



2020 vision:  
**Saving  
our energy**

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# Rising to the challenge

**T**he European Union is facing unprecedented energy challenges. These are the result of its increased dependence on energy imports, as well as concerns about supplies of fossil fuels and the effects of climate change. Nevertheless, Europe continues to waste at least a fifth of its energy, just through sheer inefficiency. And this is despite the fact that saving energy is by far the most effective way to simultaneously improve security of energy supply and to reduce carbon dioxide (CO<sub>2</sub>) emissions. Saving energy also helps to foster economic competitiveness and to stimulate the development of leading-edge markets for energy-efficient technologies and products.

EU Heads of State or Government have stressed the need to increase energy efficiency, and the EU intensified its efforts as the European Commission presented in October 2006 a wide-ranging action plan for energy efficiency. The action plan outlines a framework of policies and measures designed to realise the estimated savings potential of over 20% of the EU's annual primary energy consumption by 2020, compared with the business-as-usual scenario.

The plan also looks to reinforce Europe's position as a world leader in energy efficiency. It intends to mobilise the general public, market actors and policy-makers, transforming the EU energy market so as to provide citizens with the most energy-efficient infrastructure, buildings, appliances, and means of transport possible.

Realising the EU's energy-saving potential will indeed require far-reaching changes in the way energy is consumed. A paradigm shift is needed in the way society behaves, so that Europeans use less energy while still enjoying the same quality of life. Producers will have to be encouraged to develop more energy-efficient technologies and products, while consumers will need stronger incentives to buy such products and use them rationally.

'Europeans need to save energy. Europe wastes at least 20% of the energy it uses. By saving energy, Europe will help address climate change, as well as its rising consumption, and its dependence on fossil fuels imported from outside the Union's borders,' said EU Energy Commissioner Andris Piebalgs as the Commission presented the action plan. 'Energy efficiency is crucial for Europe: if we take action now, the direct cost of our energy consumption could be reduced by more than EUR 100 billion annually by 2020; around 780 million tonnes of CO<sub>2</sub> will also be avoided yearly,' the Commissioner pointed out.



# The potential to save energy

Energy efficiency has improved considerably in recent years, but it is still expected to be technically and economically feasible to save at least one fifth of the EU's total primary energy by 2020. This is on top of what would be achieved anyway through price effects and structural changes in the economy, along with natural replacement of technology and measures already in place.

Partly because of its large share of total energy consumption, the biggest cost-effective savings potential lies in the residential (households) and commercial buildings (tertiary) sector. The full savings potential in these areas is estimated to be around 27 % and 30 % of energy use respectively.

Based on the savings potential scenarios for the various end-use sectors (see table), it is estimated that the additional savings arising from new policies and measures and from strengthening existing ones could realistically be up to 20% by 2020 (1.5% or 390 Mtoe (million tonnes oil equivalent) per year) – including savings in energy transformation.

These savings are in addition to prospective improvements in energy intensity (energy consumption relative to economic output) of 1.8% (or 470 Mtoe per year) due to factors including expected structural changes, the effects of previous policies and changes brought about by natural replacement of technology, as well as changes in energy prices.

Estimated energy saving potential in end-use sectors

Sector	Energy consumption 2005 (Mtoe)	Energy consumption 2020 (business-as-usual) (Mtoe)	Energy saving potential 2020 (Mtoe)	Energy saving potential 2020 (%)
Households (residential)	280	338	91	27
Commercial buildings (tertiary)	157	211	63	30
Transport	332	405	105	26
Manufacturing industry	297	382	95	25

# Policies and measures to boost energy efficiency



The European Commission's action plan for energy efficiency sets out a package of measures designed to put the EU on track towards saving 20% of its energy by 2020. Building on existing EU energy efficiency legislation (see box), the plan foresees 10 particularly important priority actions covering all energy sectors. These are accompanied by various sector-specific and cross-cutting measures (see box and, for more details, pp. 4–11).

## Key EU legislation on energy efficiency as at October 2006

- Directive on energy performance of buildings
- Directive on the promotion of cogeneration
- Directive on the taxation of energy products and electricity
- Directives on efficiency requirements for boilers, fridges and ballasts for fluorescent lighting
- Directives on the labelling of electric ovens, air conditioners, fridges and other appliances
- Directive on eco-design requirements for energy-using products
- Directive on energy end-use efficiency and energy services
- Regulation on Energy Star labelling for office equipment

Dynamic energy performance requirements should be set for a wide range of products, buildings and services, according to the plan. Efficiency should be increased in the energy transformation sector. In transport, a comprehensive approach targeting motor and tyre manufacturers, drivers, oil/fuel suppliers and infrastructure planners is called for.

Cost-reflective price signals are also needed, along with better financing tools and economic incentives, the plan says. It underlines the importance of raising awareness about energy efficiency and helping people to change their behaviour. International cooperation is needed too, while innovation and technology also have a crucial part to play.

Only if all of the measures foreseen in the plan are put in place will the EU's energy saving potential be fully realised. Complementary action by EU Member States, regional and local authorities, as well as the general public and other stakeholders, are absolutely necessary to achieve the objectives.

## ACTION PLAN FOR ENERGY EFFICIENCY: 10 PRIORITY ACTIONS

- Performance standards and labelling of products
- Building performance and low-energy houses
- More efficient power generation and distribution
- Fuel efficiency of cars
- Finance for energy efficiency investments
- Energy efficiency in the new EU Member States
- A coherent use of taxation
- Awareness
- Energy efficiency in cities
- Energy efficiency worldwide





# Stepping up energy performance

**T**here is a comprehensive EU legislative framework in place to improve the energy efficiency of energy-using products, services and buildings, including areas such as eco-design, office equipment, labelling, and energy end-use efficiency.

As the action plan for energy efficiency makes clear, the EU will take additional measures where necessary to accelerate the development of an EU-wide barrier-free market for energy-efficient goods and services and ensure optimal energy performance of products, services and buildings.

## Products

**C**onsumers do not always take into account the longer-term economic savings that come from greater energy efficiency when they look at the price tag for goods like washing machines and dishwashers. So clear energy efficiency standards, performance ratings and labelling need to be in place to inform consumers and make sure that energy efficiency is properly reflected in their purchasing decisions.

In a few years' time products that account for a significant part of total energy consumption should be covered by EU-wide minimum standards and performance rating/labelling provisions. Products not meeting the minimum requirements may not be put on the market.

The EU labelling scheme (see box) will, at the same time, be an instrument to support national policies, including information campaigns, rebate and certification schemes, and public procurement guidelines.

### Action plan priority: Performance standards and labelling of products

EU labelling and minimum energy performance standards (or 'eco-design' requirements) for appliances and other energy-using equipment will be updated, paying special attention to 'standby' modes. Performance requirements will initially be developed for 14 priority product groups (see box). And existing labelling classifications will be upgraded with a view to reserving 'A-label' status for only the top 10–20% best-performing equipment.

### Helping consumers decide: The EU energy label

The EU-wide energy label is found on most 'white' goods and light bulb packaging. The label, among other things, informs consumers about a product's energy efficiency rating on a scale from A to G: A (or A+ and A++) being the most efficient and G the least efficient.

### Initial priority products for energy performance standards

Boilers	Office lighting
Water heaters	Street lighting
Computers	Air conditioning units
Copying machines	Electric motors
Televisions	Fridges/freezers (commercial)
Standby modes	Fridges/freezers (domestic)
Chargers	Washing machines

### STEPS FORESEEN IN THE EU ENERGY EFFICIENCY ACTION PLAN [ \* ]

- Develop eco-design requirements for 14 priority product groups and then for additional products
- Support voluntary commitments to deliver energy savings
- Launch a survey on the implementation of the labelling framework directive
- Prepare additional labelling implementing measures and revise existing labels
- Propose directives for energy labelling of gas water heaters and electric water heaters
- Establish stricter energy efficiency criteria for office equipment

[\*] For a complete, detailed list of measures foreseen for this and other themes presented in this brochure, please refer to the annex of 'proposed measures' included in the action plan for energy efficiency, available at: [http://ec.europa.eu/energy/action\\_plan\\_energy\\_efficiency/index\\_en.htm](http://ec.europa.eu/energy/action_plan_energy_efficiency/index_en.htm)



## Services

**E**nergy services and other end-use efficiency measures represent important ways of saving energy. A legal framework is in place to strengthen EU-wide cooperation in this area, obliging EU Member States to take energy-saving steps by means of energy services and to make other energy efficiency improvements on the basis of national energy efficiency action plans (NEEAPs).

The NEEAPs should show how energy savings will be made, and how Member States intend to comply with provisions on the role of the public sector and the availability of information and advice to consumers.

### Specialising in saving energy: Energy Service Companies

The growth of specialist companies that offer energy efficient solutions creates considerable potential for energy savings in business and industry. These Energy Service Companies (ESCOs) provide a range of services from supplying and installing energy efficient equipment to building refurbishment. The development of the ESCO industry offers scope for greater energy efficiency through cost-effective projects, also helping to bridge the gap between supplier and consumer.

In addition to this legal framework, the European Commission is planning to draw up a memorandum of understanding in cooperation with the Council of European Energy Regulators (CEER) that would set out guidelines and a code of conduct for improving energy end-use efficiency in all sectors.

Meanwhile, the action plan for energy efficiency foresees that financial help will be made available to enable small and medium-sized enterprises (SMEs) and energy service companies to make energy savings identified in energy audits. There will also be EU financing available for eco-innovation, as well as for non-technological actions (through the 'Intelligent energy Europe' programme).

Other initiatives such as the EU's eco-label scheme – a voluntary scheme designed to encourage businesses to market products and services that are kinder to the environment – are also contributing to greater energy savings. Energy efficiency requirements form part of the criteria, in particular for facilities such as tourist accommodation and campsites.

### The eco-label symbol



### STEPS FORESEEN IN THE EU ENERGY EFFICIENCY ACTION PLAN

- Implement and amend the energy end-use efficiency and energy services directive
- Prepare a memorandum of understanding on energy efficiency
- Assess an EU-wide white certificate scheme
- Make national public procurement guidelines on energy efficiency more coherent
- Agree harmonised criteria for voluntary agreements to increase energy efficiency
- Propose more detailed metering and billing requirements



#### Action plan priority: Building performance and low-energy houses

The European Commission will propose expanding the scope of current legislation on the energy performance of buildings to include smaller buildings. This will include lowering the current threshold of 1 000 m<sup>2</sup> for minimum performance requirements for major renovations so as to include a majority of existing buildings. The Commission will propose EU minimum performance requirements for new and renovated buildings and for components such as windows. And it will develop a strategy to increase the prevalence of low-energy houses.

## Buildings

**B**uildings account for a big chunk — 40% — of the EU's energy requirements. It is estimated that more than a quarter — 28% — of the energy used in the buildings sector in the EU could be saved. If this figure were achieved, the EU's total energy consumption would be reduced by around 11%.

In residential buildings, retrofitted wall and roof insulation offer the greatest opportunities to save energy, while improved energy management systems are important for commercial buildings. EU rules already provide for measures to increase the energy performance of public, commercial and private buildings. Legislation requires, for example, that by January 2009 at the latest all large public buildings in the EU display energy performance certificates for the visiting public to see.

Meanwhile, new technology is set to bring about a revolution in the way we use energy in our homes and buildings. The construction of low-energy 'passive' or even 'zero-energy' houses promises to cut our energy use (and energy bills) dramatically. 'Passive' houses do not use traditional heating systems or active cooling, and instead have very good insulation as well as mechanical ventilation systems with highly efficient heat recovery. 'Passive' houses are expected to become more widespread as the relevant technology becomes commercially available and affordable — they could even become the standard for construction of new buildings in the medium term.



#### Let there be light: Low-energy light bulbs

Making improvements to lighting is one of the fastest ways to cut energy bills, and one of the easiest ways to save energy in buildings. Low-energy bulbs, which are now readily available in shops, use less than a quarter of the electricity of a standard light bulb and last up to 15 times longer. According to estimates, replacing bulbs can save an average household around EUR 100 every year.

#### STEPS FORESEEN IN THE EU ENERGY EFFICIENCY ACTION PLAN

- Implement and amend the energy performance of buildings directive
- Propose an expanded role for the public sector to demonstrate new technologies and methods
- Change the threshold for minimum performance requirements for major renovations
- Aim for the performance of new buildings to approach the level of 'passive' houses from 2015
- Consider binding requirements to install passive heating and cooling technologies
- Introduce energy efficiency aspects where relevant under the construction products directive



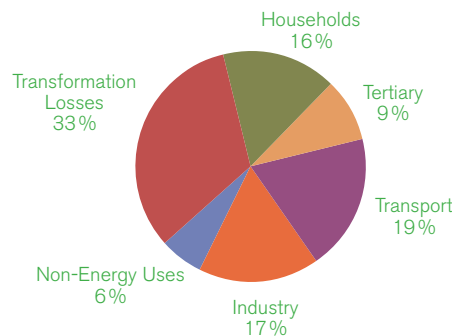


# Improving energy transformation

**M**uch can be done to make the production and distribution of energy more efficient. Energy losses from transformation are significant, accounting for as much as a third of all the energy used in the EU (see figure). Average transformation efficiency for electricity generation is only around 40%, while losses in the transmission and distribution of electricity are often as high as 10%.

The European Commission works closely with the energy supply and distribution industry and with the Council of European Energy Regulators (CEER) and the European Regulators Group for Electricity and Gas (ERGEG) to improve efficiency in energy transformation.

Primary energy consumption EU-25  
(1 750 Mtoe) in 2005



## STEPS FORESEEN IN THE EU ENERGY EFFICIENCY ACTION PLAN

- Develop efficiency requirements for new electricity, heating and cooling capacity lower than 20 MW
- Draw up guidelines on good operating practices for existing capacity
- Agree guidelines on good regulatory practices to reduce transmission and distribution losses
- Issue a mandate for a European norm for a certification scheme for heat and electricity plant engineers
- Propose a new regulatory framework for the promotion of grid access for decentralised generation
- Implement and amend the directive on the promotion of cogeneration [CHP]

Meanwhile, the EU's emission trading scheme – which allows companies to buy or sell allowances (or 'carbon credits') to emit CO<sub>2</sub> – acts as an overarching incentive for electricity producers to find cost-effective ways of improving energy efficiency in order to limit their CO<sub>2</sub> emissions.

### Action plan priority: More efficient power generation and distribution

The Commission will develop minimum binding efficiency requirements for new, smaller-scale energy production units and will consider such requirements for larger units too. It will develop, with the energy supply industry, guidelines on good operating practices for existing capacity, with a view to raising average generation efficiency for all plants. And guidelines should be agreed in cooperation with CEER through ERGEG on good regulatory practices to reduce transmission and distribution losses. A new regulatory framework will be proposed to promote the connection of decentralised generation.

The EU is also working to promote the use of combined heat and power (CHP), or 'cogeneration'. This technology – involving the simultaneous rather than separate production of heat and power – can offer both energy savings and lower CO<sub>2</sub> emissions. However, as of 2006, only around 13% of the electricity consumed in the EU was generated in this way, meaning there is still considerable scope to develop CHP.

Harmonising calculation methods and guarantees of origin, as well as improving metering and establishing norms, will be among the measures needed to stimulate further progress in cogeneration.



# Moving on transport

**T**ransport accounts for almost one fifth of the EU's energy consumption and is the fastest growing sector in terms of energy use. Transport is also a major cause of greenhouse gas emissions and of import dependency on fossil fuels. It is therefore essential to make energy efficiency gains in this sector.

Different transport modes – rail, road, sea and air – must be used and combined effectively, and more environment-friendly and energy-saving forms of transport must be promoted. Innovative approaches to urban transport can also save energy. This might include road and congestion charges, or encouraging the use of public transport, car-sharing, non-motorised means of transport and 'telecommuting' (where the need to make the daily work commute is replaced by telecoms links).

Energy can also be saved by improving the fuel efficiency of cars and by developing cleaner, smarter, safer and more energy-efficient vehicles. EU-wide car fuel efficiency labelling will act as an incentive for consumers to choose more energy-efficient vehicles, and for producers to develop them. As with other products, 'A' label status will be reserved for the 10–20% best performing cars.

## Action plan priority: Fuel efficiency of cars

The European Commission is determined to address energy efficiency and CO<sub>2</sub> emissions from cars. It issued in February 2007 a strategy aiming to ensure that new cars sold in the EU emit no more than 120 g of CO<sub>2</sub> per kilometre on average by 2012. The action plan for energy efficiency also foresees stronger EU requirements for labelling of cars.

## STEPS FORESEEN IN THE EU ENERGY EFFICIENCY ACTION PLAN

- Encourage financing for market introduction of efficient vehicles
- Amend the car fuel efficiency labelling directive
- Work towards minimum efficiency requirements for automobile air conditioning systems
- Propose a labelling scheme for tyres
- Promote accurate tyre pressure monitoring schemes
- Consider compulsory fitting of tyre pressure monitoring systems on new vehicles

## Hitting the road: New engine technology

New types of engine hold out the prospect of greater fuel efficiency, whether it is electric vehicles running on electric motors, 'hybrid' vehicles using a combination of electric and combustion engines, or 'plug-in' hybrid vehicles that could be charged from the electricity grid. Another emerging technology – fuel cell vehicles – allows vehicles to run on electric motors, with on-board fuel cells creating electricity using hydrogen fuel and oxygen from the air.

Meanwhile, estimates suggest that appropriate use of tyres and tyre pressure alone can improve vehicle fuel efficiency by more than 5%. Tyres matter because when the tyre pressure is too low the rolling resistance increases, resulting in greater fuel consumption. On top of the gains to be made by using the right tyres at the right pressure, it is estimated that the average driver can save some EUR 100 on her/his annual fuel bill by driving in a more ecological way (see also box).

## 'Ecodriving': Golden rules for saving fuel

- ➔ Shift up a gear as soon as possible
- ➔ Maintain a steady speed
- ➔ Anticipate traffic flow
- ➔ Decelerate smoothly
- ➔ Check the tyre pressure frequently

For more information on ecodriving, see:  
[www.ecodrive.org](http://www.ecodrive.org)



# Financing energy efficiency

Even though they may be fully cost-effective, energy efficiency measures can be hindered by financial barriers, not least in SMEs. Ways therefore need to be found to facilitate financing of energy efficiency steps, and to improve the way price signals impact on energy efficiency.

One way of doing this is to remove legal obstacles in national legislation to the use, for example, of companies supplying efficiency solutions, the energy service companies (ESCOs). At the same time, public-private partnerships can attract funding covering debt financing, guarantees and venture capital applications for new energy-efficient technologies.

## Action plan priority: Finance for energy efficiency investments

The European Commission will call upon the banking sector to offer finance packages specifically aimed at SMEs and ESCOs to adopt energy efficiency savings identified in energy audits. EU financing such as green investment funds will be made available for promoting eco-innovations.

EU funds can be used to help leverage private financing for energy efficiency and to develop energy efficiency management schemes. The potential for energy efficiency improvements is particularly large in the countries that joined the EU in May 2004 and January 2007.

## Action plan priority: Energy efficiency in the new EU Member States

The European Commission will encourage more intensive investment to improve energy efficiency, in particular in the new EU Member States, including social housing. The Commission will also promote networking among Member States and regions to ensure financing of best energy efficiency practices.

Taxation can also be a powerful tool to promote energy efficiency. Tax can, for example, be linked to the CO<sub>2</sub> performance of vehicles in order to encourage emissions reductions and fuel efficiency. And narrowing excessive differences in fuel tax between Member States helps reduce energy waste by discouraging 'tank tourism' — travelling across borders to shop for cheaper fuel.

## Action plan priority: A coherent use of taxation

The Commission will prepare a Green Paper on indirect taxation and look to facilitate a more targeted and coherent use of energy taxation, notably by integrating energy efficiency considerations and environmental aspects. The Commission will consider the costs and benefits of using tax credits as incentives for the production and purchase of certified energy-efficient appliances and equipment.

## STEPS FORESEEN IN THE EU ENERGY EFFICIENCY ACTION PLAN

- Facilitate public-private partnerships to attract funding for enterprises offering energy services
- Encourage the use of EU financing for SMEs to promote eco-innovation solutions
- Consider costs and benefits of tax credits as incentives for energy-efficient goods
- Review the energy tax directive to incorporate better energy efficiency and environmental considerations
- Propose a special diesel tax arrangement to narrow excessive tax differences between Member States
- Adopt EU rules to relate vehicle taxation to CO<sub>2</sub> performance





# Changing energy behaviour

Consumers, industry and public authorities alike need to be aware of the importance of energy efficiency issues and be motivated to tackle them if the EU is to make progress in saving energy. Making available clear and accessible information about energy efficiency and providing appropriate education and training for stakeholders are key ways of achieving this.

Encouraging good habits (see box) among the public at large is crucial for the EU's energy efficiency – and no more so than among children and young people. This is why the Commission plans to organise a competition in each EU Member State with a view to awarding a prize for the most energy-efficient school. The competition will be judged not just on the energy performance of school facilities but on pupils' knowledge about energy efficiency and sustainability.

Public bodies – including the European Commission, other EU institutions and national authorities – can show leadership in other ways by demonstrating new, energy-efficient technologies in their buildings, vehicles, office supplies and other energy-using equipment, as well as by adopting energy-saving procurement guidelines. For its part, the Commission intends, for example, to ensure that all the buildings it owns are certified under the EU's eco-management and audit scheme (EMAS).

## Action plan priority: Energy efficiency in cities

Due to their high concentrations of population and energy consumption, it is particularly important to improve energy efficiency in urban areas. Political commitment by the top decision makers in that sector will be an excellent starting point. The action plan for energy efficiency envisages the creation of a 'Covenant of mayors' – a network of mayors of Europe's most committed cities.

## Action plan priority: Awareness

Priorities for raising awareness about energy efficiency will include labelling as well as education and training programmes for energy managers in industry and utilities, and teaching aids for primary, secondary and vocational education.

## Making a difference: Some tips for saving energy

- Use low-energy light bulbs
- Do not leave lights/appliances on
- Insulate lofts, wall cavities and hot water tanks
- Turn down the thermostat by one degree
- Run dishwashers/washing machines on full load
- Cook with the right size pan
- Defrost your fridge/freezer regularly
- Do not over-fill your kettle
- Unplug chargers when not in use

For more energy efficiency tips, visit:  
[http://www.sustenergy.org/tpl/page.cfm?pageName=intelligent\\_energy\\_use](http://www.sustenergy.org/tpl/page.cfm?pageName=intelligent_energy_use)

## STEPS FORESEEN IN THE EU ENERGY EFFICIENCY ACTION PLAN

- Adopt European Commission energy efficiency procurement guidelines
- Promote energy management schemes, and training toolkits for industry, SMEs and the public sector
- Propose a vocational educational initiative on energy efficiency
- Create a 'Covenant of mayors' with a memorandum of understanding on energy efficiency
- Establish new networks in the 'Sustainable energy Europe' campaign
- Involve the Executive Agency for Competitiveness and Innovation and other energy agencies in implementation of the action plan





# Developing international partnerships

**E**nergy efficiency may start at home, but it is also very much an international issue. The EU should use its trade and foreign policy relations to promote the development of energy-efficient technologies and techniques.

## Action plan priority: Energy efficiency worldwide

The European Commission will seek a framework agreement with key trading partners and international organisations in order to promote energy efficiency worldwide. This will involve both developed and developing countries including Brazil, China, India, Japan, Russia and the United States. The agreement should focus on improving energy efficiency in end-use sectors and in energy transformation.

The aim should be to develop closer international cooperation on energy efficiency measurement and evaluation, minimum performance requirements for goods and services, labelling and certification, energy audits, stand-by losses, codes of conduct, and more.



## Reinforcing international cooperation: The EU-US 'Energy Star' agreement

The European 'Energy Star' programme is a voluntary energy labelling programme for office equipment. A logo helps consumers identify office equipment products that will save them money and help protect the environment by saving energy. There is also an international dimension to the scheme: the EU and the United States have an Energy Star agreement which is designed to coordinate energy-efficient labelling and which is based on rigorous energy efficiency criteria for computers, copiers, printers and computer monitors. The current agreement runs until 2011 and is expected to yield substantial energy savings.

## STEPS FORESEEN IN THE EU ENERGY EFFICIENCY ACTION PLAN

- Launch an initiative for an international framework agreement on energy efficiency
- Propose voluntary agreements with export industries on information, requirements and labelling
- Strengthen energy efficiency in external relations cooperation frameworks
- Increase international cooperation on measurement methods
- Create an international network for dissemination of information on efficient technologies
- Implement the EU-US Energy Star agreement for office equipment



## An energy-efficient future: the way ahead

**T**he potential to save energy is there. Now the necessary tools, support programmes, policies and institutional capacity must be brought to bear to achieve it. More than anything, political will and engagement at national, regional and local levels will be essential if the EU's energy efficiency targets are to be met.

The European Commission's action plan for energy efficiency is already being implemented to this end and will continue to drive energy efficiency initiatives over the years ahead. To name just one example — one highlighted by the EU Heads of State or Government at their March 2007 summit — the Commission plans to issue proposals to enable increased energy efficiency requirements on office and street lighting to be adopted by 2008 and on incandescent lamps and other forms of lighting in private households by 2009.

The Commission will also pursue a strategic energy technology plan to provide a coherent long-term energy technology outlook and spur further technology-driven efficiency gains. Particular attention will be paid to the energy-saving opportunities offered by information and communication technologies. The EU will strive for leadership in developing next-generation technology: the financing available for energy research, including energy efficiency, is significantly increased in the EU's seventh framework programme for research and development for 2007–13.

Meanwhile, the action plan for energy efficiency will be monitored and revised as circumstances require: a 'mid-term review' will take place in 2009 to ensure that the plan is kept up to date — and to ensure that the EU stays on track to meet its ambitious energy efficiency objectives.

# Further information

Directorate-General for Energy and Transport:

[http://ec.europa.eu/dgs/energy\\_transport/index\\_en.html](http://ec.europa.eu/dgs/energy_transport/index_en.html)

The action plan for energy efficiency:

[http://ec.europa.eu/energy/action\\_plan\\_energy\\_efficiency/index\\_en.htm](http://ec.europa.eu/energy/action_plan_energy_efficiency/index_en.htm)

Contacts for local and regional energy agencies:

[www.managenergy.net/emap/maphome.html](http://www.managenergy.net/emap/maphome.html)

'Sustainable energy Europe' campaign:

[www.sustenergy.org](http://www.sustenergy.org)

'Intelligent energy Europe' programme:

[http://ec.europa.eu/energy/intelligent/index\\_en.html](http://ec.europa.eu/energy/intelligent/index_en.html)

The Energy Star scheme:

<http://www.eu-energystar.org/>

<http://www.energystar.gov/>

The European Commission's Joint Research Centre site on end-use energy efficiency:

<http://re.jrc.ec.europa.eu/energyefficiency/index.htm>

**E**urope is squandering its energy resources. This is not only wasting money, but also damaging the environment and contributing to climate change. However, if everyone plays their part, Europe could save a fifth of its annual energy consumption by 2020 compared with conducting 'business as usual'. The energy-saving effort is supported at EU level by the European Commission's action plan for energy efficiency. The plan outlines the action that must be taken by the EU, its Member States, and its businesses and consumers to ensure that Europe fulfils its energy efficiency potential. This brochure explains the plan, places it in context, and points to the measures being taken to put it into practice.

