

ENERGY CHALLENGES FOR EUROPE

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The European Union (EU) is a huge consumer of energy. In 2006 the 25 member states¹ consumed 1,722.8 million tonnes of oil equivalent (mtoe). Nearly two-thirds came from hydrocarbons: 706.3 million tonnes of oil (14.9 million barrels per day) and 420.6 mtoe (476.4 billion cubic meters) of natural gas. The remaining 34.6% came from coal, nuclear and renewable sources.² Some forecasts suggest that by 2030 EU energy consumption will have increased by 15%.³

However, the EU does not have an integrated energy market. The fragmentation of this sector dates back to the 1970s, when member states responded individually to the oil crisis. Some of them, such as Germany, built up strategic gas reserves and invested in infrastructure development; others, such as the UK, proceeded to explore their own reserves.

Russia is the world's largest gas producer, and it currently supplies around 30% of the EU's total gas needs.⁴ European countries can be divided into three groups, with different levels of dependence on Russian gas imports:⁵

1. Countries with very low dependence – about 15%: Belgium, Ireland, Luxembourg, the Netherlands, Portugal, Spain, Sweden, Switzerland and the UK.

2. Countries with moderate dependence – 20–40%: France, Italy, and Germany.

3. Countries that are highly dependent – more than 50%: Austria, Czech Republic, Greece, Hungary, Poland, Rumania and Slovenia. Some countries – Bulgaria, Croatia, Finland, Latvia, Lithuania, Serbia and Slovakia – rely on Russia for all their gas imports.

The gas dispute between Russia and Ukraine in early January 2009 thus directly affected a total of 17 European countries. In a speech in mid-2009, European Commission President José Manuel Barroso noted the particular vulnerability of several countries,⁶ including Bulgaria and Slovakia.

In Bulgaria, the State is the single buyer of energy. During the last decade it signed a number of exclusive contracts with the Russian consortium Gazprom, and as a result the country increased its 90% dependency on Russian gas. On the other hand, since 1956 the Bulgarian Government has favoured the use of nuclear power. Initially a research reactor, the IRT-2000, was constructed and then in 1966 an agreement was signed with the Soviet Union for commercial units to provide the basis for the country's power programme. As a condition for EU entry, Bulgaria has shut two nuclear reactors. The two remaining reactors generate about 35% of the country's electricity.⁷ The consumption of electricity has grown since 1980 and Bulgaria is also a major power exporter. In 2006, the National Electricity Company (NEK) produced 46 billion kilowatt hours and exported 7.8 of these to Greece, Macedonia, Serbia and Turkey.⁸

In the case of Slovakia, although its market for electric power generation and distribution is small compared to other Central European countries,

projections indicate that its power system will need to be broadened to meet growing demand. The generation of electricity is primarily dependent on hydroelectric and nuclear resources, though this is somewhat balanced by thermal power stations (coal, natural gas and oil). The Slovak gas market is characterized by a high level of dependence on Russian supply and the dominance of a predominantly state-owned and vertically integrated company.

Slovakia plays a significant role in the European gas network as it is an important transit country for transporting natural gas to countries in Central and Western Europe. In general, one of the challenges in the energy relations between Russia and the EU is the transport of gas through third countries. Although Europe attributes its 'vulnerability' to Russia, part of the problem – as was the case with Belarus in early 2007 and with Ukraine in early 2006 and 2009 – lies in transit countries.

The January 2009 energy crisis highlights the lack of an integrated EU energy policy, even though the need for a policy has been approved by the European Commission and various proposals have been put forward. The lack of such a policy is reflected in the fact that energy from Russia does not flow in equal amounts to the entire region. In addition, the problem of mutual dependence is particularly complex. It is not hard to understand why the European Commission has been unable to coordinate a common vision, nor why some countries, including France, Germany and Italy, have been trying to develop their own relationships of energy dependence. National governments have to decide on the balance between dependence and diversification and on alternatives for the future.

During the last decade the lobby for the renewable energy industry has been gaining leverage in the EU. One of the proposals in the 2007 Energy Policy for Europe was to incorporate a minimum of 10% of biofuels in total transport fuel by 2020, to be accompanied by the introduction of a sustainability scheme for biofuels. The existing regulation fixes the target at 5.75% in 2010.⁹ A binding 20% target for the overall share of renewable energy by 2020 has also been proposed, the effort to be shared in an appropriate way between member states.

The main goals to be achieved by implementing a common European strategy to promote biofuels are: 1) to increase energy security, as the increasing price of oil is rapidly affecting the cost of energy and reducing European citizens' purchasing power; and 2) to reduce the emission of greenhouse gases (GHG), the main determinant of climate change. Rises in temperature and changes in precipitation seasons might affect water resources as well as agricultural production.

The future of alternative energy resources raises the question of nutrition and the future of the EU Common Agricultural Policy. Diversification in energy supplies and investment in alternative energy sources are more affordable among old EU member states. There is limited renewable energy potential for newcomers to the EU, amid demands to scale back coal power plants due to environmental reasons and resistance to the development of nuclear power.

In order to tackle the political divisiveness of the EU-Russia gas relationship, and the specific risks to the security of gas supply of states in central and eastern Europe, the EU should make gas market integration the priority of its strategic energy policy.¹⁰ Steps also need to be taken towards the enhancement of energy security development, including energy efficiency, renewable energy sources and demand-side management. ■

1 Bulgaria and Romania joined in 2007, for the current total of 27 members.

2 Data from BP, "BP Statistical Review of World Energy," June 2007, pp. 11–12, 27–28, and 41.

3 European Commission, Directorate-General for Energy and Transport, *European Energy and Transport: Trends to 2030—Update 2005*, 2006.

4 Gas relations date back to 1968, when the Soviet Union first supplied gas to Austria.

5 The present classification is taken from "Russia and Europe: Mutual Dependence in the Energy Sector", by Antonio Sánchez Andrés, 2007.

6 Barroso, J. M. "Statement of President Barroso at European Council Press Conference." 19 June 2009.

7 Data from the National Electrical Company (NEK). See: <www.nek.bg/cgi?d=1000>.

8 World Nuclear Association. "Nuclear Power in Bulgaria", 2009.

9 European Parliament and the Council of the EU. "Directive 2003/30/EC on the Promotion of the Use of Biofuels or Other Renewable Fuels for Transport." Official Journal of the European Union, 17 May 2003.

10 Noël, P. "Beyond Dependence: How to Deal with Russian Gas." *Policy Briefs*, European Council on Foreign Relations (ECFR), November 2008.