



White Paper

The South Stream Offshore Pipeline

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1. The South Stream Project: A Key Link for Supplying Natural Gas

The South Stream Offshore Pipeline is the offshore component of the South Stream Pipeline System which will deliver natural gas from Russia to Central and South-Eastern Europe. It will directly connect European consumers to the world's largest gas reserves to help secure Europe's growing energy demand.

Natural gas is the most climate-friendly fossil fuel; and it is both efficient and abundant. Yet while European demand for gas is rising, domestic production is declining, due to dwindling European reserves. The International Energy Agency projects annual gas demand in Europe to grow by 15% between 2010 and 2035. Within the same time period, production in Europe will decrease by more than 50%.¹ Therefore, the region needs additional gas supplies and reliable supply routes to secure its energy for the coming decades. The South Stream Offshore Pipeline is scheduled to deliver first gas to Europe by the end of 2015.

The South Stream Pipeline System consists of one offshore and several onshore sections. The South Stream Offshore Pipeline will run from Russia through the Black Sea to Bulgaria. The onshore sections will connect Bulgaria, Serbia, Hungary, Slovenia and northern Italy, with branch pipelines to Croatia and Bosnia-Herzegovina.

Joint ventures have been established in each onshore country between the Russian energy company OAO Gazprom and a local partner company, including Bulgarian Energy Holding EAD in Bulgaria, JP Srbijagas in Serbia, MVM Zrt. in Hungary, and Plinovodi d.o.o. in Slovenia. The offshore section of the pipeline will be implemented by the international joint venture South Stream Transport B.V.

¹ International Energy Agency, World Energy Outlook 2012.

2. South Stream Transport B.V.

South Stream Transport B.V. is an international consortium for the planning, construction, and subsequent operation of the South Stream Offshore Pipeline. Throughout the pipeline's design life of 50 years, the company will provide transport services for natural gas from Russia across the Black Sea to the landfall site in Bulgaria.

South Stream Transport brings together four leading energy companies: Russia's OAO Gazprom with a stake of 50%, Italy's Eni S.p.A. with a share of 20%, France's EDF, and Wintershall Holding GmbH – a subsidiary of Germany's BASF – each with a stake of 15%.

The South Stream Offshore Pipeline is jointly financed by investors from the international financial markets and the four Shareholders, who took the Final Investment Decision for the Project on 14 November 2012. It is an investment in secure and safe energy supplies that will support the long-term development of Central and South-Eastern Europe.

By uniting four leading European energy companies as shareholders, South Stream Transport benefits from extensive experience in the construction and operation of onshore and offshore gas pipelines. The company will draw on this know-how and apply advanced technology for safe construction and operations, following Good International Industry Practise for Health, Safety, Security, and the Environment (HSSE).

3. Construction of the South Stream Offshore Pipeline

The South Stream Offshore Pipeline will originate on the Russian shore near Anapa, cross the Turkish Exclusive Economic Zone of the Black Sea and land on the Bulgarian coast near Varna. The route through the Black Sea will be approximately 930 kilometres long and reach a maximum depth of up to 2,250 metres.

Four pipeline strings will be constructed, each with a diameter of 32 inches (81 centimetres) and an annual transport capacity of 15.75 billion cubic meters (bcm). When fully operational, the South Stream Offshore Pipeline will enable the transport of 63 bcm of natural gas per year – equivalent to the energy needs of some 38 million European households.

Each pipeline string will be made up of over 75,000 segments of 12 metres each. The pipe segments will be welded on board a pipe-laying vessel and then lowered onto the seabed. At both landfall sites in Russia and Bulgaria, the pipeline will run underground before connecting to landfall facilities a few kilometres behind the shoreline.

4. First Gas by the End of 2015

After Gazprom completed a Feasibility Study to assess different routing and landfall options, South Stream Transport commenced basic engineering works, contracting the Dutch engineering firm INTECSEA for the Front End Engineering and Design (FEED). The information from the FEED supports the development of the Environmental Impact Assessment Reports and forms the basis of the ongoing detailed design.



Construction at the landfalls and offshore pipe laying of the first line will start in 2014, after construction permits have been granted. Commercial operations of the first line are planned to start by the end of 2015 and operation of all four pipelines is to be achieved in late 2018.

5. Putting the Environment First: Environmental and Social Impact Assessments

South Stream Transport is committed to developing the Project in an environmentally and socially responsible manner, in line with national, international, and EU legislation. With the help of independent experts, the company is conducting research on the impact of the Project on the environment, taking into account the ecology, cultural heritage and socio-economic aspects.

The impact assessment consists of two parallel processes: an Environmental Impact Assessment (EIA) in accordance with national legislation in Russia, Turkey and Bulgaria respectively; and an Environmental and Social Impact Assessment (ESIA) in alignment with the guidelines of international finance institutions, such as those of the World Bank's International Finance Corporation (IFC). While the EIA serves to meet national legislative requirements, the ESIA ensures a consistent approach for the entire Project across all three countries. Potential cross-border impacts will also be assessed, both as part of the ESIA process, and in the specific context of the Bulgarian EIA, which encompasses the principles and procedures of the Espoo Convention.²

The EIA and ESIA processes start with a "scoping" phase during which key environmental or socio-economic issues are identified and published in a corresponding report. This is followed by a more detailed impact assessment, which is then presented in the EIA and ESIA Reports. In addition, South Stream Transport will publish an Environmental and Social Management Plan (ESMP) which outlines measures to mitigate, manage and monitor any impacts during construction and operation of the pipeline. Stakeholders, including local communities, NGOs and fishery organisations, are consulted on each report so that their concerns are understood and considered in the assessment. The aim is to implement the Project with as little impact to the environment as possible.

While the scoping phase is still underway in Turkey, it is drawing to a close in Russia and Bulgaria, where feedback has been collected from local stakeholders for consideration in the development of the impact assessment.

Preliminary assessments conducted during the scoping phase included surveys to determine the best route, and to help avoid areas of cultural heritage value. Amongst others, multiple shipwrecks were identified, including on the abyssal plain at depths of over two kilometres. Due to the nature of the Black Sea marine environment, which is characterised by a lack of oxygen in deep waters, some of these are well preserved despite

² The Espoo Convention, or "UNECE Convention on Environmental Impact Assessment in a Transboundary Context", sets out the obligations of Parties to notify and consult each other on major projects under consideration that are likely to have a significant adverse environmental impact across boundaries.



their old age. South Stream Transport is working with archaeologists and national authorities to learn more about these finds.

South Stream Transport aims to submit detailed EIA reports to national authorities in summer and autumn 2013 and to hold public consultations on its ESIA reports by the end of 2013, before construction begins the following year.

