

PRESS RELEASE

Nord Stream's Second Pipeline Sections to be Joined Together Underwater

- **Two of the three sections of the second 1,224-kilometre gas pipeline to be welded together off the coast of Finland**
- **Third section to be joined up off the coast of Gotland, Sweden, in June**
- **The second pipeline to become operational before the end of 2012**

Zug, May 29, 2012. Nord Stream started today the first of two all-important underwater tie-ins of its second gas pipeline through the Baltic Sea. In this complex two-week-long offshore operation, two of the pipeline's three sections will be joined together 80 metres underwater inside a hyperbaric welding habitat on the seabed off the coast of Finland.

Nord Stream has designed and constructed its twin 1,224-kilometre pipelines in three sections with reducing pipe-wall thicknesses as the design pressure of the gas drops from 220 to 177.5 bar on its journey from Portovaya Bay in Russia to Lubmin on Germany's Baltic Sea coast. This design enabled Nord Stream to dispense with the need for any interim compressor station with environmental benefits as onshore lines require the gas to be recompressed every 100 to 200 kilometres. It also reduced the amount of steel required, saving costs significantly and allowing faster pipe-lay.

The underwater connection of the three sections by hyperbaric tie-in takes place at the two offshore locations where the design pressure changes from 220 to 200 bar and from 200 to 177.5 bar respectively. The connection of the Central and South Western sections will take place in June off the Swedish island of Gotland at a depth of approximately 110 metres

"The underwater welding operations will be set up by technical divers and remotely controlled from the world's largest dive support vessel, Technip's 160 metre long Skandi Arctic, using equipment from PRS, the Pipeline Repair System pool of pipeline operators administered by Norway's Statoil", says Nicolas Rivet, Project Coordinator for the hyperbaric tie-in operations at Nord Stream.

The Skandi Arctic has a 24-man dive system on board. It has pressurized living spaces for the teams of highly-specialised divers working on the welding operation. The process uses three massive pipe handling frames,

which are lowered from the Skandi Arctic and positioned over the pipeline ends on the seabed. The frames move the ends of the overlapping parallel pipeline segments to line them up for welding after cutting them to the right length. The pipe ends are then bevelled and the pipes lifted and moved into place.

The actual welding takes about 24 hours. It is remotely controlled from the Skandi Arctic, and closely monitored by the technical divers. The weld is then inspected with ultrasound and after the weld is accepted, the welding habitat is lifted back on to the vessel and the pipe handling frames lower the pipeline back on to the seabed.

After the two hyperbaric tie-ins, all the water will be removed from the completed pipeline over the summer and the empty pipeline will then be dried. The onshore and offshore sections of the pipeline will be connected in early autumn, and after thorough testing this second line is expected to come on stream on schedule in the last quarter of 2012.

When fully operational, the integrated twin pipeline system will have the capacity to transport 55 billion cubic metres (bcm) of gas a year from Russia's massive gas fields to the European Union.

An info visual explaining underwater tie-ins [can be downloaded in our library](#).

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Notes to editors

Nord Stream is a natural gas pipeline which links Russia and the European Union through the Baltic Sea. The European Union's annual natural gas imports in 2009 were approximately 312 billion cubic metres (bcm) and are projected to increase to over 523 bcm by 2030. By then, the EU will need additional gas imports of 211 bcm per year (Source: IEA, 2011). Nord Stream will meet more than a quarter of this additional gas import requirement by connecting the European gas pipeline network to some of the world's largest gas reserves. The project will be an important contribution to long-term security of supply and a milestone of the energy partnership between the European Union and Russia.

The first of Nord Stream's two parallel pipelines became operational in November 2011. Each line is approximately 1,220 kilometres long, providing a transport capacity of some 27.5 bcm per year. All of Line 2 has now also already been laid. Full capacity of about 55 bcm per year will be reached when the second line goes on stream in late 2012. This is enough gas to supply more than 26 million European households.



Nord Stream

The new gas supply route for Europe

Nord Stream AG is an international joint venture established for the planning, construction and subsequent operation of offshore gas pipelines through the Baltic Sea. Russian OAO Gazprom holds a 51 per cent stake in the joint venture. The German companies BASF SE/Wintershall Holding GmbH and E.ON Ruhrgas AG hold 15.5 per cent each, and the Dutch gas infrastructure company N.V. Nederlandse Gasunie and the French energy company GDF SUEZ S.A. each hold a 9 per cent stake.

Nord Stream is included in the Trans-European Energy Network Guidelines (TEN-E) of the European Union. In 2006, the project was designated a "project of European interest" by the European Commission, the European Parliament and the Council of the European Union. Nord Stream is, therefore, recognised as a key project for meeting Europe's energy infrastructure needs.

Construction of the first Nord Stream Pipeline started in April 2010, after completion of environmental studies and planning and an Environmental Impact Assessment (EIA) along the entire pipeline route. Three pipelay vessels were commissioned to work on the project: Saipem's *Castoro Sei* carried out the majority of the construction in the Baltic Sea. The *Castoro Dieci* completed its operations in German waters, where it constructed both pipelines in the German landfall section; Allseas' *Solitaire* handled construction in the Gulf of Finland as a subcontractor of Saipem. The first pipeline became operational in November 2011; the second one is scheduled to become operational in 2012.

No intermediate compressor station: Nord Stream was able to design its offshore pipeline to operate without an intermediate compressor station, but with three different design pressures and pipe wall thicknesses as the gas pressure drops over its long journey from Russia to landfall in Germany. The connection by hyperbaric tie-in of these three pipeline sections was carried out at the two offshore locations where the design pressure changes from 220 to 200 bar and from 200 to 177.5 bar respectively. The connection of the Gulf of Finland and Central sections of the first pipeline took place off the coast of Finland at a sea depth of approximately 80 metres, and the connection of the Central and South Western sections off the Swedish island of Gotland at a depth of approximately 110 metres. The three sections of Line 2 will be connected underwater at the same locations this summer.