

Contribution to the debate on the Green Paper  
Towards a European strategy for the security of energy supply

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Please add your answers after the question(s) which deal most closely with the subject(s) on which you wish to comment so that the Commission can deal with the remarks efficiently and swiftly.

1.	<p>Can the European Union accept an increase in its dependence on external energy sources without compromising its security of supply and European competitiveness? For which sources of energy would it be appropriate, if this were the case, to foresee a framework policy for imports? In this context, is it appropriate to favour an economic approach: energy cost; or geopolitical approach: risk of disruption?</p> <p>Answer: The European Union cannot accept an increase in its dependence on external energy sources. On the contrary it should implement mid-term and long-term actions to significantly decrease this dependency.</p>
2.	<p>Does not Europe's increasingly integrated internal market, where decisions taken in one country have on an impact on the others, call for a consistent and co-ordinated policy at Community level?</p> <p>Answer:</p>
3.	<p>Are tax and state aid policies in the energy sector an obstacle to competitiveness in the European Union or not? Given the failure of attempts to harmonise indirect taxation, should not the whole issue of energy taxation be re-examined taking account of energy and environmental objectives?</p> <p>Answer: Energy taxation should be re-examined taking account of energy and</p>

	environmental objectives.
4.	<p>In the framework of an ongoing dialogue with producer countries, what should supply and investment promotion agreements contain? Given the importance of a partnership with Russia in particular, how can stable quantities, prices and investments be guaranteed?</p> <p>Answer:</p>
5.	<p>Should more reserves be stockpiled - as already done for oil - and should other energy sources be included, such as gas or coal? Should the Community take on a greater role in stock management and, if so, what should the objectives and modalities be? Does the risk of physical disruption to energy supplies justify more onerous measures for access to resources?</p> <p>Answer:</p>
6.	<p>How can we develop and ensure better operation of energy transport networks in the European Union and neighbouring countries so as to enable the internal market to function properly and guarantee security of supply?</p> <p>Answer:</p>
7.	<p>The development of some renewable energy sources calls for major efforts in terms of research and technological development, investment aid and operational aid. Should co-financing of this aid include a contribution from sectors which received substantial initial development aid and which are now highly profitable (gas, oil, nuclear)?</p> <p>Answer: There should be no contribution from the nuclear sector because it is a sector which does not contribute to CO<sub>2</sub> emission in sharp contrast with the oil and gas (also coal) sectors and because it is a sector in which present or future European dependency is less marked.</p>
8.	<p>Seeing that nuclear energy is one of the elements in the debate on tackling climate change and energy autonomy, how can the Community find a solution to the problem of nuclear waste, reinforcing nuclear safety and developing research into reactors of the future, in particular fusion technology ?</p> <p>Answer: Progress in energy efficiency and saving is necessary but will only lower for a time the increase in energy demand because once maximum efficiency is reached and once that the Western world would have accepted a certain level of sacrifices, the energy demand will continue to increase with the increasing needs of the growing population of developing nations. So classical fission nuclear energy, under its safest version, will remain essential - at least in an intermediate period. Its role is already important since it furnishes a sizeable fraction of the world electricity without generating CO<sub>2</sub>.</p> <p>Solutions concerning nuclear waste exist and these should be optimized within a few years and then implementation action should be taken. It is also clear that one must keep</p>

	<p>on reinforcing the already excellent nuclear safety of European reactors.</p> <p>The energy of the sun is nuclear <u>fusion</u> energy (as opposed to nuclear <u>fission</u>) in which hydrogen is fused into helium. On earth this can be achieved - and has already been achieved in Europe at the level of 16 MW - using the heavy hydrogen (deuterium) of water and the still heavier hydrogen (tritium) coming from lithium (available in the earth crust and in sea water) as primary fuel. If we maintain our research effort and take the right decisions in the 6<sup>th</sup> Framework Program, controlled fusion will provide a safe, clean and environmentally friendly source of electrical energy in the second half of the 21<sup>st</sup> century.</p> <p>Fusion will moreover, by electrolysis of water, furnish hydrogen which will be used as a fuel for cars, etc, i.e. as a clean fuel with no production of CO<sub>2</sub> or nitro-oxides.</p> <p>Fusion energy has all the beneficial characteristics of renewable energy. With fusion there is no dependency of Europe on external sources.</p> <p>On the long term, Europe needs fusion power as soon as possible in order to gradually replace fission reactors from mid-2050 onwards and fill the energy gap resulting from the decrease of oil and gas resources in an environmentally friendly way. Fusion energy has all the beneficial characteristics of renewable energy. With fusion there is no dependency of Europe on external sources.</p>
9.	<p>Which policies should permit the European Union to fulfil its obligations under the Kyoto Protocol? What measures could be taken in order to exploit fully potential energy savings which would help to reduce both our external dependence and CO<sub>2</sub> emissions?</p> <p>Answer: Developing fission nuclear energy in the immediate and mid-term future together with appropriate renewable and energy efficiency will permit the EU to fulfil its obligations under the Kyoto Protocol. On the longer timescale one must also develop fusion nuclear energy as soon as possible (see also 8).</p>
10.	<p>Can an ambitious programme to promote biofuels and other substitute fuels, including hydrogen, geared to 20% of total fuel consumption by 2020, continue to be implemented via national initiatives, or are co-ordinated decisions required on taxation, distribution and prospects for agricultural production ?</p> <p>Answer:</p>
11.	<p>Should energy saving in buildings (40% of energy consumption), whether public or private, new or under renovation, be promoted through incentives such as tax breaks, or are regulatory measures required along the lines of those adopted for major industrial installations?</p> <p>Answer: Energy saving in buildings should be promoted both through regulatory measures and incentives.</p>
12.	<p>Energy saving in the transport sector (32% of energy consumption) depends on redressing the growing imbalance between road and rail. Is this imbalance inevitable, or</p>

	<p>could corrective action be taken, however unpopular, notably to encourage lower use of cars in urban areas? How can the aims of opening up the sector to competition, investment in infrastructure to remove bottlenecks and intermodality be reconciled?</p> <p>Answer: The growing imbalance between road and rail should be corrected through corrective action such as lowering car use in urban areas.</p>
13.	<p>How can we develop more collaborative visions and integrate the long-term dimension into deliberations and actions undertaken by public authorities and other involved parties in order to evolve a sustainable system of energy supply. How are we to prepare the energy options for the future?</p> <p>Answer:</p>
14.	<p>Any other questions or proposals:</p> <p>On a long-term timescale, in order to meet the energy demand in an environmentally acceptable way around 2050 and later we need a basket of solutions with no exclusion :</p> <ul style="list-style-type: none"> <li>• Energy efficiency and saving.</li> <li>• Still fossil fuels (to the extent available) but used as cleanly as possible and with absorption of the emitted CO<sub>2</sub> whenever possible.</li> <li>• Hydro, solar, wind and biomass energy.</li> <li>• Safe classical fission nuclear energy (at least intermediately).</li> <li>• Fusion energy.</li> </ul>

Thank you for replying to this questionnaire.