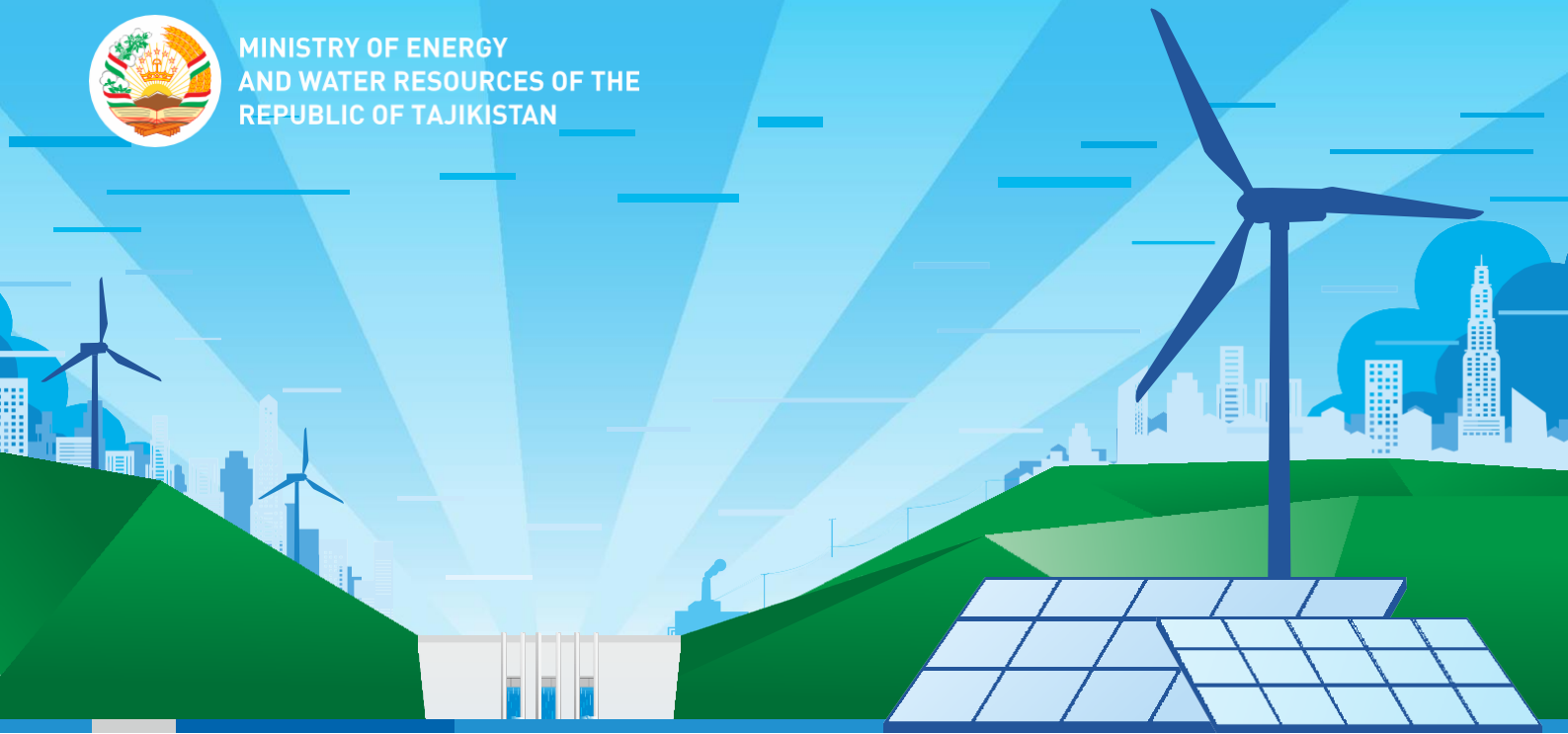


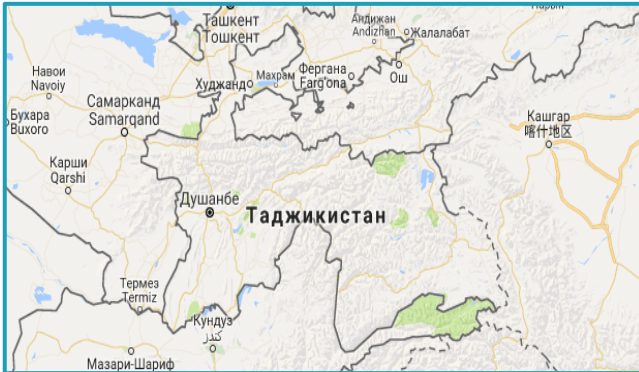
Tajikistan's Investment Opportunities in Hydropower



MINISTRY OF ENERGY
AND WATER RESOURCES OF THE
REPUBLIC OF TAJIKISTAN



TAJIKISTAN – COUNTRY OVERVIEW



Capital city: Dushanbe

Area: 143,1 sq km

Population: More 10 mln. people (as of 01.01.2023).

Official language: Tajik

Currency: Somoni (TJS)

Independence Day: 9 September 1991

Large cities: Dushanbe, Khujand, Bokhtar,
Kulyab, Khorog

The Republic of Tajikistan borders on the North with the Kyrgyz Republic (987 km), in the East with China (494.95 km), in the South with Afghanistan (1344.15 km) and in the West with Uzbekistan (1332.9 km).

High mountains and comfortable climate make Tajikistan a unique home of glaciers, consequently, of significant reserves of water and energy resources. The country occupies one of the leading positions in the world by water and energy resources.

OVERVIEW OF TAJIKISTAN'S ENERGY SECTOR



HUGE UNTAPPED POTENTIAL

- Tajikistan has huge reserves of hydropower resources, which are estimated at 527 billion kWh/year
- 95% of economically viable hydropower potential is not yet exploited
- In addition to hydro, there is a considerable generation potential from wind, solar and other renewable sources



STRONG DEMAND GROWTH PROSPECTS

- Domestic and regional demand growth requires construction of new and rehabilitation of existing power generation capacities
- Tajikistan is surrounded by countries with a projected structural power deficit (e.g. Afghanistan and Pakistan) or expensive power generation, opening up attractive export opportunities

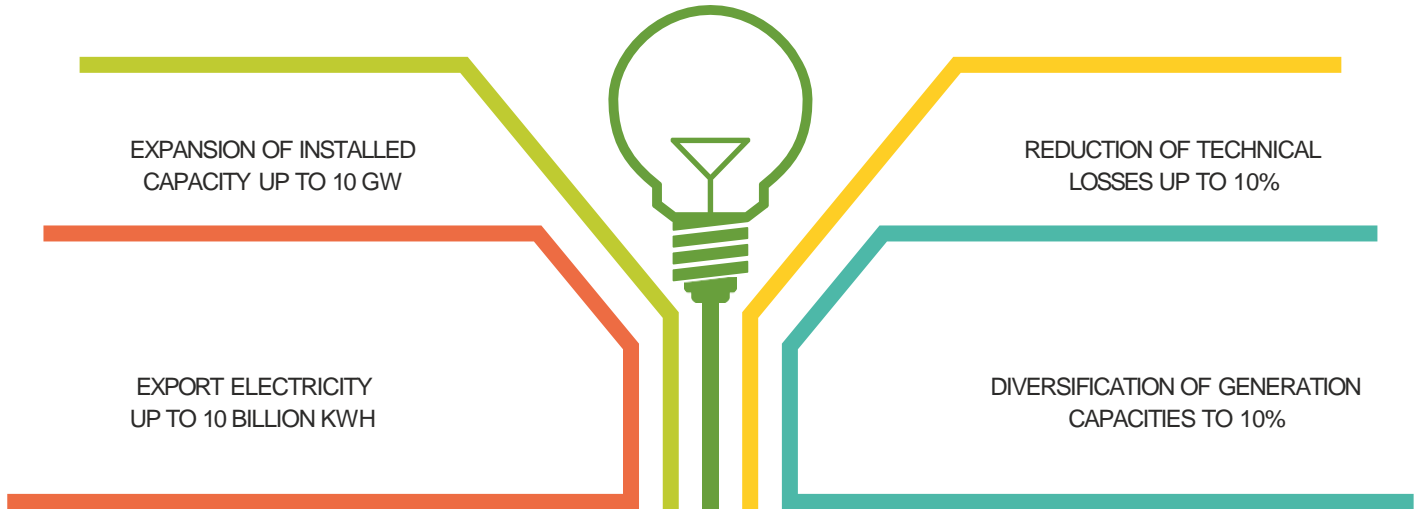


FAVORABLE INVESTMENT CLIMATE

- Ensuring Energy Independence and achieving Energy Security is one of the strategic goals of the Government of the Republic of Tajikistan
- The Government adopted several laws on attracting investments into the country and creation of more favorable investment environment
- Concept of Tariff Regulation, Methodology for Calculation of Electricity Tariffs are adopted. Regulatory body in energy sector is being created

LONG-TERM ENERGY SECTOR DEVELOPMENT STRATEGY

MAIN DEVELOPMENT INDICATORS

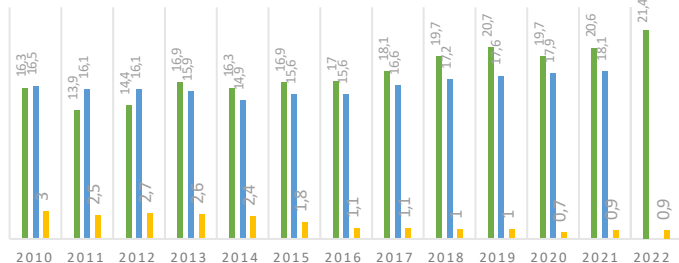


GENERAL STATISTICS

GENERATION VS CONSUMPTION

Billion kWh

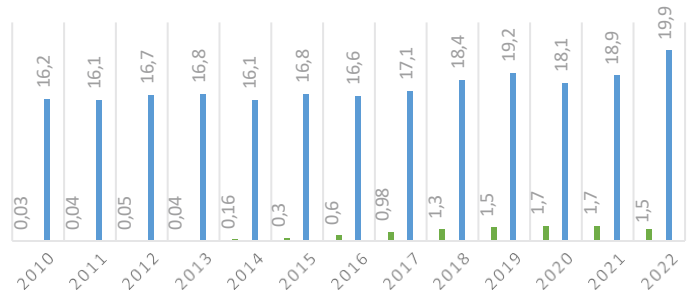
■ Generation ■ Consumption ■ Deficit



COMPONENTS OF GENERATION

Billion kWh

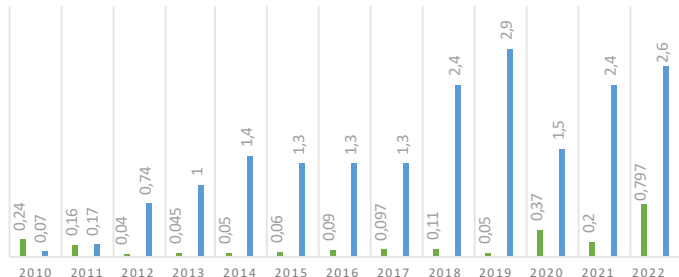
■ TPP ■ HPP



IMPORT VS EXPORT

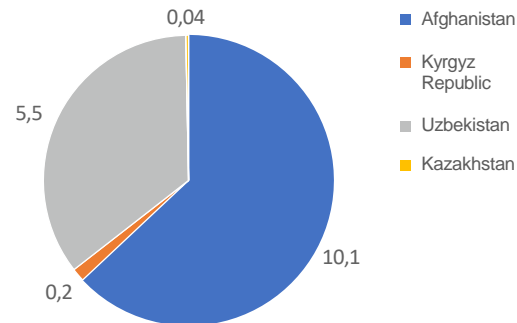
Billion kWh

■ Import ■ Export

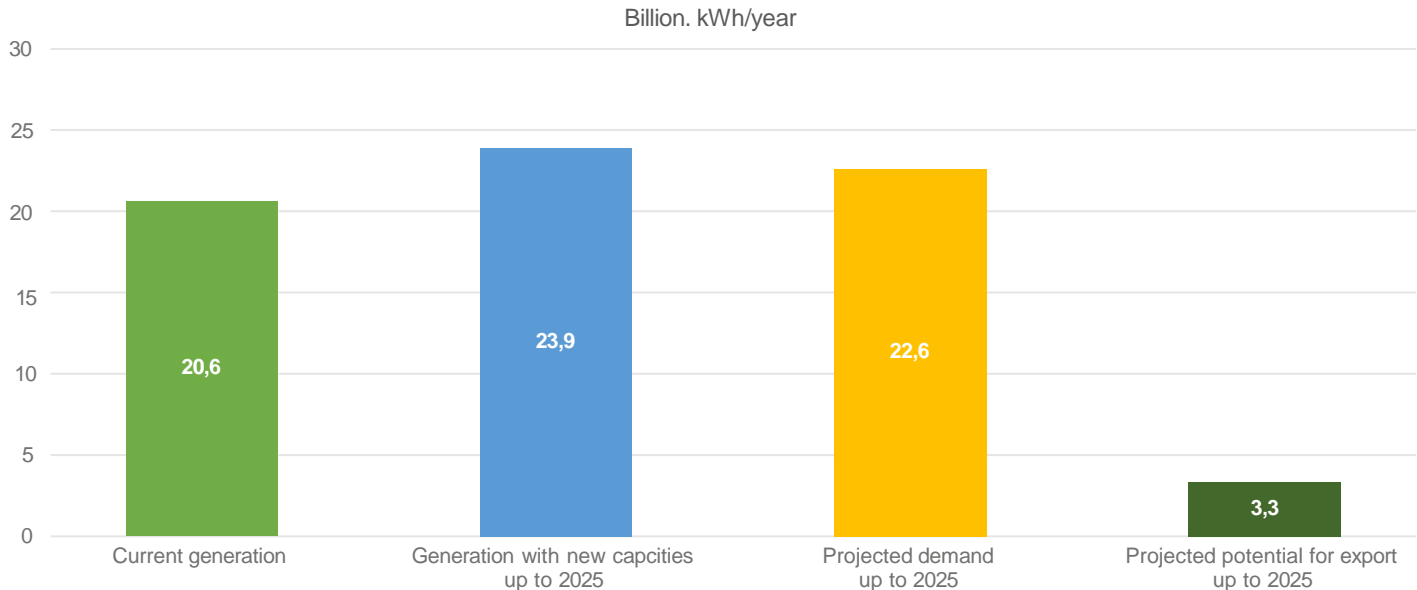


EXPORT BREAKDOWN 2015-2021

Billion kWh



DOMESTIC DEMAND GROWTH REQUIRES AN EXTENSION OF POWER GENERATION



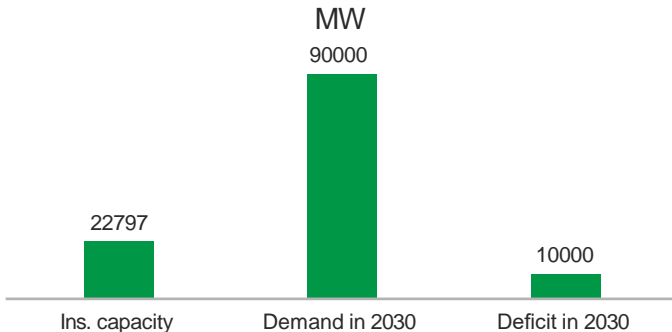
- Tajikistan and region's demand for electricity is increasing and requiring more HPP generation capacity.
- Even after completing HPPs that are under development, demand in the region will be higher than supply.

TAJIKISTAN IS SURROUNDED BY COUNTRIES WITH A STRUCTURAL POWER DEFICIT OR EXPENSIVE POWER GENERATION



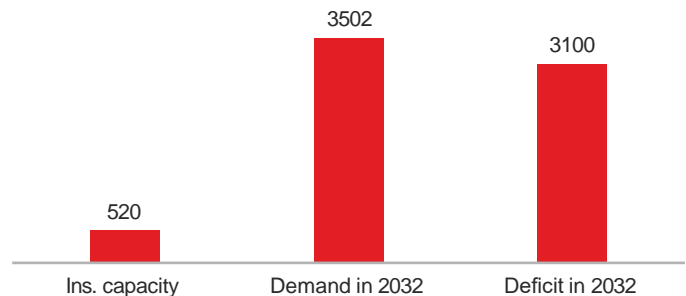
Tajikistan's hydropower potential is three times higher than the current consumption of electricity in whole of Central Asia.

PAKISTAN GENERATION DEFICITE

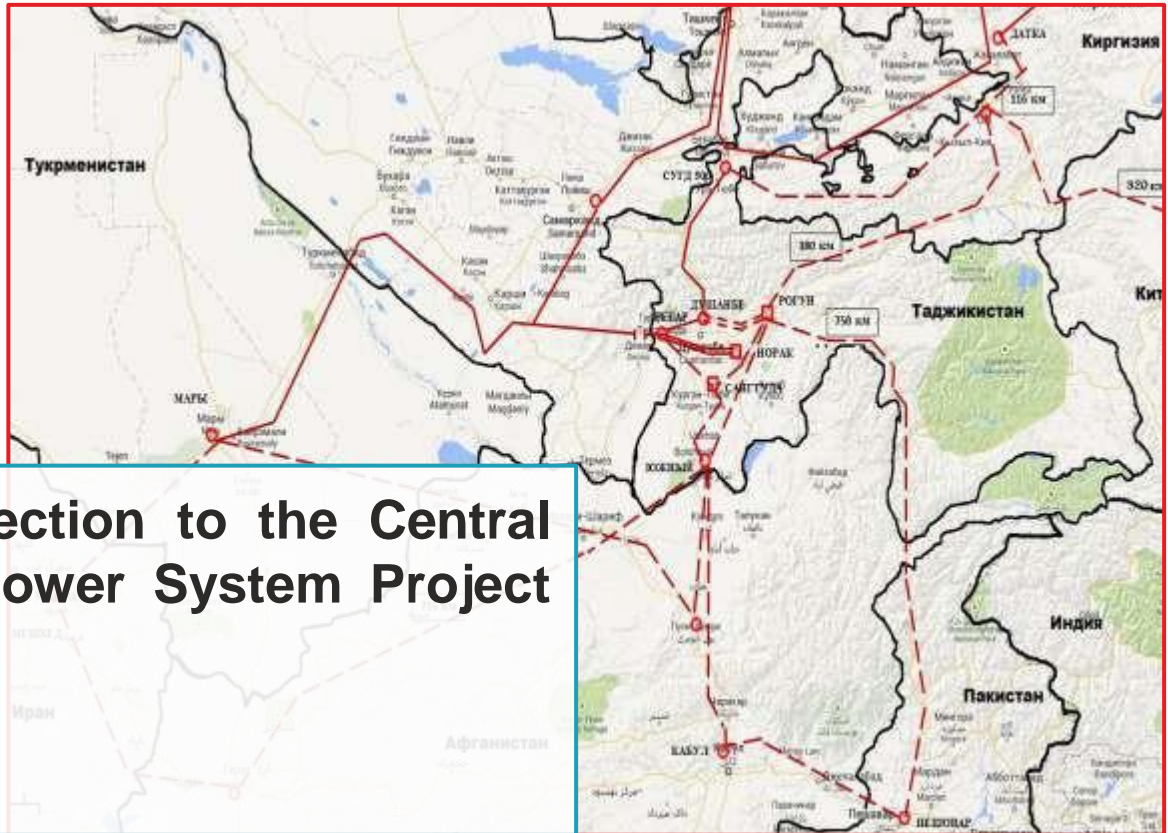


AFGHANISTAN GENERATION DEFICITE

(with Electrification Development)

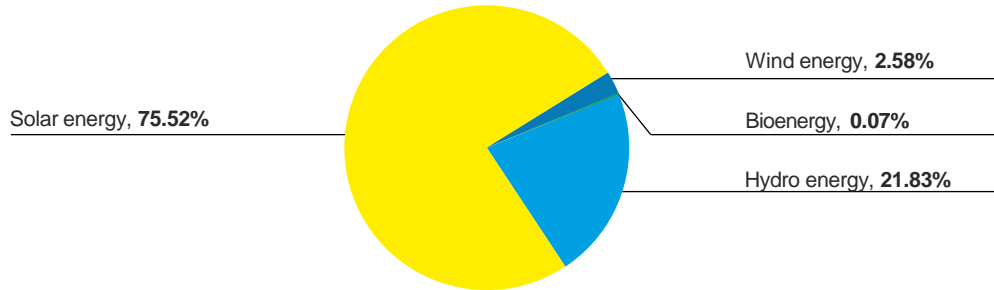


REGIONAL DEVELOPMENT PERSPECTIVE GRID MAP

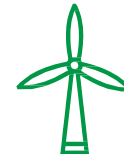
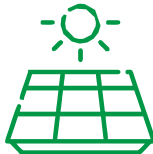


Reconnection to the Central Asian Power System Project (CAPS)

RENEWABLE ENERGY SOURCES



Resources	Gross potential	Technical potential	Economic potential
Hydropower, total	179,2	107,4	107,4
Including small hydroelectric power plants	62,7	20,3	20,3
Solar energy	4790,6	3,92	1,49
Biomass energy	4,25	4,25	1,12
Wind energy	16,3	10,12	5,06
Geothermal energy	0,04	0,04	0,04
Total (without large hydroelectric power plants)	5020,595	38,63	27,95



INVESTMENT OPPORTUNITIES - HYDROPOWER



- Tajikistan has abundant hydropower resources estimated at 527 billion kWh per year.
- About 6 projects for construction of large, 16 micro and small HPPs on the Feasibility Study level with Financial and Technical projections.

LARGE HPP

CONSTRUCTION OF SHUROB HPP (850 MW)

CONSTRUCTION OF NUROBOD-1 HPP (200 MW)

CONSTRUCTION OF NUROBOD-2 HPP (160 MW)

CONSTRUCTION OF FONDARYO HPP (135 MW)

CONSTRUCTION OF AYNI HPP (160 MW)

CONSTRUCTION OF SANOBOD HPP (208 MW)

SMALL HPP

CONSTRUCTION OF DOMBRACHI MHPP (15 MW)

CONSTRUCTION OF HAFKUL-1 MHPP (10 MW)

CONSTRUCTION OF HAFKUL-2 MHPP (8 MW)

CONSTRUCTION OF ISKANDARDARYO MHPP (6 MW)

CONSTRUCTION OF NAZARMERGAN MHPP (4,7 MW)

CONSTRUCTION OF ERMAZOR HPP (2,3 MW)

VARIOUS MECHANISMS OF COOPERATION

1	CONCESSION AGREEMENT
2	PUBLIC PRIVATE PARTNERSHIP (BOT, BOO)
3	INVESTMENT AGREEMENT
4	PRODUCTION SHARING AGREEMENT



FAVORABLE INVESTMENT ENVIRONMENT

EXEMPTION OF INCOME TAX

- For 2 years with investments ranging from US\$ 200 thousand to US\$ 500 thousand
- For 3 years with investment ranging from US\$ 500 thousand to US\$ 2 million
- For 4 years with investments ranging from US\$ 2 million to US\$ 5 million
- For 5 years, with investments more than US\$ 5 million

LEGAL STATUS OF INVESTORS

- Equal rights for domestic and foreign investors
- Legal protection of investor
- Right to use and transfer income and revenue abroad in foreign currency
- Free movement of property and information

TAX AND CUSTOMS PRIVILEGES

- Facilities, equipment and their components for hydropower plants
- Import of goods made for the implementation of targeted projects approved by the Government
- Exemption of all taxes during construction period of hydropower plant

INVESTMENT PROTECTION

- Agreement on promotion and mutual protection of investments with 36 countries
- Favorable legal framework for investors
- Investment Agreements
- Partnership Agreement

SUCCESS STORIES ON PPP, BOO AND BOT



PAMIR ENERGY

The project is being implemented within the framework of the Concession Agreement and JSC Pamir Energy. Under this agreement, the Government of the Republic of Tajikistan transferred its energy assets in the Gorno Badakhshan Autonomous Region to a concession for a period of 25 years. According to UNECE in 2016, the project was one of the top ten PPP projects. This year Pamir Energy was selected as a contender for the most valuable achievements in the field of energy Ashden Awards in the nomination "Enhancing Access to Energy."



SANGTUDA HPP-1 (670 MW)

Joint Stock Company "Sangtuda HPP-1" is a Joint Venture between Republic of Tajikistan and Russian Federation. It was formed on February 16, 2005 with the goal to complete the construction and further operation of hydropower plant on the Vakhsh River in the Republic of Tajikistan. The share of Russian companies in the authorized capital of JSC "Sangtuda HPP-1" is 75% minus 1 share, the share of the Republic of Tajikistan - 25% plus 1 share. Up to present date, the station provides up to 11% of the total power generation in Tajikistan.



SANGTUDA HPP – 2 (220 MW)

The construction of Sangtuda HPP-2 officially began in 2006. For the construction of the facility, the Iranian company Sangob allocated US\$ 318.9 million, the share of the Tajik side was US\$ 40 million. The plant was launched in September 2014. Sangtuda HPP-2 is capable to generate up to 1 billion kW/h of electricity per year. After commissioning the plant will be considered as property of the Iranian company for 12.5 years and then would be transferred to Tajikistan for further operation.



FEZ DANGARA ELECTRICITY SUPPLY

On December 22, 2016, an agreement on Public Private Partnership was signed between the Ministry of Energy and Water Resources of the Republic of Tajikistan and Shaanxi Coal Chemical Industry (People's Republic of China) under the project on construction and operation of 220 kV Transmission Lines and Substation to ensure electricity supply for Free Economic Zone "Dangara " based BOT method. The total amount of the contract is US\$ 22.8 million for a period of 8 years.

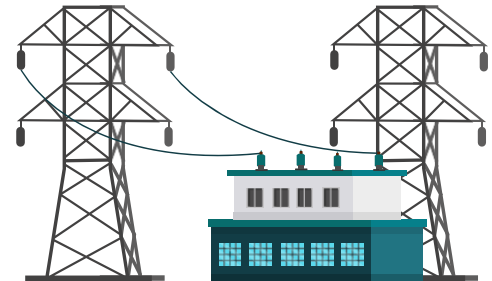
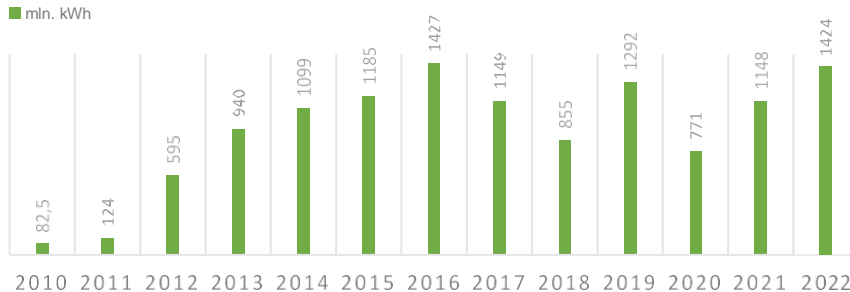
SUCCESSFUL REGIONAL POWER INTERCONNECTION PROJECT



Regional Power Transmission Interconnection Project 220kV Sangtuda-Puli Humri was implemented with support of Asian Development Bank and OPEC Fund for International Development. The total cost of project is 25,1 mln. USD.

The main project objective was to export surplus electricity during summer period from Tajikistan to cover deficit in neighboring Afghanistan. The project was also aimed to achieve following:

- increasing the available level of generation in Tajikistan during autumn-winter period;
- increasing generation and decreasing the level of technical losses in south Tajikistan;
- providing electricity to neighboring Afghanistan with more stable electricity;
- enhancing of regional connectivity and improvement of regional electricity market;
- ensuring accurate power flow in energy system;



CENTRAL ASIA SOUTH ASIA POWER TRANSMISSION LINE



Kirgizstan



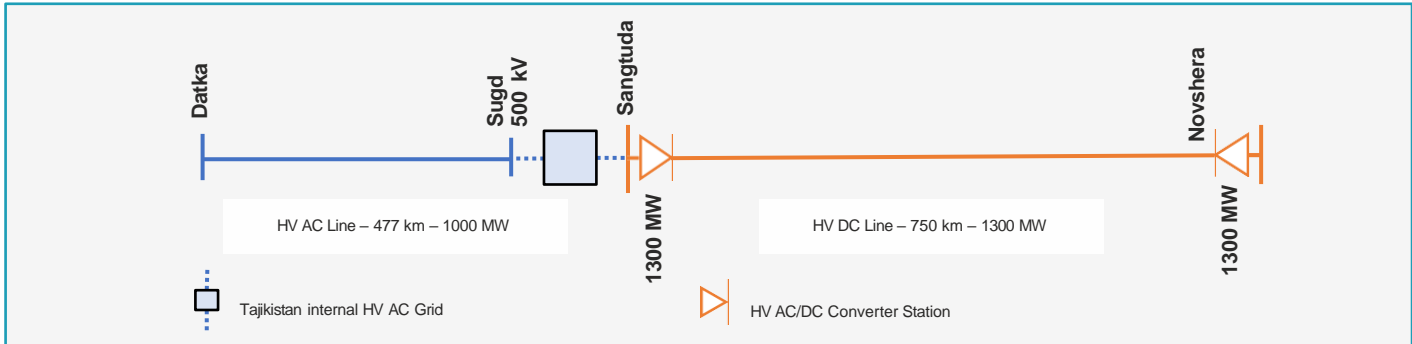
Tajikistan



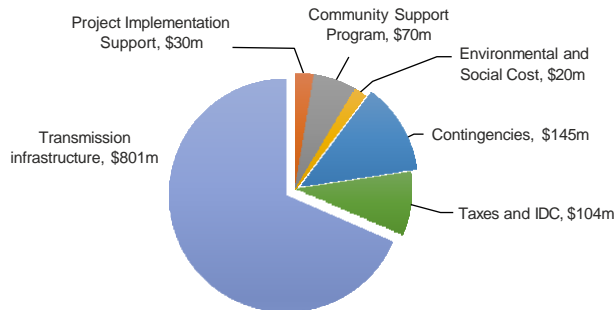
Afghanistan



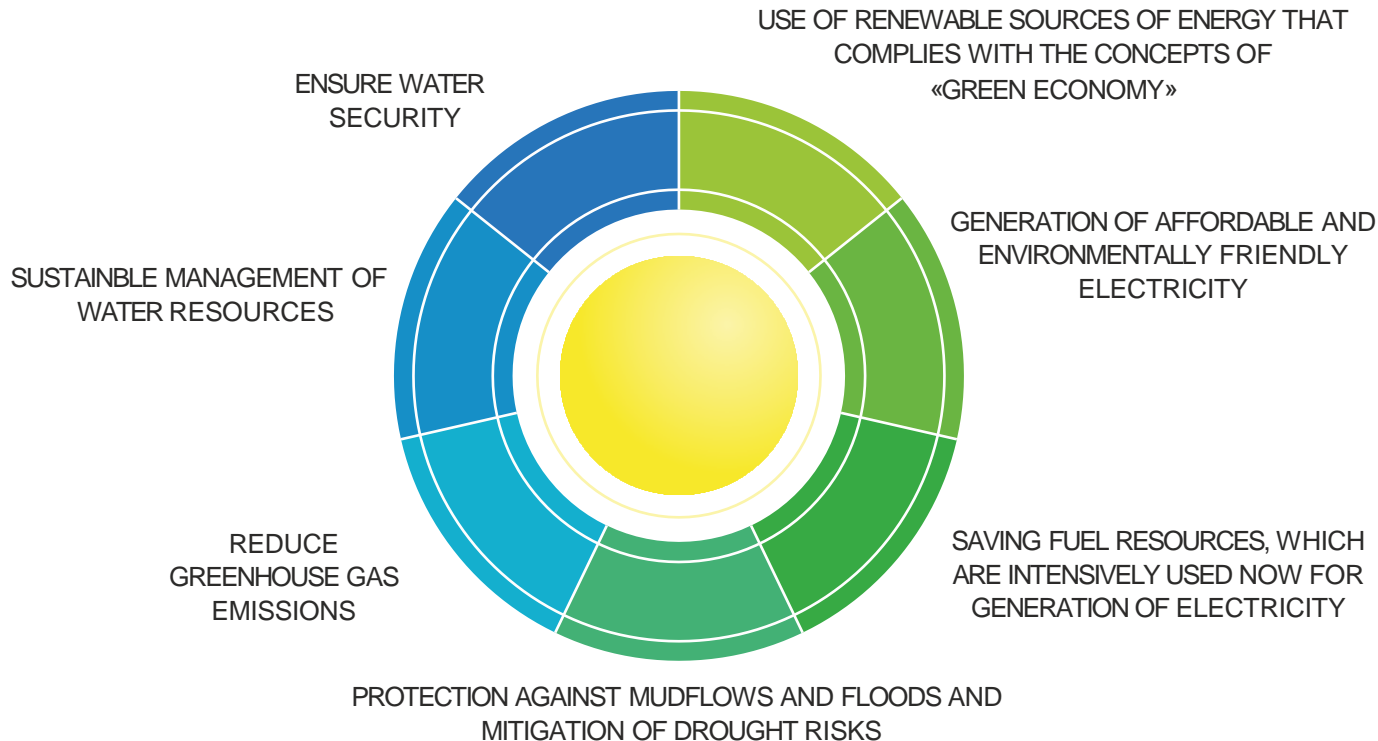
Pakistan



Total Project Cost: \$1,170m



BENEFITS FROM THE DEVELOPMENT OF HYDROPOWER RESOURCES OF TAJIKISTAN





MINISTRY OF ENERGY
AND WATER RESOURCES OF THE
REPUBLIC OF TAJIKISTAN

Thank You!

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