



USAID/PAKISTAN ENERGY/ CLIMATE CHANGE FACT SHEET

SECTOR OVERVIEW

The United States Agency for International Development (USAID) is partnering with the Government of Pakistan to help meet Pakistan's growing energy needs and combat climate change by transitioning to sustainable clean energy. Our support aims to increase the energy sector's sustainability by improving the power system's resilience, reducing greenhouse gas emissions, boosting private sector investment, and promoting new and innovative technologies.

SECTOR BACKGROUND

Since 2010, USAID has partnered with the Government of Pakistan (GOP) to address the energy demand and supply crisis that has crippled the country's economy and disrupted the lives of many of its citizens. Today, in partnership with the GOP, we are increasing power system capacity, creating the necessary policy, legal and regulatory frameworks to attract private investment in clean energy, increase energy efficiency, and expand energy access. USAID supports Pakistan's transition to affordable and sustainable energy that reduces emissions, spurs economic growth, and provides power to businesses and health and education systems.

SECTOR PRIORITIES

EXPANDING THE POWER SYSTEM THROUGH DIGITALIZATION OF THE ENERGY SECTOR

USAID projects are supporting the Government of Pakistan by introducing several new technologies to improve the transmission and distribution of energy. These include but are not limited to technical assistance in preparing transmission expansion plans, introducing smart meters, providing new technology to manage the power supply, and automated billing systems. These technologies have led to an increase in the public sector distribution companies' revenue by over \$450 million. The Pakistani government is also investing tens of millions of dollars from its funds to expand some of the technologies that USAID introduced in Pakistan. These technologies will help the GOP ensure energy security through improved revenue collection while improving customer service delivery.

BOOSTING PRIVATE SECTOR INVESTMENT

The Government of Pakistan is aggressively pursuing large-scale renewable energy investments to meet the rising energy demand and its clean energy goals. To support this venture, USAID is fostering an environment that supports private sector participation in the energy sector. These efforts include infrastructure development, creating conducive policies and regulatory frameworks, enhancing competitive procurement, providing access to finance, demonstrating partnership models, and contributing other valuable products and services such as loan guarantees. Since 2010, USAID has helped develop the first wind corridor in Pakistan, leveraged \$2.6 billion million in private investment, and supported two-thirds of Pakistan's current renewable energy capacity (excluding hydropower).

REDUCING EMISSIONS

USAID has continued supporting the Government of Pakistan to meet its goal of increasing the share of renewable energy from the current 34% (including hydropower) to 61% by 2030. Since 2010, USAID has provided infrastructure support, advised the GOP on creating space for renewables in Pakistan's energy portfolio, supported the addition of 31 wind and solar energy projects, and built/rehabilitated four hydropower projects. These efforts will reduce carbon dioxide equivalent emissions by over 55 million tons in 15 years. This significant increase in renewable energy capacity will significantly reduce greenhouse gasses, help Pakistan meet its national climate goals, and reduce its vulnerability to climate change. In addition, USAID is supporting the transition of the transport sector to help the Pakistan Government achieve the goal of 30% electric vehicles in new sales by 2030 through advisory services and policy and regulatory support.

KEY RESULTS

- Enhanced energy access for 47.8 million people.
- Added 4,064 megawatts of power capacity to the national grid through generation and transmission projects.
- Leveraged over \$2.729 billion of investment through infrastructure support and advisory services to help private-sector complete wind and solar projects.
- Constructed 288 km of power transmission lines, connecting Pakistan's first wind energy corridor to the national grid.
- Supported the implementation of over 30 policies and regulations that strengthened the clean energy sector.
- Reduced or avoided 55 million tons of projected greenhouse gas emissions in 15 years.

CURRENT/ ONGOING ACTIVITIES

PROJECT DESCRIPTION + BRIEF RESULTS

TARBELA DAM PROJECT

USAID has supported the Government of Pakistan's Water and Power Development Authority by rehabilitating the Tarbela Hydroelectric Power Station, located in Khyber Pakhtunkhwa Province. By upgrading four of 14 generator units, the Tarbela Dam Rehabilitation Project Phase I and II has restored 148 MW of generation capacity and added 648 million kilowatt hours of energy per year which is enough to supply electricity to 1.3 million people. The Phase II project has also increased the reliability of the power house and the switchyard enabling 35 million people to receive electricity from Tarbela Dam for longer durations each day and night for the next 30-40 years. With the physical completion of the project in August 2023, WAPDA and USAID are now calculating the percentage improvements in reliability and availability.

MANGLA DAM REHABILITATION PROJECT

After helping the Government of Pakistan construct the largest hydroelectric water storage dam in Pakistan in the 1960s, USAID is supporting the Government of Pakistan's Water and Power Development Authority by rehabilitating eight of the ten generation units at Mangla power house with grant assistance of \$150 million. The first two of eight General Electric generation units have been installed, increasing the generation capacity by 90 MW. When complete, the eight generation units will increase the generation capacity by 300 MW which is enough to supply electricity to over 2 million people. The replacement of the state of the art eight generation units will also increase the reliability of Mangla power house enabling over 9 million people to receive electricity from Mangla Dam for the next 30-40 years.

KAITU WEIR PROJECT

USAID is providing \$81 million to the Water And Power Development Authority for the construction of the Kaitu Weir project in the North Waziristan Agency to improve power and irrigation to the region and increase economic opportunities for the local population. Kaitu Weir is the first stage of the Kurram Tangi Dam Project and involves the construction of a weir (a feeder tunnel) on the Kaitu River, Sheratalla and Spaira Ragha irrigation canals, two powerhouses, and a 15-kilometer access road. The activity will provide 18.4 MW of hydro electricity to the national grid and irrigate 16,300 acres of agricultural land. Electricity from the project will also help complete Phase II of the Kurram Tangi Dam.

POWER SECTOR IMPROVEMENT ACTIVITY

USAID's Power Sector Improvement Activity (PSIA) is supporting the Government of Pakistan's efforts to increase the financial viability, reliability, and affordability of the power system in Pakistan. Over a four-year period, from January 2022 to September 2025, USAID's PSIA supports and facilitates Pakistan's transition to a competitive power market, while also improving operations of its transmission and distribution systems and optimizing the use of its grid electricity through increased electrification. These goals will be achieved through technical analysis and advice, connecting the

private and the public sector, and supporting academic research to increase the share of renewable energy. As of June 2023, PSIA has mobilized over \$34 million in the public and private sector.

ENERGY SECTOR ADVISORY SERVICES

USAID's Energy Sector Advisory Services Activity implemented through a partnership between USAID and National Renewable Energy Laboratory (NREL) of US Department of Energy (DOE) addresses critical aspects of advanced energy systems, including renewable energy deployment, grid modernization, distributed energy and storage, competitive market, integrated energy planning, increasing demand for electric vehicles, and energy efficiency. The partnership also addresses country-specific challenges through targeted, fully customized technical assistance and provides access to the advanced energy expertise and analysis pioneered by DOE's National Laboratories. Setting up Energy Planning and Resource Center (EPRC) in the Planning Commission of Pakistan to carry out long term integrated energy planning, **building** the capacity of the National Electric Power Regulatory Authority (NEPRA) to adopt power market monitoring function, and the working with the National Power Control Center (NPCC) to improve the power despatch **practices are few examples of the activities under this program.**

VOLUNTARY CARBON MARKET ACTIVITY

The aim of this activity is to support Pakistan's voluntary carbon market (VCM), which includes assisting the Pakistani Government with the creation of a registry, a digital measuring reporting and verification (MRV) process, and legal framework for the VCM. USAID will provide technical assistance to help the Government of Pakistan increase the capacity of a national authority (likely the Ministry of Climate Change) to consolidate the VCM integrity. Additionally, this activity aims to support private-sector carbon projects, either by convening potential buyers of carbon credits and directing financing towards early-stage projects, or by increasing the capacity and knowledge of project developers in-country.

PROMOTING ACCESS TO FINANCE FOR SMALL-MEDIUM ENTERPRISES:

USAID through multiple mechanisms is supporting SMEs to increase the access to finance for cleantech, circular economy and e-mobility sectors. The clean energy credit guarantee program was launched in 2017 to promote lending to cleantech SMEs that have mobilized over \$30 million in private capital and by working with Private Financing Advisory Network (PFAN) to provide 'Project Preparation and Investment Facilitation' advisory services to private developers. The project has created a pipeline of over 40 bankable projects in cleantech, e-mobility and circular economy sectors with an investment needs of over \$400 million.