



Uzbekistan: Regional Gas Transmission Efficiency Enhancement Project

Project Name	Regional Gas Transmission Efficiency Enhancement Project				
Project Number	52322-001				
Country	Uzbekistan				
Project Status	Proposed				
Project Type / Modality of Assistance	Loan				
Source of Funding / Amount	<table border="1"><tr><td>Loan: Regional Gas Transmission Efficiency Enhancement Project</td><td></td></tr><tr><td>Ordinary capital resources</td><td>US\$ 300.00 million</td></tr></table>	Loan: Regional Gas Transmission Efficiency Enhancement Project		Ordinary capital resources	US\$ 300.00 million
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Ordinary capital resources	US\$ 300.00 million				
Strategic Agendas	Inclusive economic growth Regional integration				
Drivers of Change	Governance and capacity development Partnerships Private sector development				
Sector / Subsector	Energy - Oil and gas transmission and distribution				
Gender Equity and Mainstreaming	Some gender elements				

Description	<p>Natural gas is the most important indigenous source of energy in Uzbekistan and regarded as one of the driving forces of the country's economy. At present, the gas sector contributes to 20% of national tax revenues and 18% of the country's gross domestic product (GDP). Natural gas comprises over 80% of the country's energy mix and 85% of electricity generated. Household sector is the largest consumers of gas (42%) followed by electricity generation (40%), industrial (12%), agriculture and others (10%).</p> <p>A major concern in the gas sector is the security of adequate gas supply. The country's proven gas reserves is estimated from 1.9 trillion cubic meters (tcm) to 2.6 tcm while potential reserves is as high as 5 tcm. With annual production of 53 billion cubic meters (bcm), Uzbekistan is the second largest gas producer within the former USSR and the 10th largest in the world with 2.5% share in the world output. If proven gas reserves is exploited, the remaining reserve capacity can meet gas demand between 30 and 45 more years, under a modest demand growth rate of 3% per year. To manage its gas potential in sustainable way, Uzbekistan government prepares its new Energy Strategy 2030 aiming at more advanced technology in exploring for new hydrocarbons coupled with investments in energy efficiency and rational use of natural gas. Aging gas transmission infrastructure is a main hurdle in Uzbekistan gas sector. Built more than 50 years ago, the gas transmission assets are well beyond the economic life. The gas infrastructure consists of a complex network of high and medium pressure pipelines equipped with physically degraded compressors with less than 35% of available capacity. Most of gas transmission facilities (pipelines) have not been tested or inspected for past 25 years. Lack of periodic maintenance resulted in technical losses above 15% or equivalent of Uzbekistan export volumes and imposing higher risk of safety of gas network in the country.</p> <p>At present, Uzbekistan gas sector lacks any centralized functions of measuring, monitoring, and controlling of supply and demand. Without automation, management of a system of this size, gas transmission system remains highly decentralized that leads to higher maintenance cost and greater operational and commercial risks. The lack of centralized operational control and data storage also constrains considerably the analytical and planning capabilities in Uzbekistan gas sector. This imperils Uzbekistan energy security and constrain the national economy growth.</p> <p>In Uzbekistan energy poverty coincides with economic poverty, especially in rural areas where over 42% of population resides. Poverty incidence is reported to be most severe in rural areas (about 50%) compared with capital and other large cities. Despite the country having an overall gasification rate of 70%, less than half of the rural population has uninterrupted access to gas, becoming most affected in case of disruptions in winter and heavily relying on solid dung, woods and coal for heating and cooking. Availability of energy in rural area could open up opportunities, increasing household income through extended period of agricultural productivity reducing rural-urban disparities. It specifically benefits women, who are mainly involved in agricultural activities, and children who are usually most affected by energy poverty. Uninterrupted gas supply also enables the operation of essential community infrastructure like schools and hospitals in winter season, contributing to the development of sustainable communities. In the absence of investments in gas transportation and increased output through newer technologies, the supplies are leveled off and shortfalls increase to crisis levels in winters.</p> <p>With poor quality of gas transmission infrastructure, Uzbekistan is not able to capitalize its export potential. Historically Uzbekistan, with installed transmission capacity of 60bcm, was the major source of natural gas in the Central Asia supplying up to 45% of its gas to Russia, Kazakhstan, Tajikistan and Kyrgyz Republic. Despite increasing needs for gas in the regional market, the export volumes of Uzbekistan gas plummeted to historical low at 11 bcm in 2017. Gas export is heavily impacted by seasonal imbalance in domestic consumption (winter demand is estimated about 90% of its production and only 20% in summer) that is very similar to its neighboring states demand profile. Although Uzbekistan has enough underground gas storage, however insufficient transmission capacity constraints guaranteed supply of gas mitigating seasonal variations in domestic and regional markets. It is resulted in reducing its actual export volumes valued at market price. At present only half of Uzbekistan gas is exported on long term market price contracts to China while remaining is on annually renewed agreements to Russia, Kazakhstan, Tajikistan at below market rates.</p> <p>Uzbekistan's geographical location makes it an energy hub of Central Asia for natural gas transit from energy rich Turkmenistan to neighboring countries, including PRC. Inaugurated in 2009, the Central Asia China (CAC) pipeline is only available export route delivering Turkmenistan gas via Uzbekistan to PRC and diversifying Turkmenistan energy export. CAC is the most attractive export route yet less than half of its capacity is explored due to insufficient quality of Uzbekistan gas network monitoring and control and integration of CAC into national network. To sustain gas transit capacity, modernization of Uzbekistan's gas transmission grid together with improved monitoring and control infrastructure (SCADA) is essential to transmit potential supply from Turkmenistan to Central Asian countries and PRC. Any delay in strengthening Uzbekistan's transit capacity for long term supply from Turkmenistan imposes significant risk for regional cooperation and energy security in the Central Asia.</p> <p>Gas pricing and tariffs. Inadequate gas pricing constrained the sector development and sustainability of Uzbekneftegaz (UNG), a 100% owned state vertically integrated gas company. At present, Uzbekistan had the lowest gas tariffs in the Central Asia insufficient to cover capital and operating expense of Uzbekneftegaz. The natural gas is mostly used to: (a) implicitly subsidize the economy by maintaining prices of gas and electricity at very low levels; and (b) support living standards by expanding the access of the population to gas. Uzbekneftegaz relies on government's subsidies (tax exemptions and privileges) and direct budgetary support for emergency rehabilitation and cost of most critical infrastructure. However, the government support is insufficient to maintain and expand gas production and modernization of transportation network and storage capacities without development cost reflecting tariff settings</p> <p>Uzbekneftegaz liquidity is heavily distorted with poor recovery of receivables from customers. Below market pricing for gas discouraged efficient use of energy in Uzbekistan and eventually made the total energy sector unsustainable. At present, Uzbekneftegaz collects only half of receivables for gas delivered to domestic consumers. In 2017, the government piloted an installation of advanced metering for residential consumers in selected regions and created a bureau of compulsory enforcement under the General Prosecutor's Office to recover debts for utilities including gas and electricity. To strengthen financial discipline and reduce operating expenses of Uzbekneftegaz, the government made significant staff cuts (over 30%) in its distribution subsidiaries. However, these efforts have only limited impact in receivable collections to an average rate of 65% and no significant improvements on the financial sustainability of Uzbekneftegaz.</p>
Project Rationale and Linkage to Country/Regional Strategy	<p>In 2017, Uzbekistan initiated comprehensive economic reforms liberalizing its exchange rate to solve long-standing difficulties associated with limited access to foreign exchange and requirements to surrender foreign exchange resulted in structural and economic distortions. The liberalization of the foreign exchange regime created significant challenge to Uzbekneftegaz massively distorting its value of assets, capital structure and revenue generation under existing governance and financial management frameworks. To restore Uzbekneftegaz financial position, the government initiated comprehensive energy sector reforms aimed at strengthening corporate sustainability of Uzbekneftegaz, creating a new cost reflective pricing for gas. Through ongoing assistance, ADB supports the government in implementing these reforms and addressing sustainability of Uzbekneftegaz, including development of operational efficiency and corporate transformation plan.</p> <p>Government development plan. Uzbekistan government formulated its vision for the country, <i>Uzbekistan 2030</i>, with the aim of overcoming social and economic challenges. The government recognizes the strong link between energy and economic growth, and the urgency to sustain gas supply modernizing transmission infrastructure. Key priority includes maintaining the momentum on structural reforms and economic activities liberalization that would lead to more financial resources for achieving long term economic growth. In its vision of <i>Uzbekistan 2030</i>, the government is committed to promote resource-efficient growth model through (i) institutional and governance reforms in the energy sector with potential unbundling of upstream, mid-stream and downstream functions; (ii) rationalized and cost reflective pricing for energy resources (gas and electricity). The government prioritizes investments in strengthening reliability of gas transmission infrastructure to increase its export and transit potential, improve gas use efficiency, and mobilize private sector investments.</p> <p>Scaling up investments in gas sector remains challenging. Uzbekneftegaz financial position is not considered adequate to meet the significant investment required to modernize the country's gas infrastructure with its capacity to develop more technically challenging gas transportation network may be limited. Furthermore, Uzbekistan's energy sector reforms, tariff settings and concerns around Uzbekneftegaz financial performance and transparency limit commercial development and private sector engagement</p> <p>The proposed project will address three key areas in the gas sector: (i) Uzbekistan gas transmission network upgraded; (ii) Uzbekneftegaz O&M practice enhanced; and (iii) Uzbekneftegaz corporate management strengthened. These outputs will result in the following outcome: Uzbekistan gas export transmission improved. The project is aligned with the following impact: reliability of gas transmission infrastructure strengthened. The project is well aligned with operational priorities in ADB Strategy 2030 and included in the Country Operations Business Plan 2019-2021. Historically, ADB's support for the energy sector in Uzbekistan largely focused on electricity (generation, transmission and distribution). This project will be ADB's first sovereign investment in Uzbekistan specifically targeting energy efficiency through gas transmission modernization measures. The proposed project forms an essential part of Uzbekistan gas sector development plan and consistent with ADB's Strategy 2030. The project promotes inclusive and sustainable economic growth, fosters energy security, improves diversification of the fuel supply source, and advances the clean energy agenda. Moreover, strengthening transit potential of Uzbekistan will promote regional cooperation and integration objectives, and enhance cross-border energy trade among Central Asian countries.</p>
Impact	Efficiency and reliability of gas transmission infrastructure strengthened.
Outcome	Uzbekistan gas transmission efficiency enhanced
Outputs	Gas transmission network upgraded Uzbekneftegaz's operations and maintenance practice enhanced Uzbekneftegaz's corporate management strengthened
Geographical Location	Nation-wide, Bukhara, Gazli, Yangiyer Shahri, Zirabulak

Safeguard Categories	
Environment	A
Involuntary Resettlement	B
Indigenous Peoples	C

Summary of Environmental and Social Aspects	
Environmental Aspects	
Involuntary Resettlement	
Indigenous Peoples	
Stakeholder Communication, Participation, and Consultation	
During Project Design	
During Project Implementation	

Business Opportunities	
Procurement	Procurement will follow the ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time) using open competitive bidding (international advertisement) for the engineering, procurement and construction/turnkey contracts for three gas compressor stations and 120-kilometer gas transmission pipeline. A project implementation consulting firm will also be recruited under the loan.

Responsible ADB Officer	Abbasov, Rafayil
Responsible ADB Department	Central and West Asia Department
Responsible ADB Division	Energy Division, CWRD
Executing Agencies	Uzbekneftegaz Uzbekistan, 100047, Tashkent Yashnabandski rayon, Str.

Timetable	
Concept Clearance	28 Jan 2019
Fact Finding	15 Nov 2015 to 30 Nov 2019
MRM	16 Mar 2020
Approval	-
Last Review Mission	-
Last PDS Update	10 Mar 2019

Project Page	https://www.adb.org/projects/52322-001/main
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