The South Stream Offshore Pipeline

Project Background

Natural gas is Europe’s fuel of choice: it is climate-friendly, efficient, and abundant. However, while European gas consumption is rising, domestic production is declining – the region needs additional gas supplies and reliable supply routes to secure its energy for the next decades.

The South Stream Offshore Pipeline will increase the security of supply of natural gas to Central and South-Eastern Europe as it creates a direct supply route and provides additional capacities. The system will contribute to European energy security in a safe, reliable, and environmentally responsible way and will help EU member states to meet their CO₂ reduction targets.

The South Stream Offshore Pipeline through the Black Sea is the offshore section of the South Stream Gas Pipeline System. It will have a length of 931 kilometres and connect the world’s largest natural gas reserves in Russia with consumers in the European Union. The South Stream Offshore Pipeline will originate at the Russian Black Sea shore in the area of Anapa, cross the Turkish Exclusive Economic Zone of the Black Sea and land on the Bulgarian coast near Varna.

Over its planned design life of half a century, the South Stream Offshore Pipeline will supply up to 63 billion cubic meters of gas each year. This is equivalent to approximately 12% of the EU’s total gas consumption in 2020 (Source: International Energy Agency, World Energy Outlook 2012).

South Stream Transport B.V. is an international consortium established for the planning, construction, and subsequent operation of the offshore pipeline through the Black Sea. The consortium consists of four energy companies – OAO Gazprom, Eni S.p.A., EDF and Wintershall Holding GmbH (BASF Group). These exporters and importers of natural gas are combining their experience to ensure the best technology, safety, and corporate governance standards for the South Stream Offshore Pipeline.

South Stream Offshore in Numbers

931 km – Offshore pipeline length
63 bcm per year – Pipeline capacity
4 – Number of pipelines
32 inch – Pipeline diameter (813 mm)
12 m – Length of each pipe segment
300,000 – Total number of pipe segments
2,200 m – Maximum pipeline depth

Shareholders of South Stream Transport B.V.

50% – OAO Gazprom (Russia)
20% – Eni S.p.A. (Italy)
15% – EDF (France)
15% – Wintershall Holding GmbH (BASF Group) (Germany)

Design Basis

DNV Offshore Standard DNV-OS-F101, Submarine Pipeline Systems 2010

The South Stream Offshore Pipeline route through the Black Sea
Project Advantages

- Connects European Union consumers to the world’s largest gas reserves in Russia
- Relies on over 40 year stability of Russian gas supplies to Europe
- Delivers an environmental-friendly energy source
- Complements existing energy infrastructure
- Provides long-term solution for consumers and industry
- Responds to the EU’s growing energy demand
- Contributes to development of the Black Sea region
- Attracts private investments
- Combines business expertise and the latest technology
- Benefits from experience of European energy companies

Natural Gas – The Cleanest Burning Fossil Fuel

**CO₂ emission level**

- COAL
- OIL
- NATURAL GAS

![Graph showing CO₂ emission levels for coal, oil, and natural gas.](source)

Pounds of CO₂ per Billion Btu (British thermal unit) of Energy Input

Energy demand

- Provides the energy needed for about 38 million European households
- Accounts for approximately 12% of total projected EU gas consumption in 2020

Transportation

- Delivers the same amount of energy as 700 LNG (Liquefied Natural Gas) tankers
- Delivers the same amount of energy as 450 Aframax oil tankers

Golden Age for Gas

The highest percentage of gas supplied in the EU still comes from indigenous sources, with 37% of total net supplies in 2010. While natural gas production in the EU and the North Sea will continue to provide significant quantities of gas to Europe, the relative share of those sources will decrease.

According to the latest estimates by the International Energy Agency, natural gas demand in the EU is set to rise from 536 bcm (2010) to 618 bcm in 2035, an increase of approximately 15%.

By 2035, EU domestic gas production will have dropped by about 53%. But in that same timescale, Russia has the ability to fill a significant proportion of the European import gap.


Project Timeline

- Memorandum of Understanding with EDF
- Memorandum of Understanding Eni and Gazprom
- Final Investment Decision
- Design, ESIA & Permitting
- Construction Phase
- Operations

63 billion cubic meters (bcm) of natural gas per year delivered by the South Stream Offshore Pipeline is equivalent to:

![Timeline diagram showing key milestones.](source)