Accelerating the clean energy transition and ensuring energy security and affordability

Now is the time to take urgent action

ASIA CLEAN ENERGY FORUM 2025

Empowering the Future: Clean Energy Innovations, Regional Cooperation and Integration, and Financing Solutions

2-6 June ADB Headquarters, Manila

MINISTRY OF ENERGY OF THE KYRGYZ REPUBLIC

“ELECTRIC POWER PLANTS”
OPEN JOINT-STOCK COMPANY

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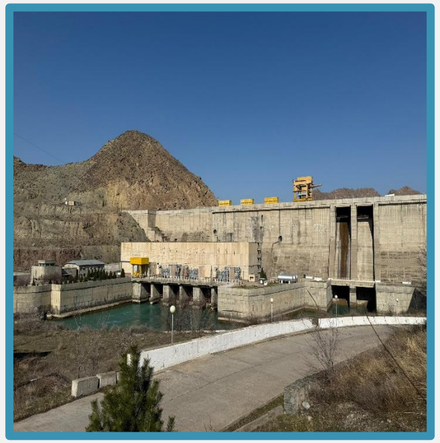
ADB



GENERAL INFORMATION

- **The Ministry of Energy of the Kyrgyz Republic** is the founder of large energy companies and a regulator, and also implements state policy and control in the electric power industry, including in relation to the activities of “Electric Power Plants” OJSC.

- **“Electric Power Plants” OJSC** is the main generator of electric power in the Kyrgyz Republic, generating 85% of the total electricity generated in the country. Annual electricity generation is 12-14 billion kWh. “Electric Power Plants” OJSC includes 7 hydropower plants with a total capacity of 3,224.7 MW.

MAIN TECHNICAL CHARACTERISTICS OF OPERATING HYDROPOWER PLANTS

“Electric Power Plants” OJSC, total - 3224,77 MW

	HPP name	Year of commissioning	Installed capacity, MW	Average annual generation, mln kWh per year
1	Toktogul	1975	1 380	4 400
2	Kurpsai	1981	800	2 630
3	Tash-Kumyr	1985	450	1 555
4	Shamaldy-Sai	1992	240	902
5	Uch-Kurgan	1961	189	820
6	At-Bashi	1970	45,7	160
7	Kambarata-2	2010	120	780
	Total:		**3 224,7**	**11 247,0**

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INFORMATION ON THE COMMISSIONING OF NEW GENERATING CAPACITIES (projects under implementation)

5 June 2025 | 11 am. (GMT+8)

Toktogul HPP Rehabilitation

Objectives of rehabilitation project:
- Increase of the capacity from 1200 MW to 1440 MW.
- Replacement of all HPP equipment
- Extension of the service life of the equipment
- Improvement of reliability and safety

The project consisted of 3 stages:

Phase I (completed):
- Survey of underwater hydraulic structures.
- Replacement of 500 kV power transformers and cables.
- Replacement of 500 kV switchgear.

Phase II (at the stage of completion):
- Rehabilitation of hydromechanical equipment.
- Deep-sea (diving) rehabilitation work.

Phase III (at the stage of completion):
- Replacement of all 4 hydropower units.
- Upgrade of the dam monitoring system.
- Improvement of business processes by introduction of the ERP system.
- All work on the project should be completed by the end of 2025.
- In 2026, procedures for the full transfer of completed works between the parties should be carried out.

Importance:
- Ensuring the sustainable energy supply
- Support for electricity exports
- Regional energy security and integration

Project period: 2017-2026

Financing: ADB, EFSD.

Uch-Kurgan HPP Rehabilitation

Objectives of rehabilitation project:
- Increase in capacity from 180 MW to 216 MW.

The project consists of 2 components:

Package I (at the procurement stage):
- purchase of earth-cleaning equipment and cleaning of the reservoir.

Package II (in progress)
- Replacement of all 4 hydropower units together with auxiliary systems.
- Rehabilitation of all hydromechanical equipment of the hydropower plant (gates, spillway structures, cranes).
- The first hydropower unit was replaced in 2024 and put into operation with an increased capacity of 9 MW.
- The second hydropower unit is at the replacement stage (March 2025-November 2025).
- In 2022, the overhead crane in the machine room was replaced.
- In 2023, one power transformer was replaced.

Project duration: 2021-2027.
Financing: ADB.

Project “Commissioning of the second unit of Kambarata HPP-2”

The project consists of the following 3 lots:

Lot 1 "Turbine, generator and station equipment“
Lot 2 "Distribution devices and power lines“
Lot 3 "Pressure pipeline, construction part of the water pipeline and HPP building“

Project period: 2019-2028.
Financing: EFSR.
International tenders are being held to select the contractors.

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Promising Projects

Hydropower Potential of Hydropower Plants in the Kyrgyz Republic

General indicators

- Total natural hydropower potential of the Kyrgyz Republic - **142,5 bln kWh.**
- The Kyrgyz Republic **ranks third** in the CIS in terms of the potential after Russia and Tajikistan.
- The percentage of development of natural potential is only **10-13%.**

Energy sector prospects

- On the Naryn river it is possible to build **9** cascades of 38 hydropower plants.
- The total installed capacity of the prospective cascades is **9,271.2 MW**.
- Average long-term annual production of more than **26 bln kWh** of electric power

List of promising large HPP projects

No.	Name	Installed capacity, MW	Average annual output, million kWh per year	Estimated construction cost, USD million	Documentation
1	Construction of Kambarata HPP-1	1860	5 640	2916,4	The FS is developed. The main part of the preparatory work on the construction of access roads, tunnels, bridges, power lines and the village is completed.
2	Construction of the Upper Naryn Cascade of HPPs	237,7	942,4	727,65	The FS is developed for the entire cascade, “project” and “working documentation” is developed for (Akbulun HPP and Naryn HPP-1)
3	Suusamyr-Kokomeren Cascade of HPPs	1305	3 300	3 343,9	The preliminary FS is developed
4	Kazarman cascade of HPPs	1160	4661,6	3620	FS is not developed
5	Construction of Sary-Jaz cascade of 6 HPPs	1100	4764	2 256,0	FS is not developed

Kambarata HPP-1 Construction Project

Main parameters of Kambarata HPP-1

- **Location:** the Naryn river, Jalal-Abad Region, Kyrgyzstan
- **Capacity:** 1860 MW (4 units of 465 MW)
- **Dam type:** rockfill, height 256 m
- **Reservoir capacity:** 4.65 km^3 (full), 2.87 km^3 (usable)
- **Average annual generation:** 6 bln kWh
- **Importance:** ensuring the stable energy supply and regional cooperation

Construction of Kambarata HPP-1

Construction works of the preparatory period		Commissioning date
Access road from Osh-Bishkek highway to the construction site	65%	May 2025
Tunnel 1350 m	100 %	August 2024
Bridge over the Naryn river	60 %	November 2025
110 kV transmission line	97 %	April 2025
110 kV substation	70 %	May 2025
Construction camp for 100 persons	50 %	June 2025

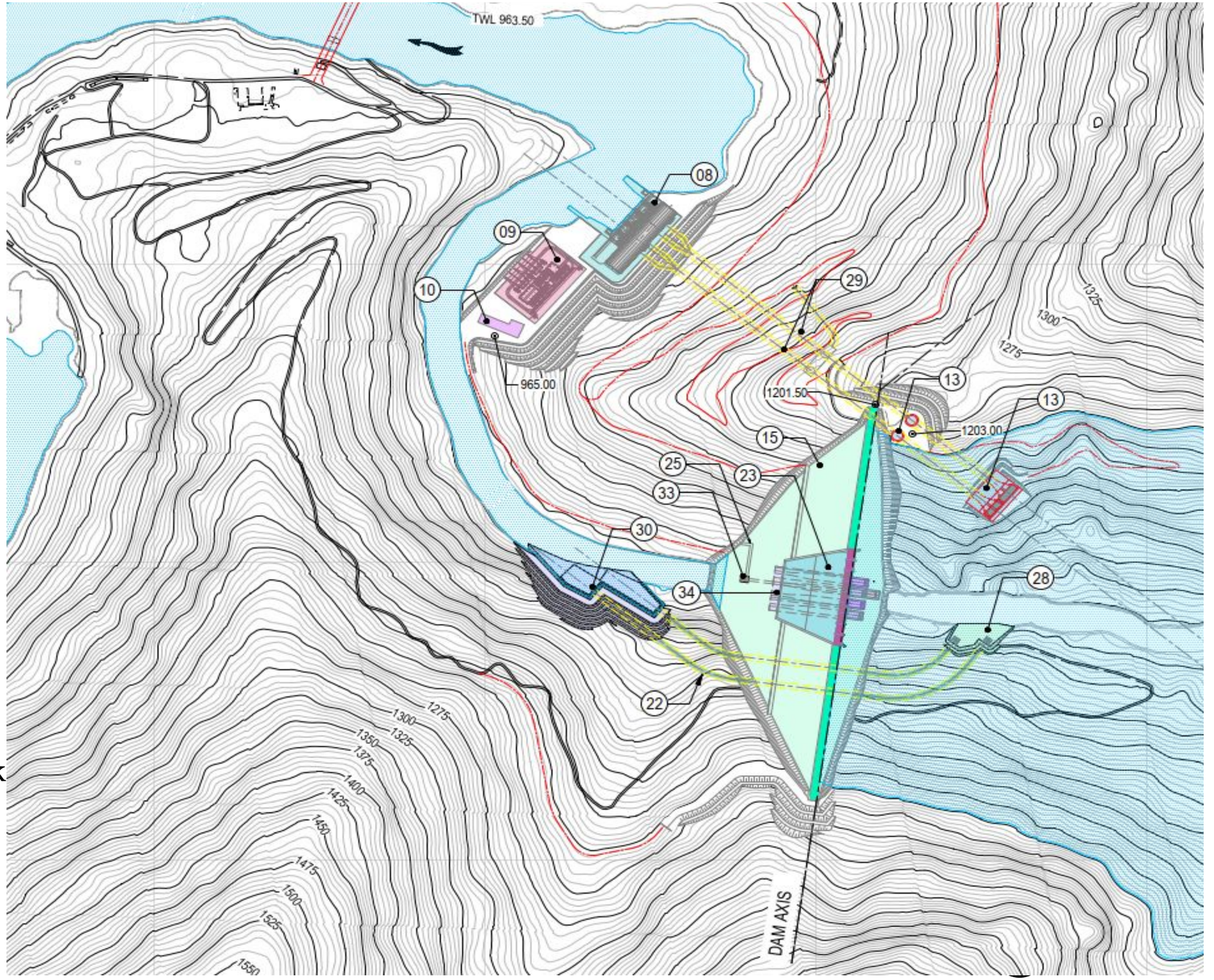
Construction of Kambarata HPP-1

Key activities	Status
Feasibility Study (FS) and Environmental and Social Impact Assessment (ESIA)	In February 2025 the Consultant AFRY (Switzerland) provided the first draft of the updated Feasibility Study and Consultant SMEC (Australia) provided the first draft of the ESIA. Ministry of Energy of the Kyrgyz Republic, World Bank, Panel of Experts provided their suggestions and comments. The final versions of the Feasibility Study and ESIA are expected to be available in May 2025.
Financing	The World Bank is ready to allocate USD 1.5 billion for the Kambarata HPP-1 project. Eight international financial institutions (ADB, EIB, EBRD, IDB, ABII, OPEC Fund, European Commission Directorate General for International Cooperation, Italian Development Agency) have expressed interest to finance the remaining $2.5 billion.

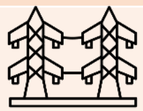
GENERAL LAYOUT

The proposed general layout of Kambarata HPP-1 includes:

- 256m high gravity straight RCC dam
- Unregulated spillway
- Middle outlets with 4 holes
- Bottom outlet with 2 holes
- Two water intakes of shaft type
- Duct system
- Open-air power plant
- Diversion of the river along the left bank



Construction of Kambarata HPP-1

Proposed activities to support local communities affected by the Kambarata HPP-1 project		
1		Provision of the local population with jobs (welders, concrete workers, machinery drivers, etc.) and training in professional and technical educational institutions and training centers of NEGK after completion of construction of Kambarata HPP-1
2		Allocation of 1% of generated electricity as assistance to the local population of Toktogul and Toguz-Toro districts
3		Support for low-income families, the number of which is about 458 people
4		Education and training of about 1,000 power engineering students at KTU named after I. Razzakov and the branch in Karakul town until completion of construction of Kambarata HPP-1 with subsequent employment
5		Provision of clean drinking water to local residents, 7 villages in Toktogul and 1 village in Toguz-Toro districts
6		Construction of 110 kV backup transmission line of about 55 km, between Toktogul district and Kambarata HPP-2 to ensure reliable power supply

KAMBARATA HPP-1 IS A TRANSFORMATIONAL REGIONAL PROJECT THAT WILL PROVIDE SIGNIFICANT ECONOMIC, SOCIAL AND ENVIRONMENTAL BENEFITS TO THE ENTIRE CENTRAL ASIAN REGION

Energy safety	• Kambarata HPP-1 is of key importance for meeting the growing demand for energy and increasing water and energy security in the region. • Increases power generation to meet peak demand during winter, helping to address seasonal energy
Transition to clean energy	• Allows to abandon the use of stations operating on gas and coal in Kazakhstan, Uzbekistan and Kyrgyzstan. • Large-scale deployment of renewable energy by creating flexible storage options for water used for energy production in Central Asia (currently over 70% reliance on coal and gas power plants).
Improving Water Management in Central Asia	• More efficient use of water resources in Central Asia
Least Cost Project	• Provides clean energy at a lower cost to the Kyrgyz Republic and Central Asia, thereby reducing the costs of the energy transition in the region.
Regulated social, environmental and fiduciary risks	• A new facility being built from scratch on a new site – manageable socio-environmental risks (no relocation planned at this time) and procurement risks.
Export revenues	• Increasing revenues from energy exports. • Wider economic implications for both the country and the region.
«Green» jobs	• Creation of 3,000 jobs during the construction phase, and almost 1,000 permanent jobs during the operational phase; in addition, thousands of jobs will be created through the introduction of solar and wind energy facilities in Central Asia.

Fragments of preparatory works at Kambarata HPP-1 site

Works on preparation of TT-2 transport tunnel for commissioning

Construction of a bridge to the right bank of the Naryn river to Kambarata HPP-1

Construction of 110 kV power transmission line (18 km) to Kambarata HPP-1 site and 110/35/6 kV substation

Thank you for attention!