

## Project Summary Information (PSI)

Report No: 000018

Project Name	Nurek Hydropower Rehabilitation Project, Phase I
Country	Republic of Tajikistan
Sector	Energy Hydropower
Project No	000018
Borrower	Republic of Tajikistan
Implementation Agency	OJSHC Barqi Tojik
Environmental and Social Category	Category B
Date of PSI prepared or updated	15 June 2017
Date of Concept Approval	17 February 2017
Date of Appraisal Approval	18 April 2017
Board Decision	Approved on 15 June 2017

### I. Introduction

Tajikistan has an abundance of hydropower resources and hydropower plants (HPPs) provide almost 95% of all electricity in the country. The World Bank (WB) estimates that about 60% of HPPs need to be rehabilitated by 2020 and 80% by 2030. Without adequate rehabilitation, the available capacity could drop from 2,306 MW in 2012 to 760 MW by 2030.

The power sector in Tajikistan is currently facing the following key challenges, which need to be addressed to ensure adequate and reliable supply of electricity.

Winter electricity shortages. Approximately 70 percent of the population suffers from extensive shortages of electricity during winters. 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 as hydropower generation drops, along with the flows of the main rivers; (b) dilapidation of Nurek hydropower plant, the largest generation plant in the country.

Financial distress. The power sector is in financial distress due to tariffs lagging the cost recovery level and sub-optimal financial management of Barqi Tojik (the State-owned enterprise under the Ministry of Energy and Water Resources).

Increasing electricity tariffs and inadequate social protection of vulnerable consumers. While the tariffs have to increase to meet the cost recovery level, the challenge is to protect the poor populations who cannot afford to pay, especially during winter when the demand increases considerably.

The Nurek hydropower plant with a seasonal reservoir is the largest generating plant. With installed capacity of 3,000MW, it provides 70 percent of the total annual energy requirement and is also the balancing plant on the system. Currently, only 77 percent of Nurek's installed capacity is operational. Its first generator was commissioned in 1972. 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.

The WB will be the lead financier of the Project and will administer AIIB's loan on behalf of AIIB (the "Bank") including procurement, disbursements, environmental and social compliance, and project monitoring and reporting. For further Project details, please see the following WB website:

<http://documents.worldbank.org/curated/en/695401486696557747/Project-Information-Document-Appraisal-Stage-Nurek-Hydropower-Rehabilitation-Project-Phase-I-P150816>

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

Objectives of the Project are to rehabilitate and restore the generating capacity of three power generating units of Nurek HPP, improve their efficiency, and strengthen the safety of the Nurek dam.

The proposed key results indicators for the Project include: (i) generation capacity of energy constructed or rehabilitated under the Project (MW); (ii) estimated annual electricity generation of three units included in the scope of the Project (GWh); (iii) estimated increase of winter electricity generation of rehabilitated units due to efficiency improvements (GWh); (iv) improved dam safety against hydrological and geological risks (Yes/No); and (v) number of people provided with improved electricity service due to the Project.

## **III. Project Description**

The rehabilitation of Nurek hydropower plant will be implemented in two phases. The phased approach is due to unavailability of the total financing required to complete all rehabilitation works. The Project, which is the Phase I of the rehabilitation, consists of:

Component 1: Rehabilitation of the power plant and replacement of auto-transformers. This component will include (i) the replacement and refurbishment of mechanical, electrical, and electromechanical equipment and works required for the rehabilitation of the Nurek HPP; (ii) replacement of auto-transformers.

Component 2: Dam Safety. This component will include activities to improve the safety of the operation of the Nurek HPP.

Component 3: Technical Assistance. This component will support implementation of the Project and strengthen the institutional capacity of Barqi Tojik.

## **IV. Environmental and Social**

The Bank has decided to use WB's Environmental and Social Safeguard Policies (Safeguard Policies) since (i) they are consistent with the Bank's Articles of Agreement and materially consistent with the provisions of the Bank's Environmental and Social Policy and relevant Environmental and Social Standards; and (ii) the monitoring procedures that the WB has in place to ascertain compliance with their Safeguard Policies are appropriate for the Project. Under WB's Safeguard Policies, the Project has been assigned Category B.

The WB has carried out due diligence including environmental and social impact studies of the Project. Overall the environmental impacts are expected to be positive as the works relate to physical rehabilitation of existing infrastructure with no new construction planned. An updated Environmental and Social Impact Assessment (ESIA) and a Stakeholder's Engagement Plan for the Project have been prepared, which are consistent with the WB's Safeguards Policies. These documents have been approved by the WB and the Implementation Agency, and disclosed on the WB website:

<http://documents.worldbank.org/curated/en/270681485857484036/Environmental-and-social-impact-assessment>

## V. Estimated Project Cost and Financing Source (US\$ million)

The Project cost is estimated to be US\$350 million. The financing sources are as follows (in US\$ million):

<b>Loans/Credits/Others</b>	<b>Amount</b>
AIIB	60.00
World Bank (IDA Credits and Grants)	225.70
Eurasian Development Bank	40.00
Financing Gap	24.30
Total	350.00

## VI. Implementation

The Project will be implemented by OJSHC Barqi Tojik, State owned enterprise under the Ministry of Energy and Water Resources.

Expected Project implementation period (Start Date and End Date): 1 June 2017– 30 June 2023

### Contact Points

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