



PROMOTING PROGRAMS TO COMBAT CLIMATE CHANGE

U.S. firms possess technologies that offer competitive solutions to combat the release of pollutants that are leading to climate change. The U.S. Trade and Development Agency (USTDA) is helping to connect these firms with overseas project sponsors, to achieve important objectives in areas such as clean energy development, emissions monitoring and alternative sources of energy that are more environmentally sustainable.

Recent USTDA projects that address climate change include:

East Asia

China Coal Mine Methane (CMM)/Coal Bed Methane (CBM) Power Plant – USTDA approved \$502,850 to provide technical assistance on the construction of a 120-megawatt (MW) power plant in Shanxi Province that uses CMM/CBM as a feedstock. The project is being implemented by a partnership involving Chinese coal mining and power utility companies, Caterpillar, Inc., and the Asian Development Bank. The project has generated over \$40 million in U.S. exports.

China Shanxi Continuous Emissions Monitoring System (CEMS) – A \$186,400 USTDA grant to Shanxi Provincial Environmental Protection Bureau (EPB) is partially funding analysis on CEMS in coal-fired power plants and industrial facilities across Shanxi. The study will assess environmental regulations, and will provide information on U.S. CEMS technologies.

Shandong Flue Gas Denitrification - USTDA is providing \$600,000 to the Shandong EPB to support a feasibility study on effective measures to limit nitrogen oxide emissions from coal-fired power plants in Shandong Province. This study is identifying advanced U.S. technology for power plant system retrofits, with the goal of incorporating this technology at similar facilities throughout the province.

Europe and Eurasia

Turkey Germencik Geothermal – USTDA provided a \$259,621 grant to Gurmat Energy Investment and Trade Co. for a study on a geothermal power plant at Germencik, Turkey. Stone and Webster of the Shaw Group performed the study. Based on the study, a 40 MW power plant was constructed, using more than \$23 million in U.S. exports.

Georgia CMM/CBM – USTDA is providing \$540,000 to partially fund a feasibility study on recovering methane from coal seams, active coal mines, and abandoned coal mines in the Tkibuli-Shaori Coal Basin. Advanced Resources International of Fairfax, VA, is conducting the study.

Renewable Energy Orientation Visit-USTDA provided \$194,013 for an OV to bring a Turkish delegation to the United States to develop business opportunities in the renewable energy sector with U.S.-based companies, industry associations, and government entities.

Turkey Public Facility Energy Efficiency and Energy Service Company (ESCO) – USTDA is sponsoring an orientation visit to the United States for Turkish businesspeople to learn about technologies, expertise and government policies that support energy efficiency programs in public facilities. The itinerary will also include workshops on best practices for public facilities energy management, and on the development of local markets for ESCOs in Turkey.

Turkey Solar Energy Tender – USTDA is providing \$375,400 to fund technical assistance with the evaluation criteria, methods, licensing and performance standards for a planned utility-scale solar power tender in Turkey. The U.S. Department of Energy National Renewable Energy Laboratory (NREL) is providing the assistance.

Latin America and the Caribbean

Mexico CFE Environmental Management — USTDA is providing \$640,500 to the Comisión Federal de Electricidad (CFE) to strengthen environmental management at its power plants, substations, and power transmission and distribution facilities.

Colombia Civil Aviation Renewable Energy – USTDA provided \$700,000 to the Unidad Administrativa Especial de Aeronautica Civil (AeroCivil) to assist in the conversion of its power supply for remote air traffic control and weather monitoring facilities from diesel generators to renewable energy sources. The project will improve the reliability of remote power supply infrastructure, while reducing cost.

Colombia Geothermal Power Generation – USTDA is providing \$599,310 to ISAGEN S.A., a leading Colombian power company, to support the development of a 50 MW geothermal power generation project. The study will assist in diversifying Colombia's

energy supply and limiting emissions from carbon-intensive gas and coal.

Uruguay Clean Coal Technology – USTDA is funding a \$419,729 feasibility study for the National Administration for Electric Supply and Transmission (UTE) on a proposed 300 MW coal-fired power plant that would use clean coal technology.

Middle East and North Africa

Jordan Renewable Energy - USTDA funded an orientation visit to the United States to familiarize Jordanian private and public sector representatives with U.S. renewable energy technology and expertise. Delegates participated in the annual PowerGen conference in Las Vegas, NV.

South and Southeast Asia

Regional Clean Energy Trade and Investment Conference – USTDA is sponsoring a workshop to discuss strategies to increase natural gas utilization in Association of Southeast Asian Nations (ASEAN) member economies. The workshop will address issues related to clean energy development in the region, including the adoption of policies and technologies that enhance power production with a focus on pollution reduction. The conference will support ASEAN Centre for Energy (ACE) efforts to make clean and efficient energy production a priority for all ASEAN members.

Indonesia Seulawah Agam Geothermal Power Plant - USTDA is providing \$589,000 for a study of a proposed geothermal power plant in Aceh Province that could present a reliable, environmentally advantageous method to restore power to the area, which was severely impacted by the 2004 tsunami. Stone & Webster/Shaw Group is the contractor for this study.

India CBM/CMM Clearinghouse – USTDA provided \$106,000 to sponsor a technical symposium in Ranchi, India, launching the India CBM/CMM Clearinghouse. The clearinghouse will be managed by the Central Mine Planning Design Institute Limited (CMPDI), a non-profit Indian organization, and will be the primary source for technical information on CBM and CMM in India.

Regional Aviation Environmental Best Practices – USTDA sponsored an orientation visit that brought government aviation officials from Malaysia and Thailand to the United States to highlight U.S. technological solutions and operational best practices for reducing emissions and fuel burn, aviation noise, and addressing water quality issues.

Pakistan Waste-to-Energy (WTE) Plant – A \$325,000 grant to Pakistan's Alternative Energy Development Board is funding an evaluation of a proposed 5-10 MW WTE power plant near Karachi.

Bagasse-Based Cogeneration Development Orientation Visit – USTDA is sponsoring an orientation visit to the United States to introduce Pakistani public and private sector delegates to U.S. technologies and products for increasing power generation capacities through biomass cogeneration.

Sub-Saharan Africa

Botswana CBM - In 2003, USTDA provided a \$525,000 grant to the Botswana Development Corporation for a study on CBM development. The study resulted in an investment by Covalent Energy (Virginia) in the Kalahari Gas Company of Botswana to undertake a pilot drilling and development CBM project. Covalent Energy and the Kalahari Gas Company have received an Overseas Private Investment Corporation loan guarantee to support the implementation of the pilot project.

Mali WTE Plant – USTDA provided a \$371,000 grant, to Mali's Ministry of Mines, Energy, and Water, to fund a feasibility study on a proposed 25 MW WTE power plant in Bamako, Mali. This WTE plant would supply electricity to 40,000 homes, produce commodity by-products for sale, and greatly reduce the trash on the streets of the capital city.