# RE-POWERING AMERICA'S LAND INITIATIVE:

# **BENEFITS MATRIX**



DECEMBER 2020

Office of Communications, Partnerships, and Analysis Office of Land and Emergency Management

## RE-POWERING AMERICA'S LAND INITIATIVE: BENEFITS MATRIX

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Across the United States, communities are generating revenue, realizing energy cost savings, and creating jobs when redeveloping formerly contaminated sites with renewable energy projects.<sup>1</sup> Community goals such as meeting a local clean energy goal, cleaning up a former brownfield, or protecting greenspace may stimulate action on a project.

If you are considering developing a renewable energy project in your community, the information presented here can be used to educate stakeholders on the benefits of redeveloping formerly contaminated sites. <u>EPA's RE-Powering America's Land Initiative</u> presents the latest benefits findings from publicly available information from fact sheets, case studies and other resources on 382 projects across the country.

#### In this Report:

- Examine <u>the list of projects starting on page 11</u> for details on community benefits for hundreds of projects. Cross-reference the site benefit information with additional information in the <u>October 2020 Tracking Matrix</u>. Examples of sites across the country exhibit benefits across a variety of technology types wind, solar, biomass, and geothermal.
- Examine <u>summary findings</u> to help policy experts and other practitioners understand current trends.
- Read tips for <u>Protecting Local Water Bodies</u> which highlights the stormwater best practices for siting solar projects on landfills.
- Read examples of two local areas that used Brownfield Grant funding: <u>Indian</u> <u>Valley Wood Products Campus</u> in Crescent Mills, California and <u>American Public</u> <u>University System</u> in Ranson and Charles Town, West Virginia.
- Explore new <u>RE-Powering tools</u>.

**Energy cost savings** are consistently one of the top three reported benefits for renewable energy projects.

<sup>1</sup> To date, the RE-Powering Initiative has identified 417 renewable energy installations on 390 contaminated lands, landfills, and mine sites with a cumulative installed capacity of 1,710.2 megawatts (MW) in a total of 41 U.S. states and territories. In this document, installation and project refer to a single renewable energy technology installation, while site and location refer to a single contaminated property. A site or location may have more than one installation or project. For example, the former Dave Johnston Mine (one site) has three separate wind installations, two of which reported benefits that are highlighted here. The RE-Powering Initiative list tracks completed projects where renewable energy systems have been installed on contaminated sites. This resource is available at: https://www.epa.gov/re-powering/re-powering-tracking-matrix.





#### **Renewable Energy Projects with Reported Environmental and Economic Benefits**





#### **Benefits from Installations Across the Country**

The commonly reported benefits from renewable energy on contaminated lands include revenues from land leases and taxes, electricity cost savings associated with the reduced need to purchase power from the grid, job creation, and reduced greenhouse gas emissions.<sup>2</sup> Energy cost savings are consistently one of the top three reported benefits for renewable energy projects.





<sup>2</sup> Sources used to populate this document include other EPA resources (fact sheets, case studies, etc.) or statements by parties directly involved with their respective projects—e.g. the city, town, or county; site owners; developers; utilities; federal agencies; and/or financiers. Note that the benefits reported may have been calculated using different methods and/ or expressed in different units; therefore, a cumulative expression of the total benefits achieved by renewable energy projects on contaminated lands is not possible from publicly available sources. In addition, the specific benefits of each project can vary due to a number of factors, including electricity prices, site clean-up status, incentives and policies such as renewable portfolio standards, development costs, availability of transmission and infrastructure, and renewable energy technology type and capacity.

#### **Inside the Numbers**

RE-Powering has documented benefits for 382 renewable energy on contaminated land installations currently tracked in the RE-Powering Tracking Matrix. Many installations publicly reported multiple benefits; as such, the RE-Powering Benefits Matrix includes citations of 626 total reported benefits. In addition to these, many expected benefits have not been publicly reported. Benefits are anticipated for every renewable energy project on contaminated land, including energy cost savings, revenue, greenhouse gas (GHG) reductions, or a combination of these. Although not comprehensive of all realized benefits, the following charts represent a snapshot of the types of benefits stakeholders are touting publicly as measures of success.

Many of these contaminated lands redeveloped with renewable energy were no longer revenue generators for the community or their owners. Renewable energy provides a unique opportunity for a return to revenue. For RE-Powering sites, revenue can typically be broken into three categories tax or payment in lieu of taxes (PILOT), lease or renewable energy credits (RECs).



Worker checking solar panels in California.

# Reported Benefits for Renewable Energy Projects on Contaminated Lands<sup>3</sup>



<sup>3</sup> Pie chart represents number of benefits across 626 total benefits identified within the 382 renewable energy on contaminated sites with reported benefits. The "Other" category in all charts includes cost savings associated with powering site clean-up (green remediation); induced economic benefits to the community resulting from jobs created (e.g., more customers for the local diner); secondary use of renewable energy installations as tools for learning and data gathering; and the ability to use renewable energy installations for distributed generation.



#### **Benefits Across Site Types**

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The RE-Powering Initiative capitalizes on the opportunity to address contamination and support renewable energy implementation to achieve the associated economic and environmental benefits. All renewable energy projects on contaminated sites realize benefits—from saving money, creating new sources of revenue, to producing clean energy. Stakeholders involved with re-developing sites note specific benefits in terms of job creation, energy cost savings, revenue, jobs, environmental benefits and others. Current trends with RE-Powering show that Solar PV on landfills has been a particularly attractive redevelopment option and represents an increasing share of all RE-Powering sites. The following chart looks at benefits for specific types of RE-Powering sites.





#### Protecting Local Water Bodies -Solar Project Best Practices for Stormwater Management

Siting solar photovoltaics (PV) on contaminated land and landfills offers many benefits to site owners, developers, and communities. Stormwater runoff requires special considerations at solar projects on formerly contaminated land.

Proposed redevelopment projects, including those on brownfields or contaminated land subject to oversight by a federal or state agency, must comply with National Pollutant Discharge Elimination System (NPDES) construction stormwater permit discharge requirements, which are typically implemented by authorized state agencies with some exceptions.<sup>4</sup> Requirements often include limiting the amount of impervious cover, limiting stormwater runoff to match pre-construction runoff conditions, or retaining runoff onsite up to a specified size of storm event, among other permit conditions.<sup>5</sup>

As part of the cleanup or as part of post-cleanup development, regulators assess:

- the impact of adding solar panels,
- changes in water runoff volume, velocity and routing,
- the geology permeability and infiltration of the ground below, and
- any changes that results in impacts to adjacent water bodies.

Plan ahead! Consider caps and remedies suitable to future solar development that protect stormwater runoff. Overall, minor changes in stormwater discharges would be expected from installing solar PV relative to other forms of development. Through the adoption of basic design and management practices, solar developers have found ways to mitigate potential incremental stormwater runoff impacts. Such design and management practices include:

- Plant and maintain vegetation under and in between solar panels, e.g., using livestock grazing or mechanical self-operating devices
- Incorporate crushed stone trenches below panel drip edges
- Limit the amount of area occupied by support structures for solar panels to 5% or less of total project area<sup>6</sup>
- Limit the height of solar panel drip edges to no more than 10 feet above ground
- For solar tracking panels, incorporate a horizonal gap in the middle of the panels to separate drainage from the upper and lower panels
- Place clean fill on the site to improve drainage
- Route stormwater flow from solar panels across vegetated areas for a cooling effect before it reaches a receiving water body or implement an on-site vegetated retention basin



Co-location of solar PV with sheep improves grazing yields and reduces mowing costs.



<sup>4</sup> U.S. EPA is the NPDES permitting authority for three states, federally recognized tribal jurisdictions, and most US Territories.

<sup>5</sup> U.S. EPA, 2016. "Summary of State Post Construction Stormwater Standards", Office of Water, Office of Wastewater Management, Water Permits Division, Updated July 2016. Accessed at https://www.epa.gov/sites/production/files/2016-08/documents/swstdsummary\_7-13-16\_508.pdf on February 20, 2019.

<sup>6</sup> U.S. EPA, 2016. "Summary of State Post Construction Stormwater Standards", Office of Water, Office of Water Management, Water Permits Division, Updated July 2016. Accessed at https://www.epa.gov/sites/production/files/2016-08/documents/swstdsumma-ry\_7-13-16\_508.pdf on February 20, 2019.

#### Heating Things up with Multiple Community Benefits

The Indian Valley Wood Products Campus is located in Crescent Mills, California and will soon be home to a 3-MW biomass facility. This facility will generate electricity and create products from biomass that's removed from surrounding forests to reduce wildfire risk, creating jobs and spurring the local economy.

The brownfield site had been vacant for many years and has received the following support from EPA's Brownfields Program: a Targeted Brownfields Assessment in 2017 for \$200,000; a Brownfields Cleanup grant for \$600,000; and another Brownfields Cleanup grant for \$500,000 in 2020. In addition, EPA provided the Sierra Institute a Biomass Facility Evaluation report in 2019 through EPA's Land Revitalization Program to help them evaluate the technical feasibility for a biomass energy facility, biomass (wood) availability to ensure sustainability of the energy facility, potential co-located businesses to make redevelopment economically feasible, and the area's labor market.

The site includes an integrative wood utilization campus that will generate renewable energy and valuable products out of low-value biomass material removed from surrounding forests, helping reduce forest fire fuel. The campus will include a community-scale biomass-powered combined heat and power facility, a wood chipping facility, and other businesses focused around wood products. These enterprises will spur the local economy and create jobs in the timber industry..



Sierra Institute staff and EPA Grant Administrator walk the site during initial days of cleanup activities.

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"The Sierra Institute is thrilled with the EPA Brownfields support," said Sierra Institute Executive Director J. Kusel. "This funding compiled with previous EPA support will hasten wood-utilizing business development and job creation in Indian Valley."



Hydromulch (green) in place to winterize the site after the end of 2019 operating season.



## DECEMBER 2020

#### Learning to Move Forward: Ranson and Charles Town, WV

American Public University System (APUS) located in <u>Ranson and Charles Town</u>, <u>West Virginia</u> was part of a 1.5-mile strip of brownfields, but is now home to multiple solar installations. Vacant for decades, underused and in some cases contaminated, the properties along this stretch of land created a stigma that slowed redevelopment in the two towns. The towns applied for and received multiple EPA Brownfields grants over the years to help address this strip of brownfield sites.

The two cities are seeing a revitalization of their downtown areas filling a void that left by the disappearing manufacturing industry. Starting with the first EPA assessment grant in 2001, an extensive brownfields planning process was sparked around the corridor's centerpiece, the APUS campus. APUS boasts more than

100,000 students from all 50 states and 100 countries and continues to expand and

is attracting highly skilled educational and technology based jobs to the region.

The new academic center for APUS sits on the 1.8-acre site of the former Veiner Metal Salvage Yard, vacant since the 1960s. Ranson used \$38,000 in EPA grant money to perform environmental assessments in 2004 and 2006. When cleanup of the site was complete, APUS invested \$12 million to redevelop the property as its new academic center. The building earned gold certification under the

U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) program, thanks in part to the building's energy-efficient design and 99 solar panels on the roof that provide a portion of the facility's energy. The

45,000-square-foot academic center is designed to accommodate 330 employees and is currently close to capacity, with staffers ranging from clerical and managerial to academic professionals.

APUS' new financial center and solar array parking lot was previously owned by Maytag Corporation's Dixie-Narco. The financial center also earned LEED silver certification. The parking lot for the center features the largest solar array in West Virginia, with more than 1,600 U.S.-made solar panels affixed to a canopy structure covering the parking area. The solar array provides approximately half the energy required to run the financial center—that's enough electricity to power 30 averagesized homes. The parking lot also includes 14 charging stations that employees, visitors and residents can use to recharge their electric or hybrid vehicles.

# Ranson and Charles Town, WV EPA Brownfields Grants Received to Date

- Three Assessment Grants (Ranson)
- Area-Wide Planning Grant (Ranson)
- Revolving Loan Fund Grant (Charles Town)



The new academic center for APUS, on the 1.8-acre site of the former Veiner Metal Salvage Yard.

#### **Tools and Resources**

When communities and property owners understand interconnection issues in advance, there is a greater likelihood for ultimate project success. Many communities and property owners are considering renewable energy redevelopment for their contaminated properties or formerly contaminated properties. Connecting renewable energy projects to the electric transmission and distribution system is a critical, and often complex, step in the redevelopment process. To aid in navigating these processes, RE-Powering has developed tools and resources to assist those who are considering developing renewable energy on contaminated lands. The following trainings and discussion papers provide information that help educate project leaders and site owners on topics including what interconnection is, different types of interconnection, steps and timing, typical cost ranges, and tips for efficiently navigating the interconnection process.

#### Interconnection and Electricity Sales Training Module

Learn about the practical and economic aspects of how renewable energy produced on contaminated land can reach end users and generate revenue. In this module, stakeholders learn how to identify and assess options for project interconnection and electricity sales.

#### Interconnection: Plugging RE-Powering Sites Into the Electric Grid

Find out how to efficiently proceed through the interconnection process for renewable energy projects connecting to the electric transmission and distribution systems. <u>The paper</u> includes information about factors that influence cost and review cycles for interconnection.

#### The Value of Existing Infrastructure for Renewable Energy Development

Examine the value of existing infrastructure—such as roads and electrical lines at contaminated lands, landfills, and mine sites whose reuse is facilitated by EPA's RE-Powering America's Land Initiative. <u>This paper</u> is targeted at the types of infrastructure commonly found on RE-Powering sites and characterizes where, and to what extent, this infrastructure affects the prospects for site redevelopment.





Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings		Job Creation	Other
AR - ARKANSAS													
Blaney Hill Solar Farm	AR	Conway	Landfill	Municipal	Solar PV	1.00	Wholesale Electricity	2020	Will generate enough to power more than 150 homes annually. The lifetime power production from Blaney Hill Solar Farm is estimated to reduce the city's carbon footprint by the equivalent of CO2 emissions from 2,623,045 gallons of gasoline.		~		
AZ - ARIZONA													
Ajo Solar Project	AZ	Ајо	Mine Lands	Private	Solar PV	5.00	Wholesale Electricity	2011	Half of the approximately 50 construction jobs went to local residents. The electricity generated onsite will be sold to Arizona Public Service (APS) under a 25-year power-purchasing agreement.			~	~
Apache Powder	AZ	Benson	Superfund	Private	Solar PV and Wind	0.00	Onsite Use - Green Remediation	1997	The use of solar and wind energy to power cleanup reduces the 30-year groundwater cleanup cost from \$25 million to approximately \$2.5 million. The cost of solar PV system and windmill pump is three times less expensive than the cost to run power lines and pay for electricity at remote areas of the site.	~			~
Bagdad Mine Solar	AZ	Bagdad (census- designated)	Mine Lands	Private	Solar PV	15	Wholesale Electricity	2011	Power generated by the solar is sold to Freeport-McMoRan at a set rate under the terms of a 25-year PPA. Generates 15 megawatts of electricity, enough to power about 3,000 homes.		~		~
Desert Star Solar Plant	AZ	Buckeye	Landfill	Municipal	Solar PV	10	Wholesale Electricity	2015	Estimated \$15,000,000 -\$20,000,000 of direct and indirect investments were made to the local economy from this project. More than 100 construction jobs.			~	~
Tucson International Airport Area	AZ	Tucson	Superfund	Non-profit	Solar PV	2.5	Unknown	2017	The project will produce renewable energy offsetting more than two-thirds of the airport terminal's use of energy, saving the TAA \$35,000 per month in power costs and reducing the airport's consumption of fossil-based grid energy.	<b>√</b>	~		
CA - CALIFORNIA													
Aerojet General Corporation Superfund Site	CA	Sacramento	Superfund	Private	Solar PV	6	Wholesale Electricity	2010	The project is anticipated to save more than \$10 million in electricity over the cleanup project's 25-year life, due to the lower cost of electricity purchasing established by the PPA.	~			
Camp Pendleton Landfill	CA	Camp Pendleton	Superfund	Federal	Solar PV	1.5	Onsite Use - General	2011	The Naval Facilities Engineering Command anticipates the system will save the Marine Corps \$336,000 yearly in electricity costs while more than tripling its previous solar energy capacity.	~			

Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE Type</b>	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings		Job Creation	Other
Cloverdale Solar	CA	Cloverdale	Landfill	Unknown	Solar PV	1.8	Wholesale Electricity	2014	The Cloverdale project is designed to generate over 2.7 million kilowatt hours of energy annually, the equivalent of more than 6,000,000 pounds of CO2.		~		
Fischer Properties: Depot Park	CA	Sacramento	Brownfields	Private	Solar PV	3	Onsite Use - General	2010	The project provides more than 40% of the electricity load for the park during peak hours. That is equivalent to 6,335 barrels of oil, or removing 500 vehicles from the road.		~		~
Frontier Fertilizer	CA	Davis	Superfund	Private	Solar PV	0.07	Onsite Use - Green Remediation	2011	The system offsets up to 5% of the site's annual electricity use for pump and treat system operations, saving energy costs of approximately \$1,500 per year.	~			~
Indian Valley Wood Products Campus	CA	Crescent Mills	Brownfields	Non-profit	Biomass	3	Onsite Use - General	2019	The Sierra Institute will generate renewable electricity and thermal outputs for the community at an appropriate rate of return, stimulate employment related to wood products in the area, and help improve the health of the forest in the Sierra Nevada mountains.		~	~	~
Lawrence Livermore National Laboratory	CA	Livermore	Superfund	Federal	Solar PV	3.3	Onsite Use - Green Remediation	2009	The self-powered solar treatment units allow ground water treatment at remote areas of the 7,000-acre site without the installation of costly power lines or generators.				~
Leviathan Mine	CA	Alpine County	Superfund	Private	Solar PV	-	Onsite Use - Green Remediation	2011	Solar energy is used for four remote monitoring stations at key seeps and creeks and for an onsite emergency shower unit. Each monitoring station was custom built by EPA Region 9 staff to include a PV array for battery charging; multiprobe sonde to measure water quality parameters of streams impacted by AMD; and satellite telemetry for hourly data collection and transmission to EPA offices.				~
MCE Solar One (Chevron Richmond Refinery)	CA	Richmond	Landfill	Private	Solar PV	10.5	Wholesale Electricity	2018	Supported 341 jobs; partnered with job-training program RichmondBUILD to train and hire local residents. Maximized local economic benefits by requiring 50% local resident workforce and engaging Richmond-based contractors and supplier.			~	~
Milliken Landfill	CA	Ontario	Landfill	Municipal	Solar PV	3.1	Wholesale Electricity	2017	Produces enough electricity to power 500 homes.		~		
NASA Jet Propulsion Laboratory (JPL)	CA	Pasadena	Superfund	Federal	Solar PV	0.564	Rooftop	2011	Under a 20-year PPA, the PV system is expected to annually generate 869,158 kWh of energy (approximately 20% of the treatment system's electricity consumption, or the equivalent power used by 100 to 125 average Pasadena homes).		~		~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
National Semiconductor Corp.	CA	Sunnyvale	Superfund	Private	Solar PV	2	Rooftop	2008	The electricity generated is equivalent to that used by approximately 1,500 homes. The panels replace an amount of carbon equivalent to the emissions of 450 passenger cars for one year or that absorbed by 667 acres of pine forests.			~		
Pemaco Superfund Site	CA	Maywood	Superfund	Municipal	Solar PV	0.0034	Onsite Use - Green Remediation	2007	Annual electricity cost savings of \$2,839.	~				
PSEG Pittsburg Solar Energy Center	CA	Pittsburg	RCRA	Private	Solar PV	25.4	Wholesale Electricity	2015	Will help PG&E meet California's mandate that 33% of the energy sold by investor-owned utilities must come from renewable resources by 2020			~		
Regulus Solar Power Plant	CA	Bakersfield	Brownfields	Unknown	Solar PV	82	Wholesale Electricity	2015	The project will contribute to the creation of 1,300 full time equivalent employee years, \$6.1M in property taxes and \$25.4M in sales generated for the county over 20-year life of project. It is anticipated to provide almost \$184 million in revenue to local businesses, governments and households during the first 20 years of operation.		~		~	~
Sutter's Landing Landfill Solar	CA	Sacramento	Landfill	Municipal	Solar PV	1.5	Wholesale Electricity	2014	Revenue from the power generated for and consumed by residents and businesses, and from lease payments, will be re-invested to fund park preservation and maintenance. Lease payments to city of \$15,000 per year.		~			~
Tequesquite Landfill	CA	Riverside	Landfill	Municipal	Solar PV	7.5	Wholesale Electricity	2015	A 25-year PPA will help Riverside Public Utilities minimize the effect of rising electricity costs.					~
Travis AFB	CA	Near Fairfield	Superfund	Federal	Solar PV	-	Onsite Use - Green Remediation	2008	Brings Travis Air Force Base one step closer to shutting down its four groundwater treatment plants that currently cost about \$7,000 a month in utilities to operate.					~
West County Wastewater District	CA	Richmond	Brownfields	Municipal	Solar PV	1	Onsite Use - General	2008	West County Wastewater District will purchase energy at a fixed price over the next 20 years, providing a cost-saving. PG&E's Self Generation Incentive Program mitigated project cost. The PV system is estimated to produce 30% of the wastewater facility's electricity needs.	~				
Western Regional Sanitary Landfill	CA	Lincoln	Landfill	Private	Solar PV	0.009	Onsite Use - General	2017	WPWMA will be saving \$.04 per kWh over what it would otherwise be paying PG&E—savings that are ultimately passed along to landfill ratepayers. More than 25 local students from Sierra College gained hands-on training for solar jobs by designing and installation the system. Solar powers the landfill's LFG power plant.	×			~	

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
CO - COLORADO														
Aurora/Arapahoe Solar Array	СО	Aurora	Brownfields	Municipal	Solar PV	0.50	Community Owned / Subscription	2013	System is demonstrating costs savings. As of April 13, 2016, lifetime production was 1,980,738 kWh, with customer savings from energy production of \$725,004.	~				
Belmar Mixed-Use Development	СО	Lakewood	Brownfields	Various	Solar PV	1.7	Rooftop	2008	The system supplies all the electricity for the parking garages at the shopping mall, which is equivalent to 5% of Belmar's energy use. A PPA uses RECs in exchange for below-retail electricity rates. The system generates enough energy to power 350 homes.	~	~	~		
Boulder Cowdery Meadows Solar Array	СО	Boulder	Landfill	Private	Solar PV	0.5	Community Owned / Subscription	2013	System is demonstrating costs savings. As of April 13, 2016, lifetime energy production was 2,136,641 kWh, with customer savings from energy production of \$462,168.	~				
Coyote Ridge Solar	CO	Fort Collins	Landfill Buffer	Municipal	Solar PV	1.95	Community Owned / Subscription	2017	Project is a part of a statewide initiative to demonstrate how low-income community solar can help reduce energy costs for highest-need customers (i.e., those who spend 4% of income or more on utility bills). Project also provided thousands of hours in solar installation job training.	<b>~</b>			~	~
Dreher Pickle Plant	СО	Fort Collins	Brownfields	Municipal	Solar PV	0.6	Community Owned / Subscription	2015	Community solar project - Estimated that customers will receive a 6.9% payback on their solar panels in the first year and an average annual payback of 9.5% over the solar array's lifetime.	~				
Fort Carson	СО	Fort Carson	RCRA	Federal	Solar PV	2	Wholesale Electricity	2008	Project expected to save Fort Carson \$500,000 in energy costs over the life of its 20-year contract with the utility.	~				
New Rifle Mill	СО	Rifle	Other	Municipal	Solar PV	1.7	Onsite Use - General	2009	Siting the project on contaminated land already owned by the city saved taxpayers approximately \$2 million.					~
Norwood Landfill Community Solar	СО	Norwood	Landfill	Unknown	Solar PV	0.2	Community Owned / Subscription	2016	Will lower the electric bills of qualified low-income residents in SMPA's service territory.	~				
Place Bridge Academy	СО	Denver	Landfill	Municipal	Solar PV	0.101	Onsite Use - General	2013	The schools are not required to pay up-front costs for the systems, and will realize an overall cost savings on their electricity bills. The schools will incorporate an education component. The following environmental benefits will also be realized: 142,274 kWh of electricity production; 291,377 pounds per year of annual CO2 emissions reduced; 318,713 miles per year equivalent reduction in vehicle miles driven and equivalent 11,207 trees planted.	V		*		~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
CT - CONNECTICUT	1					1	I	1		_				
Barkhamsted-New Hartford Landfill	СТ	Barkhamsted and New Hartford	Superfund	Municipal	Solar PV	1.5	Wholesale Electricity	2017	The lease payments help supplement the operating income of RRDD1, which continues to run a recycling program and transfer station.		~			
Bethel Town Landfill Solar	СТ	Bethel	Landfill	Municipal	Solar PV	0.948	Wholesale Electricity	2018	Through virtual net metering, 100% of the energy generated is used to power town buildings and operations, offsetting total town consumption. The Town of Bethel is now being supplied by green renewable energy. Annual energy savings of 1,254,587 kWh Annual CO2 emissions reduction of 934 metric tons. Secured an additional subsidy for the project via the State of Connecticut's Zero Emission Renewable Energy Credit (ZREC) program. Brought the town landfill back into compliance with the Connecticut Department of Energy and Environmental Protection.	<b>~</b>	~	✓		V
Bozrah Landfill Solar	СТ	Bozrah	Landfill	Municipal	Solar PV	3.1	Wholesale Electricity	2016	The portfolio also includes two Tesla battery storage systems. The two battery systems will have an aggregate capacity of 1.5 MW and provide up to 6 MWh of electricity, enabling CMEEC to remotely dispatch stored solar energy for optimal grid performance.					~
Bridgeport Landfill	СТ	Bridgeport	Landfill	Municipal	Solar PV	2.2	Wholesale Electricity	2016	Full energy park (2.2-MW solar and 2.8-MW fuel cell) expected to provide 57M to city in lease revenue over the course of the 20-year lease; create 92 jobs; and provide power for the equivalent of 5,000 homes annually.		~	~	~	
Cheshire Landfill Solar	СТ	Cheshire	Landfill	Municipal	Solar PV	0.98	Wholesale Electricity	2018	As of October 2020, the installation had produced enough electricity to equal planting over 67,000 trees, equivalent to over 290,000 gallons of gas and over 230,000 pounds of methane.			~		
Derby Landfill Solar	СТ	Derby	Landfill	Municipal	Solar PV	0.74	Wholesale Electricity	2015	Energy from panels will be used to reduce town's electricity expenses by 15-20% over the next two decades.	~				
Ecology Park (AKA Branford Landfill Solar)	СТ	Branford	Landfill	Municipal	Solar PV	-	Unknown	2018	The project will generate significant savings to the taxpayers in the form of lower utility payments.	~				

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Evansville Avenue Landfill	СТ	Meriden	Landfill	Municipal	Solar PV	1.1	Wholesale Electricity	2017	Solar project offsets power needs of co-located water pollution control facility. The city will save anywhere from \$31,708 to \$106,222 annually, or \$634,150 to \$2.2 million over the 20-year contract term (depending on future cost of electricity). The city will also receive annual tax payments over the 20-year contract totaling \$235,923. No cost to the city for this project.	<ul> <li></li> <li></li> </ul>	~			
Fairfield Landfill*	СТ	Fairfield	Landfill	Municipal	Solar PV	1.3	Wholesale Electricity	2017	Will power 25% of wastewater treatment plant electricity needs.	~				
Gallup's Quarry	СТ	Plainfield	Superfund	Private	Biomass	37.5	Wholesale Electricity	2013	The 37.5-megawatt power plant uses waste wood to generate enough electricity to power the equivalent of about 40,000 homes in Plainfield. Connecticut Light & Power purchases 80% of the generated energy under a 15-year agreement with the facility owner, while the remaining energy contributes to the regional REC market.	~	~	~		
Hartford CT Landfill (Solar)	СТ	Hartford	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2014	The facility will sell excess electricity to the grid or, potentially, to the City of Hartford at a discounted rate that could save the city several hundred thousand dollars per year on its electricity bill. In addition, in 2012, Connecticut Light & Power selected the project to receive zero - emission renewable energy credits, or ZRECs. The ZRECs add 11 cents per kilowatt - hour to the price of electricity generated for sale by the solar collectors. The system will generate up to one megawatt of electricity, enough to power about 1,000 homes when operating at full capacity.	~	~	~		
Newtown Landfill Solar	СТ	Newtown	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2018	Under the PPA, town will purchase the generated electricity at \$0.0630 per kWh vs. current cost of \$0.09795	~				
North Haven Landfill	СТ	North Haven	Landfill	Municipal	Solar PV	0.384	Onsite Use - General	2017	Powers on-site wastewater treatment facility					~
Rogers Road Landfill	СТ	Norwich	Landfill	Municipal	Solar PV	3	Wholesale Electricity	2017	Taking land in a community that has no other use and putting solar on that, is good reuse of a brownfield location.					~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings	Revenue		Job Creation	Other
Solvents Recovery Service of New England	СТ	Southington	Superfund	Unknown	Solar PV	0.05	Onsite Use - Green Remediation	2018	The installation of solar panels on the cap in September 2018 will provide the energy needed for future operation and maintenance at the Site.					~
Stafford Landfill (CT)	СТ	Stafford	Landfill	Municipal	Solar PV	0.945	Wholesale Electricity	2016	Includes two other arrays in the city, combined these three arrays provide enough electricity to power 80% of the town's buildings. The system is projected to save the town \$4.3 million over 15 years, and \$12.3 million over 25 years. Utilizes a Tax Exempt Lease Purchase (TELP) and make use of a long-term Zero Emission Energy Credit (ZREC) contract to allow the town to own and operate the arrays outright, as well as virtual net- metering. Stafford's collection of solar arrays eliminates: The equivalent greenhouse gas emissions from driving 7,410,973 miles in an average passenger car. The equivalent CO2 emissions from 3,299,687 pounds of coal burned. The carbon sequestered by 2,927 acres of U.S. forest for one year.	×	~	~		~
Wintergreen Ave. Landfill	СТ	Hamden	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2016	Savings of \$30,000 for the town per year.	~				
Woodstock (CT) Landfill Solar	СТ	Woodstock	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2016	Installed at no cost to taxpayers; will save the town over \$2.4 million over the next 20 years.	~				
DE - DELAWARE														
DuPont Newport	DE	Newport	Superfund	Private	Solar PV	0.5	Wholesale Electricity	2013	Construction created nearly 120 jobs.				~	
McKees Solar Park	DE	Newark	Landfill	Municipal	Solar PV	0.23	Community Owned / Subscription	2014	Funding model wherein residential electric users can contribute \$50 in return for a \$0.01 per kWh rebate on one (1) 100 kilowatt- hour block of power generated from the park per month, which will displace the first 100 kwh of household consumption. Residents can also make outright tax-deductible donations to the park.			~		~
North and South Peninsula	DE	Wilmington	Brownfields	Private	Solar PV	1.95	Wholesale Electricity	2013	The project sells energy and SRECs to Delmarva Power & Light under separate long-term contracts.		~			~

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
FL - FLORIDA														
Bee Ridge Landfill / Rothenbach Park*	FL	Sarasota	Landfill	Municipal	Solar PV	0.25	Wholesale Electricity	2008	The solar panels are expected to produce 250 kilowatts of clean energy, enough energy to power 55 average homes. Operating them prevents the release of more than 654,000 pounds of carbon dioxide into the atmosphere each year.			~		
Kenneth P. Ksionek Community Solar Farm at the Stanton Energy Center (SEC)	FL	Orlando	Landfill	Municipal	Solar PV	13	Community Owned / Subscription	2017	The installation will generate enough electricity to power 2,100 homes.			~		
Lake Worth Landfill	FL	Lake Worth	Landfill	Municipal	Solar PV	2	Wholesale Electricity	2017	Helps meet city's commitment to diversifying energy to clean and renewable energy sources.			~		
GA - GEORGIA														
Deptford Landfill	GA	Savannah	Landfill	Private	Solar PV	1.2	Wholesale Electricity	2019	"The beautiful thing is this is a brownfield being turned into a greenfield," said Pete Marte, CEO of Hannah Solar, which installed the panels.					~
Hickory Ridge Landfill	GA	Atlanta	Landfill	Private	Solar PV	1	Wholesale Electricity	2011	Enough energy to meet the needs of 224 homes annually.			~		
Jekyll Island Landfill	GA	Jekyll Island	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2019	"The Authority leases the land to Cherry Street Energy for about \$2,000 a month for 30 years. ""We'll pay more than \$700,000 over 30 years," Chanin said.		~			
HI - HAWAII														
Kapolei Sustainable Energy Park	HI	Kapolei	RCRA	Private	Solar PV	1.20	Wholesale Electricity	2011	The system will produce enough electricity to power between 150 and 250 homes with clean, solar energy.			~		
IA- IOWA														
Schaus-Vorhies Solar	IA	Fairfield	Brownfields	Private	Solar PV	0.5	Wholesale Electricity	2016	System will pay for itself within 5-6 years, and cover 100% of the company's electrical needs on a net-annual bases. Total energy production (over 25 years) will prevent 10,587 metric tons of CO2 from entering the atmosphere, equivalent to about 11 million pounds of coal or 25 million miles driven in a typical passenger car.	~		~		



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources			Job Creation	Other
West Dubuque Solar Garden	IA	Dubuque	Brownfields	Municipal	Solar PV	5	Wholesale Electricity	2017	Annual output is equal to the annual usage of about 126 average lowa homes. The Downtown Dubuque Solar Garden features an educational display and information to teach visitors about advancements in clean energy technology.		~		~
IL - ILLINOIS													
Exelon City Solar	IL	Chicago	Brownfields	Municipal	Solar PV	10	Wholesale Electricity	7/2/1905	During construction, the \$60 million project created 200 jobs. The developers sourced much of its labor and building materials from local companies on Chicago's South Side. The system provides permanent work in the areas of operations, maintenance, and security. The project also expands the local tax base and generates revenues from the land lease.	~		~	~
Gobnob Wind Turbine Project	IL	Farmersville	Brownfields	State	Wind	0.9	Wholesale Electricity	2009	The Rural Electric Convenience Cooperative signed a 20-year lease agreement with the Department of Natural Resources for \$1,200 per year. The system will result in a reduction in GHG emissions of 1,997 tons of carbon dioxide annually.	~	~		
IN - INDIANA													
Crane Naval	IN	Crane	Landfill	Federal	Solar PV	17	Wholesale Electricity	2017	The installation is providing and promoting energy sustainability and bringing renewable energy options to the installation and neighboring communities. In exchange for providing secure, on-base land needed for the project, NSA Crane will receive in-kind consideration in the form of electrical infrastructure upgrades, such as a motor-operated disconnect switch, and a microgrid feasibility study to increase future base resiliency.				~
Kokomo Solar Park	IN	Kokomo	Superfund	Private	Solar PV	7.00	Wholesale Electricity	2016	Provides 7 MW of clean power capacity to the community and is located on a remediated Superfund parcel of land.		~		
Kokomo Wind Farm (Continental Steel )	IN	Kokomo	Superfund	Private	Wind	-	Onsite Use - Green Remediation	2017	Three on-site wind turbines produce enough energy to offset at least half of the energy needed for ongoing groundwater treatment.				~
Marion County Solar #1	IN	Indianapolis	Landfill	Private	Solar PV	5.2	Wholesale Electricity	2015	This solar project (along with Marion County Solar #2) produces enough electricity to power over 700 homes and the equivalent to removing 7,000 tons of carbon dioxide from the environment every year.		~		



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Marion County Solar #2	IN	Indianapolis	Brownfields	Private	Solar PV	1.9	Wholesale Electricity	2015	This solar project (along with Marion County Solar #1) produces enough electricity to power over 700 homes and the equivalent to removing 7,000 tons of carbon dioxide from the environment every year.			~		
Reilly Tar & Chemical (Indianapolis)	IN	Indianapolis	Superfund	Private	Solar PV	10.8	Wholesale Electricity	2014	Under the 15-year PPA with Indianapolis Power and Light (IPL), developer Hanwha Q CELLS will sell electricity and environmental attributes from Maywood Solar Farm for 15 years. IPL will purchase 100% of the output at a set price (\$.020/kWh) and will retain ownership of project RECs. The project created 75-100 jobs during construction and will continue to have a positive impact on the economy through ongoing contracts for equipment and labor with local firms during the 15-35-year operating period of the facility.	~	~		~	
KS - KANSAS														
Strother Field Industrial Park	KS	Winfield	Superfund	Various	Solar PV	0.063	Rooftop	2014	The solar array is expected to reduce the company's carbon footprint by 56 metric tons a year, the equivalent of planting 46 acres of mature forest.			~		
KY - KENTUCKY														
Fort Campbell Solar Phase One	KY	Fort Campbell	Landfill	Federal	Solar PV	1.9	Onsite Use - General	2015	Helps Fort Campbell meet federal directives outlined in the American Renewable Energy Act, requiring federal installations to obtain 25% of their energy by renewable means by 2025.			~		~
Fort Campbell Solar Phase Two	KY	Fort Campbell	Landfill	Federal	Solar PV	3.1	Wholesale Electricity	2017	Combined with Phase One of the installation, provides a total of 5 MW of solar to Fort Campbell. Expected to reduce the post's energy load on the power grid and help save money that will be repurposed toward training soldiers.			~		~
MA - MASSACHUSETTS														
Acton Landfill	MA	Acton	Landfill	Municipal	Solar PV	1.6	Wholesale Electricity	2013	If the market rate for electricity remains at least one penny per kWh above the fixed contract rate, the predicted cost savings from the landfill solar system totals over \$325,000 for the 20 year period (more than \$15,000 per year). If the market rate stays at the Town's average 2013 rate or increases, Acton will save over \$1,700,000 over the 20 year period, or \$85,000 per year.	~				



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Aquinnah Landfill	MA	Aquinnah	Landfill	Municipal	Solar PV	0.05	Onsite Use - General	2012	The array will produce enough energy to power the town's Municipal electrical load including the town offices, police & fire stations, library, street lights, and public bathrooms and eventually save the town over \$10,000 per year in electricity costs.	<ul> <li>✓</li> </ul>				
Barnstable Landfill	MA	Barnstable	Landfill	Municipal	Solar PV	4.2	Wholesale Electricity	2014	Estimated annual savings for the town of over \$270,000.	~				
Beech St. Landfill*	MA	Rockland	Landfill	Municipal	Solar PV	3.20	Wholesale Electricity	2014	The town has 25-year PPA with NextSun and has locked in a rate of \$0.0699/kWh for the first year and 2% increase in annual power rates after that versus original rates of \$0.07887/kWh. A land lease will generate revenue of \$50,000 per year. The project will save Rockland taxpayers through lower electricity prices, saved tax revenue, and provide a hedge against future energy rate hikes.	×	~			
Bellingham Landfill Solar	MA	Bellingham	Landfill	Municipal	Solar PV	2.70	Wholesale Electricity	2017	Energy generated is being purchased by the town of Randolph, saving millions of dollars over the life of the project. Town will receive a total of over \$3.5 million in lease payments and tax revenues for the project.	~	~			
Bent Mill Solar	MA	Gardner	State Brownfields	Municipal	Solar PV	1	Wholesale Electricity	2014	City of Gardner benefits from the land lease and tax payments. Four local organizations are saving tens of thousands of dollars on their annual electricity bills, including GAAMHA, Inc., a non- profit provider of services for adults with disabilities. GAAMHA estimates they will see savings of at least \$10,000 annually.	<ul> <li>✓</li> </ul>	~			
Berkley Landfill Solar*	MA	Berkley	Landfill	Private	Solar PV	3.6	Wholesale Electricity	2017	The landfill solar farm will generate enough energy to power nearly 700 homes. Berkley has PILOT agreements with the solar farm developers – so the solar farms are generating revenue for the town.		~	V		
Berkshire Truck Plaza	MA	West Stockbridge	State Brownfields	Private	Solar PV	3	Wholesale Electricity	2016	This solar array will produce enough clean energy to power 500- 700 residences in West Stockbridge, in addition to the added tax revenue.		~	~		
Bird Machine Landfill*	MA	Walpole	Landfill	Private	Solar PV	4.75	Wholesale Electricity	2017	The town receives PILOT with the Bird Machine solar farm and the Bird landfill solar array that would pay the town a total of \$2.1 million spread out over the next 25 years.		~			



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Bolton Orchards	MA	Bolton	Brownfields	Private	Solar PV	6	Wholesale Electricity	2013	Chelmsford's Town Manager negotiated a 25-year Net Metering Power Sales Agreement (NMPSA) with Main Street Power, who owns and operates the facility. The Town of Chelmsford receives 25 years of discounted electricity rates for the energy produced by the solar facility under the NMPSA. The project will provide tax revenue to town of Bolton and power to Town of Chelmsford (higher demand than Bolton).	~	~			
Bolton Orchards Phase II	MA	Bolton	Brownfields	Private	Solar PV	2.8	Community Owned / Subscription	2016	Community solar project that enables residents to save money on their utility bills and support local solar.	~				~
Boxford Landfill	MA	Boxford	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2017	The town touts economic benefits of ~\$3 million over the next 20 years: (1) will receive nearly all the town's municipal annual electricity needs from the solar farm, electricity that is not only clean but approximately 40% cheaper than the town's current power purchase rate; (2) will receive revenue in exchange for leasing the capped landfill to the solar project's owner, SunRaise Investments, LLC and GG Renewables, the partnership that acquired and constructed the project with plans to remain the long-term owner and operator; and (3) will receive tax revenue for the life of the solar project. Solar will also power the equivalent of 200 homes and offset the equivalent to a million pounds of coal burning.	×	~	~		
Braintree Landfill	MA	Braintree	Landfill	Municipal	Solar PV	1.26	Wholesale Electricity	2014	The Braintree Electric Light Department has an agreement to buy the electricity that the site produces at a competitive rate of 6.5 cents per kilowatt (from Braintree Electric Light Department general manager William Bottiggi). Over the course of a year the project is expected to generate 1,645,000 kilowatt-hours of electricity—enough to power to more than 200 homes.	~		~		
Brewster Landfill	MA	Brewster	Landfill	Municipal	Solar PV	1.23	Wholesale Electricity	2014	The project is expected to save town \$75,685 in the first year.	~				
Bridge Street Landfill	MA	Fairhaven	Landfill	Municipal	Solar PV	0.578	Onsite Use - General	2013	The town is expected to save \$1.5M over 30 years. A PPA allows town to avoid costs associated with solar system ownership.	~				



Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE Type</b>	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Brockton Brightfield	MA	Brockton	Brownfields	Municipal	Solar PV	0.46	Wholesale Electricity	2006	Generates nearly \$145,000 in annual revenue for the city, which goes towards paying off the cost to build and maintain the brightfield. It is estimated that the loan will be paid off in full by 2026, and the city will begin to directly profit from the sale of RECs and electricity. The brightfield has a module warranty of 20 years, and with an expected system life of 30-50 years, the city should see profits for 10 to 30 years.		*			
Cedar Street Landfill	MA	Cohasset	Landfill	Municipal	Solar PV	0.42	Wholesale Electricity	2017	The town could net as much as \$1.6 million in energy cost savings over the 20-year contract, depending on net metering credit rates. Solar will produce power equal to approximately 16% of the town's annual electric load.	~				
Charles George Landfill	MA	Tyngsboro/ Dunstable	Superfund	Private	Solar PV	3.56	Wholesale Electricity	2017	Produces nearly 4,600,000 kWh of electricity per year, enough to power approximately 460 New England homes and avoid the release of over 3,500 tons of carbon dioxide annually from non-renewable power plants.			~		
Chatham Landfill	MA	Chatham	Landfill	Municipal	Solar PV	1.8	Wholesale Electricity	2014	Estimated to save town \$120,446 in the first year and more than \$3.5M by the end of the 20-year PPA.	~				
Chicopee Elks Landfill	MA	Chicopee	Landfill	Private	Solar PV	2.1	Wholesale Electricity	2015	Power sold to Chicopee Electric & Light at a discount, saving ratepayers money on their utility bill. Fifty-five jobs created.	~			~	
Chilmark Landfill	MA	Chilmark	Landfill	Municipal	Solar PV	0.099	Wholesale Electricity	2014	System offsets 60% of town's historical energy usage. In first year of operation, saved town \$2,374 from net metering (as of Sept 2015).	~				
Concord Landfill Phase I	MA	Concord	Landfill	Municipal	Solar PV	1.7	Wholesale Electricity	2014	Total installation (full 2.9 MW) expected to produce 2% of town's electricity needs. Enough energy to provide almost 400 homes with their annual energy needs.			~		~
Cottage Street Landfill	MA	Springfield	Landfill	Municipal	Solar PV	3.90	Wholesale Electricity	2014	Estimated to have brought \$22 million of construction revenue to the region.				~	~
Cowles Gravel Solar	MA	Westfield	Brownfields	Private	Solar PV	2.6	Wholesale Electricity	2016	Solar development will provide lease revenue to the town. The developer made several site improvements, including grinding an existing stockpile on the site of more than 56,000 tons of asphalt from roads and other demolition and construction debris to grade the site for solar and erecting a fence to deter off-road vehicles from entering (which was a prior issue in the community).		~			✓

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Dorchester Solar Power Project	MA	Dorchester	Brownfields	Private	Solar PV	1.3	Wholesale Electricity	2012	Over a 30 year period, this system is expected to save approximately 4,000 pounds of sulfur dioxide, 1,800 pounds of nitrous oxide, and 1.8 million pounds of carbon dioxide. This is equivalent to the emissions produced in generating electricity for 260 average household.			~		
Dover Landfill Solar	MA	Dover	Landfill	Private	Solar PV	1.4	Community Owned / Subscription	2017	Will allow Dover and Boston metro residents to enjoy local clean energy at no cost to join, while saving them 10% on their electricity bills; expected to offset approximately 1,300 metric tons of CO2 each year, equivalent to removing 270 cars from the roads or planting 1,250 acres of forest; created local jobs; helped Dover achieve Green Community status, which will allow the town to apply for additional grant money from the state.	~		~	~	~
Duxbury Landfill	MA	Duxbury	Landfill	Municipal	Solar PV	0.585	Wholesale Electricity	2014	The system should meet 15% of town's electricity needs and save \$45,000 per year. The project will generate enough electricity for over 100 homes.	~		~		
East Bridgewater Landfill Solar*	MA	East Bridgewater	Landfill	Private	Solar PV	3.2	Wholesale Electricity	2017	The city will receive 25% of the value of electricity generated at the landfill site in the form of net metering credits, which the city will be able to use to purchase its own energy. The estimated value to the city is \$320,000 each year. In terms of the environmental benefit, the solar energy produced on the landfill will offset the carbon emissions of more than 12,000 passenger cars per year or carbon emissions by 5,500 homes.	V		✓		
Eastham Landfill	MA	Eastham	Landfill	Municipal	Solar PV	0.627	Wholesale Electricity	2014	Savings from the system are estimated to be \$34,010 in first year. The 627 kW array will provide green energy to the Town of Eastham, decreasing their carbon footprint and their utility bills.	~		~		
Emery Street Landfill	MA	Palmer	Landfill	Municipal	Solar PV	5	Wholesale Electricity	2017	Will generate clean solar energy and net metering credits that deliver energy savings to the Town of Andover, while the Town of Palmer receives long-term lease payments and tax revenue. Produces enough energy for 820 typical U.S. homes.	~	~	~		
Everett Solar Power Project	MA	Everett	Brownfields	Private	Solar PV	0.61	Wholesale Electricity	2010	The project provides added tax revenue for Everett and helps National Grid temporarily offset customer demand as the load in the area steadily increases.		~			
Fairhaven Sanitary Landfill (Canton)	MA	Canton	Landfill	Municipal	Solar PV	5.6	Wholesale Electricity	2012	The electricity produced by the solar system is expected to save the town approximately \$1.5 million over the course of the 30 year contract.	~				



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Falmouth Landfill	MA	Falmouth	Landfill	Municipal	Solar PV	4	Wholesale Electricity	2017	Total economic benefit to the community over the life of the project is projected to be over \$14 million; installation avoids the equivalent of 4,000 tons of CO2 emissions each year; 50 jobs created during construction.	~		~	~	
Fitchburg Gas & Electric Light Company	MA	Fitchburg	State Brownfields	Private	Solar PV	1	Wholesale Electricity	2017	The project can independently power 144 homes.			~		
FMR Industrial	MA	Halifax	State Brownfields	Private	Solar PV	6.00	Wholesale Electricity	2019	The system will deliver bill credits to community solar subscribers who are National Grid customers (commercial and residential) located throughout the state.	~				~
FMR Lucent Technologies	MA	North Andover	State Brownfields	Private	Solar PV	3.3	Wholesale Electricity	2016	The town entered into an agreement with Osgood Solar to purchase discounted energy produced the solar array. By purchasing clean energy from Osgood Solar, coupled with a 20-year PILOT agreement, the Town of North Andover will accumulate over \$6M in energy savings and PILOT revenue. Further, the town has zero capital invested in, and no operational responsibility for, the solar facility.	<ul> <li>✓</li> </ul>	V			
Former Grasso Landfill	MA	Agawam	Landfill	Municipal	Solar PV	1.98	Wholesale Electricity	2013	Makes the nearby, energy-intensive Hood plant more competitive in today's challenging business environment, while providing new tax revenue to Agawam.		~			~
Greenfield Solar Farm	MA	Greenfield	Landfill	Municipal	Solar PV	2	Wholesale Electricity	2012	The system is projected to save city \$250,000 in first year of operation and created 50 local jobs.	~			~	
Greenwood St. Landfill	MA	Worcester	Landfill	Municipal	Solar PV	8.1	Wholesale Electricity	2017	Created 150+ jobs, including an electrical crew of 50+ workers from the local IBEW 96; Produces 20% of city's power needs; expected energy savings of up to \$2M and revenue from energy credits in first 10 years valued at \$10M; will offset 7,475 metric tons of carbon annually, equivalent amount emitted from driving approximately 18 million miles.	~	~	~	~	
Groton Landfill	MA	Groton	Landfill	Municipal	Solar PV	2.93	Wholesale Electricity	2016	Will provide 25% of Groton Electric Light Department's required electricity during the middle of the day in the spring and fall.					~
Groveland Wells Solar	MA	Groveland	Superfund	Municipal	Solar PV	3.6	Wholesale Electricity	2013	The solar array provides power for more than 500 homes.			~		
Hartford Turnpike/ Shrewsbury Landfill	MA	Shrewsbury	Landfill	Municipal	Solar PV	3.8	Wholesale Electricity	2018	Will provide energy for 400-500 homes.			~		



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources				Job Creation	Other
Harwich Municipal Landfill	MA	Harwich	Landfill	Municipal	Solar PV	4.5	Wholesale Electricity	2014	The project is expected to save the town about \$300,000 per year.	~				
Haverhill Solar Power Project	MA	Haverhill	Brownfields	Private	Solar PV	1	Wholesale Electricity	2010	Site serves to conduct load switching with neighboring feeders, providing National Grid with additional flexibility in serving customers in this area.					~
Hill Street Landfill	MA	Norton	Landfill	Municipal	Solar PV	2	Wholesale Electricity	2016	Enough energy to power approximately 280 homes in New England and prevent the annual release of over 2,000 tons of carbon dioxide from non-renewable power plants. Created 50 construction jobs.			~	~	
Hix Bridge Road Landfill	MA	Westport	Landfill	Municipal	Solar PV	0.622	Wholesale Electricity	2019	Ameresco is leasing the land housing the solar panels from Westport and making an annual PILOT to the town.		~			
Howe Street Landfill	MA	Ashland	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2018	This installation is part of three total installations. The town entered into a 20-year PPA The installations provide more than \$250,000 in annual savings in its building portfolio. Through net metering, 100% of the energy generated is used to power town buildings and operations, offsetting total town consumption. Additionally, this project brought the town landfill back into compliance with the Massachusetts Department of Environmental Protection. The installations provide: - Annual energy savings of 2.2 million kWh - Annual CO2 emissions reduction of 1,632 metric tons - Enhanced landscaping to blend array into the natural environment and minimize the visual impact of the landfill system			×		×
Hudson/Stow Landfill Solar*	MA	Hudson	Landfill	Private	Solar PV	5	Wholesale Electricity	2017	Produces enough energy to power about 1,000 homes in the area.			~		
Hull Wind II	MA	Hull	Landfill	Municipal	Wind	1.8	Wholesale Electricity	2006	Combined, Hull Wind I (not on CL) and Hull Wind II produce approximately 11% of the town's electricity. Harvard University purchases 100% of the RECs for Hull Wind II, equal to about \$1.5 million in revenue for Hull.		~			



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources				Job Creation	Other
Hunt Road Landfill	MA	Amesbury	Landfill	Private	Solar PV	6	Wholesale Electricity	2016	Allowed this unused landfill with little development potential to produce energy, tax revenue, and local construction jobs; produces enough electricity to power approximately 800 New England homes and prevent the annual release of over 6,000 tons of carbon dioxide from non-renewable power plants; and provides the city with discounted electricity rates as well as substantial tax revenues.	V	~	~	✓	
Huntington Avenue Landfill	MA	Methuen	Landfill	Municipal	Solar PV	1.3	Wholesale Electricity	2013	Methuen will see nearly \$100,000 in energy savings per year by reducing the town's price per kWh by 40%. Under the terms of the PPA, Borrego Solar secured financing for the design, construction, and ongoing maintenance of the solar project, and will sell the power in the form of energy credits through National Grid Utility, produced by the project at \$0.085 per kilowatt-hour, roughly \$0.06 lower than the current rate.	~	V			
Indian Orchard Solar Facility	MA	Springfield	Brownfields	Municipal	Solar PV	2	Wholesale Electricity	2011	The project will generate \$400,000 in annual property tax revenue to City of Springfield.		~			
Iron Horse Park / Shaffer Landfill	MA	Billerica	Superfund	Municipal	Solar PV	5.99	Wholesale Electricity	2014	The installation provides the town with certainty and predictability with respect to the revenue stream to be generated from the subject property over its 20 year term. The 6-MW facility allows Billerica to reduce dependence on fossil fuels and gain significant long-term energy cost savings.	~		~		
Iron Horse Park Asbestos Landfill Solar	MA	Billerica	Superfund	Private	Solar PV	6.00	Wholesale Electricity	2017	Along with the other Iron Horse Park solar installations, the site will generate energy for four school systems.	~		~		
Iron Horse Park/Dow Solar	MA	Billerica	Superfund	Private	Solar PV	3.68	Wholesale Electricity	2016	The site will generate energy for four school systems and one local government through virtual net metering; will supply an average of 20% of the offtakers' electricity needs at costs below local utility rates. It will offset nearly 6.9 million pounds of carbon dioxide, the equivalent of burning more than 3.3 million pounds of coal, annually.	~		~		
Lancaster Landfill	MA	Lancaster	Landfill	Municipal	Solar PV	0.5	Wholesale Electricity	2013	Energy generated is net metered to offset municipal building electricity needs, saving the town approximately \$75,000 annually.	~				
Lee Landfill (Willow Hill Road)	MA	Lee	Landfill	Private	Solar PV	2.60	Wholesale Electricity	2017	The 20-year PPA provides long-term offtaker of electricity for developer and long-term energy price assurance for towns (project serves both Lee and Lenox, MA).	~				



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings		Environmental	Job Creation	Other
Lenox Landfill	MA	Lenox	Landfill	Municipal	Solar PV	0.748	Wholesale Electricity	2017	Lee and Lenox boards of selectmen have a plan to share a 20- year solar energy net meter-credit purchasing agreement. Lee will take 80% of the solar power generated, Lenox the remaining 20%, according to municipal officials from both communities. "The array just about covers our municipal needs," said Lee Selectman Thomas Wickham. Lee would save between \$478,000 and \$525,000 over the 20-year period on the electricity used to power the town's two public school buildings, water and wastewater treatment plants and other municipal facilities. In Lenox the wastewater treatment plant and the water treatment facility will yield a total savings of \$131,162 over the 20 years.	~				~
Lexington Landfill	MA	Lexington	Landfill	Municipal	Solar PV	1.4	Wholesale Electricity	2016	The solar facility provides the town of Lexington with credits on their electricity bills and is estimated to produce 2,770,000 kWh in its first year of production. The solar project, together with solar systems already installed on Lexington's school and library rooftops, will power 45% of the municipality's electric load.	<ul> <li>✓</li> </ul>		~		~
Ludlow Landfill	MA	Ludlow	Landfill	Municipal	Solar PV	2.7	Wholesale Electricity	2013	Without a capital expenditure from the city or its taxpayers, Ludlow can purchase the energy produced by the solar energy system at a rate of \$0.05 per kilowatt-hour, much less than the \$0.09 per kilowatt-hour charged by the local utility. Depending on the solar system's efficiency, the town of Ludlow will save approximately \$100,000-\$140,000 a year on energy bills. Ludlow signed a 20-year contract to lease 17 acres of the old town landfill. In return for leasing the land, Borrego Solar secured private funds to finance the engineering, procurement, construction, and ongoing maintenance and operation costs associated with the project.	~	~			
M.T. Sullivan Landfill	MA	Chicopee	Landfill	Private	Solar PV	2	Wholesale Electricity	2017	The solar array generates enough energy to power 400 homes in the region.			~		
Mashpee Landfill Solar	MA	Mashpee	Landfill	Municipal	Solar PV	2.1	Wholesale Electricity	2014	The total anticipated cost savings over the 25-year PPA is anticipated at over \$7 million. The system will generate sufficient electricity to offset a large portion of the electrical needs of the town at a substantial reduction in cost from current retail electricity rates. It will generate enough electricity to satisfy the needs of over 300 homes.	~		~		
Massachusetts Military Reservation (Otis)	MA	Sagamore	Superfund	Federal	Wind	4.5	Onsite Use - Green Remediation	2011	The turbines to offset electrical costs for powering numerous groundwater cleanup systems at the site.	~				~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources				Job Creation	Other
Montague Landfill Solar	MA	Montague	Landfill	Municipal	Solar PV	5.9	Wholesale Electricity	2018	As part of the project, both towns will receive energy credits offsetting their electricity costs over the next 20 years. The Town of Montague is the landlord of the newly energized solar site; the site is expected to garner tax revenues on otherwise unproductive land over the life of the project. Approximately, 118,187 tons of annual carbon dioxide offset and 16,000 number of average homes powered annually.		~	~		
Mount Tom Station	MA	Holyoke	State Brownfields	Private	Solar PV	5.76	Wholesale Electricity	2017	Enough electricity to power 1,800 homes for a year and reduce GHG emissions by 3,000 metric tons.			~		
MT Sullivan Landfill Solar*	MA	Chicopee	Landfill	Private	Solar PV	2.50	Wholesale Electricity	2017	Produces enough energy to power about 400 homes in the area.			~		
Needham Landfill	MA	Needham	Landfill	Municipal	Solar PV	3.7	Wholesale Electricity	2016	Expected to provide first year revenues from net metering (approximately \$487,000), PILOT (approximately \$93,600), and land lease (approximately \$50,000).		~			
New Bedford High School Solar	MA	New Bedford	Brownfields	Private	Solar PV	0.5	Wholesale Electricity	2012	Project will improve science education through the installation of an interactive digital "kiosk" and other tools so teachers at the High School and other schools can incorporate the solar project into their science lessons.					~
Norfolk Landfill Phase I*	MA	Norfolk	Landfill	Municipal	Solar PV	0.55	Wholesale Electricity	2012	Combined with Phase II, the panels will provide the town with a benefit of \$230-250,000 per year.	~				
Norfolk Landfill Phase II*	MA	Norfolk	Landfill	Municipal	Solar PV	1.05	Wholesale Electricity	2012	Combined with Phase I, the panels will provide the town with a benefit of \$230-250,000 per year.	~				
North Adams Landfill	MA	North Adams	Landfill	Municipal	Solar PV	3.50	Wholesale Electricity	2015	In total across this installation plus three other solar sites in the city, North Adams receives nearly 100 % of municipal power from solar. The landfill installation represents the largest portion of this (approximately 40%).					~
Northampton Landfill Solar	MA	Northampton	Landfill	Municipal	Solar PV	3.17	Wholesale Electricity	2017	Expected to produce the equivalent of 45% of the power used by municipal buildings, said Narkewicz, saving \$250,000 in city energy costs in year one, and \$7.5 million over 20 years. Equivalent of taking 444 homes off the grid, or 634 vehicles off the road.	V		~		~
Nyanza Waste Dump Superfund Site*	MA	Ashland	Superfund	Unknown	Solar PV	5.8	Wholesale Electricity	2020	The clean energy produced from the solar array will support the town of Ashland.					~

Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE Type</b>	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Oliver Street Landfill	MA	Easthampton	Landfill	Municipal	Solar PV	2.3	Wholesale Electricity	2012	The system was constructed at no cost to city. Borrego leases land for \$1 and sells Easthampton electricity. For the duration of the 10 year PPA term, Easthampton will pay \$0.06/kWh and has the option to extend the contract, purchase the solar power installation, or have it removed at year 11. The reduced cost per kWh of energy is estimated to save Easthampton over \$1.4 million dollars in 10 years.	~				
Osgood Landing Solar	MA	North Andover	State Brownfields	Private	Solar PV	6	Wholesale Electricity	2016	PPA includes a 15% discount on electricity that is estimated to reduce the town's energy bill by \$160,000 in the first year. The town will accumulate over \$6M in energy savings and PILOT revenue over life of the project.	<b>v</b>	~			
Palmer Metropolitan Airfield Solar	MA	Palmer	Brownfields	Private	Solar PV	5.9	Wholesale Electricity	2016	Town of Palmer will receive real and personal property tax revenue of approximately \$2 million over the 20-year project term; three public entities – the Town of Leicester, the Town of Spencer, and Worcester State University, will together purchase all of the net metering credits from the energy generated by the project, resulting in millions of dollars in energy savings for these entities over the 20-year term of the energy agreements. Land owner, JenJill LLC of Wilbraham, Mass., which purchased the site and paid for its cleanup, will benefit from the long-term ground lease.		~			
Pembroke Landfill Solar	MA	Pembroke	Landfill	Municipal	Solar PV	3.256	Wholesale Electricity	2017	The landfill is now generating clean renewable energy for the town.					~
Philips Lightolier Wind	MA	Fall River	Brownfields	Private	Wind	2	Wholesale Electricity	2012	Will offset the production of nearly 30,000 tons of carbon dioxide over the lifetime of the project, supporting the state's GHG reduction goals; part of Philips Lightolier's plan to create a net zero energy manufacturing facility.			~		~
Pittsfield Municipal Landfill	MA	Pittsfield	Landfill	Municipal	Solar PV	2.91	Wholesale Electricity	2017	Expected to save the city about \$140,000 annually in energy costs.	~				



Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE Type</b>	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources				Job Creation	Other
Plainville Landfill*	MA	Plainville	Landfill	Private	Solar PV	6	Wholesale Electricity	2017	The town could receive over \$2 million in new revenue from the former landfill that has sat idle for over a decade in the form of a PILOT agreement. This solar farm, in conjunction with two other solar on landfill sites (located in East Bridgewater and Randolph), are also expected to reduce carbon emissions by more than 14,000 tons, which is the equivalent of removing the impact of carbon dioxide (CO2) emissions from almost 2,000 homes.		~	~		
Prospect Street Landfill	MA	Easton	Landfill	Municipal	Solar PV	1.9	Wholesale Electricity	2014	The project will save the town approximately \$200,000 annually and nearly \$4,500,000 over the course of the 20-year contract. The system will produce the equivalent quantity of electricity consumed by 235 homes in one year.	<b>v</b>		~		
Quaboag Landfill Solar	MA	Brookfield	Landfill	Municipal	Solar PV	0.43	Wholesale Electricity	2013	The installation will earn approximately \$800,000 over 20 years for town through lease payments, PILOT, and reduced electricity costs. The electricity will power nearly all municipal functions, including schools, emergency response, street lighting and the town hall. This is equivalent to the total annual electrical usage of almost 100 average single-family homes.	~	~	~		
Raffaele Road Solar Project	MA	Plymouth	Brownfields	Private	Solar PV	5.67	Wholesale Electricity	2014	The project is creating environmental benefits – the 7,410,000 kWh of clean energy generated by this project each year is equivalent in terms of CO2 reductions to removing more than 1,000 cars from the road or preserving almost 3,000 acres of forest annually. In addition, the savings that New Bedford is expected to enjoy are substantial, amounting to more than \$10 million over the life of the project.	×		~		
Randolph Landfill Solar	MA	Randolph	Landfill	Private	Solar PV	4.8	Wholesale Electricity	2017	Project will provide PILOT revenue of about \$90,000 per year, plus lease revenues.		~			
Ravenbrook Farms Landfill	MA	North Carver	Landfill	Private	Solar PV	6.00	Wholesale Electricity	2014	Developer negotiated to allow town to collect more than \$200k in back taxes owed via added land lease payments. The town will also collect tax revenue on installation going forward.		~			

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Raynham Landfill Community Solar	MA	Raynham	Landfill	Municipal	Solar PV	3	Community Owned / Subscription	2018	Taunton Municipal Lighting Plant endeavors to embrace renewable energy as part of our portfolio. We have been increasing the solar renewable production in our territory and this was an opportunity to reuse a landfill that would otherwise have no other purpose.					~
Rehoboth Landfill (MA)*	MA	Rehoboth	Landfill	Municipal	Solar PV	2.49	Wholesale Electricity	2015	The solar array connects directly to the national electrical grid and is expected to generate approximately \$2 million in revenue for the Town of Rehoboth during a 20-year PPA.	<b>v</b>				
Re-Solve Superfund Solar	MA	Dartmouth	Superfund	Unknown	Solar PV	0.15	Onsite Use - Green Remediation	2012	System to generate 90% of electricity for the groundwater treatment system; about 186,000 kWh/yr.	~				~
Revere Solar Power Project	MA	Revere	Brownfields	Private	Solar PV	0.75	Wholesale Electricity	2010	Located next to an active substation on Railroad Street that has encountered loading issues; solar project is designed to help alleviate this excessive loading.					~
Rising Paper Solar	MA	Great Barrington	Landfill	Private	Solar PV	3.2	Wholesale Electricity	2016	Will produce enough clean energy to power the electrical needs of a local school district and the Town of Great Barrington's municipal buildings. Net economic benefit of more than \$200,000 in just the first year. Project also allows for the preservation of wetlands and riverfront buffers on the site.	~		~		
Russells Mills Road Landfill	MA	Dartmouth	Landfill	Municipal	Solar PV	1.45	Wholesale Electricity	2013	The savings generated from the landfill solar energy system are approximately \$3 million over the 20-year life of the PPA term. It generates tax revenue from the solar project as it is constructed within the town limits.	~	~			
Saugus Landfill Solar	MA	Saugus	Landfill	Municipal	Solar PV	1.66	Wholesale Electricity	2017	Projected to save the town more than \$3 million in electricity costs over 20 years, in addition to generating \$80,000 annually in additional revenue through a PILOT and land lease payments.	~	~			
Scituate Landfill	MA	Scituate	Landfill	Municipal	Solar PV	3	Wholesale Electricity	2013	The system is expected to save town \$200,000 per year from discounted energy rates. The town pays Scituate Solar \$0.084/ hour (\$0.145/hr. to National Grid). Revenue to pay for municipal building energy costs. City paid nothing up front except legal fees of approximately \$9,000. Project qualified for 1603 Treasury Grant and the SREC I program administered by the Massachusetts Department of Energy Resources.	~	✓			
Shirley Landfill	MA	Shirley	Landfill	Municipal	Solar PV	1.35	Wholesale Electricity	2017	Estimated CO2 Offset (over the life of the system) 23,279 metric tons.			~		



Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE</b> Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Silver Lake Solar Photovoltaic Facility	MA	Pittsfield	Superfund	Private	Solar PV	1.8	Wholesale Electricity	2010	The installation contributes approximately \$220,000 of annual property tax revenues to the City of Pittsfield.		~			
Simonds Rd. Landfill	MA	Williamstown	Landfill	Municipal	Solar PV	2	Wholesale Electricity	2018	Anticipated that the project will generate at least \$5 million of savings over 20 years; expected to displace 1,772 tons of CO2 annually.	~		~		
South Hadley Landfill	MA	South Hadley	Landfill	Municipal	Solar PV	0.077	Onsite Use - General	2012	Electricity generated partially offsets electrical consumption from the adjacent South Hadley Department of Public Works (~50%).					~
Stockbridge Landfill	MA	Stockbridge	Landfill	Municipal	Solar PV	0.9	Wholesale Electricity	2018	Utilizing otherwise unusable land to generate renewable power, all while saving the town about 849 metric tons of CO2 offset annually, equivalent to 182 passenger vehicles driven for one year or annual electricity usage of 127 homes. Expected savings of \$60,000 annually in electricity cost reduction and new tax revenue. Over the 20-year life of this solar PV facility, the town's projected economic benefit is upwards of \$1 million.	~	~	✓		~
Stow Brownfield Solar	MA	Stow	Brownfields	Private	Solar PV	2.5	Wholesale Electricity	2013	The project pays the Town of Stow \$12,000 per year as PILOT, plus the property taxes as determined by the assessment, an amount that now comes in at a little less than \$8,000 annually for the twelve acres.		~			
Sudbury Landfill	MA	Sudbury	Landfill	Municipal	Solar PV	1.5	Wholesale Electricity	2013	Expected to save the equivalent of 1,310 metric tons of CO2 per year.			~		
Sullivan's Ledge	MA	New Bedford	Superfund	Municipal	Solar PV	1.76	Wholesale Electricity	2014	The system is expected to save city \$2.7 million over 20 years. Used a local (MA-based) capital firm - BlueWave, for development.	~			~	
Sylvester Ray Construction & Demolition Debris Landfill*	MA	Marshfield	Landfill	Private	Solar PV	3.87	Wholesale Electricity	2013	"The town buys electricity from whoever it buys from, but we give them credit for it," O'Donnell (developer owner) said. "They pay 10 cents (for power), and they get 14 cents, so they make 4 cents per kilowatt-hour for everything being made (at the solar farm), and the value is expected to go up in the next 20 years." It is estimated the town would save \$4 million on energy costs over two decades, while collecting property taxes on the 20 acres of land where the array is being built.	V	V			

Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE Type</b>	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources				Job Creation	Other
Theophilus Smith Road Landfill	MA	Dennis	Landfill	Municipal	Solar PV	6	Wholesale Electricity	2014	The Dennis-Yarmouth School District and Dennis Water District will share approximately \$500,000 to 695,000 in annual savings from installation. The town agrees to purchase the energy at a reduced rate and sell excess to the Dennis-Yarmouth Regional School District and the Dennis Water District at a reduced rate. Clean Focus owns and operates system at no cost to town.	~				
Tisbury Landfill*	MA	Tisbury	Landfill	Municipal	Solar PV	1.2	Wholesale Electricity	2014	On an annual basis, the solar array can more than offset the electricity used for the town's municipal buildings, including the West Tisbury School. West Tisbury has estimated that it will save \$63,427 per year as a result of the solar installation. Energy generated by the installation is fed into the utility grid. In exchange, the utility lowers the energy bill for the municipal buildings.	~				
Titcomb Solar Array	MA	Amesbury	Landfill	Municipal	Solar PV	4.5	Wholesale Electricity	2019	This solar array will reduce the release of carbon dioxide and other air pollutant discharges while also producing electricity. It will also generate revenue for the city from PILOT and lease payments, as well as energy credits totaling nearly \$4 million over the next 20 years.		~	~		
W.R. Grace Solar	MA	Acton/ Concord	Superfund	Municipal	Solar PV	5.5	Wholesale Electricity	2016	Will provide the town more than \$700,000 in PILOT revenue over 20 years. Offsets approx. 4,503 metric tons of carbon dioxide per year.		~	~		
Waltham Street Landfill	MA	Maynard	Landfill	Municipal	Solar PV	1.2	Wholesale Electricity	2013	Lease payments \$2,500 per MW annually. Electricity generated by the panels goes into the regional grid; in return the utility (NSTAR) provides energy credits to the town.		~	~		
West Boylston Landfill	MA	West Boylston	Landfill	Municipal	Solar PV	1.5	Community Owned / Subscription	2017	Net savings of about \$1.8 million for the community over the life of the array.	~				
West Tisbury Landfill	MA	West Tisbury	Landfill	Municipal	Solar PV	0.884	Wholesale Electricity	2015	A 10-year PPA with extension options provides long-term energy cost assurance and savings for the town of up to \$45,000 over the first 10 years of the PPA.	~				
Westfield Landfill	MA	Westfield	Landfill	Municipal	Solar PV	2.5	Wholesale Electricity	2015	The city receives benefits from lease payments, PILOT, and operational savings. The power is purchased by the Municipal Light Board, which provides electricity to municipal facilities at a reduced rate.	<b>v</b>	~			



Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE Type</b>	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Westford St. Landfill	MA	Lowell	Landfill	Municipal	Solar PV	1.5	Wholesale Electricity	2014	The city is expected to save \$1.5-\$2.5 million a year, installed at no upfront cost to the city.	~				
Weston Landfill	MA	Weston	Landfill	Municipal	Solar PV	2.27	Wholesale Electricity	2016	The town will receive 1 net metering credit for each kilowatt- hour of electricity generated by the solar array and received by Eversource (Nstar) over the course of the 20 year lease. These credits are applied to the electric bill received by the town, thereby reducing how much money is spent on electricity used by the municipality and saving tax dollars.	~				
Wilbraham Landfill*	MA	Wilbraham	Landfill	Municipal	Solar PV	0.75	Wholesale Electricity	2016	The benefit to Town of Wilbraham from the project is \$100,000 annually for 20 years, which is enough to pay for the town's municipal energy costs each year.	~				
Williamston Landfill	MA	Williamston	Landfill	Municipal	Solar PV	1.9	Wholesale Electricity	2018	Williamstown will use energy from the array to power all of its municipal buildings and the fire district building and streetlights, as well as facilities of the regional school district. The discounted clean power will provide both savings and price stability to the town's energy budget by locking in a long-term price for electricity at less than half the price the town currently pays. The town will also receive property tax revenue from the landfill. A dashboard provides information on output and how this relates to various environmental offsets.	~	~	<b>~</b>		✓
Woburn Landfill	MA	Woburn	Landfill	Municipal	Solar PV	3.4	Wholesale Electricity	2017	Expected to generate more than \$370,000 a year in savings for the city.	~				
MD - MARYLAND														
Annapolis Renewable Energy Park	MD	Annapolis	Landfill	Municipal	Solar PV	16.8	Wholesale Electricity	2018	The city earns revenue by leasing the landfill to Annapolis Solar Park, saves money by purchasing some of the electricity at a rate less than what the city was paying and put local businesses to work on the construction of the project. More than 100 green jobs were created or will be created in the city over the next 20 years as a result of this partnership. Financial and environmental benefits to the city over the next 20 years with advancement of energy efficiency for all local government-owned buildings.		✓		✓ 	~
Former Ellicott City Landfill	MD	Ellicott City	Landfill	Municipal	Solar PV	1.2	Onsite Use - General	2011	Provides ~90% of the annual electricity needs of Worthington Elementary School; SunEdison provided solar curricula for the Howard County Board of Education to use during classroom discussions of environmental sustainability and renewable energy	<ul> <li>Image: A start of the start of</li></ul>				<b>√</b>



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Fort Detrick	MD	Frederick	Superfund	Federal	Solar PV	18.6	Onsite Use - General	2016	Expected to provide nearly \$3 million in cost avoidance over the duration of the 25-year electricity purchase agreement the Army has with the project's private developer and owner.	~				
Forty West Landfill	MD	Hagerstown	Landfill	Municipal	Solar PV	2	Wholesale Electricity	2015	Across ALL EPGSolar installations (totaling 20 MW), the County will receive more than \$375,000 a year in rent and revenue with an estimated \$100,000 in energy cost savings. (For ALL sites in the plan, not just Forty West Landfill.)	~	~			
Frederick County Landfill Solar	MD	Frederick	Landfill	Municipal	Solar PV	1.9	Wholesale Electricity	2019	Through a net metering agreement, electricity generated by the solar array is transferred to Potomac Edison's power grid. The county offsets power costs at designated county facilities through a net metering agreement. The county will have access to renewable power at a fixed rate for at least the next 20 years, under the terms of a 20-year agreement between the county and TESLA Energy. The agreement also allows the county to purchase and own Solar RECs that the system generates for at least the next six years at a reduced rate of \$22 (a savings of approximately \$32).	×	~			~
Hood's Mill Landfill	MD	Westminster	Landfill	Municipal	Solar PV	0.002929	Wholesale Electricity	2018	The project will yield a substantial amount of renewable energy, thereby reducing energy costs projected for the next 20 to 25 years. Department of Public Works staff anticipates up to 25% reduction in the County's energy bill for County facilities through these projects. A low fixed-rate of \$.077 per kilowatt hour is guaranteed by the contract through 2037 for the 13.4 megawatt hours to be supplied by the solar panels.	~				~
Panorama Landfill Solar	MD	Fort Washington	Landfill	Municipal	Solar PV	6.6	Community Owned / Subscription	2019	The project will produce enough energy to power 1,100 homes in the region. It is qualified under the Maryland Community Solar Energy Generating System program. The energy generated by the projects will directly benefit qualified residential off-takers who are situated within PEPCO Maryland's service territory.			~		×


Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Resh Road Landfill (Resh S1)	MD	Hagerstown	Landfill	Municipal	Solar PV	2.5	Wholesale Electricity	2016	The county will generate power savings and rental revenue for unused ground, as well as cover all of its electricity needs over the next 20 years with clean renewable energy.		~			~
Washington County Rubble Landfill #1	MD	Williamsport	Landfill	Municipal	Solar PV	2.5	Wholesale Electricity	2015	The county will receive more than \$375,000 a year in rent and revenue with an estimated \$100,000 in energy cost savings. (For ALL sites in the plan, not just Rubble Landfill.)	~	~			
Washington County Rubble Landfill #2	MD	Williamsport	Landfill	Municipal	Solar PV	2.5	Wholesale Electricity	2015	The county will generate power savings and rental revenue for unused ground, as well as cover all of its electricity needs over the next 20 years with clean renewable energy.		~			~
ME - MAINE														
Belfast Landfill	ME	Belfast	Landfill	Municipal	Solar PV	0.122	Wholesale Electricity	2015	The system provides nearly 20% of the electricity load for the city's 11 municipal buildings. It is expected to generate \$21,000 a year and pay for itself within 15 years.	<ul> <li>✓</li> </ul>				
Brunswick Landing (Biomass)	ME	Brunswick	Superfund	Private	Biomass	1	Wholesale Electricity	2014	The facility has the capacity to generate up to 1 megawatt of electricity; almost 33% of current electrical requirement at Brunswick Landing. Power plant will greatly reduce or eliminate electricity delivered over CMP's distribution grid to the campus. PPA with VGV will allow MRRA to continue to offer a below-market electricity rate (currently 11.5 cents per kilowatt hour). The Digester will help eliminate organic waste by re-using and recycling it.	~		×		~
Brunswick Landing (Solar)	ME	Brunswick	Superfund	Private	Solar PV	1.50	Wholesale Electricity	2018	A solar array at Brunswick Landing will power 13% of the energy needs for the self-contained micro-grid supplying energy to almost 2 million square feet of commercial and industrial space at the site of Brunswick's former Naval air base. The array will produce roughly 1,970,780 kilowatt-hours or 1.9 megawatt hours of electricity each year, offsetting the equivalent of over 3.4 million miles driven in a gas-powered car.			~		~
Drowne Road Landfill Solar	ME	Cumberland	Landfill	Municipal	Solar PV	0.4747	Wholesale Electricity	2019	The solar array is expected to produce 600,000 kilowatt hours of electricity each year. It was built at no upfront cost to the town through a PPA. ReVision Energy expects the town to see savings of roughly \$20,000 in the first year. The solar array will be used to offset electric use in the town's municipal buildings. They expect savings of more than \$100,000 over the next 10 years, and eventually over \$1,000,000.	~		~		

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings		Job Creation	Other
Eliot Landfill Solar	ME	Eliot	Landfill	Municipal	Solar PV	0.13	Wholesale Electricity	2019	The array was installed under a Plan Purchase Agreement where the contractor installs and owns the array until the town purchases it. The price will be determined based on Fair Market Value which is anticipated to be around \$196,000. This solar array provides an opportunity to create clean, carbon free power from land which could not otherwise be used for development or other uses. The power generated by this array will be used to offset (about 95%) municipal CMP accounts across the town of Eliot providing long term cost savings and carbon footprint reduction. Each year the landfill solar array is expected to produce 171,144 kWh of electricity offsetting over 180,000 pounds of carbon pollution.		~		~
Grandyoats	ME	Hiram	Brownfields	Private	Solar PV	-	Onsite Use - General	2016	The solar panels power everything at the facility including computers and ovens, thus moving GrandyOats toward their goal of being a net-zero carbon emissions facility. The solar array generates more than 95,000 kWh of clean energy per year. Powering the facility with clean energy instead of fossil fuels eliminates the amount of greenhouse gas emissions generated by driving an average passenger vehicle for 160,000 miles.	~	~		
Highland Ave. Landfill	ME	South Portland	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2017	Will provide roughly 12% of the electricity used by South Portland's municipal and school buildings.	~			
Portland Landfill Solar	ME	Portland	Landfill	Municipal	Solar PV	0.66	Wholesale Electricity	2018	The array will produce 1.2 million kWh per year or about the same as City Hall / Merrill Auditorium uses annually.				~
Tremont Landfill Solar	ME	Tremont	Landfill	Municipal	Solar PV	0.153	Wholesale Electricity	2019	The town used to pay between \$ 0.17 and \$ 0.18 per kWh of electricity. They now pay \$ 0.125 per kWh for solar electricity, resulting in instant savings.	~			
Waldoboro Transfer Station Landfill	ME	Waldoboro	Landfill	Municipal	Solar PV	0.11	Wholesale Electricity	2018	The project will save the town \$380,000 over the life of the system. Sundog Solar will install and own the solar system and sell power to the Town of Waldoboro for a lower rate than it currently pays.	<b>v</b>			



Site/Project Name MI - MISSISSIPPI	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings	Revenue	Environmental	Job Creation	Other
Burcham Park Landfill	MI	East Lansing	Landfill	Municipal	Solar PV	0.3	Community Owned / Subscription	2018	Residential and commercial electric customers, including the City of East Lansing and the Capital Area Transportation Authority, signed a 25-year lease and paid \$399 per panel to receive an annual credit of around \$26 per panel on their electric utility bill for the solar power produced. In turn, they'll get a credit on their electric bill for the energy produced by those panels. Each lessee will receive a proportional percentage of utility bill credit that is equal to the amount of energy their lease produces. By using renewable resources to produce electricity, the solar park becomes eligible for RECs. "This solar park will make the Lansing area more sustainable and represents another step in East Lansing's Climate Sustainability Plan to transition to cleaner, more renewable energy options. Best of all, the city – and many who surround it economically since subscribers, including the city government, will save money on their utility bills" says Pivot Energy's CEO, Rick Hunter. The community solar project cost \$600,000 and the solar panels are capable of producing enough electricity each year to power about 60 homes.	×		*		×
Coldwater Board of Public Utilities Solar Field Park	MI	Coldwater	Brownfields	Municipal	Solar PV	1.3	Wholesale Electricity	2018	This project presented a unique opportunity for Coldwater to turn a Brownfield site into a Brightfield site.					~
Eaton Rapids Landfill*	MI	Hamlin Township	Landfill	Municipal	Solar PV	0.535	Wholesale Electricity	2014	Eaton Rapids Solar LLC will own and operate the facility, which is expected to generate 658MWh of solar generated electricity annually for the City Eaton Rapids Electrical Utility. The lower cost power will be purchased by The City of Eaton Rapids and distributed to residential and commercial ratepayers in the community. The project is also expected to generate enough power to meet one-third of the community's renewable energy requirements under the State's Renewable Portfolio Standard regulations.	✓				V

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings		Job Creation	Other
MN - MINNESOTA		1											
Hutchinson Landfill	MN	Hutchinson	Landfill	Municipal	Solar PV	0.4	Onsite Use - General	2015	Used local companies for the installation (tenKSolar, Bloomington-based solar company who supplied the hardware and 975 panels and Hunt Electric - the contractor that installed the panels). Generates 15% of power needed for WWTP (next door).				~
Lindenfelser Landfill*	MN	St. Michael	Landfill	Municipal	Solar PV	-	Onsite Use - General	2016	The solar panels are being used to provide power for equipment set up at the sites to collect the methane gas and leachate produced by decomposing fill.				~
Seneca Community Solar Garden	MN	Eagan	Landfill	Municipal	Solar PV	1	Community Owned / Subscription	2018	The solar garden will produce just under 1 megawatt of electricity – the equivalent of powering about 164 homes.		~		
Washington County Landfill (MN)	MN	Lake Elmo	Superfund	Municipal	Solar PV	0.04	Onsite Use - General	2016	MPCA constructed a solar energy system on the landfill to supply energy for ongoing operation of the leachate and gas collection systems.				~
MO - MISSOURI													
Busy Bee's Laundry	MO	Rolla	Brownfields	Private	Solar PV	0.56	Onsite Use - Green Remediation	2011	System installed to produce electricity needed for operating one 400-watt surface-mounted piston pump. Extracted more than 1,800 gallon of groundwater during the first four weeks of operation, at an average rate of 100-160 gallons per day, for ex situ treatment. The PV system is supplying an energy quantity within the range predicted in the project design phase.	<ul> <li>✓</li> </ul>	~		~
MT - MONTANA													
Zortman-Landusky Mine	MT	N/A	Mine Lands	Federal/ Municipal	Wind	0.225	Onsite Use - Green Remediation	2012	Wind turbine offsets some of the \$300,000 in annual power costs for long-term water treatment and monitoring at the site.	~			~
NC - NORTH CAROLINA													
Evergreen Packaging Landfill	NC	Haywood County	Landfill	Private	Solar PV	0.55	Wholesale Electricity	2010	Developer savings on land lease via 20-year agreement at \$1/ year.				~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
NC State University - Agricultural Pesticide Landfill	NC	Raleigh	Superfund	University	Solar PV	0.075	Wholesale Electricity	2007	DOE Technology Demonstration Project. The electricity generated is sold to Progress Energy under an avoided-cost contract and the RECs, for the first five years of operation, were sold to NC GreenPower. This project won a prestigious US Department of Energy "Brownfields to Brightfields" Technology Demonstration Grant.		~			~
ReVenture - Biomass	NC	Charlotte	Superfund	Private	Biomass	3.6	Unknown	2015	The first 20 megawatts of power from the plant to qualify for triple credits.		~			
ND - NORTH DAKOTA														
Arsenic Trioxide Site	ND	Lidgerwood, Wyndmere, Milnor and Hankinson	Superfund	Municipal	Geothermal	-	Onsite Use - General	2011	To ensure continued groundwater treatment and distribution, even during power outages, a geothermal heating and cooling system was installed to power the headquarters building where the District manages remote sensing of the system. This cost- effective approach reduces the facility's use of fossil fuels and lowers operation and maintenance costs.			~		~
NE - NEBRASKA														
Former Nebraska Ordnance Plant	NE	Mead	Superfund	Private	Wind	0.01	Onsite Use - Green Remediation	2004	Wind turbine provides sufficient renewable energy for continued trichloroethene removal and explosives destruction by the aboveground treatment system during grid inter-tie operation. Provides electricity cost savings expected to total more than \$40,000 over the next 15 years of treatment, based on an electricity rate of \$0.0546/kWh at the time of wind turbine startup. Reduces consumption of utility electricity by 26%. Decreases CO2 emissions by 24-32% during off-grid operation of the system's 230-volt submersible pump. Returns surplus electricity to the grid for other consumer use. Provides educational opportunities for Missouri University of Science and Technology students evaluating renewable energy, remediation, and electronic system technologies.	✓		~		~
NH - NEW HAMPSHIRE														
Milton Landfill Solar Garden	NH	Milton	Landfill	Municipal	Solar PV	1	Community Owned / Subscription	2016	Community solar model allows those who can't otherwise install solar to have access to solar energy; town has signed PPA, which provides energy cost savings.	~				~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings	Revenue	Environmental	Job Creation	Other
NJ - NEW JERSEY														
Cinnaminson Landfill Solar	LΝ	Cinnaminson	Superfund	Municipal	Solar PV	13.00	Wholesale Electricity	2019	The array occupies 25 acres of reclaimed Superfund landfill space in Cinnaminson, NJ and will generate enough electricity to power more than 2,000 average-size New Jersey homes annually. The Cinnaminson Solar Farm is the 33rd Solar 4 All project, with six built on landfill sites and four built on brownfield sites.			~		~
American Cyanamid Co	ι	Bridgewater	Superfund	Various	Solar PV	1.6	Onsite Use - General	2013	The solar system, will produce an expected 1,140,000 kWh annually. The PV power is connected to the site's utility meter and is expected to supplement 88% of the consumption used at the ballpark. Some environmental benefits equivalent to the 1,141,510 kWh annually can be described as follows: -805 Metric Tons of CO2 -Annual greenhouse gas emissions from 168 passenger vehicles -CO2 emissions from 90,291 gallons of gasoline consumed -CO2 emissions from the electricity use of 131 homes for one year -Carbon sequestered annually by 660 acres of U.S. forests -CO2 emissions from burning 3.5 railcars' worth of coal	*		×		
Bed Bath and Beyond Solar (Port Reading NJ)	LΝ	Port Reading	State Brownfields	Private	Solar PV	2.1	Rooftop	2011	To date, the Bed Bath & Beyond 41 SunPower® systems have generated over 125 million kilowatt hours (kWh) of clean, solar energy, offsetting over 88,000 metric tons of carbon dioxide emissions. This is equivalent to the carbon sequestered by 1.4 million tree seedlings grown for 10 years.			~		
Bernards Township Landfill	NJ	Bernards Township	Landfill	Municipal	Solar PV	3.68	Wholesale Electricity	2016	Will generate more than \$500,000 in revenue for the town via land lease and energy cost savings	~	~			
Brick Township Landfill	ΝJ	Brick Township	Superfund	Municipal	Solar PV	7	Wholesale Electricity	2014	The township estimates that the solar array will save about \$13 million through discounted energy prices over the course of 15 years.	~				
Campbell's Soup #1	NJ	Camden	Brownfields	Private	Solar PV	1.74	Wholesale Electricity	2017	Both Campbell's Soup project have a fixed PPA rate is currently lower than the cost of traditional electricity for Campbell and provides the company with long-term visibility into this portion of its electricity costs.	<ul> <li>✓</li> </ul>				



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Campbell's Soup #2	IJ	Camden	Brownfields	Private	Solar PV	2.66	Wholesale Electricity	2017	Both Campbell's Soup project have a fixed PPA rate is currently lower than the cost of traditional electricity for Campbell and provides the company with long-term visibility into this portion of its electricity costs.	~				
Clean Harbors	NJ	Bridgeport	Landfill	Private	Solar PV	1.5	Onsite Use - Green Remediation	2011	The system reduces the \$250,000 annual electric bill for cleanup by 90%. The revenue from the solar installation will fund continued groundwater treatment.	~				~
Diamond Chemical Co. Solar	NJ	East Rutherford	State Brownfields	Private	Solar PV	1.47	Onsite Use - General	2013	Provides a partial source of power for operations. The use of solar energy lowers Diamond's energy costs, which saves money and enhances Diamond's competitiveness.					~
Edgeboro Landfill	NJ	East Brunswick	Landfill	Municipal	Solar PV	4.3	Wholesale Electricity	2011	Installation of solar panels utilized landfill surface to create green energy for beneficial use that supplement the energy generated by the LFG production.					~
FedEx Ground Distribution Hub	NJ	Woodbridge	Brownfields	Private	Solar PV	2.42	Rooftop	2009	Generates 30% of the hub's electricity needs; annual reduction of approximately 1,867 metric tons of CO2 emissions.			~		~
Fort Dix Landfill Solar	NJ	Pemberton Township	Superfund	Federal	Solar PV	16.5	Wholesale Electricity	2017	Will produce enough energy to power 1,500 homes, reducing more than 15,000 metric tons of carbon dioxide emissionsthe equivalent of removing 3,000 cars from the road.			~		
Goya Foods Inc.	NJ	Jersey City	State Brownfields	Unknown	Solar PV	3.45	Rooftop	2015	Generates over 70% of the building's energy supply and provide a net zero carbon foot-print.			~		~
Hackensack Solar Farm	NJ	Hackensack	Brownfields	Private	Solar PV	1.06	Wholesale Electricity	2012	Created construction and permanent jobs (number not specified).				~	
Handson Avenue Landfill*	NJ	Egg Harbor	Superfund	Private	Solar PV	10.66	Wholesale Electricity	2016	The developer has a 15-year lease agreement and two five-year extensions optional along with an option to buy from the landfill owner.		~			

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Highland Park Solar	ΝJ	Highland Park	Landfill	Private	Solar PV	0.64	Wholesale Electricity	2020	The Highland Park Solar Storage System will combine a 1,764 panel, 605 kilowatt-dc solar farm with 2,000 kilowatt-hour Tesla batteries. The solar panels are expected to provide enough electricity to power about 100 homes annually and also charge the batteries, which will be used to lessen voltage fluctuations that are inherent to grid connected solar systems due primarily to issues like intermittent cloud cover. The learnings from the Highland Park Solar Storage System will ultimately enable better integration of renewable energy onto the electric grid, which will allow for even more solar energy projects in New Jersey and better grid reliability.			~		Image: A start of the start
Industrial Land Reclaiming Landfill	NJ	Edison	Landfill	Private	Solar PV	7.75	Wholesale Electricity	2017	Adds to state's renewable energy resources without reducing the state's open space.			~		~
Jersey Gardens Mall Solar #1	IJ	Elizabeth	Landfill	Private	Solar PV	2.00	Rooftop	2012	Generates approximately the amount of power required for 564 New Jersey homes. It is expected to generate the equivalent of 11% of the mall's electrical demand. The loan can be re-paid using SRECs generated by the solar system.		~	~		~
Jersey Gardens Mall Solar #2	NJ	Elizabeth	Landfill	Private	Solar PV	2.8	Rooftop	2012	Generates approximately the amount of power required for 564 New Jersey homes. It is expected to generate the equivalent of 11% of the mall's electrical demand. The loan can be re-paid using SRECs generated by the solar system.		~	~		
Kearny Landfill*	NJ	Kearny	Landfill	Municipal	Solar PV	3.00	Wholesale Electricity	2012	The array has enough photovoltaic cells to power up between 450 and 675 single-family homes.			~		
Kinsley Landfill	NJ	Deptford Township	Landfill	Private	Solar PV	11.18	Wholesale Electricity	2014	Transformed 35 acres of unused landfill into solar field.			~		
L&D Landfill	NJ	Eastampton, Lumberton, and Mount Holly	Superfund	Private	Solar PV	12.93	Wholesale Electricity	2016	The system created 190 construction jobs. It also generates enough electricity to power 2,000 average New Jersey homes annually.			~	~	
Linden Solar Farm	NJ	Linden	Brownfields	Private	Solar PV	3.2	Wholesale Electricity	2011	Created construction and permanent jobs (number not specified).				~	
Macy's Corporate Services Solar	NJ	Edison	State Brownfields	Private	Solar PV	1.06	Rooftop	2012	The solar array supports Macy's energy independence and helps the company to operate more efficiently.					~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources				Job Creation	Other
Matrix Industrial Site Solar	ΝJ	Perth Amboy	State Brownfields	Private	Solar PV	1.17	Rooftop	2011	The development of the Matrix Solar Project was a result of a partnership with PSE&G to help them achieve their 80 MW program goals. They will produce enough solar electricity to power about 470 average-size homes.			~		~
Mullica Hill Cold Storage Solar	NJ	Mullica Hill	State Brownfields	Private	Solar PV	2.67	Onsite Use - General	2016	The solar field at Mullica Hill Cold Storage will provide the facility with clean, green, low-cost energy. The state-of-the-art system monitors and adjusts the orientation of the solar arrays to maximize energy generation for Mullica Hill Cold Storage.			~		~
Northport Industrial Center Solar	LΛ	Elizabeth	State Brownfields	Private	Solar PV	1.25	Rooftop	2012	The project was financed in part by the PSE&G Solar Loan Program, which typically helps finance about 50% of a solar system's total cost and accepts the SRECs that the system generates as payment for the loan. Renewvia Energy owns and operates the Northport solar project and sells power using PPAs with the building's tenants. The solar system is expected to generate more than 1,500 MWh of electricity annually and IDI's tenants, Shipco Transport and Exel, Inc. expect to save at least \$50,000 per year on their electricity bills. Because of Renewvia's unique structure, both of IDI's tenants benefit from the one net- metered system, and do so without the long-term commitments typical of PPA-backed projects. The system's annual carbon dioxide offset, a reduction in emissions of carbon dioxide or greenhouse gases, is expected to total 247 tons and over a 25-year period will reach 12,630 tons. That is the equivalent of annually removing 98 automobiles from the road or 1.2 million miles not driven, and equal to planting 122 acres of pine trees.	*		×		~
Owens Corning Landfill	NJ	Gloucester Township	Landfill	Private	Solar PV	3	Wholesale Electricity	2017	Will bring in an additional \$830,000 in revenue for Gloucester Township, coming from lease payments made by Marina Energy.		~			
Park Elementary School Solar	NJ	Newark	State Brownfields	Municipal	Solar PV	0.51	Rooftop	2011	Developing a green curriculum for students.					~
Parklands Solar Farm	NJ	Bordentown Township	Landfill	Private	Solar PV	10.14	Wholesale Electricity	2015	PSE&G estimates that at the height of construction, there were approximately 100 people onsite working on the project in a range of jobs, including electricians, engineers, heavy equipment operators, ironworkers, laborers, and truck drivers.				~	
Paulsboro Terminal Landfill	NJ	Paulsboro	Brownfields	Private	Solar PV	0.276	Onsite Use - Green Remediation	2002	Solar to generate 350,000 kWh/year and will power approximately 30% of demand for remediation of the terminal. Reduction of CO2 gases by 571,000 pounds per year.			~		~

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources				Job Creation	Other
Pennsauken Brownfield Solar	NJ	Pennsauken	Brownfields	Private	Solar PV	15.2	Wholesale Electricity	2019	The solar panels generate enough electricity to power more than 2,500 homes annually.			~		
Pennsauken Landfill Renewable Energy Park- Solar	NJ	Pennsauken	Landfill	Municipal	Solar PV	2.6	Onsite Use - General	2008	All power from the installation sold to Aluminum Shapes aluminum company.					~
Picatinny Burning Grounds Solar	NJ	Jefferson and Rockaway Townships	Superfund	Federal	Solar PV	0.8	Onsite Use - General	2016	Provides base with major energy cost savings as well as an on-base, secure, and reliable source of energy. Will save Army approximately \$56,531 annually.	~				~
Price Landfill*	NJ	Egg Harbor Township	Superfund	Private	Solar PV	4.2	Unknown	Unknown	Under the agreement, the township will not foreclose on the property, while the developer for the project, will pay back more than \$290,000 in back taxes and interest.		~			
Princeton Landfill Solar	NJ	Princeton	Landfill	Municipal	Solar PV	2.7	Wholesale Electricity	2017	Solar energy is sold under a long-term PPA to Stony Brook Regional Sewerage Authority at a reduced rate, providing substantial savings to Stony Brook and its customers. Princeton receives the benefits of land lease payments in exchange for hosting the facility. Princeton is expected to realize over \$455,000 from lease payments while Stony Brook is expected to realize more than \$2.4 million in energy savings.	~	<ul> <li>✓</li> </ul>			
Royal Wine Corporation Solar	NJ	Bayonne	State Brownfields	Unknown	Solar PV	1.15	Rooftop	2012	RWC will be utilizing a federal incentive program afforded by the American Recovery Act that allows a 30% federal grant on the project. In addition to this program, Royal Wine will participate in the New Jersey Clean Energy Program allowing companies to earn Solar RECs. The system that was installed is estimated to reduce the release of over 20,000 metric tons of carbon dioxide over the 20 year life expectancy of the project, or the equivalent to one of the following: More than 3,500 passenger cars not driven; 2.0 million gallons of gasoline not burned; 42,000 barrels of oil not consumed; 2,200 households' electricity use; 46,000 tree seedlings grown; or 200 acres of forest preserved from deforestation.		×	~		
Schering Corporation Solar	NJ	Summit	RCRA	Private	Solar PV	1.65	Rooftop	2009	Will be able to use the clean energy supplied by the solar panels to meet about 12% of its peak energy needs.					~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Silver Lake Solar Farm	NJ	Edison	Brownfields	Private	Solar PV	2.02	Wholesale Electricity	2010	PSE&G used a NJ contractor to build Silver Lake Solar Farm.				~	
South Brunswick Landfill Solar	NJ	South Brunswick	Superfund	Private	Solar PV	13	Wholesale Electricity	2018	Reduces CO2 emissions that would otherwise be generated by 1,800 homes.			~		
Stafford Park Solar Farm	NJ	Stafford Township	Landfill	Private	Solar PV	6	Onsite Use - General	2011	"This model green energy project will create jobs and clean energy, and is consistent with Governor Christie's commitment to developing more solar projects on landfills," Commissioner Martin said.			~	~	
Tinton Falls Solar	NJ	Tinton Falls	Mine Lands	Private	Solar PV	20	Wholesale Electricity	2013	Provided "hundreds" of highly skilled union and professional jobs during construction.				~	
Town of Livingston Municipal Complex Solar	IJ	Livingston	State Brownfields	Municipal	Solar PV	0.05	Rooftop	2013	The solar panels allow the town to create their own energy, making the town more self-reliant, in addition to cutting down on the amount of pollution and greenhouse gasses produced.			~		~
Trenton Solar Farm	NJ	Trenton	Brownfields	Private	Solar PV	1.3	Wholesale Electricity	2010	Creation of green jobs.				~	
Wakefern Food Corporation Solar	NJ	Keasbey	State Brownfields	Private	Solar PV	2.38	Rooftop	2012	Will supply power to a refrigerated warehouse, helping lower Wakefern's long-term electricity costs and its greenhouse gas emissions. eliminating 2,000 metric tons of carbon-equivalent emissions from the atmosphere. This equates to removing the carbon dioxide emissions produced by approximately 390 vehicles. It is estimated that up to 35 jobs will be created as a result of this project.			✓	~	~
Welsbach & General Gas Mantle (Camden Radiation)	NJ	Camden and Gloucester	Superfund	Private	Solar PV	9	Rooftop	2011	The system has the capacity to produce 9.0 MW of electricity – enough to power more than 1,500 homes. It will generate the equivalent of up to 80% of the Terminal's power demand. The system is expected to offset more than 8,100 tons of carbon dioxide, approximately the same amount that would be offset by planting 400,000 trees or removing 1,200 cars from the road.			~		
White Rose Foods Solar	NJ	Carteret	State Brownfields	Private	Solar PV	4.9	Rooftop	2012	Designed to supply 100% of the electricity needs at the grocer's dry warehouse facility and will displace approximately 2,400 metric tons of CO2 from the environment annually. The building that the facility is built on is owned by KTR Carteret and 380 Middlesex Solar LLC has a lease agreement with the owner.		~	~		~



Site/Project Name NM - NEW MEXICO	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Chevron Questa Project	NM	Questa	Superfund	Private	Solar PV	1	Wholesale Electricity	2011	The village of Questa has seen economic benefits from the project. Chevron worked with several local companies, adding close to \$3 million to the local economy and an additional \$2.5 million with other contractors in the New Mexico area.				~	~
Emcore Eubank Landfill	NM	Albuquerque	Brownfields	Municipal	Solar PV	2	Onsite Use - General	2013	Project development employed up to 16 engineers at various stages, over a dozen electrical contractors, over 30 construction workers, laborers, equipment operators and truck drivers. Additional contractors included UL Engineers and Inspectors, and labor for fencing/signs and electrical enclosures made locally. The solar farm which will supply approximately 20% of the power requirements for EMCORE's Albuquerque facilities.				~	~
NV - NEVADA														
Nellis AFB Solar Array II Generating Station	NV	Las Vegas	RCRA	Federal	Solar PV	15	Onsite Use - General	2016	Created ~150 jobs for site installation and NV Energy upgrades; new substation and distribution lines help provide system redundancy and protect AFB against power vulnerabilities; expected to provide emissions reductions of 27,000 tons annually.			✓	~	~
Nellis AFB Solar Facility Site I	NV	Las Vegas	RCRA	Federal	Solar PV	13.20	Onsite Use - General	2007	The system saves the USAF an estimated \$1 million annually.	~				
NY - NEW YORK														
Lawrence Aviation Industries Site Geothermal	NY	Port Jefferson Station	Superfund	Unknown	Geothermal	0.05	Onsite Use - General	2011	Uses onsite geothermal energy to condition interior air of both groundwater treatment plants. At each building, the extracted groundwater is immediately routed to the heat exchanger from which heated or cooled air (during winter or summer seasons, respectively) is transferred to the building ductwork at an average rate of 600 standard cubic feet per minute. This and other measures at the site offset an estimated 4.1 to 4.8 metric tons of carbon dioxide (equivalent) associated with each plant annually through use of renewable, geothermal energy.			~		V
Accabonac Solar Farm	NY	East Hampton	Landfill	Municipal	Solar PV	1.1	Wholesale Electricity	2019	The system was built and operates at no cost to the town, through a 20 year fixed PPA. The town receives annual lease payments from the developer for the land.		~			
Bethlehem Steel Sun	NY	Lackawanna	RCRA	Private	Solar PV	4	Wholesale Electricity	2014	The solar farm is expected to produce enough electricity for 1,600 single-family homes.			~		



Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE</b> Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Bethlehem Steel Sun Site 2	NY	Lackawanna	Superfund	Private	Solar PV	9	Wholesale Electricity	Unknown	The 26,000 panels being installed here are sitting atop otherwise nuisance land that is undevelopable and providing power to some universities in the WNY area.					~
Bethlehem Steel Winds I	NY	Hamburg / Lackawanna	Superfund/ RCRA	Private	Wind	20	Wholesale Electricity	2007	Combined with Steel Winds II, the project created approximately \$190,000 in annual tax revenues for local communities and school districts. Created five permanent green jobs and 140 construction jobs in an area with high unemployment.		~		~	
Bethlehem Steel Winds II	NY	Hamburg / Lackawanna	Superfund/ RCRA	Private	Wind	15	Wholesale Electricity	2012	Combined with Steel Winds I, the project created approximately \$190,000 in annual tax revenues for local communities and school districts. Created five permanent green jobs and 140 construction jobs in an area with high unemployment.		~		~	
Blydenburgh Landfill Solar I	NY	Hauppauge	Landfill	Municipal	Solar PV	0.05	Wholesale Electricity	2011	Used an estimated 30 skilled craftsman on the job. Solar panels are "Buy America Act" qualified				~	~
Blydenburgh Landfill Solar II	NY	Hauppauge	Landfill	Municipal	Solar PV	2.25	Wholesale Electricity	2018	Agilitas Energy is leasing two closed landfills from the Town of Islip in Holbrook and Hauppauge for nearly \$120,000 a year. The solar arrays are expected to generate enough electricity annually to power over 5,000 homes. The electricity generated from the solar arrays will be sold to PSEG Long Island, the transmission and distribution system operator of Long Island Power Authority, to provide clean energy for local residents under a 20-year PPA as part of the Feed-in-Tariff program.		~	~		×
Clifton Park Landfill	NY	Clifton Park	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2017	Energy generated is estimated to be the equivalent of 90% of the town's energy usage; the town will realize savings via remote net metering credits for this generation (town source)	~	~			
Dennings Point Landfill Solar	NY	Beacon	Landfill	Municipal	Solar PV	2	Wholesale Electricity	2018	Savings to the city based on RFP assumptions is around \$140,000 per year	~				
Emerson Street Landfill	NY	Rochester	Landfill	Municipal	Solar PV	2.60	Wholesale Electricity	2017	Under net metering, the city will receive a credit for the quantity of electricity generated each month. The credit amount is greater than the PPA rate, thus saving money for the city. It is anticipated that the city will realize savings of at least \$80,000 per year, with total cost savings of over \$2 million over the 25-year term of the PPA. Expected to avoid GHG emissions from approx. 500 passenger vehicles annually.	×		~		

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings		Environmental	Job Creation	Other
Former Ferdula Landfill	NY	Frankfurt	Landfill	Unknown	Wind	-	Onsite Use - Green Remediation	1998	Avoids air emissions associated with consumption of grid electricity during soil treatment. Capitalizes on wind intermittency to provide the pulsed effect that is typically effective in venting operations. Recovered \$14,000 in capital/ installation costs for the wind system within one year due to avoided electricity. Accrues annual O&M costs below \$500, in contrast to potential \$75,000 for a conventional soil vapor extraction (SVE) system.			~		✓
Homeridae Project	NY	Olean	State Brownfields	Unknown	Solar PV	4.07	Wholesale Electricity	2019	This project is expected to reduce GHGs by up to 72,900 metric tons over the life of the underlying projects.			~		
Honeywell Water Treatment Plant	NY	Camillus	Other	Private	Solar PV	1.5	Onsite Use - Green Remediation	2016	Solar panels provide electric power for Honeywell's Pump Station in Camillus and 100% renewable power for air monitoring equipment.					~
Hoosick Falls Solar Garden	NY	Village of Hoosick Falls	Landfill	Municipal	Solar PV	0.592	Wholesale Electricity	2015	In conjunction with the other structure-mounted installations on village-owned buildings, installation will save the Village \$40,000 in the first full year of operation, and over \$1,300,000 over 20 years.	~				
Kings Park Solar Project	NY	Smithtown	Landfill	Municipal	Solar PV	4	Wholesale Electricity	2019	The project will provide renewable energy to customers under a 20-year PPA. It effectively avoids the use of approximately 4,500 metric tons per year of carbon dioxide, the equivalent of removing more than 800 cars from the road. Construction of the project created approximately 50 jobs, employing mainly local labor. The project will create an ongoing economic benefit for the region, including an estimated \$800,000 in additional revenue for Smithtown over its first 20 years in operations.		×	~	~	V
Lincoln Ave. Landfill Solar	NY	Holbrook	Landfill	Municipal	Solar PV	3.024	Wholesale Electricity	2018	The electricity generated from the solar arrays will be sold to PSEG Long Island, the transmission and distribution system operator of Long Island Power Authority, to provide clean energy for local residents under a 20-year PPA as part of the Feed-in-Tariff program.					~
Long Island Solar Farm at Brookhaven National Laboratory	NY	Upton	Superfund	Federal	Solar PV	32	Wholesale Electricity	2011	Created 200 plus full time equivalent jobs during construction, 2 full-time operational jobs. The system also provides price stability for electricity customers of Long Island Public Authority.				~	~



Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE Type</b>	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Madison County Agriculture and Renewable Energy Park	NY	Lincoln	Landfill	Municipal	Solar PV	0.05	Onsite Use - General	2011	Produces enough energy to offset 50% of the material recycling facility's demand. Low cost land. Improvements are taxable and jobs were created. Any excess-electricity generated through the solar modules will be net-metered to the grid. It is estimated that the 50kW system will generate approximately 50,000 kWh power year; offsetting existing electric demand at the recycling facility.		~		✓	~
Madison County Landfill (Canastota)	NY	Canastota	Landfill	Municipal	Solar PV	0.05	Onsite Use - General	2014	Powers the recycling building at the landfill.					~
Olean Gateway "Solean"	NY	Olean	State Brownfields	Private	Solar PV	4	Wholesale Electricity	2017	Through arrangement with National Grid and Olean Gateway LLC, St. Bonaventure University will save an estimated \$100,000 or more a year on its electric bill based on credits from the solar installation. The solar will also reduce the university's carbon footprint.	V		~		
Olean Gateway "Solean" West	NY	Olean	State Brownfields	Private	Solar PV	1.5	Wholesale Electricity	2016	Power sold to Olean General Hospital.					~
PatterSun NY #1	NY	Patterson	Landfill	Municipal	Solar PV	0.942	Wholesale Electricity	2015	Sells power via remote net metering to Trinity Pawling High School under a long term agreement.					~
Saugerties Town Landfill	NY	Saugerties	Landfill	Municipal	Solar PV	2.8	Community Owned / Subscription	2020	The Town of Saugerties will purchase 40% of the project's total energy output, according to Town Supervisor Fred Costello Jr. Approximately 800,000 kilowatts of the town's cut will power 80% of town facilities and the savings will ultimately extend to taxpayers. The remainder of the energy produced will be sold to an estimated 150 Saugerties homes and businesses. The company has signed a 25-year lease with the town; the lease agreement costs the company \$30,000 annually and \$15,000 of taxes per year from the project will go toward the county, town and local school system. Residents who switch to energy produced by the solar farm will have guaranteed savings — at least 10% savings on their energy bill.	✓				
Tonawanda Landfill	NY	Tonawanda	Landfill	Municipal	Solar PV	2.6	Wholesale Electricity	2019	The system covers about ten acres and will produce about 2.6 megawatts of electricity, enough to power about 450 homes. Every kilowatt generated will be sold to offset electricity costs for municipal facilities. During the first year of operation the town should save about \$80,000.	~		~		

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
Tonawanda Landfill (Wales Avenue)*	NY	Tonawanda	Landfill	Unknown	Solar PV	1.1	Wholesale Electricity	2019	The arrays (installed at the site of the Tonawanda Landfill and on municipal owned buildings), will bring energy costs down for municipal buildings and operations throughout Tonawanda. "The benefits from this project, both fiscal and environmental, are substantial," said Dan Montante, president of Montante Solar. "Not only will the power provided from these panels bring the city's electricity costs down (the arrays will offset upwards of 85% of the city's energy usage), it will also stabilize those energy costs, which can otherwise be unpredictable."	~		×		
Troy Landfill Solar 1	NY	Troy	Landfill	Municipal	Solar PV	0.6	Wholesale Electricity	2018	City officials say will provide about 20% of Troy's municipal energy needs while helping the city save an estimated \$2 million over the next 10 years. Projects like this support job creation and spur local investments all across the state.	~			V	~
Ulster County Landfill Solar	NY	Ulster	Landfill	Municipal	Solar PV	1.9	Wholesale Electricity	2018	Avoiding the greenhouse gas emissions equivalent to burning 2.4 million pounds of coal or over 5,000 barrels of oil. This installation at the former RRA site will generate approximately 20% of all the electricity used by Ulster County Government alone. Not only is that good for the environment, it will reduce our expenses which is good news for property taxpayers.			~		~
Wallkill Landfill*	NY	Wallkill	Landfill	Municipal	Solar PV	2	Wholesale Electricity	2016	As part of the 20-year contract, Wallkill will earn a flat fee of \$15,000 a year, plus earn money off the power it generates through a deal with utility Orange & Rockland. The Town Supervisor said the earnings are expected to average \$137,000 a year and increase by 2-3% yearly, though the rate could vary	~	~			
Weibel Avenue Landfill	NY	Saratoga Springs	Landfill	Municipal	Solar PV	2.5	Wholesale Electricity	2017	Expected to generate 40% of city's overall electricity needs and to avoid emissions of approximately 1,605 metric tons of CO2.			~		~
West Nyack Landfill	NY	Clarkstown	Landfill	Municipal	Solar PV	2.364	Wholesale Electricity	2014	The town expects to save about \$4M over life of system (30 years).	~				
West Park Landfill (Floyd Ackert Rd.)	NY	Esopus	Landfill	Municipal	Solar PV	0.6	Wholesale Electricity	2017	Project will generate revenue by selling net metering credits.		~			
Williamson Landfill	NY	Williamson	Landfill	Municipal	Solar PV	1.5	Wholesale Electricity	2014	The system is expected to generate enough power for all town facilities. The town anticipates \$27,000 in savings in 2015 and up to \$1.5 million in savings over the course of 25 years.	~				



Site Project Type of **Ownership** Capacity Completion Summary of Benefits Identified in Site/Project Name State Site (MW) Date **Publicly Available Sources** City Type **RE Type Project Type** Landfill Solar PV Wholesale 2018  $\checkmark$ Brooklyn Landfill Solar OH Brooklyn Municipal 4 The County can save as much as \$3 million on utility bills over 1 Electricity the next 25 years through the solar agreement. The 20-year land lease will help the City of Brooklyn offset maintenance costs of approximately \$400,000 over the course of the next 20 years. Municipal  $\checkmark$ Cuyahoga Metropolitan OH Cleveland Brownfields Solar PV 1.1 Wholesale 2013 Cuyahoga Metropolitan Housing Authority will save several **Housing Authority** Electricity million dollars over the life of the solar panels. Brownfields  $\checkmark$ **Dayton Tech Town** OH Dayton Unknown Geothermal Onsite Use -2010 Expected annual savings are over \$66,000 and 300,000 kWh/ year related to sustainable building and geothermal system General combined. Solar PV 1.5 Wholesale 1 Former Newark Processing OH Newark Brownfields Municipal 2017 Solarvision made use of partially tainted land and a floodplain Co. Electricity to develop this ground-mounted array to supply electricity for the city's water treatment plant. OH Brownfields Unknown Solar PV Wholesale 2014 Partnered with Case Western Reserve University's Solar 1 Medical Center Company Cleveland 1 Durability and Lifetime Extension research Center to assist with Solar Electricity their research and data collection goals.  $\checkmark$ **Pilkington North America** OH Northwood Brownfields Private Solar PV 0.25 Onsite Use -2011 Solar array supplies approximately 12% of the R&D center's  $\checkmark$ power requirements. A feasibility study determined a 2MW General system would be built in phases to maximize funding stream and lessen the financial burden through the sale of RECs. The National Center for OH Fairborn Brownfields Private Geothermal Onsite Use -2005 Although the groundwater onsite is not potable, it was  $\checkmark$ Medical Readiness at General repurposed for use in an energy-saving geothermal system for Calamitvville heating and cooling. ./ Toledo Zoo Solar OH Toledo Brownfields Private Solar PV 2.1 Onsite Use -2014 The zoo estimates energy savings to be in the range of General \$200,000. Installation provides power to Toledo Zoo (about 30% of zoo's total electricity needs). The system supports municipal utility and reduces the amount Wood County Landfill OH Bowling Landfill Municipal Wind 7.2 Wholesale 2004 ./  $\checkmark$ Electricity of power they have to purchase from other generators; provides Green enough electricity to power approximately 2,500 residential customers.

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings	Revenue	Environmental	Job Creation	Other
OK - OKLAHOMA														
Altus Air Force Base	ОК	Altus	RCRA	Federal	Solar PV	0.0002	Onsite Use - Green Remediation	2007	Relying on an off-grid, 200-watt PV array to power a submersible pump used for recirculation of water through the bioreactor. During initial operations (2003-2005), the system recirculated groundwater at a rate ranging from approximately 600 to 1,650 gallons per day (gpd), at an average of 922 gpd. Use of the onsite solar energy also avoided significant consumption of materials and other resources (including project funds) otherwise needed to connect to the electricity grid.			V		~
Guthrie Green	ОК	Tulsa	Brownfields	Foundation	Geothermal w/ solar PV	-	Onsite Use - General	2012	A geothermal exchange well field circulates water that feeds ground source heat pumps in the neighboring Tulsa Paper Company building and the Hardesty Visual Arts Center, reducing their heating and cooling costs by approximately 60%. Using the innovative Rygan technology, the well field has a capacity of 600 tons of heating and cooling.	~				
OR - OREGON														
Columbia Ridge Landfill*	OR	Arlington	Landfill Buffer	Private	Wind	100	Wholesale Electricity	2004	Columbia Ridge Landfill is a platform for wind power and a demonstration technology project designed to generate either renewable energy or clean fuels.					~
Corvallis Municipal Airport	OR	Corvallis	Superfund	Municipal	Solar PV	0.1	Wholesale Electricity	2017	Array will generate enough electricity to power at least 75% of the energy consumed by city-paid Pacific Power meters at the airport					~
SeQuential Biodiesel Solar	OR	Eugene	Brownfields	Private	Solar PV	0.0336	Rooftop	2006	The roof over the fueling pumps is built of 224 solar modules, some with clear backing to allow the sunlight to shine through, which composes part of a 33.6 kilowatt solar electric system that also keeps you dry while you're getting fuel. Creates a weather tight roof out of solar modules.					~



Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE Type</b>	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings			Job Creation	Other
PA - PENNSYLVANIA														
Ambler Pennsylvania Boiler House	PA	Ambler	Brownfields	Private	Geothermal	-	Onsite Use - General	2012	The building is LEED Platinum certified by the U.S. Green Building Council, due in great part to its geothermal heating and cooling system and extensive use of recycled materials during construction.					~
Casselman Wind Power Project	PA	Traverses Summit, Black, and Addison	Mine Lands	Private	Wind	34.5	Wholesale Electricity	2008	Expected to generate approximately \$245,000 in direct economic benefit to region annually, through combo of taxes, easement payments, and direct landowner payments. Up to 150 construction jobs created.		~		~	
Frey Farm Landfill	PA	Conestoga	Landfill	Municipal	Wind	3.2	Onsite Use - General	2011	Turbines provide 21-25% of power needs for nearby Turkey Hill Dairy (enough to make five million gallons of ice cream). Will reduce the dairy's annual greenhouse gas emissions by roughly 5,900 tons, the equivalent of ~1,000 cars, or decreasing demand for foreign oil by 12,000 barrels. Turbines provide energy diversification and reduced electrical costs.	~		~		
Hazelwood Green's Mill 19 Solar	PA	Philadelphia	State Brownfields	Non-profit	Solar PV	2	Rooftop	2019	A former brownfield site, 100% of the complex's total electricity usage will be offset by energy generated on site.	~				
Highland North Wind	PA	Cambria County	Mine Lands	Various	Wind	75	Wholesale Electricity	2012	Approximately \$5.5 million in tax revenue to the state, local townships and Forest Hills School District over the life of the project; over \$3 million in local goods and services for operation and maintenance over the life of the project		~			
Highland Wind	PA	Cambria County	Mine Lands	Private	Wind	62.5	Wholesale Electricity	2009	They system will generate approximately \$4 million in local goods and services for operation and maintenance over the life of the project. Creates \$4.5 million in tax revenue to state, local townships and school districts over the life of the project and 9 full-time O&M staff.		~		~	~
Palmerton Zinc Pile	PA	Palmerton	Superfund	Non-profit	Solar PV	0.0234	Rooftop	2018	The system is able to produce enough electricity to cover 100% of the building' energy needs and is preventing 49,560 pounds of carbon dioxide emissions each year.	~		~		
Paseo Verde South Apartments	PA	Philadelphia	Brownfields	Private	Solar PV	-	Onsite Use - General	2013	Environmentally sensitive features include green and blue roofs, designed to retain and slowly release rainfall to urban storm drains, permeable paving, water gardens to retain and manage water, solar panels, and the use of local, recyclable and renewable materials.					~

Through the RE-Powering America's Land initiative, the EPA encourages renewable energy development on potentially contaminated land, landfills, and mine sites when aligned with the community's vision for the site. Using publicly available information, RE-Powering maintains a list of completed renewable energy installations on contaminated sites and landfills and compiles this information in its <u>Project Tracking Matrix</u>. The following list tracks benefits associated with completed sites identified and reported by parties directly involved with their respective projects (e.g., information from the associated city, town, or county; site owners; developers; utilities; and/or financiers) or from other EPA resources.\* Common benefits resported include revenues from land leases and taxes, electricity cost savings associated with the reduced need to purchase power from the grid, job creation, reduced greenhouse gas emissions, et al. This resource is for informational purposes only. Please note that the benefits listed here are not a comprehensive representation of all benefits associated with completed renewable energy projects on contaminated lands and such benefits are calculated in various ways; nevertheless, this list illustrates the breadth of benefits being realized and highlighted across the country by those developing these types of installations.

\*With the exception of sites shaded in gray, benefits for these sites were only available from news article sources.

Site/Project Name	State	City	Type of Site	Site Ownership Type	<b>RE</b> Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources			Job Creation	Other
York County Landfill Solar	PA	Hopewell Township	Superfund	Municipal	Solar PV	0.3	Onsite Use - Green Remediation	2014	The system generates about 300,000 kWh of electricity each year and reduces the facility's dependence on fossil fuels. Generates power for the site's general energy needs, including ongoing management of groundwater treatment systems and office buildings.		~		<ul> <li>✓</li> </ul>
RI - RHODE ISLAND													
A Street Facility Solar	RI	Johnston	Landfill	Municipal	Solar PV	3.9	Wholesale Electricity	2018	The Town of Johnston is putting vacant, unusable land back to work to benefit their taxpayers with electricity savings, enhance tax payments and scholarships for the senior high school students. The former landfill is producing clean energy for town buildings while also generating tax revenue.	~			~
Forbes Street Solar Project I (FSSPI)	RI	East Providence	Landfill	Municipal	Solar PV	3.7	Wholesale Electricity	2014	The city leases land for \$40,000 per year for 18 acres (installation may be expanded in the future). Property tax to city is \$30,600 per year, based on the 20% of full valuation of tangible equipment per the corresponding PILOT agreement. Also created jobs. Power will be dedicated to the town, a wastewater treatment plant, and nearby school.	~		~	
Forbes Street Solar Project II (FSSPII)	RI	East Providence	Landfill	Municipal	Solar PV	4.1	Wholesale Electricity	2018	Forbes Street Solar Project II is expected to produce enough energy to serve nearly 500 Rhode Island households. Under a 20-year PPA with National Grid, the solar plant will provide electricity to customers of Narragansett Electric Co., a subsidiary of National Grid.		~		<b>√</b>
Kilvert Street Solar	RI	Warwick	State Brownfields	Municipal	Solar PV	6.3	Wholesale Electricity	2018	The city entered into a 25 year lease agreement. The output of the Kilvert Street solar array is projected to be 8,360,200 kWh per year, which equates to approximately 11,202,668 pounds of carbon eliminated annually.	~	~		
North Providence Landfill	RI	North Providence	RCRA	Municipal	Solar PV	2.6	Wholesale Electricity	2018	Expected to provide approximately \$120,000 in new revenue annually and to generate enough power to supply electricity to roughly 2500 homes annually	~	~		



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings	Revenue	Environmental	Job Creation	Other
Rose Hill Landfill	RI	South Kingston	Superfund	Municipal	Solar PV	4.7	Wholesale Electricity	2018	"The solar array came at no cost to the municipalities and 25% of the power generated will be sold back to the municipalities. All municipal buildings in both towns, including the school districts, have access to power generated at the solar facility. The Towns of South Kingstown and Narragansett, as well as the University of Rhode island will receive energy credits over the life of the project. In conjunction with two other installations in the area this array contributes to: Tons of Annual Carbon Dioxide Offset: Approx. 9,343 Number of Average Homes Powered Annually: 924"		~	~		✓
University of Rhode Island (URI) Disposal Area	RI	South Kingston	Superfund	University	Solar PV	2.7	Wholesale Electricity	2018	"Part of the West Kingston Town Dump/URI Disposal Area Superfund Site. The solar arrays were built at no cost to the municipalities and 25% of the power generated will be sold back to the municipalities. All municipal buildings in both towns, including the school districts, have access to power generated at the solar facilities. The Towns of South Kingstown and Narragansett, as well as the University of Rhode island will receive energy credits over the life of the project. In conjunction with two other installations in the area this array contributes to: Tons of Annual Carbon Dioxide Offset: Approx. 9,343 Number of Average Homes Powered Annually: 924"		~	~		~
West Kingston Town Dump	RI	South Kingston	Superfund	Municipal	Solar PV	1.2	Wholesale Electricity	2018	"Part of the West Kingston Town Dump/URI Disposal Area Superfund Site. The solar arrays were built at no cost to the municipalities and 25% of the power generated will be sold back to the municipalities. All municipal buildings in both towns, including the school districts, have access to power generated at the solar facilities. The Towns of South Kingstown and Narragansett, as well as the University of Rhode island will receive energy credits over the life of the project. In conjunction with two other installations in the area this array contributes to: Tons of Annual Carbon Dioxide Offset: Approx. 9,343 Number of Average Homes Powered Annually: 924"		~	~		~
SC - SOUTH CAROLINA						1		1						
Savannah River's Biomass Steam Plant	SC	Aiken	Superfund	Federal	Biomass	20	Onsite Use - General	2008	Energy savings of more than \$34.4 million annually. Created more than 27 full-time jobs on-site, with over 600,000 hours of construction and operational labor in construction period (30 months).	~			~	



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings	Revenue	Environmental	Job Creation	Other
TN - TENNESSEE														
Binkley Solar Farm	TN	Hermitage	Landfill	Private	Solar PV	0.2	Wholesale Electricity	2012	Solar generates power for the Binkley's construction recycling operation at the site. Binkley family expects to recoup investment by 2018. First landfill solar installation in TN.	~				
Bristol Demolition Landfill	TN	Bristol	Landfill	Municipal	Solar PV	0.2	Wholesale Electricity	2012	The city leases the land for \$6,000 annually and sells the electricity generated at the landfill site to TVA via the local energy provider, Bristol Tennessee Essential Services (BTES), for \$0.21/kWh. The contract specifies a twelve-and-a-half-year term of use with another twelve-and-a-half-year extension. After the initial term of the agreement, the kW rate will go down to \$0.01/kWh, but the \$6,000 annual lease fee will stay the same. The city receives about 10% of the revenue generated from the system and EES gets 90%. This system will produce approximately 300,000 kW of solar electricity annually with a lifetime guarantee of 30 years. The array provides enough electricity to power about fifty homes in the area and offsets over 6,000 tons of carbon dioxide annually.		~	~		~
RSI Brightfields One	TN	Oak Ridge	Superfund	Private	Solar PV	1.25	Wholesale Electricity	2012	Used TN-produced solar panels.					~
Somerville Solar Project	TN	Somerville	Landfill	Municipal	Solar PV	2.7	Wholesale Electricity	2019	The array will generate approximately 4 million kWh of renewable electricity each year, equivalent to the annual electricity usage of 260 local homes.			~		
Volkswagen Chattanooga	TN	Chattanooga	RCRA	Private	Solar PV	9.5	Wholesale Electricity	2013	Expected to meet 12.5% of the energy needs of Volkswagen's Chattanooga manufacturing plant during full production and 100% during non-production periods. Equivalent to avoiding CO2 emissions of nearly 2,000 passenger vehicles per year, or the equivalent amount of electricity needed to power nearly more than 1,000 average American homes annually.			~		~
TX - TEXAS														
Central Texas Veterans Landfill Solar	TX	Temple	Landfill	Federal	Solar PV	2.94	Onsite Use - General	2012	Installation saves the U.S. Department of Veterans Affairs \$300,000 per year in energy costs	~				
Grove Landfill	TX	Austin	Landfill	Non-profit	Solar PV	-	Onsite Use - Green Remediation	2006	Avoided installation of utility lines and associated air emissions from construction equipment (and additional consumption of grid-supplied electricity) by using the PV energy system wherever possible.			~		~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings		Job Creation	Other
Pantex Renewable Energy Project (PREP)	TX	Amarillo	Superfund	Federal	Wind	11.5	Onsite Use - General	2014	Project will provide an estimated \$2.8M annual energy savings for DOE.	~			
Tessman Road Municipal Solid Waste Landfill	TX	San Antonio	Landfill	Private	Solar PV	0.13	Wholesale Electricity	2009	Site uses a flexible solar cover. Republic and CPS Energy will study and document the results of this installation for use in the deployment of solar energy covers on owned landfills throughout the region.				~
UT - UTAH													
Salt Lake City Landfill	UT	Salt Lake City	Landfill	Municipal	Solar PV	1	Unknown	2014	Combined with a solar installation on its roof, landfill solar allow the city public safety building to achieve net zero energy.		~		~
VA - VIRGINIA													
Bedford Solar Farm	VA	Bedford	Landfill Buffer	Municipal	Solar PV	3.3	Wholesale Electricity	2017	Will generate around 6,000,000 kWh of energy per year, equivalent to the amount of electricity consumed by more than 500 average American homes annually.				~
Crozet Orchard	VA	Crozet	State Brownfields	Private	Solar PV	0.00039	Onsite Use - Green Remediation	2007	Avoids costs and greenhouse gas emissions associated with consumption of grid electricity during the treatment process.		~		~
Salem VA Medical Center Solar*	VA	Salem	Landfill	Federal	Solar PV	1.6	Onsite Use - General	2013	Will provide 10% of campus electricity needs, saving the VA about \$160,000 in costs each year.	~			
Stone Brewing Company	VA	Richmond	Brownfields	Private	Solar PV	-	Rooftop	2016	This facility has pursued LEED Silver certification through the use of eco-friendly materials and design practices that include 100,000 square-feet of photovoltaic solar panel.				~
VI - VIRGIN ISLANDS													
Former St. Croix Alumina Plant Solar I	VI	St Croix	RCRA	Unknown	Solar PV	0.000165	Onsite Use - Green Remediation	2003	Wind-driven turbine compressors drive compressed air into hydraulic skimming pumps. Solar PV powers some recovery wells. These systems avoid air emissions associated with consumption of grid electricity during petroleum recovery. (Benefits are from multiple projects.)		~		~
Former St. Croix Alumina Plant Solar II	VI	St Croix	RCRA	Unknown	Solar PV	0.00033	Onsite Use - Green Remediation	2006	Wind-driven turbine compressors drive compressed air into hydraulic skimming pumps. Solar PV powers some recovery wells. These systems avoid air emissions associated with consumption of grid electricity during petroleum recovery. (Benefits are from multiple projects.)		~		~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources			Job Creation	Other
Former St. Croix Alumina Plant Wind I	VI	St Croix	RCRA	Unknown	Wind	-	Onsite Use - Green Remediation	2002	Wind-driven turbine compressors drive compressed air into hydraulic skimming pumps. Solar PV powers some recovery wells. These systems avoid air emissions associated with consumption of grid electricity during petroleum recovery. (Benefits are from multiple projects.)		~		~
Former St. Croix Alumina Plant Wind II	VI	St Croix	RCRA	Unknown	Wind	-	Onsite Use - Green Remediation	2006	Wind-driven turbine compressors drive compressed air into hydraulic skimming pumps. Solar PV powers some recovery wells. These systems avoid air emissions associated with consumption of grid electricity during petroleum recovery. (Benefits are from multiple projects.)		~		~
VT - VERMONT													
Coventry Landfill	VT	Coventry	Landfill Buffer	Private	Solar PV	2.7	Wholesale Electricity	2015	System produces 3,029 MWh per year.		~		
Elizabeth Mine Superfund Site	VT	Strafford	Superfund	Private	Solar PV	7	Wholesale Electricity	2017	Developer used local civil, mechanical, and electrical contractors for the project, driving employment for local economies during installation. Grid upgrades completed during construction benefited the community with an improved electrical system that upgraded the reliability of the entire system. Project will offset 6,000 tons of CO2 annually, equal to emissions from the combustion of 14,000 barrels of oil; equal the carbon sequestration from almost 5,000 acres of forest; and provides electricity sufficient to power 1,200 homes annually		~	~	
Hartford VT Landfill Solar	VT	Hartford	Landfill	Municipal	Solar PV	1	Wholesale Electricity	2016	Saved the town \$28,516.99 in calendar year 2016, offsetting electricity costs for the Wendell A. Barwood Arena, town hall, and wastewater plant.	~			
Long View Forest Solar	VT	Hartland	State Brownfields	Private	Solar PV	0.745	Wholesale Electricity	2019	The solar project is expected to produce approximately 900,000 kWh per year, enough to power approximately 125 homes annually. Together, Mascoma and the Montshire Museum of Science will realize approximately \$700,000 of savings on their electricity bills over the 25-year term of the agreement.	~	~		
Lyndonville Solar East	VT	Lyndonville	Brownfields	Private	Solar PV	0.485	Wholesale Electricity	2018	Benefit to Lyndonville Electric Company for Lyndonville Solar West and East combined over life of contract is expected to be \$150,000-\$200,000				~



Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources				Job Creation	Other
Lyndonville Solar West	VT	Lyndonville	Brownfields	Private	Solar PV	0.5	Wholesale Electricity	2018	Benefit to Lyndonville Electric Company for Lyndonville Solar West and East combined over life of contract is expected to be \$150,000-\$200,000					~
Rutland Landfill (Stafford Hill)	VT	Rutland	Landfill	Municipal	Solar PV	2.3	Wholesale Electricity	2015	The utility plans to lease the dormant landfill from the city for 25 years, with a 25-year option, for \$30,600 a year.		~			
South Burlington Landfill	VT	South Burlington	Landfill	Municipal	Solar PV	2.2	Wholesale Electricity	2017	The solar array will employ Vermont's industry-leading virtual net-metering program. The City and School District will receive net-metering credits on electric bills for specified meters, at a significant discount compared to their value. "The 25-year contract will provide the opportunity for long-term savings and predictable electric pricing—the projected savings could be \$2 million to \$5 million," said South Burlington City Manager Kevin Dorn.	V				~
The Creamery	VT	Richmond	Brownfields	Private	Solar PV	-	Onsite Use - General	2018	Fully net zero buildings through solar arrays.			~		
Townshend Landfill	VT	Townshend	Landfill	Municipal	Solar PV	0.15	Community Owned / Subscription	2014	Community solar project providing power to 15 residences as well as the town hall and town library.					~
Wallingford Sand and Gravel Solar	VT	Wallingford	State Brownfields	Private	Solar PV	3.2	Wholesale Electricity	2019	The solar panel ground-mount array is projected to produce 3,291,000 kilowatt hours of electricity in its first year. The estimated carbon offset is equivalent to the CO2 emissions from 406 homes' electricity use for one year and 296,750,995 smartphones charged.			~		
Windham Solid Waste Management District	VT	Brattleboro	Landfill	Municipal	Solar PV	5	Wholesale Electricity	2018	The project will generate annual lease revenue for the Windham Solid Waste Management Division and will also provide significant savings on electric costs for member communities through participation in a group net metering arrangement.		~			~

Site/Project Name	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings	Revenue	Environmental	Job Creation	Other
WI - WISCONSIN														
Beloit Coal Ash Landfill	WI	Beloit	Landfill	Private	Solar PV	2.3	Wholesale Electricity	2016	Generates clean power for 500 local households.			~		
MATC PV Evaluation Lab	WI	Milwaukee	Landfill	Private	Solar PV	0.54	Onsite Use - Training	2010	The estimated energy savings in the first year of operation is \$70,300. Energy produced at the site will be used to operate the Milwaukee Public Television transmitter that is located at the site. This will be the first public television transmitter in the country that will transition to being neutral to the energy grid. The facility also will serve as a training center for technicians, designers, site assessors, electricians, sales personnel and other professionals in the fields of renewable energy.	~				~
Refuse Hideaway Landfill	WI	Middleton	Superfund	State	Solar PV	0.01	Onsite Use - Green Remediation	2010	"The solar array generates clean power to offset the needs of the remediation systems. A Madison-based company was hired to install a 44-solar panel array, capable of generating 12,000 kilowatt hours a year. Energy from the system is then returned to the power grid, and the DNR is credited on its next energy bill."			~	~	~
Sky Park Solar	WI	Eau Claire	Landfill	Private	Solar PV	1	Community Owned / Subscription	2017	Community solar project. Revenue neutral for Xcel Energy; consumers who purchase panels will receive credits for 25 years. The city receives lease revenue from developer. The city offsets 100% of power for their municipal swimming pool with 116kW in credits from the installation.		~			~
WV - WEST VIRGINIA														
American Public University System Academic Center	WV	Ranson and Charles Town	Brownfields	University	Solar PV	-	Rooftop	2010	The building earned gold certification under the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) program, thanks in part to the building's energy-efficient design and solar panels on the roof that provide a portion of the facility's energy.					~
American Public University System Financial Center	WV	Ranson and Charles Town	Brownfields	University	Solar PV	-	Onsite Use - General	2012	The solar array provides approximately half the energy required to run the financial center—that's enough electricity to power 30 average-sized homes. The parking lot also includes 14 charging stations that employees, visitors and residents can use to recharge their electric or hybrid vehicles.			~		~



Site/Project Name WY - WYOMING	State	City	Type of Site	Site Ownership Type	RE Type	Project Capacity (MW)	Project Type	Completion Date	Summary of Benefits Identified in Publicly Available Sources	Energy Savings		Job Creation
Chevron Casper Wind Farm	WY	Casper	RCRA	Private	Wind	16.5	Wholesale Electricity	2009	Created approximately 20 construction jobs, 1.5 permanent jobs.			~
Dave Johnston Mine / Glenrock Wind I	WY	Glenrock	Mine Lands	Private	Wind	118.5	Wholesale Electricity	2008	The three systems produce enough electricity to supply 66,800 households for one year.		~	
Dave Johnston Mine / Glenrock Wind III	WY	Glenrock	Mine Lands	Private	Wind	39	Wholesale Electricity	2009	The three systems produce enough electricity to supply 66,800 households for one year.		~	
Warren AFB Wind	WY	Cheyenne	Superfund	Federal	Wind	3.32	Wholesale Electricity	2009	Expected to save the Air Force more than \$11.4 million in energy costs over the 20 years. The annual estimated energy production is approximately \$575,000 with a simple payback period of 14 years.			