

RE-Powering America's Land

Evaluating the Feasibility of Siting Renewable Energy Production on Potentially Contaminated Land

St. Bernard, Louisiana

RE-Powering: EPA/NREL Feasibility Studies

The U.S. Environmental Protection Agency's (EPA) *RE-Powering America's Land* Initiative encourages renewable energy development on current and formerly contaminated land, landfills and mine sites when it is aligned with the community's vision for the site. EPA and the U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) are collaborating on a project to evaluate the feasibility of siting renewable energy production on potentially contaminated sites. This effort pairs EPA's expertise on contaminated sites with NREL's expertise in renewable energy. The feasibility studies provide site owners and communities with a technical and economic assessment of installing renewable energy on a given site.

Site Description

The former Kaiser Aluminum site is a 39-acre closed landfill bounded by the St. Bernard Port, Harbor and Terminal District, the Chalmette National Battlefield and Cemetery, and the Mississippi River. Kaiser Aluminum disposed of spent potliner (SPL) from the aluminum process in a 25-foot mound on the river side of the site. The SPL mound is properly capped as approved by the Louisiana Department of Environmental Quality (LDEQ), but this inhibits traditional redevelopment of the site, which has been vacant for more than 20 years.

Community Goals

Given the variety of crops grown in the region, the site may be a good candidate for biorefinery or biopower projects. While the SPL mound covers about 19 acres of the site, the remaining 20 acres are relatively flat, open land, making the installation of an alternative energy project feasible. The local utility is committed to working with the project team to explore renewable energy options, help facilitate the project, and potentially purchase energy produced at the site. This feasibility study will enable the St. Bernard Parish and the St. Bernard Parish Economic Development Foundation to examine options for a renewable energy project and better market the site to potential developers.

Feasibility Study: Biopower

EPA and NREL conducted a study on the potential for biopower power generation on the Former Kaiser Aluminum Landfill site. The feasibility study evaluated the technical and economic opportunities and challenges at the site. The completed study:

- Provides a preliminary analysis of the viability of the site;
- Assesses biopower potential;
- Identifies possible facility type, size and location; and
- Reviews the economics of the proposed facility.

Total food waste generation in the study area is estimated at 70,000 tons per year, and large producers of food waste in the area expressed interest in alternative waste disposal options. This study finds that there is adequate food waste, and the site is capable of supporting a biomass facility. However, at this time the low energy and landfill prices in Louisiana restrict the profitability of a biomass facility. Additional analysis is merited as electricity rates increase, landfill tipping fees increase, and new incentives become available.

Former Kaiser Aluminum Landfill St. Bernard, Louisiana

Site Facts:

Site type: Landfill

Renewable technology: Biopower

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The information presented in this fact sheet is from the site's initial proposal, site visit(s), discussions with community stakeholders, and other information collected in preparation of the feasibility study. This fact sheet is for informational purposes only and may not reflect the site's current regulatory or remediation status.

For more information, visit www.epa.gov/renewableenergyland or contact cleanenergy@epa.gov



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