

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

East Helena, Montana

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

From 1888 until 2001, the American Smelting and Refining Company (ASARCO) operated a lead and zinc smelter in East Helena, Montana. The ASARCO site was added to EPA's Superfund National Priorities List (NPL) in 1983 due to extensive soil and ground water contamination. The bankruptcy reorganization of ASARCO in 2009 placed the former smelter site into the hands of the Montana Environmental Trust Group (METG), which is responsible for remediating the 130-acre plant site and the ground water contamination that has migrated to the City of East Helena.

Community Goals

Given current site conditions, renewable energy development may be the only viable reuse for the former smelter site. The large size of the property, adjacent utilities, and its location near forest and farmland give the site potential for siting of a biorefinery or biopower facility on the former plant site in East Helena. After more than 100 years of smelting history, redevelopment with renewable energy could redefine the character of the community of East Helena, creating jobs and taxable value for future generations.

Feasibility Study: Biopower

EPA and NREL conducted a study on the potential for biopower on the ASARCO Superfund 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 resource availability;
- Identifies possible facility type, size and location; and
- Reviews the economics of the proposed facility

The ASARCO site could host a future 10 to 20 megawatt (MW) biopower plant based on available acreage for the plant and its operations, and potential residues from the primary mill and/or forestry residue sources in the surrounding area. At the time of the study, there were not sufficient renewable energy incentives to make a biopower system cost-competitive with conventional fuel sources. The project may be viable by obtaining lower feedstock prices, lowering capital costs, or receiving grants. Additional analysis is merited as electricity rates increase, new incentives become available, or biomass feedstock prices decrease.

ASARCO Superfund Site East Helena, Montana

Site Facts:

Site type: Superfund
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



Study Published in February 2013