1898 & CO.®
PART OF BURNS & McDONNELL

CASE STUDY

Empowering Renewable Energy to Cross U.S.-Mexico Border

Baja California in Mexico offers some of the strongest wind resources on the West Coast. For all the minute details involved in developing a major wind farm to help serve demand in nearby Southern California, Sempra and IEnova turned to us, a frequent partner on wind projects, for owner's engineer services.

Challenge

To support Southern California's extensive renewable energy goals, Sempra International —an independent power producer headquartered in San Diego, California — established a plan to build a wind farm in neighboring Baja California in Mexico. The project called for 47 wind turbine generators and a cross-border, high-voltage electric transmission line to bring the power into the U.S., requiring engineering services for the comprehensive development and construction. Leveraging an ongoing, trusted partnership, Sempra and its Mexico-based sister company, IEnova, turned to our team for owner's engineer services.

Project Stats

Client
Sempra International and IEnova

Location
Jacumé, Baja California

Completion date
2015

47
WIND TURBINE GENERATORS

155
MW OF CAPACITY

Solution

To begin the process, we evaluated more than 10 bids for the wind turbine supply, consisting of more than 15 unique turbine generator models, and evaluated multiple balance-of-plant contractors. We also assisted with preparation of the engineerprocure-construct (EPC) request for proposal (RFP) and management of the bid process, helping to lay the groundwork for a cost-effective construction plan.

The project required a detailed wind resource assessment. Our scope also included turbine micrositing to minimize wake-induced losses, limit machine stresses and maximize energy yield; evaluating microwave beam path interference; and providing detailed technology assessments of a preferred wind turbine.

As the dedicated owner's engineer service team, we developed and maintained the overarching project schedule, which spanned approximately five years, and served as a constant source of background knowledge and guidance for the client until project completion.

Results

The wind farm became operational in 2015, boasting 47 wind turbine generators with 155 megawatts of renewable wind energy capacity — capable of powering up to 65,000 homes. Fulfilling its goal to provide renewable energy to Southern California, Sempra International has a 20-year power purchase agreement with San Diego Gas & Electric. The client is also evaluating a second phase wind farm project, building off the specifications and standards set by this successful renewable project.

About 1898 & Co.

1898 & Co. is a business, technology and cybersecurity consulting firm serving the industries that keep our world in motion. As part of Burns & McDonnell, our consultants leverage global experience in critical infrastructure assets to innovate practical solutions grounded in your operational realities. For more information, visit **1898andCo.com**.