to make the most of the opportunities offered by the internal energy market. For instance, they should be able readily to switch supplier, they should receive straightforward bills and offers that can be compared, they should be able to find out where their electricity has come from and they should be able to find out about their consumption at any moment. Information technology and telecommunications are set to occupy an increasingly important place in the energy sector as a way of involving consumers more proactively in the energy market. Only Europe-wide regulation will place all consumers on an equal footing and enable them to benefit from the economies of scale achieved by the

*European households and businesses need safe and reliable energy.*



sector. Europe must therefore introduce the necessary regulations, especially as regards the protection of data from meters. Consumers must also be able to buy energy-saving appliances and be informed about their actual consumption so that they have all the information at their fingertips before making a purchase. Businesses must also be able to buy their energy in as secure a way as possible from the place in which it is cheapest. Only real competition can pave the way for fair prices that are not artificially high or too low to encourage investment in energy generation.

### Safety: an issue for Europeans

Europeans need to know that European energy policy is ensuring safe energy generation and transport. EU governments are aware of the advantages of Europe-wide coordination or even harmonisation of the safety standards for critical power plants. The Fukushima accident in Japan has shown how important nuclear safety is. The European Union must therefore set the highest possible safety standards for European nuclear power stations and the management of nuclear waste. Set at European level, European standards to protect the population and nuclear-sector workers against radioactive radiation now apply throughout Europe. Lastly, Europe must be able to continue to guarantee that trade in uranium within its borders fuels neither trafficking nor the proliferation of nuclear weapons. All these rules may provide a template for the world as a whole. In the case of other power plants, such as offshore gas and oil plants, steps have to be taken to prevent any repeat off Europe's coasts of the disastrous oil slick in the Gulf of Mexico in 2010.

### Leaders in low-carbon technology

There will have to be a technological revolution in Europe if its energy is to be generated without emitting CO<sub>2</sub>. In March 2008, the European Union therefore approved a strategic plan for low-carbon energy technologies. The aim is to rally industrialists in the sectors concerned to work together while benefitting from the support of the European Union. Some industrial initiatives are focusing on energy generation and sources such as biofuels, wind, solar and nuclear power, as well as fuel cells and the use of hydrogen. Others are geared towards better energy management in 'smart cities', underground CO<sub>2</sub> capture and storage and the electricity grids of the future. The aim is to make these new technologies affordable and profitable so that current technologies can ultimately be replaced and CO<sub>2</sub> emissions reduced in the European energy

sector. The huge finances involved mean that this goal can be achieved only by a Europe-wide coordinated effort: it is estimated that €50 billion will have been channelled into the European plan by 2020.

## Energy diplomacy

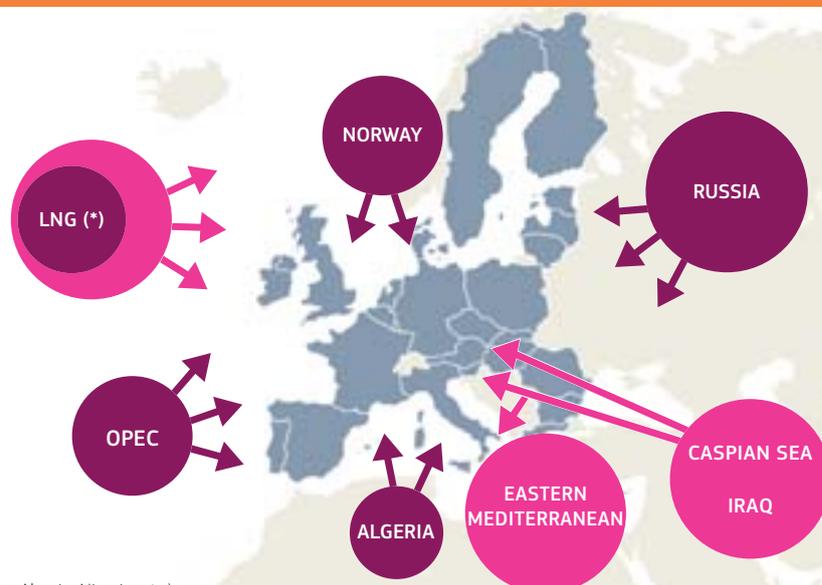
Europe, the world's largest regional market, has to assert its interests in the international arena in order to ensure that its supplies of energy are secure. When you are so big but so dependent on the outside world, you cannot just leave matters to take their own course — especially at a time when the world race for energy resources is speeding up. The problem is that the European Union has always found it difficult to speak with a single voice when it should be presenting a united front and bringing all its weight to bear on the leading energy producing and consuming countries. Europe must first make sure that its neighbours serve its energy interests, not just for the purposes of secure transport of energy from its gas and oil suppliers, but also as a way of extending its energy market. Energy also has to be part of European external policies: development aid, trade and bilateral cooperation agreements. That is also a way of supporting exports of cutting-edge European technologies.

## Democratic decision-making

European energy policy matters to all Europeans. European legislation has a major impact on national legislation, especially in the energy field. The European Parliament (elected every 5 years by Europeans) and the Council of Ministers of the European Union (representing member governments) jointly adopt European energy legislation, except for legislation on nuclear power and energy taxation which the Council of Ministers adopts on its own. National governments are involved at an early stage in drawing up European law, via committees of national experts. Professional organisations and civil society take part in this transparent process, as their opinion is sought during various consultation stages — that is, if they haven't already made their views clear!

### WHERE DO EUROPE'S OIL AND GAS IMPORTS COME FROM?

- Traditional strategic suppliers
- Emerging strategic suppliers



(\*) LNG: liquefied natural gas (Qatar, Algeria, Nigeria, etc.)

## What is Europe doing?

### Empowering consumers and stimulating the energy sector

The European Union is providing European consumers with an unprecedented level of protection: protecting vulnerable consumers, stepping up the regulatory powers of supervisory authorities and their ability to impose sanctions and making bills clearer. The real revolution lies, however, in the 'smart' meters and grids that the European Union hopes will make consumers more proactive. Not only will bills be based on actual consumption, but consumers will also be able to find out about their consumption at any moment and take steps to improve it. The European Union is introducing the necessary safeguards to ensure respect for privacy and for the information gathered from smart meters.

From the point of view of information, energy performance labelling, brought in by the European Union, means that purchasers of electrical appliances now have all the information they need at their fingertips. This kind of labelling is now being extended to many domestic electrical, office and other products. It has encouraged manufacturers to offer more energy-saving products, helping to reduce bills, as the real retail price of a product does not just include its purchase price but also the cost of using it.

#### Cutting energy bills

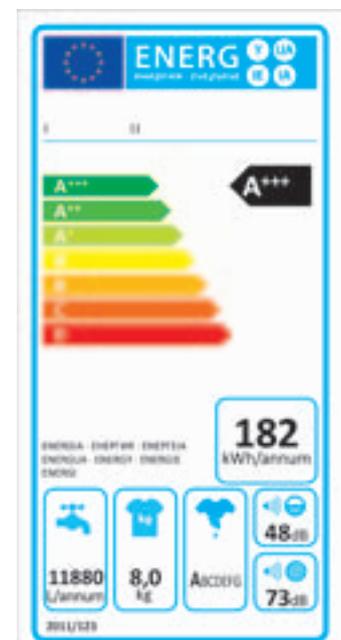
The end of the monopolies in the electricity and gas markets means that all consumers are free to choose their energy suppliers. A recent study has estimated that over €13 billion, i.e. €100 per household per year, could be saved by switching electricity and gas supplier. Businesses were the first to be able to choose their electricity and gas suppliers. Energy accounts for a substantial proportion of the production costs of both large and small businesses in Europe's main industries. Competition between energy suppliers has extended what is on offer, improved the overall quality of the service and kept prices as competitive as possible.

To back this up, national authorities, commonly known as energy 'regulators', have been established by the European Union. Their task is to police the system and represent the interests of the public and therefore consumers. They have extensive powers to punish

anti-competitive practices and help consumers to make the best possible choices. The regulators set energy transport tariffs as fairly as possible so that grid operators receive a proper income and are encouraged to invest, without any major increases in final consumers' bills. Energy prices will not necessarily go down, however, as they depend to some extent on world oil prices which are impossible to control. The only real way of reducing your energy bill is therefore to reduce what you consume. If European energy-saving goals are achieved in 2020, that will mean a yearly saving of €1 000 for every European household.

#### Securing Europe's energy supplies

Although major electricity cuts are now rare in Europe, that is to some extent due to the cooperation between grid operators set in motion by the European Union. However, 50 % of Europe's gas is imported, in some cases from very far away. A breakdown in supply for reasons over which it has no control may have serious consequences. In the event of shortages, the European



*Energy performance labelling gives you the information you need to choose the right appliance.*

Union has a very comprehensive solidarity mechanism through which oil and gas stocks can be accessed. Prevention is nevertheless better than a cure: it has set up its own energy market observatory and even introduced an early warning mechanism with Russia.

---

### The lessons of the January 2009 'gas crisis'

*The European Union and the energy industry had to act together to deal with an unexpected shortage of Russian gas in the middle of winter. A lack of gas interconnections meant that countries such as Bulgaria and Romania, highly dependent on Russian gas, were completely cut off from the rest of Europe. Europe was made brutally aware of its vulnerability to supply crises. Under its European recovery programme, €1.3 billion of funds was channelled into the construction of gas infrastructure between 2009 and 2012. Some €78 million has gone into 'reverse-flow' facilities so that gas can, if necessary, be sent from western Europe to the eastern European countries.*

---

*Greater energy sharing between European countries reduces the risks of gas shortages and power cuts.*



## Stimulating the energy sector

Competition between electricity and gas operators has shaken up the energy sector. New trades have emerged (traders, consultants, auditors) and the sector is increasingly drawing on information and communications technologies. New operators have broken into national markets and many now have a European dimension. Winning over new customers requires innovation to create new products, at a competitive price, and therefore greater efficiency. The European Union has introduced incentive and priority measures to promote new sources of energy in electricity generation, in biofuel and heat production and even in combined electricity and heat generation.

## The boom in renewables

Europe has set itself an objective: one fifth of the energy consumed in the European Union in 2020 should come from renewable sources. Promotion throughout Europe has led to a spectacular increase in the production capacity of renewable sources, with conventional power stations lagging some way behind. The cost of solar panels has fallen by 50 % over the last 5 years. In 2009, the industrial renewables sector was already worth €70 billion and employed over half a million people in Europe. And that is set to continue, as renewable sources are at the core of Europe's long-term energy strategy because they make it possible to cut greenhouse gas emissions and reduce energy imports. This booming economic sector leaves no doubt that Europe is leading the way in the new energy technologies, providing Europe with 'green' jobs and high added-value exports.

## Energy efficiency: a promising market

Research into greater energy efficiency is stimulating growth. Insulating homes, installing new energy-saving equipment, refurbishing buildings, carrying out audits: they all create economic activity. Two million jobs could be created by 2020 if Europe's energy-saving objectives are achieved. With a return as well! With a yearly investment of €24 billion in insulation and energy management and control systems, for instance, the European energy bill could be cut by some €38 billion between 2011 and 2020.

From now on, energy suppliers will also have to deliver energy savings for their customers. The energy service company business model will need to be rolled out throughout Europe. Companies like this are tasked with supplying energy services (lighting, heating, air conditioning, electricity supply) on condition that they invest in high-performance equipment and reap their rewards from the energy savings that they achieve.

*Achieving European energy-saving objectives could create 2 million jobs by 2020.*



*The Energy Star logo helps consumers to find equipment with high energy efficiency.*



In the case of appliances, Europe is giving consumers the option to replace their current appliances. It is lowering energy consumption standards for a whole range of appliances, from their design to the end of their life: televisions, refrigerators, dishwashers, washing machines, fans, freezers, lamps, etc. The most radical change, which will not have escaped anyone in Europe, has been to put a stop to the production of conventional light bulbs, which have been replaced by energy-saving light bulbs. These bulbs may use up to five times less energy. Overall, between €5 billion and €10 billion will be saved and channelled back into the economy.

The Energy Star logo that you see on your office equipment is visible proof that the European Union is encouraging the sale of energy-efficient products. Since 2001, under this agreement with the US, it has been possible to showcase the good energy efficiency of products (computers, photocopiers, printers, monitors). This information offers the public authorities a valuable guideline when making bulk purchases.

---

## Disseminating good practice

Interview with Patrick Lambert, Director of the Executive Agency for Competitiveness and Innovation.

*What is your agency doing in the energy field?*

P.L.: We manage a programme called Intelligent Energy Europe which fosters energy efficiency and the use of renewable sources as well as the creation of local or regional energy agencies. We finance training, dissemination, information and communication projects and projects to demonstrate best practices in these fields. Our work culminates every year in the spring, at the European Sustainable Energy Week.

*Can you really change attitudes in a week?*

P.L.: Several hundred events took place during that week, throughout the European Union, including 100 or so in Brussels. We want to make Europeans and businesses more aware and create a 'snowball' effect by encouraging them to replicate projects and best practices throughout Europe. Our annual Sustainable Energy Prizes are our showcase.

*Is legislation not enough on its own?*

P.L.: Adopting laws is important, but action is also needed in the field to ensure that they become a reality in people's lives. For instance, it will not be possible to put European legislation on the energy performance of buildings into practice unless consumers are properly informed about it.

---

## Combating climate change

Europe has undertaken, in international climate talks, to reduce its greenhouse gas emissions by 20 % of 1990 levels by 2020 and to increase that figure to 85 % or even 95 % by 2050. Most of that reduction will have to come from the energy sector, as it accounts for 80 % of the European Union's greenhouse gas emissions. If Europe manages to achieve its renewable energy and energy efficiency objectives by 2020, it would then be able to exceed its current goal of a 20 % reduction of greenhouse gas emissions from 1990 levels and achieve a 25 % reduction in 2020.

All decision-making levels are involved in implementing European energy and climate policies, be they local, regional, national or European. For instance, the European Union launched the Covenant of Mayors initiative in 2009. Signatory towns and cities undertake to exceed the European objectives. There are currently

4 000 signatories, representing over 160 million inhabitants and offering a potential CO<sub>2</sub> reduction of 164 million tonnes, the equivalent of total emissions from Hungary, Sweden and Portugal.

## Europe's place on the world stage

The European Union has set up a permanent dialogue on energy issues with its main suppliers — Russia, OPEC, Norway and the Gulf States — and with other countries or regions playing a part on the world energy stage — the United States, Africa, Brazil, India, China and the Mediterranean. Europe has launched many cooperation and aid programmes in the energy field throughout the world. The European Union speaks with a single voice within organisations such as the International Energy Agency (IEA), the International

Atomic Energy Agency (IAEA) and the International Energy Forum (IEF). Europe has signed up to the Sustainable Energy for All initiative launched in 2011 by the UN to help a further 500 million people in the developing countries to gain access to sustainable energy by 2030. Closer to its borders, the European Union has signed an energy community treaty in order to extend the rules of its internal energy market to 10 or so countries of south-east Europe. Europe also has a structured neighbourhood policy with the countries between the EU and Russia, covering energy issues and, in particular, energy transit grids.

To meet the future challenges posed by energy, Europe is taking part in a number of large-scale international projects including ITER, the experimental nuclear fusion reactor being built at Cadarache (France). It is also taking part in the international research project on nuclear reactors of the future (Generation IV).

*The EU takes part in many international programmes where it can spread its expertise in renewables.*



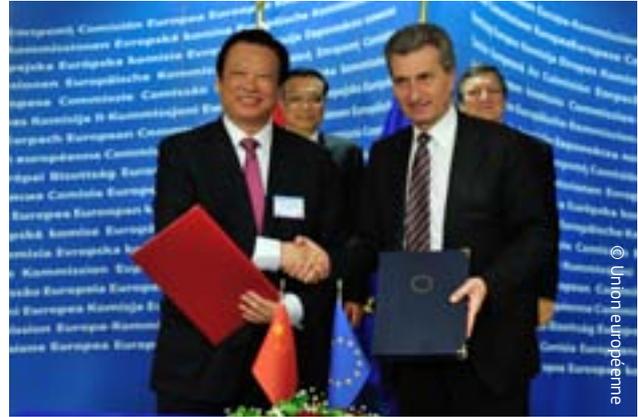
## Work in progress

### 2020 and beyond: future challenges

Throughout the world, we shall all have to come to terms with a new situation in future: increasingly difficult access to the planet's mineral resources. Oil will be much more expensive and much more difficult to extract. While new oil and gas reserves (shale oil and gas) may well exist, there are many environmental constraints on their extraction. More and more energy will be needed to mine raw materials, as the mineral content of mines will continue to decrease. Lastly, some countries such as China already have a quasi-monopoly over the production of rare metals, a must for high-tech industries. Europe will have to put all its weight into complex negotiations if it is to get the Caspian Sea gas resources across its borders. Access to energy sources will be increasingly dependent on geopolitical considerations. This new world situation will make it impossible to put off a radical rethink of Europe's energy supply security.

#### A predictable long-term energy policy

Many challenges need to be met in a complex situation: securing access to imported energy sources under the best possible conditions while supplying energy at the most competitive price and conserving the environment as far as possible. In keeping with its international commitments, the European Union has started down the path that will lead to a low-carbon society by 2050. Its '2050 roadmap' is fuelling the debate on the best way of managing to meet growing energy needs while emitting as little greenhouse gas as possible, at a price which is affordable. To attract investors, however, it is important for the direction and regulatory framework that they are given to be clear and predictable from now on, as a great many power plants which have served their time will have to be replaced in future, over a period of 30 to 40 years, by new plants. There will have to be a shift away from the current centralised system, with its large-scale power plants, towards a system made up of more and more small decentralised production units. We need to start thinking about that now.



*The EU cooperates with the major players in world energy, especially China.*

#### Fostering technological progress

If we are to move towards a low-carbon society, there has to be a technological revolution in the energy sector. We already know that electricity will somewhat paradoxically play more of a role in the future in lowering overall energy consumption, especially in transport. Innovation is therefore a must, and the European Union's role will be to fill the gap between the work of researchers and engineers and the marketing of new technologies. Projects are under way to develop wind power on a massive scale in the North Sea and to pipe solar energy produced in the deserts of north Africa to the south of Europe. Storing energy is another major technological challenge, especially renewable energy bearing in mind that the lion's share of energy will in future be clean energy. Europe is not, however, the only runner in this race. The United States, China, Japan and Korea are channelling enormous resources into support for technological innovation in the energy sector and threatening Europe's leadership. Investing in low-carbon technologies will have at least one major advantage — cutting our external energy bill, as we will have to import much less fossil fuel energy.

## A more European energy policy

It is only through European integration that these long-term challenges can be met. There can be no doubt that the decisions of one EU country have repercussions for us all. Modernising the energy system and developing new technological solutions raise huge financial issues. Without European cooperation, public

funds will not be able to channel investment into technologies of the future which are still too risky for investors. In this period of transition to a greener world, the EU must not just speak with a single voice in the outside world but its member countries must also agree on their energy priorities, to better coordinate their work in this field. A genuine common European energy policy is the only solution.

*Cities of the future will be low-carbon and provide better services for their increasing populations.*



## For further information

### EUROPEAN ENERGY LEGISLATION

- ▶ **Summary of EU legislation:** [http://europa.eu/legislation\\_summaries/energy/index\\_en.htm](http://europa.eu/legislation_summaries/energy/index_en.htm)

### EUROPEAN ENERGY STATISTICS

- ▶ **Key figures:** [http://ec.europa.eu/energy/observatory/countries/doc/key\\_figures.pdf](http://ec.europa.eu/energy/observatory/countries/doc/key_figures.pdf)
- ▶ **Energy Observatory:** [http://ec.europa.eu/energy/observatory/countries/countries\\_en.htm](http://ec.europa.eu/energy/observatory/countries/countries_en.htm)

### EUROPEAN ENERGY STRATEGY

- ▶ **2020 strategy:** <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0639:EN:HTML:NOT>
- ▶ **2050 roadmap:** [http://ec.europa.eu/energy/publications/doc/2012\\_energy\\_roadmap\\_2050\\_en.pdf](http://ec.europa.eu/energy/publications/doc/2012_energy_roadmap_2050_en.pdf)

### EUROPEAN ENERGY POLICY

- ▶ **European Commission — DG Energy:** [http://ec.europa.eu/energy/index\\_en.htm](http://ec.europa.eu/energy/index_en.htm)

### QUESTIONS ABOUT THE EUROPEAN UNION?

- ▶ **Europe Direct can help:** 00 800 6 7 8 9 10 11: <http://europedirect.europa.eu>

