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

Riverside, 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 Stringfellow Superfund Site operated as a disposal area for industrial wastes from 1956 to 1972. During this period, up to 20 unlined surface impoundments for liquid wastes were located in the 17-acre disposal area. Approximately 34 million gallons of liquid wastes containing spent acids, solvents, pesticide-manufacturing byproducts, heavy metals, and various organic and inorganic compounds were discharged into the surface impoundments during the operational period.

In 1983, the site was added to EPA's Superfund National Priorities List (NPL). The California Department of Toxic Substances Control (DTSC) is responsible for the monitoring and operation of remediation systems at the site. These systems include three groundwater extraction and treatment systems extending from the waste disposal site into the community of Glen Avon.

Community Goals

Installing a renewable energy system at the Stringfellow Superfund Site is a productive use of land that may not be attractive for other purposes and minimizes the impacts of developing sites elsewhere. Installing a photovoltaic (PV) system on the contaminated land at the site would reduce the amount of energy used to run the Stringfellow treatment plant.

Feasibility Study: Solar

EPA and NREL analyzed the construction and installation of a PV system. The PV system would be connected to the Southern California Edison (SCE) power grid and designed to offset most of the electrical load of the existing pretreatment plants. The completed study:

- Identifies possible PV system size and type;
- Reviews the economics of the proposed system; and
- Highlights financing options.

The site locations considered for a solar PV system are excellent areas for solar PV system development. Installing a PV system on the site would reduce the amount of energy used to run the Stringfellow treatment plant. For multiple reasons—the high cost of energy, the dropping cost of PV, the existence of an excellent solar resource and excellent Southern California Edison incentives—a government-owned PV system provides a reasonable payback, is easy to implement, and is therefore recommended. If funding is not available, a third-party ownership power purchaser agreement (PPA) is the most feasible way for a system to be financed on this site.

Stringfellow Superfund Site
Riverside, California

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.*