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USAID SUPPORT FOR RENEWABLE ENERGY AUCTIONS

Countries can achieve historically low energy prices when energy providers compete in open and transparent renewable energy auctions. Through the Scaling up Renewable Energy (SURE) program, the U.S. Agency for International Development (USAID) provides a full range of services to prepare for, design, and implement auctions, making sure that partners are supported in every step of the process. SURE also works with policymakers to develop a regulatory framework that attracts private investors. Since 2017, SURE has supported 13 renewable energy auctions.

Photo: tope007

RENEWABLE ENERGY AUCTION

A renewable energy auction is a competitive procurement process that enables countries to find the most cost-effective renewable energy projects on the market. In an auction, energy project developers bid against each other to supply energy through long-term contracts at the lowest possible price. Awards are generally made based on bids submitted by participating energy providers according to transparent award rules. The energy industry also refers to an auction as a tender or reverse energy auction. Auctions are open to all eligible bidders and have clear award rules. This open and transparent process creates a level playing field for U.S. and other companies and safeguards against corruption.

Photo: Sander Weeteling

Regardless of market maturity, auctions help policymakers achieve sustainable cost reductions while spurring private investment, creating local jobs, reducing corruption in the procurement process, and reducing emissions. Through a well-designed auction process, national policymakers can attract competition and diverse bidders, reduce corruption, and avoid delays in project completion.

COLOMBIA RENEWABLE ENERGY AUCTIONS 2019-2021

For years, as much as 77 percent of Colombia's electricity supply came from hydropower, but droughts intensified by the climate crisis made hydropower less reliable. With more climate impacts on the horizon, Colombia needed to diversify its energy mix.

Working with SURE, the Government of Colombia developed an auction process to help buyers—in this case, electric utilities—add wind and solar power to their energy portfolios. SURE helped Colombia draft policies and regulations that fit the country's context and policy vision.

Using auctions, Colombia achieved historically low prices for renewable energy, securing over 2,170 MW of new wind and solar power at prices 15 to 25 percent lower than previous contracts. These renewable projects will attract approximately $2 billion in private investment, save up to $228 million in annual electricity costs, and create new local jobs and business opportunities in a region hit hard by climate change.


Photo: Joel Duncan

First Renewable Energy Auction

SURE supported Colombia's first renewable energy auction in February 2019, assessing the energy sector, drafting regulatory documents, and tailoring the auction design to Colombia's unique needs. SURE also coordinated with Bloomberg New Energy Finance to hold events in Bogotá and New York City focused on attracting U.S. private sector developers to bid in the auction. Approximately 150 companies participated in the events, demonstrating strong commercial interest in the Colombian opportunity. SURE developed an online library to house key auction documents (in English and Spanish), rules for bidder participation, and the contracts to be awarded to winning bidders. Throughout the auction process, SURE monitored trends and innovations in global auctions and conducted study tours and workshops to help participants benefit from best practices. Despite high participation rates, the government did not award contracts because the auction's competition criteria were not met.

To ensure future auction success, SURE interviewed all 12 selected buyers and sellers who participated in the first auction to determine options for a way forward. The assessment informed new rules for a second auction conducted in October 2019. Between the two auctions, USAID co-hosted 13 events that trained 1,200 participants, including 544 people from 13 countries via live stream and 22 distributors and retailers (the buyers). Fifty-three companies applied to participate in the second auction—27 generators (the sellers) and 26 buyers (representing about 95 percent of Colombia's regulated demand in 2018).

Second Renewable Energy Auction

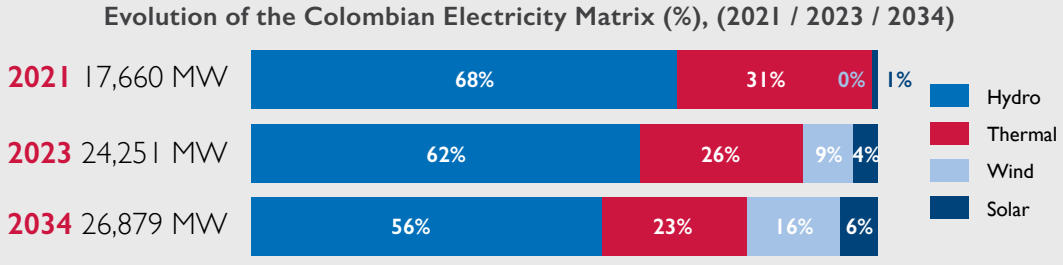
With support from SURE, the Government of Colombia conducted its second auction in 2019. The auction awarded contracts for seven projects that are scheduled to become operational by 2022. The second auction mobilized an estimated $1.3 billion in private capital and secured around 1.3 GW of new wind and solar PV capacity with a cost of about $28 per megawatt hour (MWh). The projects will reduce GHG emissions by more than 11 million tons of carbon dioxide equivalent (tCO_2e) through 2030 and create around 5,000 local construction jobs. This was a positive step toward the diversification of Colombia's installed generation capacity, with solar PV and onshore wind shares expected to increase from less than 1 percent in 2019 to about 12 percent by 2022. U.S. company AES won contracts valued at approximately $250 million in the auction.

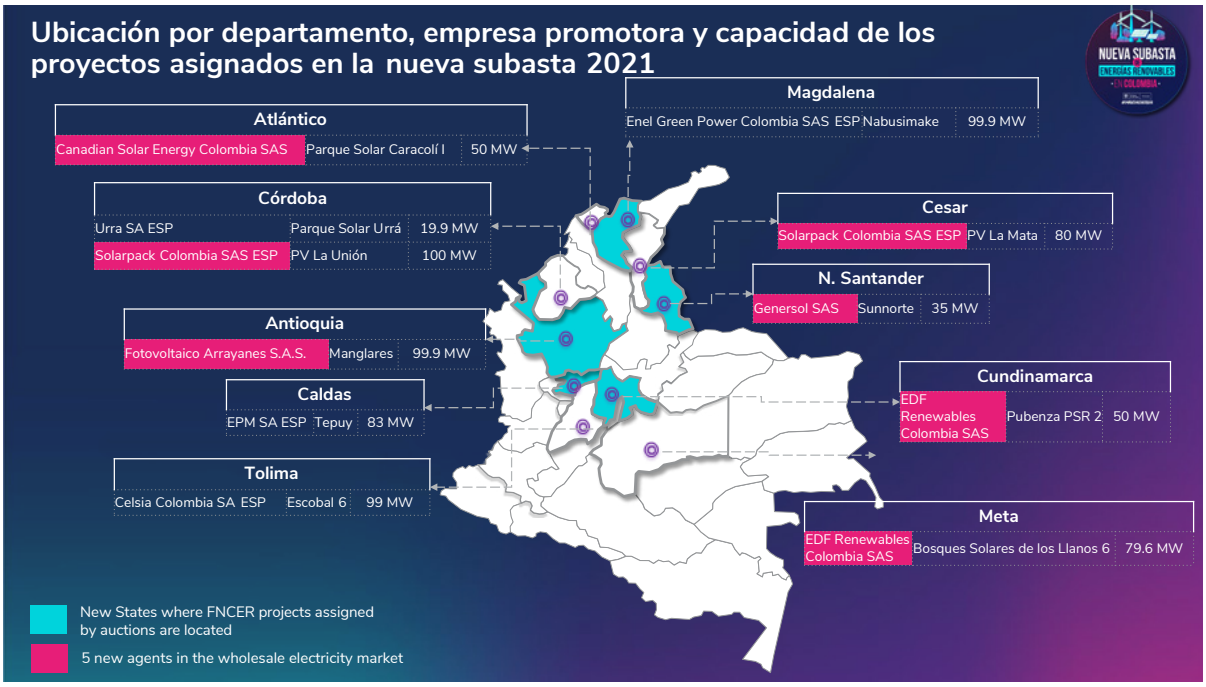
Climatelinks, a technical resource for development practitioners, highlighted lessons learned from Colombia's renewable energy journey. SURE partnered with IRENA and USAID to publish a case study, Renewable Energy Auctions in Colombia: Context, design and results. SURE also developed a case study on how USAID and Colombia partnered with the private sector and published additional resources on the Colombia auctions on USAID.gov.

Third Renewable Energy Auction

On October 26, 2021, Colombia hosted its third renewable energy auction with support from USAID. Competition increased with several companies new to the country winning projects for the first time. Contracts were awarded to 11 solar projects totaling 796.3 MW of capacity at an average price of approximately $40.56/MWh—higher than the average price at the 2019 auction, but still 15 percent below the average market price. The price increase was expected due to supply chain disruptions affecting the global solar market. The projects are estimated to mobilize an investment of approximately $875 million, with operations expected to start by 2023. The electricity generated from these plants is estimated to reduce emissions by approximately 465,000 (tCO_2e) per year while creating about 4,700 local jobs. Colombia Minister of Mines and Energy Diego Mesa publicly expressed appreciation for USAID's support on October 28, 2021.

The Colombian electricity generation mix will be increasingly clean and diversified





SURE supported the 2021 auction with outreach and capacity building. SURE helped organize, deliver, and promote a total of eight outreach events including five regional workshops that were attended by approximately 132 people and three events targeting financiers, energy producers, and energy marketers. Colombia's Vice Minister of Energy delivered opening remarks at one of the workshops designed to educate potential bidders on the auction's potential benefits and risks and the main rules and procedures. SURE developed training materials for suppliers, generators, and financial institutions to use during the workshops. As a result, 107 companies, 52 sellers, and 55 buyers registered in the online platform managed by XM, the auction administrator. Out of these, 69 companies, 22 sellers, and 47 buyers prequalified by complying with all technical, legal, and financial requirements. Competition in the new auction increased with five companies new to Colombia winning projects for the first time, including developers from the United Kingdom, France, Canada, and Spain.

Workforce Development

Led by the Office of the Vice President with support from SURE, the Government of Colombia developed a comprehensive multi-sector initiative to address workforce development issues in Guajira province, the country's wind power center. To create long-term economic opportunities for Guajira province and reduce the risk of project delays and project cancellations, USAID is supporting the Ministry of Mines and Energy, the Ministry of Labor, and others to assess and develop a workforce plan that would help train people in local communities to construct and operate an expected first wave of about 2,531 MW of renewable energy between 2021 and 2024. The renewable energy projects along with the workforce development program are expected to consolidate a development engine for the region and catalyze long-lasting economic benefits for the local population, including Indigenous Wayuu communities in Guajira. USAID is supporting workforce development with the National Technology Training Agency (SENA), which will begin relevant training activities in February 2022.

Photo: Nestor Morales

Grid-Scale Storage Procurement

With support from SURE, Colombia's power sector planning agency (UPME) drafted a tender for 60, 40, and 20 MWh of battery storage in three substations in Barranquilla in 2019. In 2020, UPME issued the tender for 45 MWh of battery storage at only one substation due to grid constraints. SURE, the National Renewable Energy Laboratory, and the United States Energy Association conducted a two-day workshop on utility-scale battery energy storage and convened energy practitioners from the Ministry, the system operator, the regulator, the regional utility, and global storage experts to procure storage technologies that would defer a multimillion dollar investment in transmission infrastructure.

Gender Lens Investing in Colombia

The Fund for Non-Conventional Energy and Energy Efficiency Management (FENOGE) is an organization regulated by the Ministry of Mines and Energy that finances, manages, and executes plans, energy efficiency programs, and projects and the use of non-conventional sources of energy in Colombia. SURE supported FENOGE's efforts to reduce gender inequality in the Colombian energy sector by integrating gender into its project life cycle. For project design, SURE integrated a gender lens checklist that incentivizes gender inclusion.

For project prioritization, SURE integrated gender-inclusion indicators to incentivize female employment and benefits. For monitoring, SURE proposed gender-inclusion performance indicators and sources for assessing projects against the indicators proposed. In 2021, FENOGE received interministerial approval to incorporate gender language in its operating manual.