

RE-Powering America's Land

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

Savannah, Georgia

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 1,480-acre former Tronox facility located near Savannah, Georgia, once housed titanium dioxide and sulfuric acid production facilities, a former wastewater treatment plant, and several rail lines. From 1985 to 2008, a municipal solid waste incinerator also was in operation on a leased five-acre portion of the site. Soil and water along the existing facility are contaminated with metals, volatile organic compounds, and semi-volatile organic compounds.

Community Goals

The proposed project envisions covering the former municipal waste landfill with a solar system. Because there is significant utility infrastructure at the site, the need for significant investment in transmission equipment to sell power for grid distribution will be minimal. If constructed, this project could provide sufficient energy to power the facilities still in operation at the site.

Feasibility Study: Solar

EPA and NREL conducted a study on the potential for solar power generation on the former Tronox facility 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 solar resource availability;
- Identifies possible system or facility size, design and location; and
- Reviews the economics of the proposed facility.

Two locations were evaluated at the Tronox facility: the Deptford Tract and the former Montenay Municipal Solid Waste (MSW) incinerator. The study found both locations to be excellent candidates for solar development because they are nearly flat, zoned for industrial use, and have existing infrastructure in place, including extensive electrical distribution.

The available land area has the potential for an estimated 8.5-megawatt (MW) photovoltaic (PV) capacity at the Tronox facility. Based on existing federal and state incentives, project economics are most favorable for a 100 kW net-metering project for each individual future building/site. However, improvements to incentives could improve viability for larger projects (8.5 MW). These changes could include an increase to the purchase price from the local utility, loan guarantees with longer repayment periods, and higher REC payments that would apply to larger systems. Additional analysis is merited as market conditions and utility programs in Georgia evolve.

Former Tronox Facility
1 Kerr McGee Road
Savannah, Georgia

Site Facts:

Site type: RCRA

Renewable technology: Solar

Contacts:

EPA Region 4

Margaret Olson
olson.margaret@epa.gov
(404) 562-8601

EPA Headquarters

Adam Klinger
klinger.adam@epa.gov
(202) 566-0546
www.epa.gov/renewableenergyland

National Renewable Energy Lab

Gail Mosey
gail.mosey@nrel.gov
(303) 384-7356
www.nrel.gov

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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