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PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE

Report No.: AB4266

Project Name	Kazakhstan: Moinak Electricity Transmission Project
Region	EUROPE AND CENTRAL ASIA
Sector	Power
Project ID	P114766
Borrower(s)	Kazakhstan Electricity Grid Operating Company (KEGOC)
Implementing Agency	KEGOC
Environment Category	[] A [x] B [ ] C [ ] FI [ ] TBD (to be determined)
Date PID Prepared	July 9, 2009
Estimated Date of Appraisal Authorization	May 13, 2009
Estimated Date of Board Approval	September 15, 2009

1. Key development issues and rationale for Bank involvement

Recent strong economic growth together with rising incomes has fuelled increasing demand for electricity in Kazakhstan, with consumption growth averaging over 6% per year since 2000. The major portion of the demand growth and more than half of total electricity consumption is in the southern regions which suffer from increasing power deficit. In recent years, the consumption/generation gap has risen to 2 to 1 in the south. In the Almaty region, growth in electricity consumption has exceeded 8% per year between 2000 and 2008. This vigorous demand growth has brought to light weaknesses in the capacity of both power generation and transmission networks in the south.

At present, the deficit is met largely by supplies from the north and in part by importing electricity primarily from Kyrgyztan. During winter, a high cost oil/gas-fired power plant at Zhambyl is operated to meet peak demand. However, the deficit cannot be fully met in the winter period of maximum electric loads, thus necessitating growing restrictions on consumption (load shedding) with adverse impact on regional economic development and welfare.

Following recovery from the current economic slowdown, electricity demand in southern Kazakhstan is expected to increase nearly 6% per year till 2020 and the supply shortfall will more than triple by 2020 (from 865 MW in 2007 to 3,400 MW) unless major new investments are undertaken in the generation and transmission sectors. The deficit is predicted to be particularly severe in the Almaty region. In order to address these supply constraints in the southern region, the Government of Kazakhstan (GOK) approved an ambitious long-term plan of system modernization and expansion.

The proposed operation forms an integral part of this program. Priority projects under the plan include the Moinak Hydroelectric Power Plant (HPP), a 300 MW facility on the Charyn River under construction. The plant will generate much-needed incremental regulating (peak) power for the south. The proposed project will support connection of the Moinak HPP to the high

voltage transmission network through construction of new transmission lines as well as extension and modernization of two substation facilities.

The state electricity enterprise KEGOC, which is responsible for the high voltage national transmission network, has completed all necessary feasibility studies and environmental assessments for the proposed project. Total estimated cost of the project is US$69.0 million. The GOK has provided a state guarantee for an IBRD loan in the amount of US$48.0 million equivalent as part of the 2009 state budget.

The Bank has had a long and productive relationship with both the GOK and KEGOC in the development of the electricity sector in Kazakhstan. Under two Bank-financed transmission operations (transmission modernization and North-South line), Kazakhstan has developed one of the most modern and efficient power systems in the Former Soviet Union, with an effective Independent System Operator (KEGOC) and a liquid, electronic spot market supplementing contractual arrangements between generators and customers.

The proposed project is consistent with the objectives of the Country Partnership Strategy, which support the development priorities of the GOK. These include as one of the key pillars "investing in human capital and infrastructure" given that major segments of infrastructure (e.g., road and power transmission networks) do not meet the needs of a rapidly expanding economy. The proposed project would support this development priority by addressing growing transmission constraints to reliable power supply.

2. Proposed objective(s)

The primary project objective is to ensure that business enterprises and households in southern Kazakhstan have improved access to reliable, cost effective and high quality supply of electricity. This objective will be achieved by increasing the capacity of the power transmission network to provide adequate supply of electricity to the southern part of the country, with particular focus on the Almaty region. Existing and prospective supply deficits in the region are a barrier to both economic growth and human development. By addressing these deficits, the project will help to ensure that broader societal objectives in terms of improved employment, incomes and standard of living can be achieved.

3. Preliminary description

The Moinak HPP under construction is located in South-Eastern Kazakhstan on the upper reach of the Charyn River. The approved design for evacuating power from the plant calls for 220 kV connection to the grid at two existing substations (SS). The main project sub-components include:

- 220 kV Overhead Transmission Lines (OHTL). This component includes construction of 220 kV transmission links between the Moinak HPP and Shelek SS (about 97 km) and between the Moinak HPP and Robot SS (about 225 km).

- Reconstruction of Robort SS and Shelek SS.

- Construction of outdoor switchyard (OSY) at Moinak HPP to evacuate power to the above SSs.

Estimated total cost (including consulting services, contingencies and taxes) is US$69 million. Projected construction period is about three years (completion expected by June 30, 2012).

4. Safeguard policies that apply

Environmental Assessment (OP/BP/GP 4.01). The site of the switchyard at Moinak HPP is in a remote rugged area near the Charyn River. There are no significant environmental issues during construction other than the normal issues of dust, noise and disposal of construction wastes as well as protection of the Charyn River water quality. Reconstruction works at Shelek SS and Robot SS will be confined to the boundaries of existing fence lines. During construction of the OHTLs, there are no significant environmental issues other than the normal issues of dust, noise and disposal of construction wastes. The selected routes and rights-of-way do not cross any known structures or sites of cultural significance or areas of proven mineral reserves. For the most part, the land use along these routes is for grazing or agricultural production. In addition, to protect surface water quality, special attention must be paid where transmission line routes cross rivers or streams and where worker construction camps are sited. The routes selected do not interfere with any migratory bird flight patterns. During operation, the chief issue is noise (corona discharge) and public health and safety from the high electric field strength. A satisfactory Environmental Management Plan was prepared and disclosed in the Bank's InfoShop and on KEGOC's website, and will be updated with detailed information reflecting the detailed designs when these are available. Based upon information received from the Borrower, environmental Category B was assigned to the project, indicating limited impacts.

Involuntary Resettlement (OP/BP 4.12). Civil works at the Shelek SS and Robot SS will be carried out within existing fence lines, thus not requiring land acquisition. There are no current occupants and users of these areas. Land (4 hectares) will need to be expropriated for the OSY at the Moinak HPP and the OHTL towers (8.1 hectares). The exact number of towers that will be built is unknown at this point in time, but will follow from the detailed working designs for the power lines during the first year of implementation. Since the exact scope and incidence of all land acquisition requirements cannot be precisely assessed now, a Land Acquisition Policy Framework acceptable to the Bank was prepared by KEGOC as a condition of appraisal. Once the final working designs for the OSY and the OHTLs are completed by the turnkey contractor, KEGOC will prepare a specific Land Acquisition Plan and submit it to the Bank for approval before proceeding with construction. No physical displacement of people will take place under the project. Land will be acquired through a government land fund with compensation to the affected private owners/users.

Safety of Dams (OP/BP 4.37). The Moinak transmission component will evacuate power from the Moinak HPP that is currently under construction. Since the transmission lines and the outdoor switchgear are linked to the integrity of the HPP, this policy is triggered. The Bank engaged an independent dam safety expert to perform a due diligence assessment of the Moinak HPP dam's compliance with OP/BP 4.37. The assessment concluded that the dam was designed

by qualified engineers and an experienced firm. The drawings are of high quality with sufficient detail and the quantitative calculations were done in an appropriate manner. Several issues were raised as part of the due diligence assessment for which the Bank received satisfactory clarifications from the project sponsor (JSC KazKuat).

5. Tentative financing

Source:		($m.)
Borrower		21.0
International Bank for Reconstruction and Development		48.0
	Total	69.0

6. Contact point

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