

# RE-Powering America's Land

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

Columbus, Mississippi

### 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 Kerr McGee Chemical Facility is approximately 90 acres and adjacent to residential property and commercial businesses. Beginning in 1928, the site operated as a wood-preserving facility using creosote, creosote coal tar solutions, and pentachlorophenol resulting in ground water and soil contamination. Since operations ended in July 2003, all tanks, equipment and process buildings have been removed. A small office and maintenance building housing ground water treatment equipment are all that remain. The local community is following the cleanup process. The site was listed on the Superfund National Priorities List (NPL) in September 2010.

### Community Goals

Redevelopment of the site is envisioned as an integration of resident and business needs with the goal of creating a revitalized, sustainable site centered on a proposed solar facility. The clean energy center ultimately could power a community center, new small businesses, new health centers, parks and gardens, which would help promote a healthier and more sustainable community. Depending on overall system size, the goal is to further contribute to the community with the reinvestment of potential revenue to complete the cleanup process.

### Feasibility Study: Solar

EPA and NREL conducted a study on the potential for solar power generation on the former Kerr McGee Chemical 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 size, design and location; and
- Reviews the economics of the proposed system.

The former Kerr McGee site is suitable for deployment of a large-scale photovoltaic (PV) system. The site could host up to a 5 megawatt (MW) array, which would require between 28 and 34 acres. At the time of the study, there were not sufficient renewable energy incentives to make a system of this size cost-competitive with conventional fuel sources. Instead, the site could also host a smaller system (up to 1 MW), which would qualify for the Tennessee Valley Authority (TVA) Solar Solutions Initiative and would result in acceptable project returns. Additional analysis is merited for near-term development through the TVA initiative and future more expansive development could be possible, if electricity rates increase or new incentives become available.

### Former Kerr McGee Chemical Facility Columbus, Mississippi

#### Site Facts:

**Site type:** Superfund  
**Renewable technology:** Solar

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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](http://www.epa.gov/renewableenergyland) or contact [cleanenergy@epa.gov](mailto:cleanenergy@epa.gov)



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