RE-Powering America's Land

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

Brisbane, 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 Brisbane Baylands site consists of approximately 684 acres in the western part of San Francisco Bay. The Baylands site is divided into two distinct areas: the west side was used for railroad freight operations from 1914 to 1960 and the east side was used as a municipal landfill for household waste. The majority of the former rail yard area is currently vacant with remnant buildings, while the former landfill site is used for soil and construction material recycling. The site is recognized by the State of California Department of Toxic Substances Control (DTSC) and the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) as a contaminated brownfield site.

Community Goals

The 684-acre area provides one of the largest and most underdeveloped spaces in the west San Francisco Bay Peninsula, and its expansive open space lends itself to renewable energy generation. The City of Brisbane and the land-owner/developer are planning to develop a new transit-oriented, mixed-use community on the site, including onsite renewable energy generation. The project is designed to be a model of socially, economically and ecologically sustainable redevelopment that aims to substantially reduce its carbon footprint. The city and the local electric utility also have developed preliminary land use plans that include approximate acreages and locations for solar photovoltaic (PV) and wind energy facilities.

Brisbane Baylands Site
Brisbane, California

Site Facts:

Site type: Brownfield
Renewable technology: Solar

Contacts:

EPA Region 9
Cara Peck
peck.cara@epa.gov
(202) 972-3382

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.

Feasibility Study: Solar

EPA and NREL conducted a study on the potential for solar power generation on the Brisbane Baylands 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 Brisbane Baylands is suitable for deployment of large-scale solar energy. Two options for solar system scale were explored based on proposals developed by the Universal Paragon Corporation (UPC) and the Committee for Renewable Energy on the Baylands (CREBL). The UPC option is comprised of a mixed use development with area allotted for rooftop PV and a ground-mount PV component, while the Renewable Energy Alternative has more area allotted for ground-mounted PV. Both of these options were considered viable based on the technical and economic assessment. Based on available acreage, the site could host a 23–28 MW PV system producing approximately 42.4–45 gigawatt-hours (GWh) annually.

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

Study Published in April 2013