NV5

GRID FEASIBILITY

CATALINA ISLAND MICROGRID FEASIBILITY STUDY

SANTA CATALINA, CA | SOUTHERN CALIFORNIA EDISON

Southern California Edison is required by the state of California to reduce its NOx emissions from its power generation fleet. The island of Santa Catalina is off the coast of Southern California and within SCE's service territory. It is currently powered by six diesel generators, 23, 65 kW propane microturbines, and a 1MW/7.2MWh NaS battery storage system.

NV5 offered the client a feasibility study to explore three solutions to repower the island. We provided a comprehensive study of the island's existing electrical system, power generation resources, and top locations for renewable development and deployment including wind, solar, battery storage, and ocean power technologies. The results of this study provided SCE a guide on how to update their existing power generation sources into an emissions-compliant system.

CHALLENGES & SOLUTIONS

- The immense nature of the project scope led to a large project team with expertise in many different fields. Keeping these studies organized and consistent in a format that could be easily digested and referenced was a major challenge for this project. Another challenge involved the sheer number of stakeholders involved in the study process. Many different groups with various levels of expertise had to come together and provide input and information to the project narrative. It was an organizational and logistical challenge to receive, summarize, and digest input from the various parties involved in the project.
- To work through these challenges, NV5 coordinated closely with, and took in feedback from, all the team members and stakeholders involved. We stayed highly organized to control the incoming data and input from all involved. Most importantly, NV5 made sure that everyone felt heard and that all comments, suggestions, and requests were responded to. Ultimately, NV5 produced a detailed, cohesive report that took in input from a variety of stakeholders and a range of data sources.

PROJECT SIZE: 15 MW, 12 KV
CONSTRUCTION COST: TBD
VALUE OF CONSULTANT SERVICES: $448,610
YEAR COMPLETED: 2020

SERVICES

- Environmental Services & Permitting
- Microgrid Optimization & Design
- Electric Distribution Impact Study
- Master Planning Infrastructure & Utilities
- Renewable Energy Facilities Siting & Design

SYSTEMS

- Renewable Energy
- Clean Power Generation
- Photovoltaic
- Medium Voltage
- Electrical
- Undersea Cable Design