

INSIGHT

How to Increase Energy Supply, Reduce Isolation and Improve Social Services



The Nurek hydropower plant is Tajikistan's main source of power, producing over 70% of the country's electricity. Photo credit: ADB.

Tajikistan has overcome the challenges of being a mountainous, landlocked country to make development gains across society.

Introduction

The Nurek hydropower plant is Tajikistan's main source of power, producing over 70% of the country's electricity. About 6 million people rely on the plant for power, as do the textile, aluminum, food processing, and agriculture industries, which drive the economy.

This vital power source was found to have a major vulnerability. The switchyard, which performed crucial functions needed to keep the plant running, sat on a water-soluble rock formation that was dissolving. The switchyard had literally been sinking. If it were to fail, the plant would go offline, causing power outages in most of the country and resulting in disastrous social and economic consequences.

In 2008, Tajikistan partnered with the Asian Development Bank to find a solution. The Nurek 500-Kilovolt Switchyard Reconstruction Project built a new state-of-the-art switchyard on a stable site and made

Tajikistan more energy secure.

Analysis

In the 1990s, Tajikistan experienced a conflict that devastated its economy and caused hardship to its people. ADB responded with a postconflict rehabilitation program as well as work to help the country transition to a market economy.

By the 2000s, Tajikistan and ADB were working together to improve the country's supply and transmission of energy. Hydropower provides most of Tajikistan's electricity, but the Soviet-built power plants and power lines were antiquated and poorly maintained, resulting in frequent power outages and inefficient operation.

ADB's assistance to upgrade and rehabilitate the outdated energy infrastructure not only made power more reliable and available to the country's citizens, but also enabled Tajikistan to export surplus power in the summer to neighboring countries.

This work included upgrading nearly 500 kilometers of transmission and distribution lines, thereby connecting more than 50,000 households to electricity for the first time.

The first energy initiative in which ADB and Tajikistan partnered was the \$34 million Power Rehabilitation Project in 2000, which added more than 100 gigawatt-hours of power-generation capacity by rehabilitating major power plants in the country.

Another example of the energy partnership was the 2006 Regional Power Transmission Interconnection Project. With help from other donors, the ADB-supported project tapped Tajikistan's summer energy surplus to meet shortfalls in neighboring Afghanistan. The project constructed a 220-kilovolt transmission line linking the hydropower stations on Tajikistan's Vakhsh River to the border town of Sher Khan Bandar, then to the Afghan towns of Kunduz, Baglad, Pul-e-Khumri, and, ultimately Kabul.

With a new ADB field office opening in the capital city of Dushanbe in 2003, ADB continued to help Tajikistan connect and trade with its neighbors. This assistance included supporting Tajikistan's membership in the Central Asia Regional Economic Cooperation program, which it joined in 1998.

ADB and Tajikistan have partnered to make the country's customs operations more simple, efficient, and transparent, so goods could be traded more easily with neighboring countries. The Regional Customs Modernization and Infrastructure Development Project supported a crackdown on smugglers, increased the amount of tax revenue collected at the border, and streamlined the process for imports and exports.

Insights

ADB has also been active in helping Tajikistan improve its roads. By 2013, ADB had become the largest multilateral development partner in its transport sector, with about \$440 million in loans and grants to support improvements. The work focused on rehabilitating the country's major regional highways, rural roads, and border crossings.

As a result of the partnership in the transport sector, about 430 kilometers of major highways and 620 kilometers of rural roads were built or improved, giving people greater access to vital social services and opening up regional markets for Tajikistan's goods.

After a difficult decade in the 1990s, Tajikistan's economy took off in the 2000s and poverty plummeted. During 1998–2007, gross domestic product growth averaged 7.9% per year. During 2005–2009, the proportion of the population earning less than \$2 per day fell from 84% to less than 28%.

Resources

Asian Development Bank (ADB). 2017. *Together We Deliver*

Asian Development Bank (ADB). 2017. *Tajikistan: Country Operations Business Plan (2018–2020)*

Asian Development Bank (ADB). 2016. *Tajikistan: Country Partnership Strategy (2016-2020)*

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