



USAID POWER THE FUTURE

Accelerating the transition to clean energy, diversifying energy sources, and creating competitive markets across Central Asia

USAID’s Power the Future activity is accelerating Central Asia’s transition to cost-effective, low emission, energy-secure, and climate resilient economies through increasing the deployment of renewable energy and energy efficiency in all five Central Asian countries.

The scaling up of renewable and distributed energy resources requires comprehensive changes to the regional governments’ power infrastructures, local market designs, and business models. USAID is working closely with the Governments of Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan, along with donors and other key stakeholders, to address the policy, technical, and financial barriers to clean energy development and regional electricity trade. USAID’s Power the Future is a results-oriented activity, focusing on empowering partner countries so they can control their own economic and social development and build new renewable energy generation.

POWER SECTOR PLANNING FOR RENEWABLE ENERGY

USAID supports the governments of Central Asia with national power sector planning and development to integrate increased levels of renewable energy. In 2019, USAID worked with the Government of Kazakhstan to develop a twenty-year least cost generation plan. The plan has now been adopted into Kazakhstan’s national strategy for energy sector planning and development. In 2019 and 2020, USAID launched a renewable energy forecasting pilot project to gather data from twenty renewable energy generation plants in Kazakhstan. The pilot demonstrated the power of forecasting tools to accurately plan renewable energy generation and reduce the cost of integration. In 2020, USAID gave Kazakh energy specialists and government policy makers international best practice modeling tools to plan the strategic expansion of the energy sector and enhanced its capability to integrate increased levels of renewable energy. In 2021, USAID will continue to collaborate with Kazakhstan and conduct these activities.

COMPETITIVE PROCUREMENT OF RENEWABLE ENERGY

USAID helps Kazakhstan conduct renewable energy auctions, the first ever in Central Asia, as a preferred method for procuring renewable electricity resources. In 2018-2020, USAID supported Kazakhstan to conduct Central Asia's first renewable energy auctions resulting in at least 1,150 megawatts (MW) of installed capacity in wind, solar, hydropower, and biomass energy. The auctions attracted potential investors from at least 150 companies and estimated \$1.5 billion of new investment. The renewable energy auctions are not only attracting private investment to Kazakhstan but also reducing carbon dioxide emissions and diversifying the country's energy mix. In 2025, the renewable energy (RE) auctions will result in a 3.6% emissions reduction as RE generation replaces coal-fired power plants. In 2021, USAID will continue to provide extensive technical assistance and auction preparatory work to help Kazakhstan get ready for a new round of renewable energy auctions.

GRID INTEGRATION OF VARIABLE RENEWABLE ENERGY

USAID is providing targeted thought leadership and technical support to help Central Asian countries prepare their national grids for increased renewable energy integration. USAID is working closely with the Government of Uzbekistan, which has set ambitious renewable energy goals and intends to increase the share of renewable energy to at least 25 percent of all generation by 2030. USAID is conducting a renewable energy impact study to evaluate the impacts of renewable energy generation and integration on the national grid and overall regional power system. This work will help Uzbekistan avoid severe technical issues, reduce energy costs, and minimize risks associated with integrating renewable energy.

IMPROVING ENERGY EFFICIENCY IN GENERATION

As energy efficiency measures can reduce a country's need for expensive peak generation while also improving integration of renewable energy into power systems, USAID promotes energy efficiency amongst policy makers, utilities, and financial institutions across Central Asia. In 2018 and 2019, USAID assessed potential energy efficiency measures for Almaty's combined heat and power plants (CHPs) and identified 26 energy efficiency measures that can reduce fuel and energy costs. To ensure the bankability of the measures, USAID developed pre-feasibility studies and business plans to implement the energy efficiency investment projects. In 2020, USAID replicated this work at several CHPs in the Pavlodar region of Kazakhstan and identified applicable energy efficiency measures and cost-efficient ways to implement these activities. In 2021, USAID will conduct this work with CHPs in Sogrin'skaya and Stepnogorskaya.

KNOWLEDGE MANAGEMENT, COORDINATION, AND LEARNING

Under the C5+1 platform, USAID connects stakeholders, shares lessons learned, and provides access to information needed for collaborative decision making. USAID is partnering with Central Asia's leading universities to train the next generation of engineers and energy specialists in renewable energy power system planning and development. In 2019, USAID developed and helped implement a first-in-region renewable energy curriculum for the Almaty University of Power Engineering and Telecommunication, which will soon be rolled out to other universities in Central Asia. USAID facilitates knowledge and experience exchanges for women working in the region's energy sectors through field trips to renewable energy facilities, knowledge exchanges, and capacity building trainings. By investing time and resources into training and renewable energy education, especially for women, USAID creates favorable conditions for Central Asian countries to realize their goals and ambitions for renewable energy development.

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