



## What difference would Nord Stream mean to European energy supply?

Posted by [Chris Vernon](#) on January 28, 2010 - 10:16am in [The Oil Drum: Europe](#)  
Topic: [Supply/Production](#)

Tags: [baltic pipeline](#), [eu](#), [europe](#), [gas](#), [nord stream](#), [pipelines](#), [russia](#) [list all tags]

*This is a guest post from Selene Rebane. She is from Estonia, has a degree in journalism and recently graduated from an MSc in International Relations from University of Bristol. She's particularly interested in energy issues in Eastern Europe and the Commonwealth of Independent States (CIS).*

Nord Stream (also known as the Baltic Pipeline) stirs emotions in Europe.



*Nord Stream route (EEZ = economic exclusivity zone).*

The plans to build the politically and environmentally controversial Nord Stream pipeline have been in the air since 1997. With Finland and Sweden finally saying “yes” to the pipeline in their waters, the wheels of construction are now in full speed with the first line to be opened in the 2011. This will bring relief to Europe that is struggling with energy supply--yet not everyone is a winner.

The European Union accounts for 16% of the World's energy consumption but has only 6 % of the world's population. Natural gas comprises 24% of EU energy consumption. EU27 in 2007 consumed 505 bcm of natural gas per year according to Eurogas. This is expected to increase to 578 bcm by 2020 (estimations vary, some analysts claim that the gas consumption will decrease

drastically). 40 % (128 bcm) of the natural gas is imported from Russia. The EU is also estimated to import 70% - 80 % of its energy supplies by 2030 as the North Sea gas supplies are diminishing; over 60 % of natural gas imports are expected to come from Russia. [10 % of the total EU gas demand would be covered by the Nord Stream](#). Natural gas will remain the fuel of preference for the EU because of its greener properties. In addition to that, phasing out nuclear power stations puts more strain on alternative energy sources. The pipelines that are running through Ukraine are aging and it is debatable at what capacity they would be running at by 2020: The [EU offered Ukraine a loan of \\$2.5bn](#) to revamp its pipeline infrastructure in March 2009, but it is debatable if this money went to pipeline upgrade projects as a proportion of that loan would have gone to repay existing gas debts to Russia; according to [prime minister Tymoshenko](#), Ukraine would need an extra \$3.5bn for the revamp of current pipelines.

The EU's decision to lend \$2.5bn was not welcomed by Russia, who said that it was "unprofessional" to make deals like this without consulting the main supplier (80 % of Russian gas exports currently go through Ukraine). It has been estimated that the existing pipelines are already well into two-thirds of their projected life span. The [planned life span](#) for Ukrainian pipelines, most of which were built between 1950 and 1970, is 33 years. (In 2004, 22% of the Ukrainian pipelines exceeded that and 66% were between 10 and 33 years old.) Logistically pipelines play a big role as not all countries in the EU have the capacity to use LNG facilities, and are still highly dependent on natural gas (see figure 1).

Country	Dependence on Russian gas
France	21%
Italy	31%
Germany	43%
Slovenia	60%
Austria	73%
Slovak Republic	73%
Czech Republic	74%
Poland	79%
Hungary	81%
Greece	82%
Finland	100%
Estonia	100%
Latvia	100%
Lithuania	100%

Figure 1 (Source [www.energy.eu](http://www.energy.eu))

There is no doubt that Nord Stream would provide great relief for European energy supplies, at least in the short term, because of the long term capacity of Algerian and Norwegian gas production: Algeria has the supplies, but the demand from Africa is increasing and [pipeline construction is delayed](#), Norway seems to be going down the route of [reducing its long term exports](#). Added to this is the problems with Ukraine as a transit country. Nord Stream would provide a steady and reliable gas flow to Western Europe, bypassing transit countries such as Ukraine and Poland. Russia and the Nord Stream will be playing an increasingly larger role in the EU's energy supply. Recent cold weather in Europe and particularly in England has also brought that realisation home when, due to the disruptions to the North Sea gas supplies, Russia came to the rescue.

Nord Stream also has the blessing of the European Union, with the former EU Energy Commissioner [Andris Piebalgs stating](#), "These (Nabucco and Nord Stream) projects have the full

support of the European Commission". In spite of the fact that there is a direct need for such a pipeline as Nord Stream, there have been a large number of obstacles on the way to building it, making it one of the most controversial pipelines in Europe. The project first started in 1997 when Gazprom and the Finnish company Neste (later known as Fortum) formed a joint company, North Transgas Oy, for construction and operation of a gas pipeline from Russia to Northern Germany across the Baltic Sea. This has now come to [a joint ownership](#) of Gazprom (51%), Wintershall Holding (20%), E.ON Ruhrgas (20%) and Gasunie (9%). Gazprom is currently also holding talks with GDZ Suez that would secure gas supplies to France in addition to Germany, Netherlands, Belgium and Denmark. Gas would come from the Yuzhno-Russkoye field that has estimated gas reserves of more than one trillion cubic metres, [including 700 bcm](#) of proven reserves. Additional gas supplies from fields in Yamal Peninsula, Ob-Taz bay and Shtokmanovskoye will also be available. It will be 1220 kilometres in length, making it one of the longest offshore pipelines in the world. It will run through Russian, Finnish, Swedish and Danish waters, but has encountered strong opposition from the Baltic States of Lithuania and Estonia. The decision from Swedish and Finnish governments to allow Nord Stream to be built in their waters came last autumn after more than three years of negotiations and Russian threats to abandon the pipeline construction and focus on LNG production instead.

One of the main arguments against Nord Stream has been its effect on the environment. The low salinity and shallow Baltic Sea has a fragile ecosystem and is more susceptible to environmental changes such as increased naval traffic involved with the building of the pipeline. Thus, the building of a new, natural oil pipeline has caused concern amongst environmentalists. The Nord Stream consortium [claims to have spent more than €100m](#) on different environmental assessments, one of the latest being the [Espoo report](#) that was published in 2009. "It is Nord Stream's aim to hold regular, genuine dialogue with interested parties. Having taken into account stated concerns and having thoroughly assessed the impact of the project, Nord Stream is confident that the Espoo Report provides a sound basis for evaluation of potential transboundary impacts associated with the pipeline," said Romans Baumanis, NS Regional Advisor for the Baltic States. Yet, the [WWF calls the Espoo report](#) "inadequate" pointing to issues such as a lack of data, underestimation of the environmental impact and improper risk assessment. Last week the Estonian Green Movement and the Estonian Fund for Nature sent an official complaint to the Commission arguing that the governments of Denmark, Finland, Germany and Sweden have violated EU directives on environmental impact assessment (EIA) and conservation of wild birds and habitats. The fact that Finnish ex-prime minister Paavo Lipponen was appointed an advisor on Nord Stream has raised questions in the [Finnish media](#) that politicians have been paid off. It is also feared that the pipeline laying process itself will not be as environmentally friendly as claimed. Before the actual work on the pipe laying can start, the contractor would have to detonate abandoned mines from the First and Second World War lying in the Gulf of Finland, which can cause damage to the seabed, marine mammals and fish. First attempts at [mine clearance](#) in November 2009 failed, in spite of careful planning.

It is also believed that Russia's eagerness, when it comes to building Nord Stream and South Stream, is largely motivated by the fact that it would help to bypass problematic transit countries such as Ukraine and Poland. Mikhail Korchemkin, analyst from East European Gas Analysis, believes that it is no coincidence that [Nord Stream and South Stream combined](#) would give the exact same capacity that is currently delivered by the Ukrainian pipelines (118 bcm/y). The EU's decision to back Nord Stream has infuriated the Polish government. Polish foreign minister, Radoslaw Sikorski, has dubbed Nord Stream "[the Molotov-Ribbentrop pipeline](#)," hinting that Russia is using natural gas as a foreign policy tool and a strategy to weaken the EU and NATO. Poland has a right to fear as it imports the majority of its natural gas from Russia (79%). The Russian decision to stop gas deliveries to Poland would have serious consequences on the country's energy supply without affecting the main clients in Europe, such as Germany. The Nord Stream has issued a statement claiming that the security of supplies to Estonia and Poland would not be threatened. Another reason why the Baltic States do not support Nord Stream is that it would increase the traffic of Russian vessels on the Baltic Sea. This, considering the history of

those countries, seems threatening to most of the former Soviet Union countries in the region. Incidents in Ukraine and Belarus would seem to indicate that Russia would not hesitate to use energy as a foreign policy tool.

At the same time, in a recessionary time, money is money. The Nord Stream has been of interest to Germany for years, with the former chancellor (and chairman of the Nord Stream shareholders committee) Gerhard Schröder an avid supporter. The 2010 forecast on energy dependency in The Economist suggests that the new chancellor Angela Merkel privately dislikes the project, but will push for the project to go ahead because of Germany's energy hungry industry. From an economic point of view Russia has every reason to want to keep Germany happy, as the latter is the [biggest recipient of Russian gas](#) (40 bcm/y in 2007).

Although Nord Stream would ease the need for energy supply, the European Union would become even more dependent on a single supplier than it already is. Yet, it seems as if the EU has to swallow this bitter pill inasmuch as Nord Stream coincides with its environmental objectives (an offshore pipeline would emit less CO<sub>2</sub>) and would help to make deliveries more reliable. The EU has no reason to believe otherwise, because before the Ukrainian and Belarusian incidents, Western Europe enjoyed a long and uninterrupted economic relationship with Russia reaching back to the 1970s, when it came to oil and natural gas. As in every deal, there are winners and losers, and when there is a buyer that is willing to pay good money for it, compromises have to be found. While it would seem that the environment and the security of supply to the Baltic States may be at risk, it is the rest of Europe that would be winning.

## Facts & Figures

Route:	Offshore pipeline from Portovaya Bay near Vyborg, Russia to the coast of Germany near Greifswald, Mecklenburg-Western Pomerania. Constructed by Nord Stream AG
Gas capacities:	55 bcm per annum (2 pipelines with 27.5 bcm capacity each)
Pipeline length:	1220 km - Nord Stream is one of the longest offshore pipelines in the world
Max. water depth:	210 m
Project start:	2005
Completion of the first line:	According to plan – in 2011
Completion of the second line:	According to plan – in 2012
Pipeline diameter:	1,153 mm
Design pressure:	220 bar/ 200 bar/ 170 bar
Pipe standard:	steel DNV Offshore Standard OS-F101; Steel grade: X-70
Wall thickness:	26.8-41.0 mm
Coating:	Interior antifriction coating of 0.06 mm epoxy layer; Exterior anticorrosion layer; Passive anticorrosive protection is ensured by aluminium sacrifice bracelet anodes
Gas supply resources:	Yuzhno-Russkoye oil and gas reserve, Yamal Peninsula, Ob-Taz bay and Shtokmanovskoye fields

Estimated investment: € 7.4 billion

Shareholders: OAO Gazprom (51%), Wintershall Holding AG (20%), E.ON Ruhrgas AG (20%), N.V.Nederlandse Gasunie (9%)

Selene can be contacted at: selenerete AT hotmail DOT com



This work is licensed under a [Creative Commons Attribution-Share Alike 3.0 United States License](http://creativecommons.org/licenses/by-sa/3.0/).