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US NATION RENEWABLE ENERGY LABORATORIES PARTNERSHIP (NREL)

Helping deliver clean, reliable, and affordable power to Colombia.

OVERVIEW

The US Nation Renewable Energy Laboratories Partnership (NREL) with USAID advances renewable energy systems in Colombia. NREL provides policy, planning, modelling and deployment support to national energy entities within the Government of Colombia (GOC) to address renewable energy challenges in the country. NREL's Colombia runs from January 2018-June 2022.

COMPONENTS

INTEGRATING NON-TRADITIONAL RENEWABLE ENERGY

NREL works with the GOC to plan, operate and integrate solar and wind power into Colombia's electricity system and market. NREL supports the GOC, utility companies and stakeholders in developing standards, programs and best practices for rooftop solar power production.

PLANNING RURAL ELECTRIFICATION PROJECTS

NREL improves electric power access in non-connected rural communities by providing options for cost effective renewable energy resources.

BUILDING LOCAL CAPACITY

NREL improves the GOC, utility companies and stakeholders' knowledge of renewable energy. It does this through seminars, technical events and access to advanced renewable energy sector research. NREL also promotes women's involvement and success in the energy sector.

DEVELOPING CLEAN POWER AUCTIONS

NREL helps Colombia's Ministry of Mines and Energy (MME) and the Energy and Gas Regulation Commission (CREG) develop energy auctions to deploy renewable energy systems.

RESULTS

- Trained 40 GOC Working Group for Renewable Energy professionals on large-scale battery storage system use to integrate intermittent solar and wind energy sources;
- Assisted the GOC in the design of new rooftop solar energy generation regulations for homes, businesses and communities;
- Disseminated information to 120 professionals on the evolving efficiencies of solar power and battery storage for off grid rural use;
- Helped the GOC hold its second renewable energy auction which resulted in the GOC awarding 15-year power purchase agreements to nine new solar and wind projects;
- Assisted Colombia's new competitive procurement process resulting in historically low average energy prices of approximately USD $28 per megawatt hour (MWh);
- Supported 150 wind and solar energy projects' registration with the National Energy Planning Unit; and
- Contributed to the design of Colombia's first procurement of large-scale battery systems for an interconnected power grid, expected to occur in early 2021.