

## **New Energy Policy for Europe: STICKING TO THE DIRTY DINOSAURS?**

### **Friends of the Earth's key demands for Europe's future energy policy:**

- i. Cut energy consumption by 20% by 2020 through increasing efficiency**
- ii. Meet 25% of primary energy demand from renewable sources by 2020**
- iii. Reverse unsustainable growth trends in the transport sector**
- iv. Phase out expensive and dangerous nuclear energy**
- v. Redirect money to renewable energy and efficiency industries**

### **1. Overview: A European Energy Policy**

The draft Constitutional Treaty proposed that energy be included as an area of joint competence for both the European Union and its Member States. Following the Constitution's rejection by voters in France and the Netherlands in 2005, the UK presidency put forward a paper, 'European Energy Policy, Securing Supplies and Meeting the Challenges of Climate Change'. In early 2006, the Russian-Ukrainian dispute over gas led to renewed attention on the EU's dependency on imported energy. Over the next decades, EU's domestic reserves of oil and gas will decline significantly. The European Commission estimates that import dependency on oil would increase from 75% in 2005 to 90% in 2030, with natural gas showing an increase from 50% to 70% over the same period.

On 8 March 2006, the European Commission released the Green Paper "*A European Strategy for Sustainable, Competitive and Secure Energy*". It lists six priority areas, ranging from developing a coherent EU external energy policy and further market integration in order to secure long-term energy supply to triggering technology development -- and to tackle climate change.

A week later, on 14 March 2006, a special EU Energy Council has discussed the paper, and its conclusions will feed into the discussion at the EU Spring Summit 23-24 March 2006. Guided by the conclusions of the Heads of State, the European Commission will then hold a "wide-ranging public debate" before tabling concrete proposals for action towards the end of 2006 or early 2007.

Unfortunately, both the European Commission and the Energy Council failed to make cutting energy waste and tapping into the full potential of renewable energies the central elements of the proposed strategy. Instead, priority is given to securing oil and gas imports through a coherent external policy especially towards politically unstable regions, and long-term contracts with producer and transit countries as well as a diversification of pipeline routes. While both Commission and Member States see the further integration and liberalisation of the European electricity and gas markets as key, they ignore that this must, first and most, lead to removing market distortions such as billions of Euros worth in perverse subsidies that governments channel to fossil and nuclear energy industries every year, keeping the dirty forms of energy artificially cheap against their renewable

competitors. Also, liberalising markets must not disallow governments to regulate markets to promote the increasing use of renewable energies, e.g. through granting priority access to electricity grids.

Under the heading “Sustainable Energy” EU Energy Council highlighted the role of energy efficiency and the need for a perspective on renewable energies beyond 2010. While the ministers noted that this must include the removal of “legislative and administrative obstacles to renewables take-off”, they failed to come up with concrete targets to ensure the long-term sustainability of Europe’s energy supply.

Appallingly, the debate fails to acknowledge that nuclear power remains the most dangerous form of energy that is neither emissions-free nor economically viable. The majority of European citizens are opposing nuclear power<sup>1</sup> -- promoting it despite public opposition, the dangers and economic sense will not bring Europe closer to its citizens.

## **2. Five key areas for a sustainable energy policy for Europe**

The EU needs an integrated EU energy policy that gives priority to the five key areas below -- with the aim to trigger a shift away from dirty fossil fuels (imported or not) and dangerous nuclear power towards renewable energies and energy efficiency, with clear benefits for people and the environment. 80% of Europe’s greenhouse gas emissions result from the energy sector<sup>2</sup>. In order to avoid the most catastrophic effects of climate change by limiting global warming to around 2°C with reasonable certainty, the EU must reduce its greenhouse gas emissions by at least 30% by 2020 and by 80% by 2050. This must guide European energy policy.

The current trends are worrying. The European Environment Agency (EEA) reported that emissions of CO<sub>2</sub> increased by 1.8% during 2003 and are now 3.4% above 1990 levels. The EEA said that the extra 59 million tonnes of CO<sub>2</sub> were largely as a result of an increase in the use of the coal in the power sector. Total greenhouse gas emissions (CO<sub>2</sub> plus five other gases) are now 1.7% below 1990 levels and have to be at 8% below 1990 levels during the years 2008-2012, following the obligations under the Kyoto Protocol.

### **i. Cut energy consumption by 20% by 2020 through increasing efficiency**

**Increasing energy efficiency must be the central pillar of European energy policy, given that the cheapest, fastest and most effective way to secure energy supply will always be to reduce our huge demand for energy, thereby also reducing energy costs for households and industry and curbing greenhouse gas pollution. Europe should set a binding target to cut total energy consumption by 20% by 2020.**

The Commission’s Green Paper notes the economic and environmental benefits of increased energy efficiency and suggests making Europe the most energy-efficient economy in the world -- but misses this general objective with a viable vision and concrete targets.

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<sup>1</sup> A recent Eurobarometer poll shows the only 12% of Europeans believe that developing the use of nuclear energy would give a satisfactory answer to the current challenges of security of energy supply, growth of energy consumption and climate change. See [http://europa.eu.int/comm/public\\_opinion/archives/ebs/ebs\\_247\\_en.pdf](http://europa.eu.int/comm/public_opinion/archives/ebs/ebs_247_en.pdf)

<sup>2</sup> The remaining 20% are from waste, industrial processes, agriculture & land use. See “ Annual European Community greenhouse gas inventory 1990 –2003 and inventory report 2005”, European Environmental Agency 2005

The European Commission noted in last year's *Green Book on Energy Efficiency* that 20% of the EU's current energy use could be saved by 2020 at no net cost and delivering (for free!) half of Europe's commitments under the Kyoto Protocol<sup>3</sup>. The cost-effective savings potential would be several times higher if the external costs of conventional energy, such as increased health care costs as a result of air pollution were part of the equation. Savings can be achieved across all sectors with existing technology: Germany has shown that 50% of the energy consumption of buildings can be saved through better insulation -- with the initially higher construction costs turning, over time, into net savings for house-owners.

The few existing policies on the EU level are weak, and there is no binding framework to capture the multitude of energy conservation benefits. A recent embarrassing example is the EU directive on energy end-use efficiency that originally proposed mandatory targets for reducing energy waste but ended up with little more than business-as-usual. The EU directive on the efficiency of buildings, for example, addresses only about a tenth of the total potential<sup>4</sup> to save energy in the household sector, which accounts for a staggering 40% of European energy use. Another EU directive on the promotion of simultaneous generation of electricity and heat, neither sets targets nor standards but requires EU Member States to do little more than to study the issue.

## **ii. Meet 25% of primary energy demand from renewable sources by 2020**

**Europe's leaders fail to make a long-term vision for renewable energies the second central pillar of Europe's energy policy. In comparison to nuclear or fossil fuel based energy, renewable sources are indigenous forms of energy as they provide energy without fuel; they do not put people and the environment at risk; and they do not leave behind costly legacies for future generations, such as radioactive waste or climate change.**

Both Ministers in their Council conclusions and the Commission in its Green Paper agree that a supporting policy framework is needed for renewable energy to fulfil its potential, but both fail to spell out a vision and concrete targets that would guide the introduction of new instruments with quantified objectives. At present, powerful tools to drive massive investments and the market penetration of renewable energies are largely lacking. The Green Paper announces a *Renewable Energy Road Map* for the EU Spring Council 2007 -- as the EU will miss its current target of meeting 12% of Europe's primary energy demand from renewable sources by 2010<sup>5</sup> -- over the last years, the share was stagnating at around 6%.

Europe should set a mandatory target for meeting 25% of its primary energy needs from renewable energies by 2020<sup>6</sup>. A long-term target is crucial for energy businesses when planning investments. Binding sectoral targets should be set for the electricity sector, energy for heating & cooling as well as in the transport sector.

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<sup>3</sup> See [http://europa.eu.int/comm/energy/efficiency/doc/2005\\_slide\\_presentation\\_en.pdf](http://europa.eu.int/comm/energy/efficiency/doc/2005_slide_presentation_en.pdf)

<sup>4</sup> See "Mitigation of CO<sub>2</sub> - Emissions from the Building Stock. Beyond the EU Directive on the Energy Performance of Buildings"; EURACE 2003; at [http://www.eurace.org/reports/R\\_160204.pdf](http://www.eurace.org/reports/R_160204.pdf)

<sup>5</sup> This target was set by the Renewable Energy Directive, which assigns voluntary targets for each Member State. The targets are set as shares of renewable energy meeting *electricity energy needs*, amounting to 21% of total electricity use. This corresponds to 12% of *primary energy needs*.

<sup>6</sup> This is a realistic target, as has been shown in "Target 2020 – Policies and Measures to reduce GHG in the EU"; Wuppertal Institute and WWF 2005; see [http://assests.panda.org/downloads/target\\_2020\\_low\\_res.pdf](http://assests.panda.org/downloads/target_2020_low_res.pdf)

Above all, renewable energies need political support to overcome the market distortions created by decades of massive financial, political and structural support to conventional energies. Most urgently, governments must remove the perverse subsidies for fossil and nuclear energy and internalise the hidden costs of conventional energy into the price of the product.

### **iii. Reverse unsustainable growth trends in the transport sector**

**Appallingly, the transport sector is largely absent in the debate. Any reasonable energy policy must give high priority to the unsustainable growth rates of transport demand. The sector accounts for a third of Europe's total energy use and 70-80% of all oil foreign imports -- a key challenge for Europe's security of energy supply. Effective policies are needed to cut down consumption, through increasing car efficiency and massively expanding the use of public transport.**

EU wide measures to reverse the negative trends are almost completely lacking. Years ago the European Commission had planned to set binding rules on the efficiency of cars, but car manufacturers managed to get away with weaker and only voluntary targets -- which they are going to miss<sup>7</sup>. Rather than making the standards binding, the European Commission is now considering to lower the bar by a dubious calculation that counts the share of biofuels towards the target. The European Commission should begin drafting binding legislation on car efficiency, based on best available technology and bringing down emissions to no more than 120g CO<sub>2</sub> per km by 2010, as originally envisaged by the European Commission.

Member States, for their part, should seize the full potential of road pricing to reduce unnecessary transport (e.g. empty lorries) and to shift freight transport from road to rail, by making maximum use of the provisions of the recently agreed Eurovignette Directive. Also in regard to passenger transport, road pricing, especially if introduced in combination with improved public transport systems allows energy waste to be cut in the transport sector while maintaining people's levels of mobility. The examples of London and Stockholm show the effectiveness of such strategies.

### **iv. Phase out expensive and dangerous nuclear energy**

**Europe must stop wasting taxpayers' money to protect a dangerous and financially insane technology. Nuclear energy can not survive in a liberalised energy market, especially if the sensational costs of decommissioning and long-term waste storage for thousands of years are taken into account. Above all, 20 years after the Chernobyl disaster, nuclear power remains the most dangerous mechanism of generating electricity. And, globalised terrorism makes nuclear power stations and the uncontrolled proliferation of nuclear material a serious security hazard.**

The nuclear industry hopes to trigger a revival of its dangerous technology, arguing that nuclear power is cheap, emission-free and thus has a role to play in securing the supply of energy. But nuclear power accounts for significant emissions if uranium mining, transportation, plant construction and decommissioning and waste storage are included in the calculation. In the UK with its 23 nuclear

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<sup>7</sup> In 2003, cars were only 4% more efficient than they were a decade ago -- due to weight and engine power increases and the growing use of air-conditioning. See also "Sense and Sustainability -- Smart thinking to restart European transport policy"; European Federation for Transport & Environment; Brussels 2004; <http://www.t-e.eu>

reactors, doubling capacity would cut emissions by no more than 8%<sup>8</sup>. Globally, tripling nuclear capacity by 2050<sup>9</sup> might contribute 12.5%-20% to the necessary emission reductions. But such scenarios -- one plant every two weeks -- have no link to political reality, and the costs would be astronomic. Compare this to the 20% reduction of energy consumption the European Union can achieve by 2020 (30 years earlier) at *zero net costs*, as the European Commission has pointed out.

Nuclear power is horrendously expensive and comes with high opportunity costs: Every Euro spent on new nuclear power could save ten times more emissions if it was invested in energy conservation measures -- thus also securing energy supply ten times cheaper<sup>10</sup>. Also, experience indicates that nuclear power will not be able to compete with renewable energies without huge amounts of state aid. That nuclear power today produces on third of Europe's electricity is due to political that created favourable market conditions: Since 1974, the EU's governments spent more than €45 billion for nuclear research. Most of the costs of a (however likely) serious nuclear accident will be borne by society and not by the plant operator's insurance. There is a huge gap between the expected costs of decommissioning and waste storage of the currently operating plants in the EU and the money set aside for that purpose by the operators.

Friends of the Earth welcomes that the Strategic EU Energy Review announced by the European Commission that is also intended to ensure "that the real costs, advantages and drawbacks of nuclear power are identified for a well-informed, objective and transparent debate". If such an assessment will include *all* aspects of nuclear power, including the costs of waste storage for thousands of years and the potential impacts of a serious nuclear accident, common economic sense will send nuclear power finally into the museum.

Recent polling shows categorically that the public across the EU opposes nuclear energy. 48% of the public wants governments to focus on the development of solar power and only 12% favour nuclear energy. In France, where 80% of the electricity is generated from nuclear power, only 8% of the citizens support nuclear power<sup>11</sup>.

#### **v. Redirect money to promote renewable energy and efficiency industries**

**The EU Energy Council as well as the European Commission ignore that year after year, the European Union is spending billions of Euro to subsidise fossil fuel and nuclear energy, making it harder for renewable energies to penetrate the market. A sustainable energy policy must remove these market distortions. It must also change lending priorities of public banks and increase the public research budgets for renewable energy and efficiency technologies.**

The European Environment Agency (EEA) estimated that in 2003 the direct or indirect subsidies were at €23.9 billion in the EU-15, while renewable energies received only €5.3 billion. Also, conventional energy companies externalise hidden costs of around €40-70 billion every year to

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<sup>8</sup> See Friends of the Earth's briefing at [http://www.foe.co.uk/resource/briefings/why\\_nuclear\\_power\\_is\\_not\\_a.pdf](http://www.foe.co.uk/resource/briefings/why_nuclear_power_is_not_a.pdf)

<sup>9</sup> Note that about 280 nuclear power stations would have to be built over the next 20 years -- one every 3-4 weeks -- to only maintain capacity, without reducing a single ton of CO<sub>2</sub>.

<sup>10</sup> The high costs of nuclear power result from not only the costs of constructing and operating the plant, but also waste treatment and storage for thousands of years and the costs of decommissioning the plant at the end of its life-span. See "Nuclear power: economics and climate protection potential": Rocky Mountains Institute; January 2006; available at <http://www.rmi.org>

<sup>11</sup> Attitudes toward Energy, Special Eurobarometer, No 247 January 2006.

society<sup>12</sup>, e.g. in the form of health costs from air pollution. These costs should be internalised, e.g. through a dirty fuel tax, using revenues to support renewable energy and efficiency programmes.

Furthermore, lending priorities of public banks support unsustainable trends. Between 1998 and 2003 the European Investment Bank -- the EU house bank -- has granted approximately €7.7 billion<sup>13</sup> loans to the transport sector in Central and Eastern Europe. Half of that money was used to build roads, less than a fifth went into the railway sector, and urban public transport received 7.5%<sup>14</sup>.

The EU's budget 2007-2013 will direct the lion's share of public research money to nuclear energy The current proposal splits the research budget into €4.8 billion for nuclear power and €2.9 billion for all other energy technologies<sup>15</sup>. The nuclear research budget runs under the Euratom treaty, beyond democratic control through the European Parliament. The money will be used to subsidise waste treatment costs of the nuclear energy companies, develop the next generation of nuclear reactors, and finance nuclear fusion research (receiving three times more than renewable energy & efficiency programmes), a technology that will not produce a single commercial kilowatt-hour before the middle of the century, if ever. The Euratom Scientific and Technical Committee recently stated it would take twenty years before it could be determined whether fusion is a viable option for electricity supply in the 21<sup>st</sup> century at all<sup>16</sup>. In any case, it is absolutely certain that nuclear fusion cannot play a role in help to reduce CO2 emissions or improve security of supply over the next decades.

And, most of the non-nuclear research money is currently likely to be dedicated for Capture & Storage (CCS) rather than e.g. for renewable energies. But the fossil fuel sector is making record profits every year, and thus has no need for public research money, contrary to the relatively young renewable energy sector. Also, CCS constitutes an unnecessarily high-cost strategy for providing low-emission energy, if compared to a combination of efficiency, renewable energies and highly efficient gas-fired power stations, as research in Australia indicates<sup>17</sup>.

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<sup>12</sup> And this figure does not yet include the expected costs of climate change. Report available at [http://reports.eea.eu.int/technical\\_report\\_2004\\_1/en/Energy\\_FINAL\\_web.pdf](http://reports.eea.eu.int/technical_report_2004_1/en/Energy_FINAL_web.pdf)

<sup>13</sup> Heading down dead ends. Transport sector financing in Central and Eastern Europe; Bankwatch 2004; available at [http://www.bankwatch.org/publications/studies/2004/dead\\_ends-transport\\_study\\_09-04.pdf](http://www.bankwatch.org/publications/studies/2004/dead_ends-transport_study_09-04.pdf).

<sup>14</sup> Online database of the European Investment Bank at <http://www.eib.org/projects/loans/regions/list.asp> and calculations from the CEE Bankwatch Network.

<sup>15</sup> The nuclear budget is for the five years 2007-11, but the proposal also contains a provisional budget for the seven year period 2007-13, adding up to €4.8 billion.

<sup>16</sup> Scientific and Technical Committee EURATOM: The Energy Challenge of the 21<sup>st</sup> Century: The role of nuclear energy; European Commission, Community Research, EUR 20634 EN, Brussels, 2003

<sup>17</sup> "Geosequestration -- What is it and how much can it contribute to a sustainable energy policy for Australia?"; Australia Insitute 2004