

# RE-Powering News



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



## SPOTLIGHT

### RE-Powering Updates and Expands Screening Tools and Resources

#### Updated RE-Powering Tools and Resources

Building and expanding on existing tools and resources, EPA's RE-Powering Initiative released two updated products recently: the [RE-Powering Mapper](#) Suite and the [Electronic Decision Tree](#). Both of these tools are designed to assist stakeholders in identifying potential sites and evaluating them for renewable energy.

#### RE-Powering Mapper

EPA's RE-Powering Initiative expanded its screening of sites in the [RE-Powering Mapper](#) to include more than 80,000 EPA- and state-tracked sites, comprising more than 43 million acres. Using screening criteria developed in collaboration with the U.S. Department of Energy's National Renewable Energy Laboratory, each site was screened for developing solar, wind, biomass, and geothermal facilities at various scales. As part of this effort, EPA collaborated with state agencies from California, Hawaii, Illinois, Massachusetts, New York, New Jersey, Oregon, Pennsylvania, Texas, Virginia, and West Virginia to screen more than 47,000 state-tracked sites.

#### Our Mission

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

#### Get Updates from RE-Powering

Click to subscribe to EPA's RE-Powering Listserv

- [Upcoming Conferences](#)
- [New Resources](#)

EPA launched [@EPALand](#) on Twitter to help you learn about what is being done to protect and clean up our land. Stay up to date on topics including [site cleanups](#), learn about [renewable energy technologies](#) on contaminated sites, [sustainable materials management](#), and understand how EPA responds to [hazardous material emergencies](#). Follow [@EPALand](#) and join the conversation:

<https://twitter.com/@EPALand>



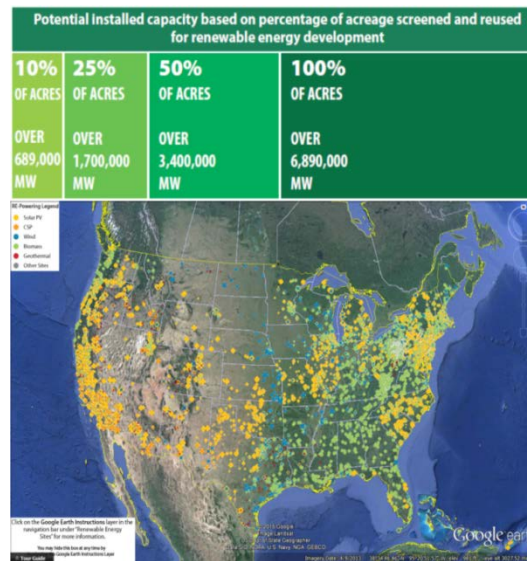
This tool enables the user to perform a preliminary screen of contaminated sites for renewable energy potential nationwide. In addition to the Mapper itself, RE-Powering has developed a suite of related tools and resources that may be useful in conducting initial screening analyses. These include:

- RE-Powering Screening Dataset
- National Renewable Energy Maps
- Technology-Specific Fact Sheets

### Electronic Decision Tree

The RE-Powering Initiative expanded the concept of the existing paper versions of solar and wind decision trees into a downloadable computer tool that guides interested parties through a process for screening site suitability for solar photovoltaic (PV) or wind installations. The [Electronic Decision Tree](#):

- Explores potentially contaminated sites (e.g., brownfields, RCRA-permitted, Superfund), landfills, and underutilized sites and rooftops;
- Walks users through a series of Yes / No / Skip questions supplemented by tips and links to relevant tools and information resources;
- Screens for site characteristics, redevelopment considerations, criteria specific to landfills and contaminated sites, energy load, and policies and financial considerations; and
- Generates reports that includes the screening results and user annotations that can be printed and/or copied into another document.



*Google Earth depiction of utility-scale sites screened as part of the RE-Powering Mapper project.*



*User screen of EPA's Electronic Decision Tree.*

### RE on CL Provides Benefits to Communities

As more renewable energy systems on contaminated lands continue to be installed, more and more communities are realizing the economic and other benefits associated with such projects. In addition to returning contaminated and potentially defunct land to a viable use, these projects can help create cost savings and new jobs. Examples of these co-benefits include:

- The [Bethlehem Steel Winds project](#) provides approximately \$190,000 in annual tax revenues for local communities and school districts, as well as creating 140 construction and five permanent jobs.
- The city of [Westfield, MA](#) receives lease payments, payments in lieu of taxes, and operational savings from its landfill solar installation. In addition, the power is purchased by the Municipal Light Board, which provides electricity to municipal facilities at a reduced rate.
- The [landfill on solar project](#) in Greenfield, MA, saved the city ~\$250,000 in first year of operation.

The Electronic Decision Tree includes context-specific information regarding the various considerations for screening contaminated sites for renewable energy. The goal is to engage users in renewable energy and to screen potentially contaminated or underutilized sites or landfills to see whether those sites are good candidates for solar PV or wind projects. The tool is constructed to accommodate a range of users: more knowledgeable professionals can quickly navigate the decision tree, while less experienced stakeholders can access additional information as they make their way through the questions.

### **Congress Passes Multi-Year Extensions for Solar and Wind Tax Credits**

In December 2015, the U.S. Congress passed and President Obama signed a spending [bill](#) that [includes extensions on tax credits](#) for a range of renewable energy technologies. These credits—which could be available for renewable energy projects on contaminated lands, landfills, and mine sites—have been viewed as important mechanisms that support renewable energy investments with a dollar-for-dollar reduction in federal income taxes. According to the [Solar Energy Industries Association](#) (SEIA), the investment tax credit (ITC) has contributed to annual solar growth of more than 1,600% since 2006. A number of renewable energy installations on contaminated properties have or are hoping to make use of the solar ITC, including Brattleboro Landfill solar (VT), Boxford Landfill solar (MA), and Barstow Landfill solar (CA). The existing 30% solar ITC is now active through December 31, 2019, after which the credit will be stepped down to 26% and 22% in 2020 and 2021, respectively. The 2.3-cent Production Tax Credit (PTC) for wind energy was also extended through 2016, after which the credits will “step-down” by about 20% per year through 2020. Geothermal, landfill gas, marine energy, and incremental hydropower also received a one-year PTC extension

### **Success Story- Geothermal is Heating Things up at Tech Town**

RE-Powering recently released a new success story for [Tech Town](#), a mixed use area of downtown Dayton, Ohio. Located on the formerly contaminated GM Harrison Radiator complex, the Creative Technology Accelerator, one of three buildings located in Tech Town, is a sustainable facility that includes a geothermal heating and cooling system. The building is certified Gold in the U.S. Green Building Council’s Leadership in Energy & Environmental Design (LEED) program because of its ecologically-friendly "green" features. These include the geothermal heating, ample natural lighting, energy-efficient fixtures, and a rooftop garden.

*“In Dayton, urban revitalization means building our technology-based future from our industrial history. Tech Town is a contemporary example of environmental responsibility and revitalization.”*

*—Nan Whaley, Mayor of Dayton*

The GM plant produced automotive air conditioning compressors and related components, electric refrigerators, household appliances, as well as machine guns during World War II. It was remediated under the Ohio EPA Voluntary Action Program. The Tech Town master plan was developed with a range of local partners and stakeholders, including the City of Dayton, Montgomery County, the Montgomery County Port Authority, the Chamber of Commerce, the University of Dayton, the Miami (OH) Conservancy District, and a number of local business and community stakeholders.



*Tech Town Campus  
Photo courtesy of City Wide*

Annual savings are expected to be more than \$66,000 and 300,000 kilowatt-hours/year related to sustainable building and geothermal system.

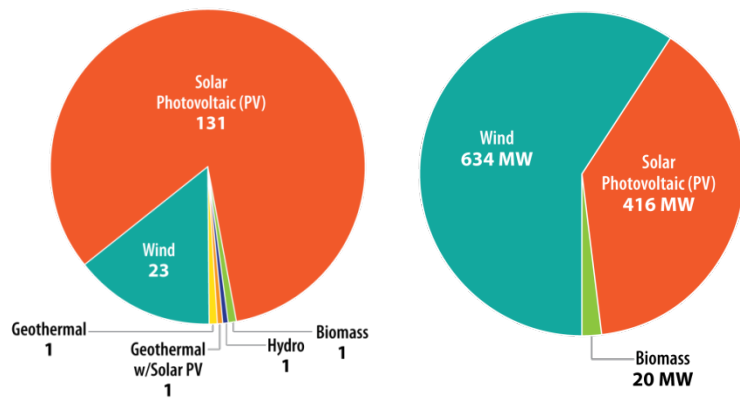
### ***Key Takeaways from Tech Town Project Participants***

- *Create a 'master plan' that involves stakeholders early in the process. Work with stakeholders to create guidelines and principles that support the concepts envisioned for development of the site.*
- *Include brownfield redevelopment as a key component of the local economic development plan and the overall strategic plan to bolster projects on contaminated sites. Tech Town's success is at least in part due to redevelopment being a priority for the city, county, and region.*
- *Consider developing sites concurrent with remediation. Tech Town provided plans to Ohio EPA ahead of time and worked with them to ensure that development would not affect remediation, and that development of a geothermal well would not violate the restrictions placed on the site. This communication allowed the project and remediation to proceed together and on schedule.*

## In the Numbers: RE on CL Development

The RE-Powering Initiative has identified 158 renewable energy installations on 150 contaminated lands, landfills, and mine sites, with a cumulative installed capacity of almost 1,070 megawatts (MW). Over two-thirds of these identified renewable energy systems sell power back to the grid as wholesale electricity. Systems range from utility-scale systems, like the 3.5-MW solar installation at the North Adams Landfill in Massachusetts, to small-scale projects like the 230-kilowatt McKees Solar Park, a community solar garden on a landfill in Newark, Delaware.

**Total Projects by Technology**    **Total Capacity by Technology**



For more information regarding the current trends, practices, and benefits of siting RE on CL, see [RE-Powering's Tracking Matrix](#).

## Growing RE on CL - The Nutmeg State Increasingly Powered by RE on CL

Perhaps taking a cue from its neighbor to the north, the Nutmeg State is showing increased interest in renewable energy installations on contaminated properties. Although not yet close to the 52 completed RE on CL installations in Massachusetts, Connecticut is seeing more activity and interest toward these types of projects. Although the state has only one completed installation—a 1-megawatt (MW) solar project on the [Hartford Landfill](#), many other projects are being planned or already under construction; these include a solar landfill project in North Haven that is slated for [completion this spring](#), as well as others being considered in [Clinton, Fairfield, Meriden, and Ansonia](#). The city of Bridgeport's [Green Energy Park](#), which includes 9,000 solar panels, is also under construction atop a former landfill site. Several other Connecticut towns are in varying stages of implementing solar on landfills, including [Branford](#), [Derby](#), [Norwich](#), and [Hamden](#).

## NJ Engineers Select Kinsley Landfill as RE Project of the Year

The Kinsley Landfill solar installation in Deptford Township, NJ, was recognized as the [2014 Renewable Energy Project of the Year](#) by the New Jersey Association of Energy Engineers (NJAAE). The 11.18-MW project is part of PSE&G's Solar 4All® program, which aims to build 125 MW of solar across the utility's service territory—including 22 MW to be potentially built on landfills and brownfields . The Kinsley Landfill was considered to an optimal location for solar due to its size, relative flatness, and proximity to interconnection. The installation [went live](#) in December 2014.

## Test Your Wind Knowledge

The U.S. Department of Energy (DOE) has a fun quiz that tests your knowledge on wind energy. Think you know a lot about wind energy? Find out by testing your [Wind Energy IQ](#).

Want to learn even more about wind energy? Visit these DOE "Top 10" pages:

[Top 10 Things You Didn't Know About Wind Power](#)

[Top 10 Things You Didn't Know About Distributed Wind Power](#)



## Save the Date!

### [2016 National Association of State Energy Policy Outlook Conference](#)

**February 9–11, 2016 | Washington, DC**

This event is a national forum to connect with and learn from state energy officials working on innovative energy policies and programs, and to engage with federal officials on priority energy issues. The program will feature experts and strategists from government, business and advocacy groups focused on sharing new ideas and partnership models that promote energy affordability, infrastructure resilience, clean energy technologies, and economic opportunity.

### [Distributed Wind 2016 Business Conference and Lobby Day](#)

**February 23–25, 2016 | Washington, DC**

Sponsored by the Distributed Wind Energy Association, this conference features education sessions on the following topics: the state of the distributed wind industry, federal agency opportunities and updates, exploring business opportunities, emerging distributed wind markets, and installing distributed wind systems.

### [PV Conference & Expo – Boston](#)

**February 24–25, 2016 | Boston, MA**

Solar Power PV Conference & Expo (formerly PV America) focuses on PV solar solutions. This conference convenes manufacturers and service providers with professionals interested in the technologies, innovations, research, and policy driving the PV industry today and into the future.

### [ARPA-E Energy Innovation Summit](#)

**February 29–March 2, 2016 | Washington, DC**

This annual conference and technology summit brings together experts from different technical disciplines and professional communities to advance cutting-edge technologies that could fundamentally change the way we generate, use, and store energy.

## New Resources

[Renewable Energy in the Clean Power Plan](#). The EPA recognizes the role renewable energy is already playing in reducing emissions in the power sector and encourages renewable energy development to meet the Clean Power Plan goals. As such, EPA anticipates that renewable energy will be a significant strategy for states and existing sources. The Clean Power Plan offers an array of flexible approaches through which renewable energy can be fully deployed to meet requirements in a state's plan.

[Technical Assistance for States – Call for Letters of Interest](#). The National Renewable Energy Lab's Solar Technical Assistance Team (STAT) Network is offering help to states to address critical questions related to solar PV development. To be considered for technical assistance, a state must submit a signed letter of interest from a high-level official who is part of the legislative or executive branch. Letters of interest are due no later than 5 pm ET on February 22, 2016.

[State and Local Solution Center \(DOE\)](#). The State and Local Solution Center provides resources to advance successful, high-impact clean energy policies, programs, and projects. By championing state and local leadership, addressing specific market barriers, and promoting standardized approaches, the Solution Center aims to help states, local governments, and K-12 schools take clean energy to scale in their communities.

[Photovoltaic \(PV\) Pricing Trends: Historical, Recent, and Near-Term Projections](#). A new report from the National Renewable Energy Laboratory and the Lawrence Berkeley National Laboratory is now available online. "Photovoltaic (PV) Pricing Trends: Historical, Recent, and Near-Term Projections" concludes that distributed solar PV system prices dropped 9–21% nationwide from 2013–2014. Prices in 2015 are expected to fall another 7–19%, depending on system location and market segment, and industry analysts expect this trend to continue over the next couple of years.

[Wind Energy Permit Toolkits](#). The Northwest Wind Resource and Action Center Wind Permit Toolkits address the challenges of permitting processes across jurisdictions, cumbersome interconnection procedures, and inconsistent zoning ordinances. These state-specific Toolkits were created for Washington, Oregon, Idaho, Montana, and Wyoming, and are based on industry best practices and incorporate input from regional stakeholders.



**[A Systematic Approach to Better Understanding Integration Costs.](#)** As part of its stakeholder outreach effort, DOE's WINDEXchange published a [Wind Integration slideshow](#) that provides information about integrating wind energy into the electricity grid. DOE's National Renewable Energy Laboratory also published, "[A Systematic Approach to Better Understanding Integration Costs,](#)" which reports on how new generation and the generation mix affect grid system costs, and how variable generation affects natural gas orders.

**[Climate Change and the U.S. Energy Sector: Regional Vulnerabilities and Resilience Solutions.](#)** As part of the Obama Administration's efforts to support national climate change adaptation planning and to advance DOE's goal of promoting energy security, the DOE published a new report: "Climate Change and the U.S. Energy Sector: Regional Vulnerabilities and Resilience Solutions." The report examines current and potential future impacts of climate change trends on the U.S. energy sector

**[Biogas Opportunities Roadmap Progress Report.](#)** This report is an update of the federal government's progress to reduce methane emissions through biogas systems since the Biogas Opportunities Roadmap was published by the three agencies in July 2014. It highlights actions taken, outlines challenges and opportunities, and identifies next steps to the growth of a robust biogas industry, and includes information on how biogas fits into the DOE Bioenergy Technologies Office's portfolio.

## Contact Us

For more information, contact Marc Thomas via email at [thomas.marc@epa.gov](mailto:thomas.marc@epa.gov) or visit <http://www.epa.gov/re-powering>.

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