



Clean Energy Transformation in Bangladesh

USAID and NREL collaborate in Bangladesh to improve energy access and security and stimulate economic growth through the deployment of advanced energy systems.

With more than 165 million people, Bangladesh is one of the most densely populated countries in the world—resulting in an ever-increasing demand for energy. As Bangladesh continues its transition to a middle-income economy, energy security and access will play crucial roles in the country's ability to meet its economic growth targets and sustain increased living standards.

Since 2011, the United States Agency for International Development (USAID) and the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) have partnered to support Bangladesh's energy transition by enabling the deployment of advanced energy systems. The benefit of investing in clean energy resources in Bangladesh contributes to the U.S. government's Indo-Pacific Strategy and specifically supports the Indo-Pacific Strategy initiatives known as [Asia Enhancing Development and Growth through Energy \(EDGE\)](#) and Bangladesh Advancing Development and Growth through Energy (BADGE).

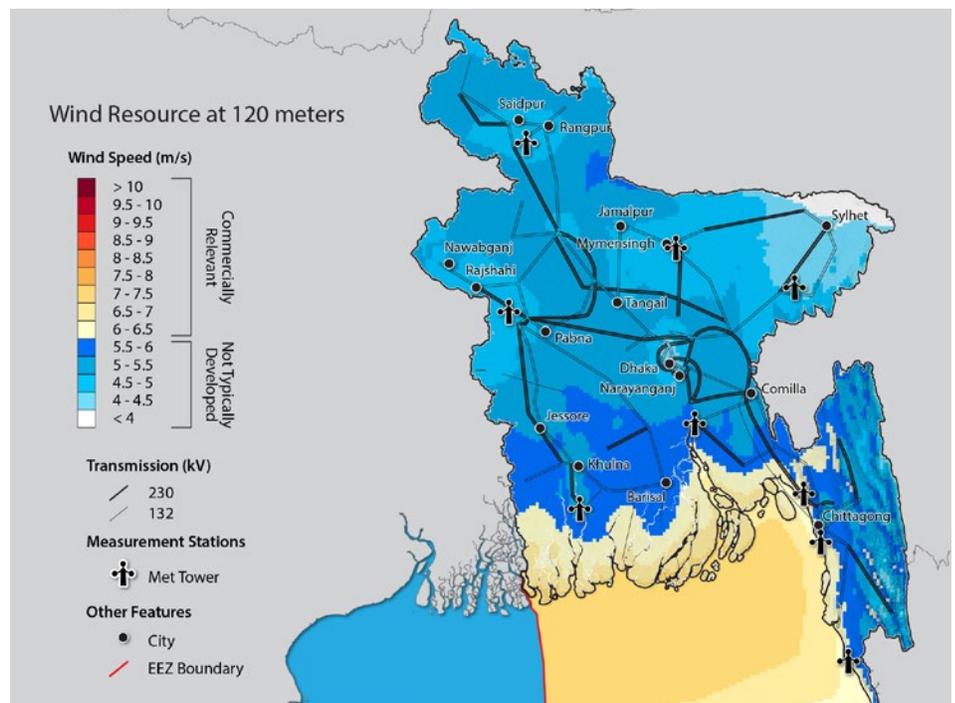
Wind Energy Development Project Underpins Partnership

Collaboration with the Government of Bangladesh began with the USAID-NREL Partnership providing technical assistance to promote the development of wind energy markets and projects. A cornerstone of this program was an NREL-led assessment, with in-country

partners, to quantify the wind resources in Bangladesh (see figure). This assessment resulted in first-of-its-kind renewable energy resource data for Bangladesh that is now available through the [Renewable Energy Data Explorer](#) tool for decision-making in clean energy policy and planning.

Beyond broadening access to renewable energy resource data, USAID and NREL engagement in Bangladesh equips local stakeholders with the technical capacity to build, operate, and manage renewable energy projects. USAID and NREL jointly host workshops and

events with a focus on understanding opportunities and challenges related to renewable energy development as well as grid integration and system flexibility. In response to feedback gathered during these events, USAID and NREL developed a [One-Stop-Service](#) document that assimilates information and resources necessary for wind project development. This document supports the project development process by making it more streamlined and less time consuming, opening further investment and development possibilities.



Wind resource map of Bangladesh generated in the Renewable Energy Data Explorer, showing measurement locations as of September 2018. *Figure by Billy Roberts, NREL*

Making an Impact Across the Bangladesh Energy Sector

The USAID-NREL Partnership launched the **Reinforcing Advanced Energy Systems (RAES)** program in May 2021 as a mechanism for providing a broader array of technical assistance to the Government of Bangladesh in support of their goal to promote renewable energy development to stimulate private sector investment, rural economic development, and to meet growing energy demand through domestic energy resources.

Through RAES, NREL complements the BADGE program by providing unique, world-class analysis and decision support for scaling-up advanced energy systems and enabling the transition to sustainable,



The Reinforcing Advanced Energy Systems program in Bangladesh supports increased deployment of clean energy systems, which can result in greater access to sustainable and lower cost energy technologies across economic sectors such as agriculture, manufacturing, or textiles. *Photo from iStock 1091011804*

RAES Program Technical Areas



Renewable Energy Development in Economic Zones



Grid Modernization and Power System Flexibility and Resiliency



Distributed Energy Resources



Energy Efficiency and Demand Response



Energy Storage



Electric Vehicles

secure, and market-driven energy sectors in Bangladesh. Key to supporting this transition is creating robust energy policies, plans, and practices that can be effectively implemented. Potential RAES activities are designed to improve the use of data-driven decision-making for energy policies and practices, increase the adoption of best practices and advanced approaches to energy planning and policymaking, and improve robustness of in-country analytical capabilities for energy decision-making.

Ultimately, the goal is for USAID and NREL's energy sector programming in Bangladesh to result in well-developed policy and improved analytical tools and processes that facilitate Bangladesh's

clean energy transition. USAID and NREL look forward to continuing to support these goals, sharing best practices, and providing context-specific technical assistance through the RAES program to promote these and other clean energy and climate change mitigation topics.

Learn more about how [USAID and NREL support clean energy transformation in Bangladesh.](https://www.usaid.gov/our-work/energy/clean-energy-transformation-in-bangladesh)

www.nrel.gov/usaaid-partnership

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The USAID-NREL Partnership addresses critical challenges to scaling up advanced energy systems through global tools and technical assistance, including the Renewable Energy Data Explorer, Greening the Grid, the International Jobs and Economic Development Impacts tool, and the Resilient Energy Platform. More information can be found at: www.nrel.gov/usaaid-partnership.

