

Europe's Energy Future: The New Industrial Revolution

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The world is facing a massive energy and environmental challenge, a challenge that is particularly acute for Europe. It has been estimated that world energy demand is set to increase by more than half by 2030, and that demand for oil alone is expected to grow by over 40 percent during this period. Europe already imports half of its energy, and this is forecast to rise to nearly two thirds by 2030 unless action is taken. The potential effects of Europe's dependence on imported energy are serious.

With oil prices around USD 100 per barrel only awhile ago, the EU's annual energy import bill is causing a lot of trouble to many citizens and economic sectors of Europe. Europe is particularly vulnerable to a price shock, and as the International Energy Agency states, "the ability and willingness of major oil and gas producers to step up investment in order to meet rising global demand are particularly uncertain." While the economic impact of Europe's reliance on energy imports may be cause for concern, the security consequences could be dire.

Oil and gas reserves are increasingly controlled by the national monopolies of just a handful of countries, and recent actions by some of these monopolies suggest that energy security is an issue with geopolitical overtones. Diversification of Europe's energy supply base is an urgent priority. Growing energy consumption is not just a threat to Europe's economy and political stability, it is also linked to environmental challenges - and climate change in particular. The world's output of carbon dioxide (CO₂) - which accounts for 75 percent of all greenhouse gases - is set to increase by 55 percent by 2030 with the EU's emissions increasing by five percent. The impact of this scenario on Europe's environment, economy and way of life would be tremendous.

For example, a six-metre rise in sea level would submerge large parts of Barcelona, Venice, Amsterdam, London, Stockholm, and Lisbon. It would exacerbate water shortages in parts of Southern Europe. And it could lead to an influx of millions of refugees from hard-hit developing countries. While energy and the environment are the greatest challenges for Europe in the 21st century, they also represent an enormous opportunity. By accelerating low-carbon growth and dramatically increasing the amount of low-emission energy produced and used, Europe can become the leader in renewable energy and low-carbon technologies, and make its economy much more robust in the process. In short, Europe has the opportunity to usher in a new industrial revolution in energy.

Recognising the seriousness of the challenge, as well as the inherent opportunity, the European Commission has put forward a comprehensive European Energy Policy - the most far-reaching reform of Europe's energy policy ever attempted. The policy aims to transform Europe's energy economy into one that is sustainable and competitive and enjoys security of supply. The first step is to achieve a 20 percent reduction in the EU's greenhouse gas emissions by 2020 versus 1990 levels. This unilateral target is just an initial goal. The hope is

that other nations will follow Europe's lead. When such an international commitment exists, Europe will raise the target to a 30 percent reduction by 2030 and a 60-80 percent reduction by 2050. The 20 percent target is the driver for the new European energy policy, but the policy is not just about climate change. It also aims to improve Europe's energy security and competitiveness. Achieving the 20 percent target can limit the EU's growing exposure to volatility in the price of oil and gas, create a more competitive EU energy market, and stimulate innovation and job creation. Even without global warming, Europe should be taking this bold step forward.

To realise this vision, the European Commission has tabled a sevenpoint action plan which foresees a range of measures:

1. Creating an efficient and competitive EU energy market: a more efficient and competitive energy market will result in more reliable supply at a lower cost to consumers. To achieve this, Europe must unbundle networks from services, harmonise energy regulation and create a body that has the power to adopt binding decisions on crossborder issues. The Commission made an ambitious proposal to solve the problems of the internal market with a package of legislative measures in September 2007. A final compromise on the internal market package may be reached during the French presidency.

2. Ensuring security of supply for oil, gas and electricity and promoting solidarity between Member States: this means promoting diversity of energy source, supplier, transport route and transport method, as well as putting in place effective mechanisms to ensure solidarity between Member States in the event of an energy crisis. The Commission will come up, during the French presidency, with the second Strategic Energy Review which will be very much focused on this issue.

3. Promoting energy efficiency: to achieve a 20 percent improvement in energy efficiency by 2020, including a 13 percent reduction in energy consumption - meaning a reduction of 780 million tonnes in annual CO₂ emissions and annual savings of €100 billion. During the French presidency, the Commission wants to come up with a package of measures to increase energy efficiency in buildings and in a number of energy using devices, including the facing out of incandescent light bulbs.

4. Supporting renewable energy: without a substantial shift towards renewable energy over the coming years, Europe will not be able to reduce greenhouse gas emissions by 20 percent. Although increased energy efficiency, nuclear energy and carbon capture and storage can all contribute to achieving the 20 percent target, none of these measures will have a major impact before 2020. The Commission therefore proposed on January this year a framework directive to raise the share of renewable energy in the EU's energy mix to 20 percent. The French presidency has the leading role in reaching a political compromise in the Council by the end of the year.

5. Backing research: Europe is lagging behind on research into the next generation of low-carbon and renewable technologies. The European Commission will work to stimulate the construction and operation by 2015 of up to 12 large-scale fossil fuel plants to demonstrate CO₂ capture and storage technology, and will provide a clear indication of when coal- and gas-fired plants will need to install the technology.

6. Building a framework for nuclear energy: whilst not all European nations will opt for nuclear energy, it nonetheless accounts for 30 percent of electricity generated in the EU and is the largest source of low-carbon energy available. The EU should create an advanced framework for nuclear energy, including nuclear waste management and decommissioning,

respecting the Member State's freedom to choose nuclear energy or not. So said, the French presidency may come up with some paper to increase nuclear safety and waste treatment standards at European level.

7. Developing a common External EU Energy Policy: Global warming and energy security are global challenges. The EU can set the pace on these issues, but it needs to bring the US, China, India, Japan and its other partners on board. To do so, and to protect its own interests, Europe must speak with one voice and act as one. EU energy policy can also help developing countries. Like Europe, many of these countries depend on energy imports, and surges in oil prices can effectively cancel out development aid. The recent crisis in Georgia has underlined the important role that the French presidency will have to play in this respect during its six months.

As shown in the action plan, many crucial decisions of this new born Energy and Climate change policy are going to dominate the six months of the French Presidency and many key decisions are going to be taken during this time. It was not surprising then, that few days after the opening of the French presidency, Minister Borloo organised an informal council to discuss the main axes of his period as president of the Energy and Environment councils. Energy discussions were dominated by two issues of which are very close to my heart: energy efficiency and renewable energy sources. I am confident that we are going to see very important developments in these two issues in the coming months.

The energy and environmental challenges that we face are really opportunities in disguise, and for those who seize them, the rewards will be great. Europe now has the chance to establish world leadership in clean, efficient and low-emission energy technologies. These will become an engine for growth and job creation whilst sustaining a high quality of life. The new European Energy Policy offers a roadmap to Europe's secure, clean and prosperous energy future.