

TOWARD A SUSTAINABLE FUTURE: THE MEANGUERA DEL GOLFO RENEWABLE ENERGY PROJECT

Introduction

eks Energy together with our client AES El Salvador undertook the Meanguera del Golfo Renewable Energy Project as part of our commitment to transition towards more sustainable and environmentally friendly energy generation. This case study presents the background, objectives, implemented solutions, results and benefits of the project.

Background

Meanguera del Golfo, a municipality located in the eastern coast of El Salvador, heavily dependent on fossil fuels generation of electricity, leading to high greenhouse gas emissions and important environmental impact. We and AES El Salvador we saw the need to diversify their energy sources, reduce their carbon footprint and contribute to the sustainability of the country Goal development.

Objectives

The primary objectives of the Meanguera del Golfo Renewable Energy Project were as follows:

- To establish a renewable energy generation facility in Meanguera del Golfo.
- To reduce carbon emissions.
- To contribute to the national goal of increasing the share of renewable energy.
- To create local employment opportunities and promote socio-economic development.

Implemented solutions

1. Wind Power Generation: The project involved the installation of state-of-the-art wind turbines with a total capacity of 50 megawatts (MW). These turbines harness the region's abundant wind resources to produce clean electricity.

2. Grid Integration: AES El Salvador enhanced the existing grid infrastructure to ensure the seamless integration of the generated renewable energy into the national power grid.

3. Environmental Impact Mitigation: The project adhered to strict environmental guidelines to minimize its impact on local flora, fauna, and communities. Comprehensive environmental impact assessments were carried out and mitigation measures were put in place.



AES MEANGUERA DEL GOLFO

Location	MEANGUERA DEL GOLFO - El Salvador
Model of the plant	Hybrid: photovoltaic and battery storage
Rated Power	1MW
Capacity	4MWh
Number of AMPS	1
Clients	AES
Duration	2021-2023
Main objectives	Sustainability goals, carbon emissions reduction and renewable energy storage

Results and Benefits

The Meanguera del Golfo Renewable Energy Project yielded several significant results and benefits:

- Clean Energy Generation: The 50 MW wind power facility now generates clean electricity, displacing a substantial amount of fossil fuel-based generation and reducing CO2 emissions.
- Reduced Carbon Footprint: The project's clean energy contribution resulted in a significant reduction in carbon emissions, helping El Salvador make progress towards its climate change mitigation targets.
- Socio-Economic Impact: The project created employment opportunities in the construction, operation, and maintenance of the wind farm, stimulating local economic growth and supporting livelihoods.
- Energy Security: By diversifying its energy sources, El Salvador improved its energy security, reducing its dependence on imported fossil fuels.
- Community Engagement: AES El Salvador actively engaged with local communities, collaborating on social and development initiatives to enhance the well-being of residents.

Conclusions

From eks Energy, since we are part of the AES Meanguera del Golfo project, we highlight the leadership in promoting sustainable energy generation. Through our expertise in advanced technologies and strategic collaboration with AES, we demonstrate the viability and benefits of renewable energy. Its commitment to the local community and focus on replicability make this case an inspiring model for future collaborations in the search for sustainable energy solutions. In short, we contributed significantly to the success of the project, setting a high standard for the transformation of the energy industry towards clean and renewable sources.

