



FACTS ABOUT THE NATURAL GAS PIPELINE ACROSS THE BALTIC SEA

## THE NEW GAS SUPPLY ROUTE TO EUROPE

Nord Stream is a natural gas pipeline across the Baltic Sea. It will link the Russian gas transmission system to the gas network of the European Union. With an annual capacity of up to 55 billion cubic metres, Nord Stream will be an important factor in European energy security.

Nord Stream is a joint venture of four major companies: OAO Gazprom (Russia), E.ON Ruhrgas AG (Germany), BASF/Wintershall AG (Germany), and N.V. Nederlandse Gasunie (the Netherlands). The consortium guarantees best practices and meets international standards with regard to technology, security and corporate governance.

Nord Stream will connect the Russian Baltic Sea coast near the town of Vyborg with the German Baltic Sea shore near Greifswald. From the landing point, natural gas will be piped via the European gas network to large markets. These include Germany, Denmark, the United Kingdom, the Netherlands, Belgium, France, and the Czech Republic.

In Russia, Gazprom is building a 917 kilometre onshore pipeline to connect Nord Stream to the Russian gas transmission system. WINGAS and E.ON Ruhrgas are building two onshore connections from Greifswald to the south and west of Germany totalling 850 kilometres.

#### **About Nord Stream**

- Vyborg, Russia Greifswald, Germany
- Approx. 1,220 km long 2 parallel pipelines
- 27.5 bcm annual capacity each
- 55 bcm total capacity per year
- 2011 planned commissioning of first pipeline
- 2012 planned commissioning of second pipeline
- 1,220 mm pipeline diameter
- 220 bar design pressure
- Planned investment: 7,4 billion Euro
- Will meet about 25% of the growth in Europe's gas import needs between 2005 and 2025



#### **GAS FOR EUROPE**

Europe is consuming more natural gas every year. Gas has lower CO<sub>2</sub> emission levels than all other fossil fuels. As an environmentally friendly energy source, its share of the total energy mix is growing. Given declining production and growing import requirements, the European Union will need to import 81 per cent of its natural gas by 2025, compared to 58 per cent in 2005.

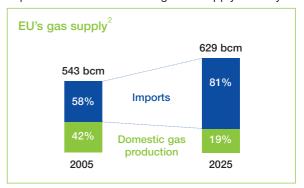
Nord Stream will make a vital contribution to ensuring that the EU meets its future gas needs.

Recognising the need to encourage the construction of new import routes, the European Union's institutions have designated Nord Stream a "Project of European Interest" as part of the Trans-European Energy Networks (TEN-E). This status is the highest granted under the TEN-E Guidelines and was most recently confirmed in mid-2006, following a proposal by the European Commission and approval by the European Council and Parliament. In line with EU

<sup>1</sup> Source: European Commission, Eurobarometer. Energy. Issues, Options and Technologies. Science and Society, 2002

energy policy, this makes Nord Stream a key project for ensuring the sustainability and security of energy supplies for the European Union.

Without Nord Stream, the European Union would be unable to cover future gas demand. Nord Stream will meet about 25 per cent of the projected growth in Europe's imports up to 2025, thereby making an important contribution to long-term supply security.



<sup>2</sup> Source: European Commission, Directorate-General for Energy and Transport, 2007

#### **OPTIMISED ROUTE**



Nord Stream will directly link Russia's gas reserves to the European gas grid. It will run through the Exclusive Economic Zones (EEZ) and/or the territorial waters of five countries: Russia, Finland. Sweden, Denmark and Germany.

The route has been selected and optimised on the basis of an integrated evaluation of environmental, technological and economic factors. An integrated feasibility study conducted from 1997 to 1999 considered several alternative routes and landfall locations. The proposed route was judged the most feasible.

The pipeline has been planned to follow the shortest possible route consistent with the need to take adverse natural conditions into account. Nord Stream will also respect or avoid environmentally sensitive areas, military exclusion zones, munitions dump sites, major navigation traffic lanes and special areas used for other economic or recreational interests.



#### TECHNOLOGICAL EXPERTISE

The Nord Stream consortium brings together the most comprehensive experience in building and operating pipeline networks. The combined cutting-edge expertise of the shareholders guarantees sustainable and advanced technological solutions.

- Gazprom operates a pipeline network of 156,000 kilometres and is gaining its latest experience in constructing the 386-kilometre-long gas pipeline Blue Stream at water depths of more than 2,000 metres in difficult conditions under the Black Sea.
- BASF/Wintershall projects connect platforms with onshore pipeline networks in the North Sea, offshore Argentina and offshore northern Africa, including a recent project with a pipeline in the

environmentally sensitive coastal region of the Wattenmeer in the German North Sea.

- E.ON Ruhrgas operates an efficient transmission system of 11,280 kilometres in central Europe and holds shares in companies building and operating important European offshore pipelines in the North Sea, such as Interconnector, BBL and SEAL.
- Gasunie has over 40 years of experience in the construction and operation of pipelines, such as the BBL pipeline, completed in 2006, of which 230 kilometres run offshore across the North Sea.

All these projects were built according to the highest environmental and safety standards.











#### SOME PROJECT MILESTONES

1997-1999 **Feasibility Study.** International engineering companies, Russian research institutes and the Russian-Finnish company Northtransgas conducted surveys and maritime research in the Baltic Sea. Alternative routes for transporting Russian gas to Europe were investigated. A feasibility study for the offshore section confirmed the technical feasibility and economic efficiency of a pipeline across the Baltic Sea.

2000

**Project of Common Interest.** In December, the European Union designated the offshore pipeline a "Project of Common Interest" as part of the Trans-European Energy Networks (TEN-E).

2005

**Establishment of the North European Gas Pipeline Company.** In September, OAO Gazprom, BASF AG and E.ON AG signed a basic agreement on the construction of the pipeline. The North European Gas Pipeline Company (later renamed Nord Stream AG) was established in December.

2006

**Start of Approval Process.** The European Union reconfirmed the importance of Nord Stream by listing it as a "Project of European Interest" within the Trans-European Energy Networks (TEN-E). Nord Stream AG opened its head office in Zug, Switzerland. In November, Nord Stream submitted a Project Information Document on the planned pipeline to the responsible environmental authorities of Russia, Finland, Sweden, Denmark and Germany in accordance with the Espoo Convention.

2007

**Detailed technical planning and environmental assessment studies.** Updated status documentation in October. In December, Dutch gas infrastructure company N.V. Nederlandse Gasunie agreed with Gazprom on the principal terms and conditions for its participation in the Nord Stream consortium. Nord Stream submitted applications to the Swedish Government.

2006-

**Transboundary Environmental Impact Assessment.** All major contracts with suppliers have been finalised. Nord Stream is to submit transboundary EIA report and national applications in Russia, Denmark, Germany and Finland in line with the national legislation of each country.

2010-

**Laying of Pipeline 1.** The first pipeline will be laid. Before construction can start, a sufficient number of pipe joints has to be ready in the stock yards along the route.

2011

**Commissioning of Pipeline 1.** After thorough testing, gas deliveries will start.

2011

**Laying of pipeline 2.** A second pipeline will be built, parallel to the first one.

2010

**Commissioning of Pipeline 2.** When the second line comes on stream in 2012, full capacity of 55 billion cubic metres per year will be achieved.

### **ENVIRONMENTAL STUDIES**



The Baltic Sea will benefit from comprehensive studies undertaken by Nord Stream.

All in all, more than 2,400 square kilometres of the Baltic Sea have been thoroughly researched. The

results of these unprecedented studies will be an important contribution to further research of the Baltic Sea environment. They will add considerably to knowledge about dumped munitions, sediment structure and bathymetric data.

Nord Stream is fully committed to conserving the Baltic Sea environment.

The pipeline is being planned with acute awareness of environmental issues and conditions in the Baltic Sea. The many offshore infrastructure projects in the world include thousands of kilometres of underwater lines. These show that offshore solutions offer an environmentally sound alternative to onshore structures.

For more information on environmental studies please go to www.nord-stream.com.

#### PERMITTING PROCESS



As a cross-border project, Nord Stream is subject to international conventions and national legislation in each of the countries through which it passes.

Before construction starts, an Environmental Impact Assessment (EIA) will be completed. This is a detailed study of all environmental aspects in a transboundary context. The process is governed by international legislation – the Espoo Convention, Council Directive 97/11/EC of 3 March 1997 – and the need to obtain national permits and licences. The Baltic Sea terrain along the pipeline route will be carefully researched before pipe-laying begins.

A number of preliminary environmental assessment and baseline studies were carried out during the feasibility phase. Their findings are being used for the final EIA and as background information. Nord Stream held long and detailed consultations with government bodies and public interest groups, the concerns of which are also reflected in the EIA.

# Nord Stream's Environmental Impact Assessement (EIA) consultations:

- Ensure that the environment, the health and well-being of Baltic Sea residents are respected
- Meet the requirements of national and international legislation
- Help to designate optimum alternatives and choose state-of-the-art technology for pipeline construction and operation
- Minimise environmental risks
- Contribute towards developing the best environment management plan
- Guarantee proper environmental monitoring and measurement

#### The EIA process

- 1. Notification (November 2006)
- Screening, consultation with authorised bodies and the public
- 3. Scoping
- 4. EIA programme
- 5. Environmental survey
- 6. EIA report development
- 7. Final EIA report (2009)
- 8. Permits, licences, etc.
- 9. Environmental monitoring

For more information please visit www.nord-stream.com.



#### **NORD STREAM AG**

Nord Stream AG is an international joint venture established for the planning, construction and subsequent operation of the new offshore gas pipeline. Gazprom holds a 51 per cent stake in the joint venture. BASF/Wintershall and E.ON Ruhrgas hold 20 per cent each. Gasunie has a 9 per cent stake.

### Nord Stream guarantees Europe's energy security.

Nord Stream AG brings together leading European consultants on environmental, technical and financial issues. Nord Stream employs a total of 85 international experts.

The Shareholder Committee, which consists of top managers representing each of the shareholders, is responsible for corporate governance. The chair of the Shareholder Committee is Gerhard Schröder.

Nord Stream's mission is to create and operate an efficient gas pipeline infrastructure in order to provide Western Europe's energy networks with natural gas, an environmentally friendly fossil fuel.

Nord Stream aims to achieve a qualitatively new level of cooperation with regard to the energy infrastructure between business, political institutions and non-governmental organisations.

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