



Case Study

OnQuest/Synergy Renewables: Puerto Rico Waste-to-Energy Facility

Background

Synergy Renewables needed a preliminary design and capital cost estimate for the development of a gasification and electrical generation facility in Puerto Rico that utilized refuse-derived fuel (RDF) technology. A waste-to-energy facility creating RDF would solve two of Puerto Rico's pressing problems: lack of landfill space and lack of affordable energy/power. The proposed facility would process up to 600 tons of waste per day producing approximately 13 megawatts of electricity.

DEI Scope of Work

DEI was hired to develop the conceptual designs and cost estimates for the material receiving and process facility as well as traffic flow and infrastructure for the entire project. DEI also prepared a Request for Proposal for equipment to produce the RDF.

DEI Tasks

DEI was responsible for the following work tasks as part of the preliminary planning and design efforts:

- Preparation of a design basis for the receipt of materials, and the facilities needed to enclose the material processing and storage activities for the project
- Preparation of design calculations for space required for the receipt of incoming solid waste and the storage of RDF
- Oversight for the preparation of the conceptual building design and specifications needed to obtain bids on the building
- Preparation of performance-based specifications for solicitation of bids from qualified manufacturers for equipment to process material and produce an RDF
- Preparation of bid comparison spreadsheets and evaluation of bids from equipment manufacturers; used this information to make recommendations to Synergy for vendor selections

Results

- DEI completed all of its assigned work.
- Synergy Renewables was able to finalize all the preliminary planning documents with DEI's work products and completed a pro forma for the project.
- All preliminary work is complete, but final approvals have been held up amid opposition from local environmental groups.



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