



## Safety Security : Energy Security

### Energy Security in Europe: From Russia with Love

**Europe is an industrial giant, but a dwarf when it comes to energy resources. Energy dependence on neighboring Russia seems inevitable.**



A Russian specialist checks valves at Russian gas monopoly Gazprom gas storage facility south of Moscow. Europe receives about 40 percent of its natural gas from Russia (Photo: Reuters)

European industrialization was fueled by coal, but the continent has gradually switched to oil and natural gas. In some countries, coal is still important for heating and electricity, but concern over climate change and carbon dioxide emissions could reduce this further.

Other fossil fuel resources, however, are scarce in Europe. The United Kingdom and Norway are the only two European countries with significant oil and natural gas resources, but their output is in decline. In 2006, the UK became a net oil importing country for the first time in decades. Around 45 percent of EU oil imports come from the Middle East. Twenty years down the road, an expected 90 percent of oil consumed in the EU will have to be imported.

With gas, important for electricity and heating, the dependence on foreign energy is even more accentuated. About 95 percent of the gas Europe consumes comes from three countries, none of them a member of the European Union. Russia alone provides for 40 percent of all imports, a figure that is expected to rise to 60 percent by 2030.



#### Pipe Dreams

Russian oil and gas pipelines to Europe (Graphic: EIA)

Even coal, still abundant in countries like Germany and Poland, is increasingly imported. The European Commission expects that by 2030, some 66 percent of EU's coal needs will have to be covered by imports.

### **The Russian affair**

Energy security for Europe, thus, means stable imports. "The basic point is, Europe needs more gas and needs to diversify its supply, because we are highly dependent on Russia," says Didier Houssin, an expert at the International Energy Agency.

Europe, however, has not found a common position on how to deal with Russia. Some member states like Germany seek a close bilateral working relation. Others, especially Eastern European states, fear a Russian monopoly and dominance, and have protested plans to build a direct pipeline from Russia to Germany in the Baltic Sea that circumvents their countries.

The fear is not unfounded. Russia has already used its energy power to influence policy decisions in neighboring countries like Ukraine or Georgia. One plan to minimize Europe's dependence on Russia is to tap the massive natural gas resources in Central Asian countries and the oil fields in and around the Caspian Sea. Gas and oil pipelines already originate from Azerbaijan crossing the Caucasus and running towards Turkish harbors and, ultimately, European ports.

### **Electricity: The domino effect**

Ensuring electricity supply is another crucial topic for Europe. The European Commission is trying to set up a Europe-wide electricity market that would make better use of surplus electricity capacity and lead to lower prices.

For now, however, Europe is experiencing the negative side effects of interconnectivity. In 2006, a German blackout spread all over the continent, leaving ten million people without power. Austria, France, Belgium, Italy, the Netherlands, Spain, and Morocco were affected after power generator E.ON shut down a high-voltage transmission line over a river to let a ship pass.

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The European Commission wants to improve existing networks and create an integrated European electricity grid. It says that 21 percent of Europe's energy could be produced by renewable sources if the existing electricity grids were compatible with smaller-scale, local, power facilities, such as wind turbines or solar panels.

According to Didier Houssin, a large energy market could also increase energy security. "You can cope better with disruptions like blackouts or gas shortages if you have a large market," he says. "But a large market really has to be an integrated market, which is not the case in Europe. We are lacking interconnection in the gas and power sector."

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