

RE-Powering News

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



Evaluation Scoping Assessment

In October 2014, the RE-Powering America's Land Initiative released the final version of its Action Plan 2.0, which articulates the goals and objectives of the Initiative and the activities it expects to pursue over the next two years. In that plan, the Initiative noted its intentions to embark on a staged evaluation of its activities, stating that such an evaluation would articulate outcomes, examine the mechanisms used by the Initiative, and explore metrics to measure effort and impact.

As a first step towards achieving that end, the Initiative conducted an evaluation scoping assessment for the Re-Powering Program, which has now been completed. This assessment articulates a new logic model for the Initiative, poses questions of interest and explores methods and data that would be used to answer such questions. The assessment will be posted on the [RE-Powering America's Land website](#) in the near future.

The Initiative is now considering the results of this assessment and exploring the practicality of which aspects of the Initiative to continue to evaluate. A combination of qualitative and quantitative data sources and methods may be used to continue assessing one or more of the potential evaluative questions.

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.

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Economic Benefits of RE on CL

The use of contaminated lands, landfills, and mining sites for renewable energy projects offers a range of benefits, including the ability to leverage existing infrastructure, put otherwise unusable land to productive use, and build a sustainable land development strategy for local communities. Developing renewable energy on contaminated lands can also offer economic benefits, such as reduced land costs and energy savings. Here are just some of the specific economic benefits that select RE on CL projects are realizing:

Apache Powder: Despite the small 0.0014 MW capacity of this combined solar and wind installation, its economic benefit is still significant. Combined, the solar and wind systems used to power groundwater clean-up at this former chemicals manufacturing site [reduce the 30-year clean-up cost from \\$25 million to approximately \\$2.5 million](#). The overall cost of the solar system and windmill pump was three times less expensive than the cost to run power lines and pay for electricity at remote areas of the site.



Bethlehem Steel Winds facility in Lackawanna, NY.

Bethlehem Steel Winds: This 35-MW wind installation on a former steel production site in Lackawanna, NY, and cleaned up pursuant to RCRA Corrective Action [provides ~\\$190,000 in annual tax revenues for local communities and school districts](#). The installation created 140 construction jobs and five permanent jobs in an area with high unemployment.

Casselman Wind: A [35-MW wind installation](#) on a former coal mining site in Somerset County, PA, Casselman Wind [is expected to generate ~\\$245,000 in direct economic benefits to the region](#) annually through a combination of taxes, easement payments, and direct landowner payments.

Greenfield Solar Farm: Construction of this 2-MW solar system on a former landfill was completed [at no cost to the town of Greenfield](#) and included the creation of about 50 local construction jobs. Completed in 2012, the system was expected to save the town \$250k in first year of operation.

New FEMP Funding Opportunity

The U.S. Department of Energy's (DOE's) Federal Energy Management Program (FEMP) issued a Funding Opportunity Announcement (FOA) titled, ["Assisting Federal Facilities with Energy Conservation Technologies \(AFFECT\), FY 2015."](#) The AFFECT FOA will provide grants to federal agencies to assist in funding renewable energy projects that are incorporated into a privately financed performance contract, such as an energy savings performance contract or utility energy service contract, or as part of a renewable energy power purchase agreement. Applications for renewable energy projects that are financed through appropriations will also be considered. Letters of Intent are due by April 6, 2015, and full applications are due by May 20, 2015. To apply to AFFECT, applicants must register with and submit application materials through the [EERE Exchange](#). Send direct questions regarding this FOA to FOA.AFFECT2@ee.doe.gov.

Ravenbrook Farms Landfill Solar: This 6-MW solar installation on a former landfill site in North Carver, MA, is allowing the town to [recoup a \\$246,925 tax delinquency on the property](#). North Carver will also collect \$2.2 million in payment in lieu of taxes (PILOT) on the system over the next 25 years. Through a net metering agreement, the solar installation will [save Cape Cod Healthcare \\$200,000 to \\$250,000](#) in annual energy costs over the next 20 years. Development of the project contributed upgrades to the local utility distribution system.

Shaffer Landfill/Iron Horse Park Solar:

This 6-MW solar installation on a former landfill/Superfund site in Billerica, MA, includes a PILOT agreement, which ensures [a monetary benefit to town of \\$2.9 million over 25 years](#). The payments are front-loaded at \$221,000 annually for the first six years, and the developer is paying a \$400,000 property tax backlogged by former owners.



Shaffer Landfill in Billerica, MA.

Photo courtesy of Massachusetts Dept. of Environmental Protection

Focus On – Financing

Finding and securing financing for renewable energy projects can be a concern for communities and developers. Here are two examples of unique subscription financing models being employed to facilitate RE on CL installations:

- **Community Solar.** [New Hampshire Landfill Solar Garden](#)– This 900-kilowatt (kW) solar installation is currently under construction on a landfill in Milton, NH. The system was sold to community businesses who are customers of Public Service of New Hampshire (the local utility) using a subscription model. In return for purchasing this clean, renewable power, businesses will save one cent per kWh of generated power, which they will receive via rebates in bi-annual checks. As of December 23, 2014, the garden was "at capacity" with subscribers.
- **Community Contributions/Community Solar.** [McKees Solar Park](#) in Newark, NJ – This 900-panel, 230-kW solar park is funded in part by community contributions, with more than 20 Newark residents donating a total of \$4,000 towards the project. An additional 77 people made a \$50 "micro-investment" and, in exchange, will receive a \$1 rebate each month on their electric bill for the next 10 years. The city's goal is 200 micro-investors. The project will eventually pay for itself through three mechanisms: the avoided cost of buying wholesale power, the state's Green Energy Program, and the sale of renewable energy credits to the Delaware Municipal Electric Corporation.

RE on CL – Mine Lands

Existing and former mine lands pose unique contamination and clean-up issues, with potential environmental effects such as heavy metals and acid drainage affecting soil and groundwater. RE-Powering and EPA's [Abandoned Mine Lands program](#) encourage developers and property owners to consider installing renewable energy systems at these sites, as such development may be a productive use of land with limited alternative uses, while also offsetting fossil energy use.

RE-Powering has catalogued a number of both active and defunct mine sites being used for renewable power generation. For example, **Bagdad Mine** in Yavapai County, AZ, features [a 15-MW solar installation](#) comprising more than 71,000 single-axis tracking photovoltaic modules. The site is owned by Freeport-McMoRan and is an operational open-pit copper and molybdenum mine. Power generated from the solar installation is sold to Arizona Public Service under a 25-year power purchase agreement and effectively offsets about 5 percent of the mine's operational needs. Other examples of renewable energy installations on mine sites include the **Dave Johnston Mine** in Converse County, WY, which features a [276-MW wind installation](#) that helped PacificCorp garner a 2012 award from the U.S. Department of the Interior for [Excellence in Surface Coal Mining Reclamation](#); **Tinton Falls Solar**, a [20-MW solar](#) installation located on the former Scarano Sand and Gravel pit in Tinton Falls, NJ; and the **Chevron Molycorp Questa Project**, [1 MW of concentrating PV solar](#) on a Superfund mining site in Questa, NM.

Upcoming Events

[Electric Power 2015](#). April 21 - 23, 2015, Chicago, Illinois. Join power generators at the 17th annual Electric Power Conference and Exhibition. Learn about and explore new technology solutions and how to generate new opportunities and ideas to generate cleaner energy.

[AWEA WINDPOWER 2015 Conference and Exhibition](#). May 18 -21, 2015, Orlando, Florida. Join the American Wind Energy Association to see what's happening across the wind industry. The 2015 event will focus on what you can do to meet the challenges of today while preparing for tomorrow's future of wind energy.

[Brownfields Training Conference](#). September 2-4, 2015, Chicago, Illinois. This is the premier conference and trade show focused on environmental revitalization and economic redevelopment. The 2015 Brownfields Conference includes three days of training, networking, and business development.



Upcoming and Recent Webinars

[REAP Round-Up: Project Finance \(Guaranteed Loans\)](#). April 2, 2015. 2:00 PM ET. The U.S. Department of Agriculture (USDA) has planned training webinars and provided a number of tools for applicants to access the Rural Energy for America Program (REAP), which provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses to purchase or install renewable energy systems or make energy efficiency improvements. These learning opportunities are particularly helpful given the recent overhaul of REAP.

[Spring "Cleaning" - Innovative Energy Solutions on Institutional Property](#). March 19, 2015. DOE's National Renewable Energy Laboratory (NREL) will introduce its unique research-based capabilities across a spectrum of renewable energy and energy efficiency focus areas. NREL's analysis informs various stakeholders on technological, environmental, policy, and economic decisions as energy-efficient and renewable energy technologies advance from concept to commercial application to market penetration. With objective, technology-neutral analysis, NREL aims to increase the understanding of energy policies, markets, resources, technologies, and infrastructure and connections between these and economic, environmental, and security priorities.

New Resources

[Eastern Interconnection States Planning Council \(EISPC\) EZ Mapping Tool](#). The EISPC Energy Zones mapping tool is a comprehensive mapping tool that enables EISPC members and other stakeholders to identify areas within the U.S. portion of the Eastern Interconnection that are suitable for the development of clean (low- or no-carbon) power generation. In addition, this mapping tool includes the dataset screened in the RE-Powering Mapper Tool for those interested in gauging how far specific sites are from existing infrastructure.

[Wind Vision: A New Era for Wind Power in the United States](#). This DOE report highlights the importance of wind in the nation's energy portfolio and details the importance of advancing wind's position in the energy marketplace to maintain the nation's existing wind manufacturing infrastructure and economic benefits. The report includes a roadmap that defines actions needed to realize the substantial economic and social benefits of a robust wind energy future.

[Consumer's Checklist for Small Wind Electric Systems](#). The Checklist is intended to be a companion document to DOE's online [Small Wind Guidebook](#) for consumers interested in installing a small wind turbine. It features a list of 10 questions consumers should investigate before buying a small turbine and describes the three most common mistakes people make when purchasing small wind turbines.

[Short-Term Energy Outlook](#). DOE's Energy Information Administration released its Short-Term Energy Outlook, which contains price and consumption data on electricity, natural gas, and other energy-related commodities.

[Understanding Processes and Timelines for Distributed Photovoltaic Interconnection in the United States](#). This report published by NREL is a first-of-its kind analysis of residential and small commercial PV interconnection process time frames in the United States. The study includes analysis of data from more than 30,000 PV systems across 87 utilities in 16 states to better understand how solar interconnection policies align with actual project completion timelines, including application review and approval, system construction, inspection, and permission to operate.

Contact Us

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