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The EU and Energy Policy

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Background

Energy has always been of importance to the EU but in recent years three major issues – set out below – have propelled it to the top of EU leaders' concerns. Since the Hampton Court summit in 2005, when EU leaders decided that the EU needed a major new initiative on energy policy, it has adopted a broad EU energy policy for the first time.

This milestone in EU energy policy addresses the three issues that have made energy such an important issue: security of supply; the development of a single market in energy; and climate change. In addition to this development, the Treaty of Lisbon gave the EU competence (shared with Member States) in the field of energy enabling the EU to adopt broader energy policies rather than being limited to the competition and environmental aspects of energy policy.

This briefing looks at these the three aspects of EU energy policy mentioned above in the light of developments since 2005.

Security of Supply

The EU imports over half of its overall fuel needs (in fact the figures are higher for oil at 80 per cent and for gas at 60 per cent) and the trend is for greater dependence on imports. This raises questions about the security of supply, particularly the EU's reliance on oil and gas from unstable and unreliable countries. With 34 per cent of EU natural gas and 33 per cent of EU oil coming from Russia (2009 figures), it makes sense for Russia and the EU to develop a long-term dialogue and co-operation over energy issues. No easy task given that the Russians have made no secret of their intention to use their oil and gas as an instrument of their foreign policy. The gas crisis of the winter of 2009 (the second such crisis), when several EU countries in Eastern and Central Europe were cut off for a week because of a dispute with the Russian energy giant Gazprom, vividly demonstrated the vulnerability of EU Member States.

Since the end of the Cold War the EU has tried to create a level playing field for trade and investment in the energy sector. The Energy Charter Treaty, signed in 1994 and in force since 1998, aims to create such a level playing field through a legally binding treaty that ensures that foreign investments in energy operate in a stable and transparent climate in the host country, that countries accept the freedom of transit of energy flows through their country and try to minimise the impact of energy industries on the environment. It has been signed by 51 states but although Russia has signed the Treaty, and provisionally applied the Treaty until October 2009, she has failed to ratify it.

The problem of energy imports is made more acute by the EU's dependence on a relatively small number of countries; for gas, for example, over 75 per cent of the EU's imports come from three

countries, Russia, Norway and Algeria (2009 figures). While the EU has close ties to Norway, the political and economic situation is clearly less stable in Russia and Algeria. This dependency is likely to worsen with the gas imports potentially rising further over the next 25 years.

Over-reliance on imports can be tackled in a number of ways. Making the energy market more efficient will help by reducing demand but also that there needs to be greater diversity of supply, new generation capacity and better interconnectors between national grids to increase competition and reduce the need for spare capacity.

The ability to extract and exploit shale gas (gas found in rocks many thousands of feet underground) is a new development in energy that could have far-reaching consequences. The amount of such gas in Europe is estimated to be sufficient to meet the continent's needs for the next 60 years. But extracting shale gas is controversial – the French Senate has already banned the process called hydraulic fracturing (fracking) in France. Poland has allowed large-scale shale gas exploration and Germany is considering the idea. The development of shale gas in the United States has had a substantial effect on the energy market there and could do so in Europe.

Policy on new generating capacity, particularly nuclear power, is a sensitive issue in many Member States and although it is primarily a matter for them to decide, decisions on it will affect other countries.

The disaster at the Fukushima reactor in Japan in March 2011 adversely affected attitudes towards nuclear power in some parts of Europe. Germany decided to phase out nuclear generation by 2022 and Italy placed its plans for long-term construction of new nuclear power plants on hold. New safety concerns mean that existing reactors are likely to have a shorter life expectancy than previously anticipated; they might be decommissioned in future after 40 years service rather than the expected 60 years. As half of the nuclear capacity in the EU is in France, what decision the French Government makes as to the life span of its plants will be of great importance in determining the percentage of electricity in the EU generated by nuclear power.

New pipelines that take oil or gas around Russia would also be valuable. The Nabucco project will bring natural gas from Turkey to Austria. Over 3,000 kilometres in length, the pipeline is intended to be linked to the planned Trans-Caspian Gas Pipeline through the existing South Caucasus Pipeline, enabling natural gas from Turkmenistan to reach Western Europe without going via Russia. The pipeline is being partly financed through the EU Trans-European Energy Network programme.

The key question for Member States is whether they can reach agreement on an external energy policy for the EU, so that they work together with powerful energy suppliers like Russia to create a stable and law-based market. At European Councils, Heads of State and Government have repeatedly emphasised their desire to reach agreement with Russia on energy issues; the problem is partly divisions within the EU but also the rather different ambitions of Russia.

A Single Market in Energy

The cost of energy is a crucial element in business costs; industry and transport are the two largest users of energy. The Commission estimates that electricity prices in the EU are 21 per cent higher than they are in the USA and an astonishing 197 per cent higher than in China.

The EU has in recent years pursued a programme to open up energy markets to competition; this forms part of the Europe 2020 agenda for economic reform. The establishment of a full internal market in energy would not only bring benefits to consumers in businesses within the EU, the absence of such a market means that the EU is less able to develop a coherent policy for dealing with difficult external partners such as Russia.

Opening the energy market is not just about reducing prices for consumers. The EU believes that by adopting this approach, there will be greater incentive for utilities to invest in new generation capacity, greater efficiency and the development of more interconnectors between national grids. Greater interconnection improves security of supply as well as potentially reducing prices – during shortages power can be moved across supply grids. New power grids are also needed in Europe to enable power generated by renewable methods – wind in the North Sea, solar in the Mediterranean – to be distributed.

The process of opening up markets began with electricity from February 1999 for large and medium consumers and gas from August 2000. The process has been faster in some countries than others – the UK and most Scandinavian countries were early pioneers.

The failure of the first two packages of EU measures to open up competition effectively – largely due to the resistance of some Member States to the break-up of state monopolies – led to the adoption of a third package of energy liberalisation measures in 2009. The Commission's proposals to separate production and distribution (known as "unbundling") were highly controversial and opposed by eight countries, including France and Germany. The solution was to allow both ownership unbundling and regulatory unbundling – the latter meaning that a company could retain both production and distribution businesses but they would have to be legally separated, involve independent directors and be subject to market regulation.

In February 2011 the European Council set 2014 as the headline for the completion of the energy single market. Licensing requirements for operators have been simplified as part of enabling this goal to be achieved.

Climate Change and Renewables

A key aim of EU policy is to tackle the causes as well as the consequences of global warming. About 80 per cent of the energy consumed in EU Member States comes from fossil fuels – coal, natural gas and oil. The EU needs to reduce its carbon emissions in order to cut the emissions that drive global warming – that affects energy generation as well as energy consumption.

The EU has pioneered the use of a carbon emissions trading scheme; this and other measures to tackle climate change are described in a separate briefing note. There is also a note on the related question of biofuels.

Improving energy efficiency is an important EU ambition and it has a target of saving 20 per cent by 2020. On present indications, it will miss that target; EU leaders agreed in February 2011 that more work needs to be done on identifying ways to improve energy efficiency.

Renewables are already a significant factor in the EU, with 300,000 people now working in a sector that, for example, in terms of wind energy has installed capacity equivalent to 50 coal-fired power stations (although in practice wind turbines operate at 27-30 per cent of their installed capacity). But the EU fell behind in reaching its already agreed target of making the share of electricity from renewable sources 21 per cent by 2010 (it was around 18 per cent).

In 2007 the EU agreed a number of targets for reducing greenhouse gas emissions and to source 20 per cent of the EU's energy needs from renewables by 2020 (a major step-up from the actual performance of 8.5 per cent in 2005). The Renewables Energy Directive resulted from this decision.

The Directive sets national targets that meet the overall binding target of 20 per cent by 2020. It also includes a requirement that a minimum 10 per cent of transport fuels be biofuels in each Member State (see the briefing note on biofuels for further details). The UK country target for energy from renewables is 15 per cent; this will be difficult to reach given that we only achieved 1.3 per cent in 2005. The UK's target is lower than those for France, Germany or Spain, reflecting the fact that UK lags behind many other EU countries in the development of renewable energy.

Future Developments

Energy policy has been a difficult area for the EU. The lack of a specific competence in the treaties hampered the development of a broader energy policy until the Lisbon Treaty and vested interests resisted greater competition in energy markets. Recent developments have overcome, at least in part, these problems but there are still significant obstacles to achieving the tight goals the EU has set itself. It is also a long way from agreeing a coherent approach to third countries in energy policy.

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Senior European Experts

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