



**Nord Stream**  
The new gas supply route for Europe

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# Section 1

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## Introduction

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# 1 Introduction

Nord Stream AG plans to construct an upstream natural gas pipeline system through the Baltic Sea. The project consists of two parallel pipelines. The 1,220 km long pipeline system runs from Portovaya in the area of Vyborg/St Petersburg in Russia to Lubmin in the Greifswald region in Germany. It will connect the world's largest natural gas deposits in Russia with the integrated European pipeline network. From Germany, the natural gas can be further transported to Denmark, the Netherlands, Belgium, Great Britain, France, Poland Czech Republic and other countries.

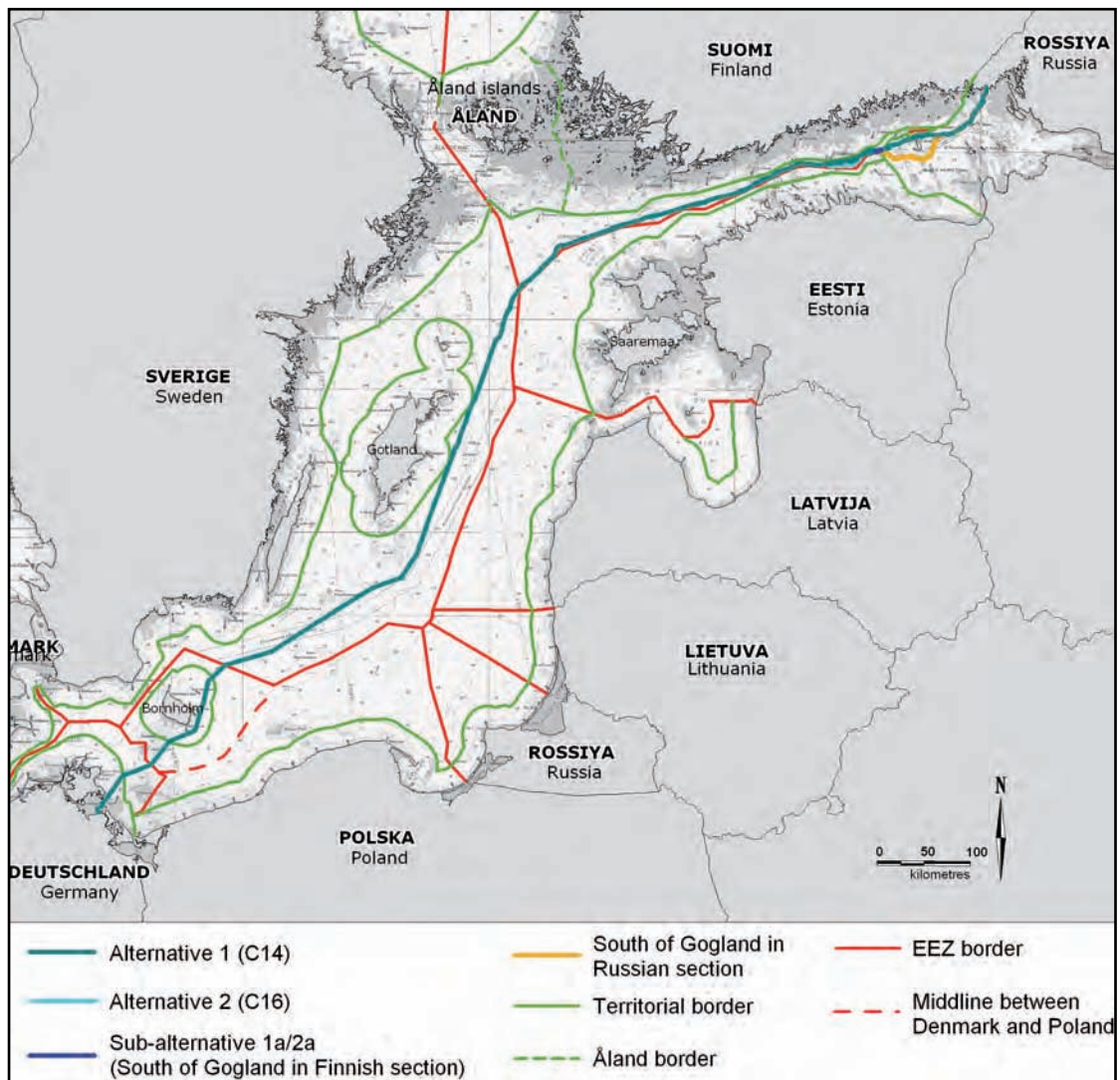


Figure 1.1. The Nord Stream pipeline will run from Russia to Germany via the Baltic Sea.

The pipeline system will pass through the exclusive economic zones (EEZ) of five countries – Russia, Finland, Sweden, Denmark and Germany – and the territorial waters of Russia, Denmark and Germany (see Figure 1.1).

Nord Stream AG will be the commissioner and operator of the project. The company is described in Chapter 2. Rambøll Oil & Gas AS, Denmark, and Ramboll Finland Oy have acted as the consultant and Environmental Impact Assessment (EIA) expert for Nord Stream AG. The Italian company Saipem Energu Services (former Snamprogetti) has been responsible for the technical design of the pipelines. The project is located in the territories of three Finnish Regional Environment Centres: Southeast Finland, Uusimaa and Southwest Finland. The Finnish authorities have agreed that the Uusimaa Environment Centre will act as the coordinating authority for the national EIA procedure. Other authorities, research institutions, municipalities and members of the public have also been involved in the EIA process. Public participation is described in Chapter 4.2.5.

Natural gas comprises 25% of the primary energy consumption in the EU, which is a significant proportion of energy consumption. Natural gas demand in the EU is expected to grow at an average annual rate of 0.74%, from 543 bcm in 2005 to 629 bcm in 2025 /1/. At the same time, the production of gas in the EU is expected to decline to cover only 20% of the forecasted natural gas requirement in 2020. In order to meet the future demand for energy in the EU, the EU Commission has launched a programme named Trans-European Energy Networks (TEN-E) /2-4/.

The first pipeline of the Nord Stream project is planned to be completed by the end of 2011. With this first pipeline, a transport capacity of approximately 27.5 bcm of natural gas per annum will be provided. In the second project phase, this transport capacity will be doubled by a second pipeline running almost parallel to the first, increasing the overall transport capacity to approximately 55 bcm of natural gas per annum. This second pipeline is planned to be completed in 2012.

Transboundary impacts are assessed according to the Espoo Convention (Convention on Environmental Impact Assessment in a Transboundary Context). The section of the pipeline route that runs through the Finnish EEZ is subject to national environmental impact assessment in accordance with Finnish legislation.

The national environmental impact assessment is based on the Finnish Act on Environmental Impact Assessment Procedure (468/1994, amendments 267/1999 and 458/2006). The EIA procedure is two-phased: the procedure starts with an EIA programme phase and is followed by an assessment phase. Nord Stream AG submitted the Finnish EIA programme to the authorities in November 2006. Results of the impact assessment have been compiled in this report.

The environmental impact assessment procedure is meant to ensure that the environmental impacts of a proposed activity will be thoroughly investigated before decision-making by the respective authorities. Another objective is to increase the information available to citizens and provide an opportunity for the public to participate. Impact assessment has been carried

out simultaneously with the technical design. Therefore, it has been possible to take environmental impacts into account in the planning, e.g., by re-routing the pipeline or finding other technical solutions (see Chapter 13.1).

The scope of the Finnish national EIA is presented in Chapter 3 (Figure 3.1). In general, this national EIA report focuses on the construction, pre-commissioning, commissioning and operation of the pipelines in Finnish waters with two main route alternatives. Transboundary impacts from other countries to Finnish waters and from the Finnish EEZ to other countries are outside the scope of this document. They will be presented in the Espoo report /5/.

Chapter 2 describes background information of the project including history of the Nord Stream project and economic, socio-political and environmental rationale for the project. Chapter 3 is the description of the project including route- and detailed design, installation logistics, construction, commissioning and relation to other projects. Chapter 4 describes the environmental impact assessment procedure and Chapter 5 the present situation in the project area including physical and chemical environment, biotic environment, protected areas and also economic and human conditions. Chapter 6 gives detailed information of the route alternatives and route optimization and Chapter 7 describes the background and methodology of the environmental impact assessment work. Chapter 8 gives detailed descriptions of the environmental impacts of the project. Chapter 9 discusses the risks related to unplanned events during installation and operation of the pipelines. Environmental considerations for decommissioning are dealt in chapter 10 and conclusions and comparison of alternatives are described in chapter 11. Chapter 12 discusses the lack of information and uncertainties. Chapter 13 describes preventing and mitigating measures, Chapter 14 further planning and includes Chapter 15 proposal for a monitoring programme.

The Finnish national EIA documentation comprises this national EIA report, separate national Atlas as well as the Nord Stream Environmental Impact Assessment Document for Consultation under the Espoo Convention (later Espoo report) and Espoo atlas. Espoo report and Espoo atlas are appendixes to this national EIA report.