

# European strategic energy technology plan

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**PURPOSE:** to present a European Strategic Energy Technology Plan (SET-Plan).

**BACKGROUND:** The inter-related challenges of climate change, security of energy supply and competitiveness are multifaceted and require a coordinated response. A wide range of policies and measures are being developed to combat these challenges: i) binding targets to reduce greenhouse gas emissions by 20% and ensure 20% of renewable energy sources in the EU energy mix by 2020; ii) a plan to reduce EU global primary energy use by 20% by 2020; iii) carbon pricing through the Emissions Trading Scheme and energy taxation; iv) a competitive Internal Energy Market; v) and an international energy policy. Now we need a dedicated policy to accelerate the development and deployment of cost-effective low carbon technologies.

Harnessing technology is vital to achieve the Energy Policy for Europe objectives adopted by the European Council on 9 March 2007. To meet the targets, we need to lower the cost of clean energy and put EU industry at the forefront of the rapidly growing low carbon technology sector. In the longer term, new generations of technologies have to be developed through breakthroughs in research if we are to meet the greater ambition of reducing our greenhouse gas emissions by 60-80% by 2050.

Current trends and their projections into the future show that we are not on a pathway to meet our energy policy objectives. The energy innovation process, from initial conception to market penetration, suffers from unique structural weaknesses. There is neither a natural market appetite nor a short-term business benefit for such technologies. In addition, public energy research budgets in the EU have declined substantially since the 1980s.

It is evident that many of the technological challenges that can be addressed by an EU energy policy are beyond the reach of the instruments and models of cooperation that are currently being used. Bearing this in mind, the Commission proposes a new approach based more on the development of joint programmes, and making use of the full potential of the European Research and Innovation Area and the Internal Market.

**CONTENT:** the SET-Plan proposes to deliver: i) a new joint strategic planning; ii) a more effective implementation; iii) an increase in resources; iv) and a new and reinforced approach to international cooperation.

**Joint Strategic Planning:** To steer the implementation of the SET-Plan, reinforcing the coherence between national, European and international efforts, the Commission will, in early 2008, establish a Steering Group on Strategic Energy Technologies. The mandate of the group will be to conceive joint actions, through coordinating policies and programmes, make resources available and monitor and review progress in a systematic manner, in order to reach common objectives. The Commission will also introduce an information system aimed at establishing a precise overview of energy technologies throughout Europe.

**Collaboration at Community level:** The Commission proposes to launch new priority initiatives, starting in 2008, in the following areas: i) European Wind; ii) Solar Europe; iii) Bio-energy Europe; iv) European CO<sub>2</sub> capture, transport and storage; v) European electricity grid; vi) and Sustainable nuclear fission initiatives. The Commission proposes to create a European Energy Research Alliance and to initiate, in 2008, an action on European energy infrastructure networks and systems transition planning.

**Resources:** In order to address the need to increase investment, the Commission intends to present a Communication on financing low carbon technologies at the end of 2008. This Communication will examine, in particular, the opportunity of creating a new European mechanism/fund for the industrial-scale demonstration and market replication of advanced low carbon technologies and will consider the costs and benefits of tax incentives for innovation. The Commission will use the Marie Curie Actions of the Research Framework Programme to boost the training of researchers in the energy field. Member States' own actions to increase the human resource base should also be better coordinated.

**International Cooperation:** International cooperation, for example on research or the setting of international standards, is vital to stimulate the global development, commercialisation and deployment of, and access to, low carbon technologies. The measures proposed in the SET-Plan should bring about a reinforced international cooperation strategy. It is also important to ensure that the EU increasingly speaks with one voice in international fora, to achieve a more coherent and stronger partnership effect.

**Moving forward:** the Commission calls on the Council and Parliament to: 1) reaffirm that energy technology forms a fundamental pillar of Europe's Energy and Climate Change policies, and is vital to achieve decarbonisation targets; 2) endorse a Community objective to jointly and strategically plan energy research and innovation efforts in alignment with EU energy policy goals; 3) confirm that a better and more effective implementation of current energy research and innovation efforts is fundamental; 4) confirm that a better use of and overall increase in resources, both financial and human, are needed to accelerate the development and deployment of low-carbon technologies of the future; 5) welcome the Commission's intentions to prepare in 2008 a Communication on financing low carbon technologies; and 6) agree on the need to reinforce international cooperation.