

**PROJECT INFORMATION DOCUMENT (PID)  
APPRAISAL STAGE**

Report No.: PIDA53297

<b>Project Name</b>	Nurek Hydropower Rehabilitation Project Phase I (P150816)
<b>Region</b>	EUROPE AND CENTRAL ASIA
<b>Country</b>	Tajikistan
<b>Lending Instrument</b>	Investment Project Financing
<b>Project ID</b>	P150816
<b>Borrower(s)</b>	Ministry of Finance, Tajikistan
<b>Implementing Agency</b>	Ministry of Energy and Water Resources, Tajikistan, OJSHC Barqi Tojik
<b>Environmental Category</b>	B-Partial Assessment
<b>Date PID Prepared/Updated</b>	06-Feb-2017
<b>Date PID Approved/Disclosed</b>	09-Feb-2017
<b>Estimated Date of Appraisal Completion</b>	
<b>Estimated Date of Board Approval</b>	28-Apr-2017
<b>Appraisal Review Decision (from Decision Note)</b>	The chair authorized the team to proceed with appraisal of the project subject to the approval by the Bank of the final ESIA and its disclosure. The final ESIA report has already been disclosed in-country and in InfoShop.

**I. Project Context**

**Country Context**

Despite regional headwinds, Tajikistan's economy grew by a robust 6.6 percent, year-on-year (y/y), during the first half of 2016, supported by a substantial increase in public investment. The sources of growth shifted from services to industry, construction and, more recently, agriculture. A sharp increase in foreign-financed investment coupled with a slowdown in tax revenues that failed to meet projections, turned a fiscal surplus of 1.5 percent of GDP in the first half of 2015 into a deficit of 5.5 percent of GDP in the first half of 2016. As the fiscal envelope narrowed, the government took steps to protect core social spending and to honor its commitment to increase the minimum wages.

An ongoing decline in remittances, which are the major source of foreign exchange, coupled with other issues in the banking sector, have exacerbated financial sector vulnerabilities. The share of nonperforming loans increased dramatically. Many banks also face liquidity pressures due to maturity mismatches and have become increasingly dependent on central bank liquidity support to meet their funding needs.

The external accounts improved only marginally during the first six months of 2016, as a rise in

investment-related capital goods imports largely offset a contraction in consumer goods imports. Meanwhile, current transfers continued to fall, though the pace of the decline slowed from 33 percent to 24 percent (y/y). The Tajik somoni depreciated by 11 percent between January and mid-February of 2016, but by end-February the exchange rates had unified, and they remained stable thereafter. To ease inflationary pressures the central bank tightened its monetary policy stance by increasing the refinancing rate and raising the liquidity support rate above the interbank rate.

The central bank also continued its efforts to build up the country's foreign-exchange reserves, mainly in gold, which reached US\$654 million on July 1st, up 32 percent from the beginning of the year. The decline in remittances in 2015 was partially offset by a modest increase in wage income, especially among poor households.

The risks to Tajikistan's economic outlook are tilted to the downside, and most relate to domestic factors, i.e. the high contingent liabilities from state-owned enterprises and from the financial sector. In addition, a weaker-than-expected regional economic recovery could depress remittances and trade. Tighter regulations on migrant workers in Russia could further reduce labor migration. The economy-wide shift toward investment as the primary driver of economic expansion could narrow the distribution of the returns to growth and weaken its impact on poverty reduction and shared prosperity. Lower-than-expected consumption growth could further slow the pace of poverty reduction. Finally, delays in the expansion of the targeted social assistance program could diminish its anticipated effect on the poverty rate. The government's most immediate challenges will be to restore financial stability and to complete the fiscal adjustment while protecting pro-poor spending and ensuring the timely and efficient implementation of the targeted social assistance program. Further progress on the structural reform agenda could improve the business climate, helping sustain robust economic growth, steady employment creation and lasting poverty reduction.

### **Sectoral and institutional Context**

The power sector is comprised of the vertically integrated energy company, Barqi Tojik (BT), two independent power producers (IPPs), Rogun Joint Stock Company, and a concession combining power generation and distribution. BT owns and operates most of the electricity generating plants and is also responsible for electricity transmission, dispatch, and distribution services. The two IPPs – Sangtuda-1 and Sangtuda-2 hydropower plants (HPPs) – were constructed with foreign direct investments from Russia and Iran, and supply electricity to BT under 20-year power purchase agreements. The Government has started construction of the Rogun HPP through the incorporated Rogun Joint Stock Company, which is legally independent from BT. The Pamir Energy Company generates and supplies electricity to around 30,000 consumers in the Gorno Badakhshan Autonomous Oblast (GBAO), which is one of the country's regions in South-East. Access to electricity is universal with all cities and rural areas connected to the distribution network.

The power system is currently facing the below key challenges, which need to be addressed to ensure adequate and reliable electricity supply.

**Challenge #1: Winter electricity shortages.** Approximately 70 percent of the population suffers from extensive shortages of electricity during the winter. These shortages were estimated at about 2700 GWh or 25 percent of winter demand in 2013. The economic losses from those shortages were estimated at US\$200 million or 3 percent of GDP. The electricity shortages are due to:

(a) Shortage of firm generation capacity in winter. Hydropower generation reduces during winter due to seasonal reduction of the flows of the main rivers. Insufficient reservoir capacity and water rights of downstream riparians limit the ability to offset this seasonal variation. As a result, the country is in the unfortunate situation of having insufficient electricity generation in winter and excess capacity during the summer with limited market opportunities for sales.

(b) Dilapidation of the largest generation plant in the country. Only 77 percent of the generation capacity of Nurek HPP is operational because generating units require refurbishment given the age and technical condition. The need for rehabilitation was established based on the technical assessment of the condition of the generating units and other infrastructural components of the power plant. The poor technical condition of the plant is due to obsolescence of equipment and lack of major capital repairs since its commissioning.

Challenge #2: Financial distress. The power sector is in financial distress due to tariffs lagging the cost-recovery level and sub-optimal financial management of BT. The weighted average tariff is estimated to be 55 percent below the cost-recovery level (computed following the cash needs approach).

Challenge #3: Gaps in billing, accounting and financial reporting of BT. There is no unified billing system in place. There are donor-financed ongoing initiatives in regional distribution companies of BT. However, those systems will ultimately need to be integrated and roll-out to cover all consumers and regions. The existing system of BT does not provide end-to-end data integrity, and its reliance on manual entry of all customer and consumption data at various dispersed entry points significantly increases the risk of error, manipulation and fraud in the critical metering and billing cycle.

Challenge #4: Increasingly un-affordable electricity tariffs and inadequate social protection of vulnerable consumers: The energy expenditure burden is high for the poorest parts of the population, especially in rural areas. This suggests that large share of rural households cannot afford even basic level of energy consumption.

## **II. Proposed Development Objectives**

The project development objective is to restore the generating capacity of the rehabilitated units of Nurek HPP, improve their efficiency, and strengthen the safety of the Nurek dam.

## **III. Project Description**

### **Component Name**

Rehabilitation of the three generating units, the key infrastructural components of the plant, and replacement of auto-transformers

### **Comments (optional)**

### **Component Name**

Enhancement of dam safety

### **Comments (optional)**

### **Component Name**

Technical assistance  
**Comments (optional)**

#### IV. Financing (*in USD Million*)

Total Project Cost:	350.00	Total Bank Financing:	210.00
Financing Gap:	140.00		
<b>For Loans/Credits/Others</b>			<b>Amount</b>
International Development Association (IDA)			210.00
Total			210.00

#### V. Implementation

BT will be responsible for implementation of the project. The proposed project implementation arrangements were developed considering the experience of BT with implementation of the IFI-financed projects, including the World Bank financed Energy Loss Reduction Project and its Additional Financing as well as the ongoing Kairakum Hydropower Rehabilitation Project financed by EBRD.

The Supervisory Board of BT will be responsible for overall project oversight. BT will also establish a Working Group for the project, which will be responsible for: (a) review and acceptance of works of the contractors and outputs of the consultants under the project; (b) review of justifications for changes in the scope of contracts under the project, including variation orders under construction contracts; and (c) briefings and recommendations to Supervisory Board of BT on project related matters as required.

The Technical Council of BT will be responsible for review and approval of the technical specifications of the bidding documents for all main contracts under the project. The Technical Council includes the heads of all technical departments of BT.

Panel of Experts (PoE) and Project Management Consultant (PMC) will provide technical advice and implementation support to both Technical Council and the Working Group. Specifically, PoE will provide independent review and expert advice on dam safety issues, including review of all technical reports and specifications in the bidding documents for implementation of activities related to enhancement of the dam safety. BT completed selection of PoE, which includes an experienced dam safety specialist, geologist, and an electro-mechanical expert.

The Project Realization Group (PRG) of BT will be responsible for procurement, contract administration, and financial management under the project. PRG has extensive experience in implementation of IFI financed projects, including the recently completed World Bank financed Energy Loss Reduction Project and its Additional Financing.

#### VI. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	x	
Natural Habitats OP/BP 4.04		x

Forests OP/BP 4.36		x
Pest Management OP 4.09		x
Physical Cultural Resources OP/BP 4.11		x
Indigenous Peoples OP/BP 4.10		x
Involuntary Resettlement OP/BP 4.12		x
Safety of Dams OP/BP 4.37	x	
Projects on International Waterways OP/BP 7.50	x	
Projects in Disputed Areas OP/BP 7.60		x

**Comments (optional)**

**VII. Contact point**

**World Bank**

Contact: Artur Kochnakyan  
 Title: Senior Energy Specialist  
 Tel: 202-473-6302  
 Email: akochnakyan@worldbank.org

Contact: Takhmina Mukhamedova  
 Title: Energy Specialist  
 Tel: 5210+15821  
 Email: tmukhamedova@worldbank.org

**Borrower/Client/Recipient**

Name: Ministry of Finance, Tajikistan  
 Contact: Abdusalom Qurboniyon  
 Title: Minister  
 Tel: 99237-221-14-17  
 Email: info@mof.tj

**Implementing Agencies**

Name: Ministry of Energy and Water Resources, Tajikistan  
 Contact: Usmonali Usmonzoda  
 Title: Minister  
 Tel: 99237-235-35-66  
 Email: uusmanov@gmail.com

Name: OJSHC Barqi Tojik  
 Contact: Mahmaddumar Asozoda  
 Title: First Deputy Chairman  
 Tel: 99237-235-87-66  
 Email: Asozoda1968@gmail.com

**VIII. For more information contact:**

The World Bank  
 1818 H Street, NW  
 Washington, D.C. 20433  
 Telephone: (202) 473-1000  
 Web: <http://www.worldbank.org/projects>