USAID
FROM THE AMERICAN PEOPLE

TRAINING THE FUTURE LEADERS OF RENEWABLE ENERGY GENERATION IN COLOMBIA

Colombia is transforming its electricity sector and needs to prepare the next generation of energy professionals to lead the integration of increasing amounts of renewable energy.

Photo: Juan Saravia

The U.S. Agency for International Development (USAID), through the Scaling Up Renewable Energy program, the National Renewable Energy Laboratory of the U.S. Department of Energy (NREL), and the U.S. Energy Association (USEA) worked with the Government of Colombia to develop a comprehensive workforce training program for these young professionals to learn about the construction, operation, and grid integration of variable renewable energy (VRE) projects. The nine month training program was facilitated by experts from all around the United States, Norway, Germany, Australia and Brazil, including market operators, institutions, regulators, generators, distributors, and technology producers. The students were encouraged to interact with the presenters online, which created strong working relationships between the young leaders and the US energy sector. The training also focused on the inclusion of young women to promote gender balance in the male-dominated sector.

Training participant Jennyfer Marín has a degree in electrical engineering from the University of La Salle, Bogotá, Colombia, and works at the Superintendency of Domiciliary Public Utilities (SSPD), where she manages smart metering projects while pursuing her master's degree in electrical engineering at the National University of Colombia, Bogotá. Ms. Marín is interested in energy issues because of climate change and the importance of energy to economic growth.

During the USAID and NREL training, Ms. Marín learned about VRE policy and planning trends for solar and wind integration, including strategies to increase system resilience. She also made important connections with energy experts who facilitated the classes and strengthened her peer network of young energy professionals. Completion of the training earned Ms. Marín an Institute of Electrical and Electronics Engineers (IEEE) continuing education certification, which can open doors to new career opportunities.

USAID selected training participant Jennyfer Marín's action plan for the integration of renewable energy in Colombia to receive technical implementation assistance. Photo: Jennyfer Marín

Photo: Juan Saravia

Slide from Jennyfer Marín's winning action plan, selected as part of USAID's workforce training program to help young professionals lead the integration of renewable energy in Colombia.

Training participants also developed action plans for better integrating renewable energy into their respective jobs. In Ms. Marín's current job at SSPD, she is in charge of overseeing public utility service providers to ensure compliance with regulations. With increasing VRE generation in Colombia, her action plan focused on better forecasting and managing the complex fluctuations of VRE generation to ensure the lights remain on with a stable Colombian electricity grid.

"THE ELECTRICITY SECTOR IS CHANGING AND THE IDEA IS TO LEARN THE BEST PRACTICES FROM OTHER COUNTRIES."

Jennyfer Marín

VRE forecasting helps utilities like SSPD to integrate utility-scale VRE and distributed energy resources into the power grid cost effectively. Consumers will enjoy lower electricity prices and fewer power outages as a result of the grid's improved reliability and flexibility.

Ms. Marín's action plan was one of five selected to receive technical implementation assistance. She is using what she learned from the training and applying the action plan to enhance SSPD's management of Colombia's utilities by implementing improved energy metering and smart metering projects for better forecasting, monitoring, and surveillance of electricity generation and demand.

As prices for VRE clean energy and storage technologies continue to fall and Colombia continues to explore ways to cut emissions through new technology, Ms. Marín is positioned to become a leader in this energy transition.

Slide from Jennyfer Marín's winning action plan selected as part of USAID's workforce training program to help young professionals lead the integration of renewable energy in Colombia.

With increased confidence on the job to promote the latest VRE best practices in support of Colombia's utility regulations, Ms. Marín hopes to expand opportunities for other women in the sector as well. She is interested in building on this training to gain more energy experience both in Colombia and internationally while growing professionally to become an energy sector leader.

As Colombia continues to diversify its energy mix with increased production of renewable energy, Ms. Marín and her fellow training participants are ramping up to lead the government and private sector to usher in a more resilient energy future for Colombia that combats climate change.