

## Project Summary Information (PSI)

Project No: 000062

Project Name	Turkey Gas Storage Expansion Project
Country	Republic of Turkey
Sector	Energy
Project No	000062
Borrower	Boru Hatları ile Petrol Taşıma A.Ş. (BOTAŞ)
Implementation Agency	Boru Hatları ile Petrol Taşıma A.Ş. (BOTAŞ)
Environmental and Social	Category A
Date of PSI prepared or updated	June 28, 2018
Date of Concept Approval	December 4, 2017
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Date of Board Approval	June 24, 2018

### I. Introduction

Turkey has achieved impressive economic and social development results since the early 2000s, raising it to the world's 17th largest economy. Macroeconomic stability, broad social and economic reforms, increased economic integration with the region, and a transformation of a significant part of the economy away from agriculture into manufacturing and services were core contributors to Turkey's growth. Turkey's economy grew strongly from 2001 to 2014, with GDP quadrupling in nominal U.S. dollar terms, underpinned by a comprehensive macroeconomic and structural reform program. As a result, Turkey's per capita income of USD 10,787 in 2016 puts it in the group of upper-middle-income countries. Following a strong performance in 2015, growth has slowed to 3.2 percent in 2016 partly reflecting weak investment due to Russian sanctions and failed coup attempt in July. In 2017, Turkey's growth rate increased to 7.4%<sup>1</sup> supported by an extensive fiscal stimulus, which together with credit expansion pushed inflation to double digits.<sup>2</sup> The current account deficit has widened and the Turkish Lira has depreciated significantly against the USD over the past 12 months. The country's sovereign debt rating has been downgraded recently by one notch to by Moody's, citing concerns about the country's current account deficit and higher external debt.<sup>3</sup> Looking ahead, Turkey's medium-term growth is projected to stabilize around 3.5 - 4%, supported by domestic demand.<sup>4</sup>

Turkey increased its access to natural gas after it made a strategic choice, in the late 1980s, to diversify its energy mix. Gas based power generation was preferred due to its lower investment cost, operational flexibility and environmental advantages compared to coal. Natural gas is now the most important fuel in Turkey's energy supply. Turkey's gas consumption, about 52 billion cubic meters (bcm) in 2017, accounted for about one third of Turkey's primary energy supply. Implementing the Government's strategic choice to diversify the country's energy mix, Turkey's national gas company BOTAŞ launched the development of a national gas transmission networks followed by natural gas imports in 1987. Less than two decades later, gas had displaced indigenous coal as the most important fuel in power generation. Residential and industrial consumption have increased steadily in line with the expansion of BOTAŞ' natural gas transmission network and the development of gas distribution systems by a large number of private companies across Turkey. Their shares in total consumption reached 31 percent and 29 percent of annual gas consumption in 2017, respectively; with power generation still accounting for the highest share at 40 percent.

<sup>1</sup> <http://www.turkstat.gov.tr/HbGetirHTML.do?id=27825>

<sup>2</sup> IMF, 2018. Turkey: Staff Concluding Statement of the 2018 Article IV Mission, February 2018.

<sup>3</sup> Source: Financial Times, March 21, 2018.

<sup>4</sup> IMF, 2018. Turkey: Staff Concluding Statement of the 2018 Article IV Mission, February 2018

The domestic production of natural gas is insignificant (less than 1 percent). Thus, the country relies entirely on imports to meet the domestic consumption of natural gas. Turkey's heavy dependence on energy imports (mostly oil and gas) constitutes a macroeconomic challenge and an energy security risk.

Network capacity and storage limitations endanger security of supply, constrain the flow of gas and also the trading of gas by prospective competitors.<sup>5</sup> Residential gas consumption is increasing steadily. Gas is used mainly for heating and is heavily seasonal, peaking during winter months. Demand peaks in the residential sector have led to curtailment of gas service to the power sector during cold periods and generation of power from more expensive and in the case of fuel oil and coal, more polluting generation. While Liquefied Natural Gas (LNG) remains a key part of Turkey's energy security strategy and floating storage and regasification units (FSRUs) will help improve security of supply during peak demand periods, the Government has recognized LNG's limitations: (i) higher cost of supply compared to pipeline gas; (ii) price seasonality with winter prices being higher precisely when demand in Turkey is at its peak; and (iii) transportation lead times and logistical challenges. Government strategy therefore calls for rapid development of additional gas storage capacity.

A World Bank (WB) supported project to develop a 1.2 bcm gas storage utilizing the Tuz Golu salt formation is underway. The proposed project would raise the capacity of the Tuz Golu Gas Storage Facility by 4.2 bcm to 5.4 bcm, and Turkey's total capacity to 9.7 bcm, about 17 percent of projected annual gas consumption in the mid-2020s. Though a major improvement compared to the current less than 6 percent, 17 percent would still be rather modest compared to 30-40 percent in similar import-dependent European countries<sup>6</sup>.

The proposed Sovereign-backed Loan is to co-finance the Turkey Gas Storage Expansion project (the Project) with the World Bank. The World Bank will be the lead co-financier of the project and will take a leading role in procurement, disbursements, ensuring environmental and social safeguards compliance, and monitoring and reporting for the project.

## **II. Project Objective and Expected Results**

The objective of the project is to increase the reliability and stability of gas supply by expanding underground gas storage capacity.

## **III. Project Description**

The project consists of the following components:

### **Component 1: Tuz Golu Gas Storage Expansion Facilities** consisting of

Surface facilities, subsurface facilities, water and brine pipelines, electricity supply, instrument, control and telecommunication systems and contractor services.

### **Component 2: Supervision Consultancy** consisting of

Review of engineering drawings, supervision of construction and installation of the facilities and develop and implement overall project quality assurance and quality control program.

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<sup>5</sup> For more details regarding the issues discussed in this paragraph and other gas sector challenges, please see Turkey's Energy Transition: Milestones and Challenges Report (the World Bank, 2015).

<sup>6</sup> Such as France (33 percent), Italy (29 percent), and Germany (35 percent), as well as the Netherlands, a gas producing country (40 percent). Source: EMRA, BP World 2015 Report, Gas Infrastructure Europe, European Commission Country Reports and World Factbook.

### **Component 3: ESIA and RAP Monitoring Consultancy** consisting of

Regular monitoring of compliance of the construction activities with the Environmental and Social Impact Assessment (ESIA) and the Resettlement Action Plans (RAP).

#### **IV. Environmental and Social**

The project would use the WB's Environmental and Social Safeguard Policies (Safeguard Policies) since: (i) they are consistent with the AIIB's Articles of Agreement and materially consistent with the provisions of the Bank's Environmental and Social Policy (ESP) and relevant Environmental and Social Standards (ESSs); and (ii) the monitoring procedures that the WB has in place to ascertain compliance with its Safeguard Policies are appropriate for use under the AIIB project. Under the WB's Safeguard Policies, the proposed project has been assigned Category A, which is consistent with the provisions of the Bank's ESP.

The main environmental concern is the potential adverse impacts on the Tuz Golu (Salt Lake). The Salt Lake has been designated a Special Environmental Protected Area by the Turkish Ministry of Environment and Urbanization. The ongoing WB financed project's potential impacts on the protected area were assessed as part of the original environmental assessment and revisited with additional studies in 2013. Both assessments concluded that there were no significant adverse impacts on the Salt Lake. The brine solution has the same characteristics as the natural inflows to the lake and the total amount of brine solution discharged is not significantly affecting the amount of water in the lake. Monitoring will continue under implementation of the expansion project.

The project's social concerns include impacts on downstream users of Hirfanli Dam and the economic and livelihood impacts due to involuntary land acquisition. During the preparation of the additional finance for the WB's ongoing project, dam safety assurance measures were agreed with the dam operator (State Hydraulic Works or DSI), Electricity Generation Corporation of Turkey (EUAŞ) and BOTAŞ for implementation by the DSI field organization. These measures have been updated and revised in line with the WB review for the proposed project, including the Operations and Maintenance Plan. They did not involve significant and complex remedial works. Since the details of the exact land requirement are still unknown, a Resettlement Policy Framework (RPF) in line with the World Bank's OP/BP 4.12 has been prepared. Corresponding Resettlement Action Plans (RAP) for different project sub-components will be prepared and implemented by BOTAS to reflect the final design. Both the land acquisition process and potential nuisances impacting community members in the Project's area of influence will be covered in the Grievance Redress Mechanism (GRM), which comprises the state-managed national GRM, and a project-level GRM managed by BOTAŞ.

The ESIA also provides frameworks for the sub-management plans (e.g. waste management, biodiversity action plans, labor influx management, traffic management plan, occupational health and safety management plan, etc.) and requires the contractor to finalize these plans and submit them for BOTAŞ' approval.

Following two rounds of public consultations, the environmental and social safeguard instruments including the Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plans (ESMP), GRM and the RPF have been disclosed and can be consulted at the following links:

[www.botas.gov.tr/docs/ihaleler/2018/ddb\\_GSEP\\_ESIA\\_Report.pdf](http://www.botas.gov.tr/docs/ihaleler/2018/ddb_GSEP_ESIA_Report.pdf)  
[www.botas.gov.tr/docs/ihaleler/2018/ddb\\_Resettlement\\_Policy\\_Framework\\_RPF.pdf](http://www.botas.gov.tr/docs/ihaleler/2018/ddb_Resettlement_Policy_Framework_RPF.pdf)  
<http://projects.worldbank.org/P162727/?lang=en&tab=documents&subTab=projectDocuments>

Further stakeholder engagement is planned throughout the course of the project implementation.

## V. Estimated Project Cost and Financing Source

The project cost is estimated to be US\$ 2,735 million. The indicative financing plan is as follows:

<b>For Loans/Credits/Others</b>	<b>Amount in US\$ million</b>
AIIB Loan	600
World Bank Loan	600
Islamic Development Bank Loan	350
Commercial Loans	450
BOTAS	735
Total	2,735

## VI. Implementation

The project will be implemented by BOTAS. On-going monitoring will be conducted by a Supervision Consultant and the ESIA and RAP Monitoring Consultant. The World Bank and the AIIB plan to conduct implementation support missions at regular intervals during the implementation phase.

Procurement is being conducted in accordance with the World Bank's Procurement Regulations for Investment Project Financing (IPF) Borrowers of July 2016, revised in November 2017. Further information is available at the World Bank's website. The link is provided below:

<http://projects.worldbank.org/P162727/?lang=en&tab=procurement&subTab=notices>

Project implementation period (Start Date - End Date): June 2017 – October 2023.

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