RE-Powering America's Land

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

Deming, New Mexico

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 1,420-acre Peru Mill Industrial Park site, located approximately four miles northwest of Deming, New Mexico, once housed a mill that processed zinc sulfide ore. The mill was built in 1928 and operated until 1967. The ore processed at the site was crushed, ground, mixed with water, and pumped to flotation cells. Various chemicals were then added to separate the minerals from the mixture. The remaining ore and slurry were pumped to a tailing impoundment resulting in a tailings pile located on the site. At some point, the containment for the liquid tailings failed, which caused a spill that eliminated the vegetation cap on top of the tailings pile and spread tailings over a large area east of the original pile and beyond site boundaries. When the remediation of the site was completed, the City of Deming annexed the property into the city limits and zoned it for industrial use.

Community Goals

Given the abundant solar resource in southwest New Mexico, the proposed industrial park includes solar electricity production. The city hopes to use this renewable energy to offset energy needs for future warehousing, manufacturing or logistics facilities. Reuse of this land will leverage existing rail and highway infrastructure that once served the mining operations, repurposing these assets for future growth.

Peru Mill Industrial Park
Luna County
Deming, New Mexico

Site Facts:

Site type: Brownfield
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.

Feasibility Study: Solar

EPA and NREL conducted a study on the potential for solar power generation on the Peru Mill Industrial Park 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 solar resource availability;
- Identifies possible system size, design and location; and
- Reviews the economics of the proposed system.

The Peru Mill Industrial Park site is suitable for a large-scale photovoltaic (PV) system of up to 36.4 megawatts (MW) based on available acreage. The property is located in an area with the highest rating of solar resource in New Mexico, is nearly flat, has access to rail, roads and solar resource, is zoned for industrial use, and has electrical infrastructure onsite.

Three scenarios were evaluated at the Peru Mill Industrial Park. The key to the solar project development would be finding a potential buyer of the generated electricity through a power purchase agreement (PPA). Analysis performed in support of the feasibility study estimates that a 36.4 MW system would support 1,107 direct and indirect jobs per year for the duration of the procurement and construction period, as well as 13.5 full-time operation and maintenance jobs per year for the life of the system.

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

EPA

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