I. Project Context

Country Context

Uzbekistan is a low mid-income, resource rich country in the heart of Central Asia. The country accounts for one-third of the region's population, and its economic and social prospects are important both for the 28 million citizens, and the populations in the rest of the Central Asian countries (Kazakhstan, Kyrgyz Republic, Tajikistan and Turkmenistan), which were part of the former Soviet Union over two decades ago.

The country has enjoyed robust GDP growth since the mid-2000s—averaging 8 percent annually according to official data. Its economy withstood the 2008-09 global recession relatively well, due mainly to the continued high international demand for, and world market prices of the country's key export commodities—copper, cotton, gold, and natural gas; prudent macro-economic management; and the country's limited exposure to world financial markets. Overall growth is projected to continue around 7-8 percent annually during 2011-14, supported by net exports and a large capital investment program.

To become a high middle-income country in a sustainable manner, Uzbekistan needs to transform its current commodity-dependent economy into an industrialized, private demand-driven one. Critical elements for such a transformation include the following: (a) increasing the economy's efficiency and competitiveness; (b) strengthening the financial sector to support entrepreneurial activity in industrial and agricultural development; (c) diversifying production towards higher value-added activities and sub-sectors where comparative advantage can be demonstrated; (d) creating jobs for the rapidly growing population of young educated people; (e) improving governance to enhance the effectiveness of industrial development; and (f) improving access to information on government policies and their outcomes.

Uzbekistan's long-term development goal is to become an industrialized, high middle-income country by mid-century. The authorities' approach toward achieving this goal is to continue the gradual transition to a more market-oriented economy, to mitigate the potential negative consequences of external shocks, to ensure equitable distribution of growth between regions, and to maintain infrastructure and social services at an adequate level. In the mid-term, the government's key development priorities are to (i) increase the efficiency of infrastructure, especially of energy, transport, and irrigation; (ii) enhance the competitiveness of targeted, strategic industries, such as agro-processing, petrochemicals, and textiles; (iii) diversify the economy, in particular to reduce its reliance on commodity exports; and (iii) improve access to and the quality and outcomes of education, health and other social services, so that the benefits of overall growth are shared equitably by the entire population.

II. Sectoral and Institutional Context

Uzbekistan has rich energy resources. At the end of 2009, Uzbekistan had 600 million barrels of proven oil reserves and a Reserves-to-Production (R/P) ratio of 18.7 years. It has about 1.7 trillion cubic meters of proven natural gas reserves with a R/P ratio of 26.4 years. Its proven coal reserves are estimated at 3 billion tons. In 2010, the country produced 65 billion cubic meters (bcm) of natural gas and 32 million barrels of oil. The domestic consumption and exports of gas were around 49.5 bcm and 15.5 bcm respectively. Domestic production of oil is estimated to cover 80 percent of the country's domestic demand.

Uzbekistan is a large producer of electricity in Central Asia. By the end of 2010, installed capacity of the country's power generation system reached 12,472.3 MW. It generated 51,935 Giga Watt-hours (GWh) of electric power. Natural gas accounted for 85 percent of the power generation fuel mix, coal for 7 percent and hydro for around 8 percent.

The Uzbek power network is part of the larger Central Asian power system (CAPS), which is coordinated through a central dispatch coordination center located in Tashkent. In the past, the CAPS consisted of the five Central Asian national power grids, but is currently operating with only three countries, e.g. Kazakhstan, Kyrgyz and Uzbekistan. The national power transmission network has 1,850 km of 500 kV lines, 6,200 km of 220kV lines, and 15,300 km of 110 kV lines. The transmission network is interconnected with neighboring countries with 220 kV and 500 kV transmission lines.

The state owned national power company, Uzbekenergo (UE), has the mandate for providing electricity in Uzbekistan. It is a state-owned
company governed by a council chaired by the Deputy Prime Minister. It was established in August 2001 after public sector reorganization and is the legal successor of the former Ministry of Energy and Electrification. It is a holding company of 54 companies and has 51-100 percent equity ownerships of these subsidiaries.

UE is a vertically integrated power company, generating, transmitting and distributing most of the electricity in the country. By the end of 2010, its installed generation capacity was 12,038.7 MW with total electricity generation of 50,063 GWh. UE also owns and operates the national transmission network. The total number of employees of UE was around 61,700 in 2010.

UE owns and operates all the distribution networks and is a monopoly in the retail business through its 14 distribution companies following a geographical spread of the network across the country. Each of these distribution enterprises comprises a number of regional network units that deliver the electricity to end users. In total, there are 256 such regional network units. Latest statistics indicate that UE has around 5 million customers. Most of the electricity consumed by industrial (46 percent) and agricultural (24 percent) consumers. Average annual per capita electricity consumption is 1,940 kilowatt-hours (kWh).

The electricity tariffs are regulated by the central government and have been regularly adjusted since 2004 when the nominal average electricity tariff was at about US$ 0.018/ kWh. Tariff categories have been simplified and cross-subsidies reduced. In the past few years, the tariff level has been increased at a rate exceeding the 8 - 10 percent annual rate of inflation. Currently, the average level of end-user tariffs is US$ 0.053/kWh (as of October 2011). These steps have allowed UE to cover operational costs without direct subsidies from the government. As a result, the overall financial performance of UE was sound though some deterioration of operating profitability and higher leverage has been observed recently.

The power sector is facing following some major challenges to support the country to achieve the target of becoming an industrialized, and high middle-income country by mid-century:

- Efficiencies of the power industry are low. All the existing gas fired thermal power plants run on old steam thermal technology with efficiency of barely around 30 percent comparing to efficiency of over 55 percent of the latest combined cycle gas turbine technologies. Transmission and distribution system losses, both technical and commercial, are officially reported to be around 20 percent of electricity generated, around two to three times of losses experienced in advanced European power grids and some middle income developing countries. Although the collection rates for power bills improved in the past few years, there is still significant room for further improvement.

- Aging assets will have to be replaced or rehabilitated in the mid to long terms, requiring significant financing resources. Most of the generation assets are 40 to 50 years old. Around one-third of power transformers and circuit breakers are also over 30 or 40 years old and many distribution assets are approaching service lives of around 40 years. A large portion of existing electricity meters have been in service well beyond their designed economic life and cannot be recalibrated, causing poor measurement accuracy and easy to tamper with. Significant financing resources from both public and private sectors will be required to replace and/or rehabilitate the aging assets.

- Existing technical standards and management practices require urgent updates to be consistent with international norms and/or best practices. UE continues to rely on many Soviet era technical standards for design and construction of power sector facilities, which limits the participation of international suppliers. The accounting and financial management system and approaches of system planning are not fully consistent with international practices. Significant changes are needed to transform the company into a commercialized and efficient power utility.

The security and affordability of the energy supply are the key priorities of the GoU’s energy sector policies. The government’s energy sector strategy is focusing on: (a) improving energy efficiency and promoting clean energy technologies; (ii) integrating energy efficiency into national planning; (iii) improving energy sector performance by commercializing utility operations; (iv) attracting private sector participation; and (v) increasing commercial energy exports.

Currently, a major focus of GoU’s energy strategy is to improve rapidly the energy efficiency of both energy supply industries, and energy end users. A key action in the power sector is to implement a country wide advanced electricity metering (AEM) program to improve transparency and accountability of the sector. The program aims to implement modern technologies in electricity metering, billing and payment collection to reduce commercial losses. It will also encourage electricity consumers to use electricity more efficiently by providing transparent and fair pricing signals, and information of electricity consumption.

The program will cover all the consumers nationwide, both low voltage small (residential and institutional), and high- and medium-voltage (10 kV and above) large (mostly industrial, and agricultural) consumers. According to related government regulations, all consumers will be required to install advanced metering systems. For low voltage consumers, the metering systems will be financed and installed by UE and for high and medium voltage consumers, the metering systems will be installed by themselves but under the supervision of UE and in accordance with the technical specifications defined by related national authorities.

In the past few years, UE has spent around US$ 32 million in installing bulk revenue meters capable of accurately measuring and reporting interval demand for large, high- and medium-voltage customers, power generation plants and transmission-distribution interfaces. Large consumers are also installing meters within their own premises. Recently, UE has undertaken several pilot AEM projects in Tashkent, covering around 53,000 residential customers. These pilot projects have significantly reduced commercial losses and substantially increased revenue in the project areas. Building on the experience of the pilot projects, the GoU is requesting the Bank and other international financial institutions to finance the scaling-up of the AEM program.

III. Project Development Objectives
The project development objective is to reduce commercial losses of UE’s three regional power distribution companies in Tashkent City, and the Oblasts of Tashkent and Syrdarya by improving their metering and billing infrastructure, and the commercial management system.

IV. Project Description
Component Name
Component 1: Advanced Metering Infrastructure (AMI)
V. Financing (in USD Million)

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VI. Implementation

UE will be the implementing entity for the proposed project. Within UE, the project will be implemented by a Project Management Unit (PMU) established within ORGRES (a subsidiary of UE), the three regional distribution companies in Tashkent City, the Oblasts of Tashkent and Syrdarya respectively, and other related departments and subsidiaries of UE. The core staff of the PMU has been appointed with terms of reference agreed with the Bank. A tendering committee will be established to conduct bid evaluation and make procurement decisions. Selected contractors and international supervision consultant will assist UE in implementing the project and provide goods and services. Detailed institutional arrangements are described in Annex III.

The project will be implemented during a period of around 48 months. Detailed project implementation plan has been developed and agreed with the Bank. A project operation manual (PoM) has been drafted by UE and, reviewed and commented upon by the Bank. It will be agreed with the Bank, and adopted by UE for project implementation before the effectiveness of the loan.

VII. Safeguard Policies (including public consultation)

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