

RE-Powering America's Land: Evaluating the Feasibility of Siting Renewable Energy Production on Potentially Contaminated Land

New Castle County, Delaware

Feasibility Studies to RE-Power Communities

The U.S. Environmental Protection Agency's RE-Powering America's Land initiative encourages renewable energy development on current and formerly contaminated land and mine sites when it is aligned with the community's vision for the site. EPA and the U.S. Department of Energy's 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 will provide site owners and communities with a realistic and achievable plan for putting renewable energy on a given site.

Site Description

The Standard Chlorine of Delaware/Metachem facility was built in 1965 on farmland north of Delaware City, Delaware. The facility was constructed to manufacture chlorinated benzene compounds such as paradichlorobenzene through heating and mixing. Following major hazardous chemical spills in 1981 and 1986, the site was added to EPA's Superfund National Priorities List in 1987. Chlorobenzenes from the spills have contaminated soil, subsurface soil, sediment, and groundwater at the site and on adjacent properties. Remedies at the site include a subsurface barrier wall and pump-and-treat system that removes groundwater contaminants, and a long-term remedial cap on the 23-acre former plant area slated for completion in 2013. The system consumes about 12,000 kilowatt-hours of electricity per month.

Community Goals

Following remediation, the site will be flat with little to no sloping, potentially making it ideal for the installation of a solar array. This project may build on the success of nearby properties where other renewable energy systems are currently operating. If the system is capable of producing more energy than what is required at the site, it could become Delaware's first large-scale renewable energy installation providing energy savings to the surrounding community through the state's new "net metering" policy.

Feasibility Study: Solar

EPA and NREL are collaborating to conduct a study on the potential for solar power generation on the Standard Chlorine of Delaware/Metachem site. The feasibility study will evaluate the technical and economic opportunities and challenges at the site. It will:

- Provide a preliminary analysis of the viability of the site;
- Assess solar resource availability;
- Identify possible system size, design and location; and
- Review the economics of the proposed system.

Standard Chlorine of Delaware/Metachem Site

745 Governor Lea Road
New Castle County, Delaware

Site Facts:

Site type: Superfund
Renewable technology: Solar

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The information presented in this fact sheet comes from the proposal; EPA cannot attest to the accuracy of this information. Therefore, activities described in this fact sheet are subject to change.

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

