

# RE-Powering America's Land

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

Salinas, California

### 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 160-acre Crazy Horse Sanitary Landfill (CHL) in northern Monterey County is approximately five miles northeast of the City of Salinas. From the early 1970s until about 1982, a local manufacturing plant disposed of large quantities of rubber materials, carbon black, other fillers, oils, and mixed solvents in an area of the site known as Module 1. A ground water extraction and treatment system was installed in 1988 to mitigate the effects of the contamination. In 1990, this area was listed on the National Priorities List (NPL) as a Superfund site. The CHL stopped accepting waste and was closed to the public in May 2009.

### Community Goals

As part of the final landfill closure plan, the Salinas Solid Waste Authority (SSWA) revised the final cover to enable the future use of photovoltaic (PV) technology to the landfill cover system. This development effort is in line with a shift in focus to clean energy and alternative fuel management. Based on the available solar resource and incentives, a preliminary assessment indicated that a solar array may be viable at the site. Since 1987, Pacific Energy has operated a 1.3 megawatt (MW) landfill gas plant for electricity generation on site, which was recently dismantled and will likely be replaced by a 3.2 megawatt (MW) plant.

### Feasibility Study: Solar

EPA and NREL conducted a study on the potential for solar power generation on the Crazy Horse Sanitary Landfill site. The feasibility study will evaluate 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 Crazy Horse Landfill is suitable for a large-scale PV system. Approximately 20 acres of the site are adequate for development of PV, which could host up to a 3.5 MW system. For multiple reasons—the high cost of energy, the dropping cost of PV, and the existence of a good solar resource and possible incentives—this report finds that a PV system is viable reuse opportunity for the site.

### Crazy Horse Sanitary Landfill Salinas, California

#### Site Facts:

**Site type:** State-Lead Superfund  
**Renewable technology:** Solar

#### Contacts:

##### EPA Region 9

Rachelle Thompson  
thompson.rachelle@epa.gov  
(415) 972-3962

##### EPA Headquarters

Adam Klingler  
klingler.adam@epa.gov  
(202) 566-0546  
[www.epa.gov/renewableenergyland](http://www.epa.gov/renewableenergyland)

##### National Renewable Energy Lab

Gail Mosey  
gail.mosey@nrel.gov  
(303) 384-7356  
[www.nrel.gov](http://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](http://www.epa.gov/renewableenergyland) or contact [cleanenergy@epa.gov](mailto:cleanenergy@epa.gov)



Study Published in March 2013