

RE-Powering News

A Quarterly News Digest from EPA's RE-Powering America's Land Initiative



SPOTLIGHT

EPA Screens more than 66,000 Contaminated Sites for Renewable Energy Potential with Updated RE-Powering Mapping and Screening Tools. See below for details.

In August 2013, the U.S. Environmental Protection Agency (EPA) updated its [RE-Powering Mapper and Screening Tool](#). The RE-Powering Mapper now provides preliminary screening results for renewable energy potential at over 66,000 contaminated lands, landfills and mine sites across the country – nearly triple the 24,000 sites the program had screened previously.

The RE-Powering Initiative team expanded the universe of sites by pulling information from EPA databases of potentially and formerly contaminated lands, as well as partnering with state agencies from California, Hawaii, Oregon, Pennsylvania, New Jersey, New York, West Virginia, and Virginia. Gathered information was then filtered through screening criteria developed in collaboration with the U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL). RE-Powering used the criteria to evaluate solar, wind, biomass, and geothermal potential at various levels of development at sites tracked by EPA and selected state agencies.

Our Mission

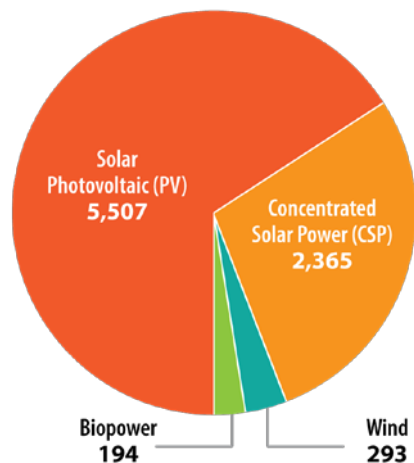
EPA launched *RE-Powering America's Land: Siting Renewable Energy on Potentially Contaminated Land, Landfills and Mine Sites* to encourage the siting of renewable energy on thousands of currently and formerly contaminated properties across the nation.



An Example of a Solar Photovoltaic Facility on a Former Landfill in Fort Carson, Colorado

The updated screening provides insight into the significant potential for renewable energy generation on contaminated lands, landfills and mine sites nationwide. For solar energy alone, EPA identified over 10,000 contaminated sites with the potential to install a 300-kilowatt solar array or greater. Based on mapped acreage, these sites could cumulatively host solar energy systems capable of producing greater than 30 times more solar energy than all renewable energy systems operating in the United States today. Although additional site-specific technical and economic analyses would be necessary to determine the feasibility of siting a renewable energy project at any particular property, the high number of sites and acres that screened positively for one or more renewable energy technologies highlights the significant potential for siting renewable energy projects on contaminated lands as a means of putting these properties back into productive uses for surrounding communities. The graph and chart below summarize the estimated potential available based upon RE-Powering’s preliminary screening results.

Estimated Capacity Potential in Gigawatts (GW)



Technology	Number of sites	Est. Capacity Potential (GW)
Solar PV	13,232	5,507
CSP	438	2,365
Wind	8,612	293
Biopower	9,966	194

Summary of Potential Capacities and Sites Included in the RE-Powering Mapper Update

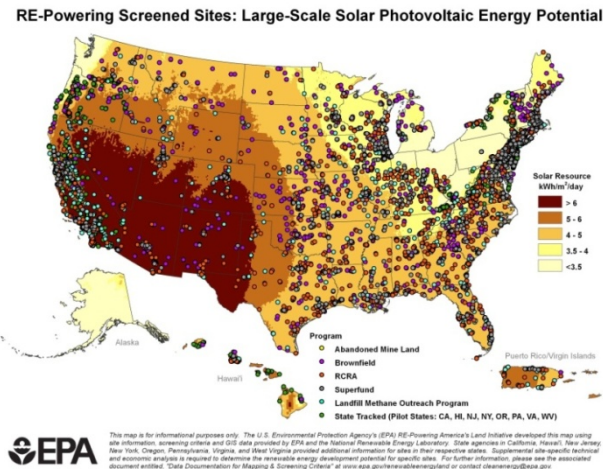
CASE STUDY

The City of Sanford, Maine, and the Sanford nonprofit Waban Projects, Inc. have partnered to explore solar on a closed landfill as a means to potentially reduce energy costs – an idea city officials garnered while attending EPA’s [2013 Brownfields Conference](#) in Atlanta, Georgia. If the project is successful, the former Rushton Street landfill will house a [five-megawatt solar array](#) to power the city’s municipal buildings, schools and streetlights, as well as Waban’s properties. The site would be the largest solar farm in Maine and the first developed through a municipal-nonprofit partnership.

[Initial results](#) of a feasibility study by groSolar indicate the landfill is adequate for solar development, and detailed results are expected soon. Annual energy cost savings from the installation are estimated to be approximately \$100,000 for Waban and as much as \$400,000 for Sanford.

Several key products were generated and/or updated from this effort:

- [RE-Powering Mapper \(KMZ\)](#) – Contains regional Google Earth files for each EPA Region identifying all potential capacity, and national Google Earth files highlighting renewable energy potential at the utility-scale, at large-scale and for solar on landfills.
- [National Maps \(PDF\)](#) – Shows sites with renewable energy potential based on type of technology and scale.
- [RE-Powering Screening Dataset \(XLSX\)](#) – Provides detailed information for over 66,000 sites screened for renewable energy potential that can be sorted and filtered.
- [Data Documentation for Mapping & Screening \(PDF\)](#) – Outlines the renewable energy mapping methodology, data considerations, data sources, and attributes.
- [Primer for Using RE-Powering Data to Screen Sites for Renewable Energy Potential \(PDF\)](#) – Shows how to use filtering and reporting features to target sites with specific characteristics and develop custom reports.
- [RE-Powering Mapper GIS Shapefile](#) – Offers information that can also be downloaded as a shapefile, providing spatial locations and data used to determine renewable energy potential and associated criteria for each site.



One of the Maps Created During the RE-Powering Mapper Update

New EPA-NREL RE-Powering Feasibility Studies

EPA and NREL are evaluating 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 following feasibility studies were published recently on NREL's website. Links are also available on the [RE-Powering America's Land website](#). This list includes feasibility studies that were funded by both EPA headquarters and EPA Region 5.

- **Wind** – Lincoln, Nebraska: [West Haymarket Renewable Energy Project](#)
- **Solar PV** – Cleveland, Ohio: [Kolthoff Landfill](#)

In addition to completing these feasibility studies, EPA recently updated 28 of its fact sheets describing the sites selected for feasibility studies. These updated fact sheets now include brief summaries of the results and recommendations from the completed feasibility studies.

In the News

Crazy Horse Celebrates Closure and Starts Plans for Solar

The historic Crazy Horse Landfill near Salinas, California recently celebrated its final closure. The landfill was designated as a Superfund site in 1990. Crazy Horse is now capped with a ClosureTurf™ system, which uses an impermeable plastic bottom layer covered with synthetic turf. The site is owned by Salinas Valley Solid Waste Authority and plans are underway to repurpose the 65-acre former landfill with a solar farm. The site was deemed suitable for solar in a [feasibility study](#) completed by EPA and NREL. [More info](#)



*Crazy Horse Landfill Deemed Suitable for Solar
Photo credit: Blaise Stoltenberg, NREL*

Construction Underway on Largest Federally-Owned Wind Farm

In support of President Obama's goal for the federal government to obtain 20 percent of its electricity from renewable sources by 2020, DOE broke ground in August on the nation's largest federally-owned wind power project at its Pantex Plant, which is also undergoing cleanup activities under [Superfund](#) authority. Located in Amarillo, Texas, the wind farm will comprise five 2.3-megawatt Siemens wind turbines and is expected to meet more than 60 percent of the plant's annual energy needs. Siemens is constructing the project under an [Energy Savings Performance Contract](#) that uses the project's estimated \$2 million in annual energy savings to cover upfront project costs. The wind farm is expected to be operational in summer 2014. [More info](#)

Public Service Electric & Gas Scouting Former Landfills for Solar Farms in New Jersey

Using 45 screening criteria to find the most suitable location for solar grid-supply projects, PSE&G and its consultant identified 22 former brownfields and landfills in New Jersey as possible candidates for solar installations. PSE&G envisions building 42 megawatts of new solar capacity on these former landfills as part of its Solar 4 All program. [More Info](#)

Recent Webinars

[Renewable Energy Projects on Federal Lands: A Practical Guide and Examples](#) (delivered August 8, 2013). This CLU-IN Internet Seminar was sponsored by EPA's RE-Powering America's Land Initiative. A complete archive of this seminar along with hundreds of other archived Internet seminars is now available for free download and replay [here](#).

[Community Shared Solar and Urban Neighborhoods](#) (delivered September 4, 2013). During this 90-minute webinar, solar experts explored emerging approaches to Community Shared Solar. The panelists discussed approaches that maximize the benefits for participants and for the community at large, in part through utility innovation. Visit the [Security & Sustainability Forum](#) to access the archived webinar.

Upcoming Conferences

Solar Power International. Chicago, Illinois; October 21-24, 2013. Solar Power International (SPI) is powered by the Solar Energy Industries Association (SEIA) and Solar Electric Power Association (SEPA). Since 2003, SPI has convened this show that serves and advances the solar energy industry by bringing together the people, products and professional development opportunities that drive the solar industry and forge its bright future. [More Info](#)

American Wind Energy Association (AWEA) Wind Energy Fall Symposium. Colorado Springs, Colorado; November 6-8, 2013. Join executives from across the industry for a stimulating and thought-provoking discussion on analyzing market challenges, examining potential solutions, and steering the wind industry toward a new growth phase. [More Info](#)

Recent Activities

New Resource: EPA and six other federal agencies have produced a guide to help community and tribal leaders find federal funding for energy efficiency and clean energy projects. [*Federal Finance Facilities Available for Energy Efficiency Upgrades and Clean Energy Deployment: A Guide for State, Local & Tribal Leaders and their Partners*](#) is designed to serve as a “Yellow Pages” for federal financing. The guide is organized by market segment and includes contacts for each funding facility listed. Markets covered include single and multi-family housing, commercial buildings, infrastructure, public buildings, and manufacturing.

New Resource: In August, Ernst & Young released [*United States Renewable Energy Attractiveness Indices*](#). The indices provide scores for state renewable energy markets and renewable energy infrastructure, and their suitability for renewable technologies.

Links of Interest

- **Federal Solicitation.** Federal Energy Management Program (FEMP). FEMP [Notice of Intent](#) for Funding Opportunity Announcement, [Assisting Federal Facilities with Energy Conservation Technologies](#) (AFFECT). Funding will help support federal agencies increase energy efficiency and renewable energy at agency facilities.
- **State Solicitation.** New York: The New York State Energy Research and Development Authority (NYSERDA) [requests applications from qualified Solar Thermal \(ST\) installers](#) for eligibility in a financial incentive program for approved ST systems installed for eligible New York State customers. NYSERDA and the New York Power Authority [seek proposals to identify and address](#) solar photovoltaic balance-of-systems (BOS) issues and drive BOS cost reductions.
- **Funding Opportunity.** Georgia: [Georgia Environmental Finance Authority](#) (GEFA). GEFA offers low-interest loans to local governments and authorities for energy efficiency and renewable energy projects at water and wastewater treatment plants, landfills, and municipal solid waste facilities, in addition to infrastructure improvements.

Contact Us

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