Alternative Energy Projects at Superfund Sites

Status Update and Highlights from across the Country

September 2018

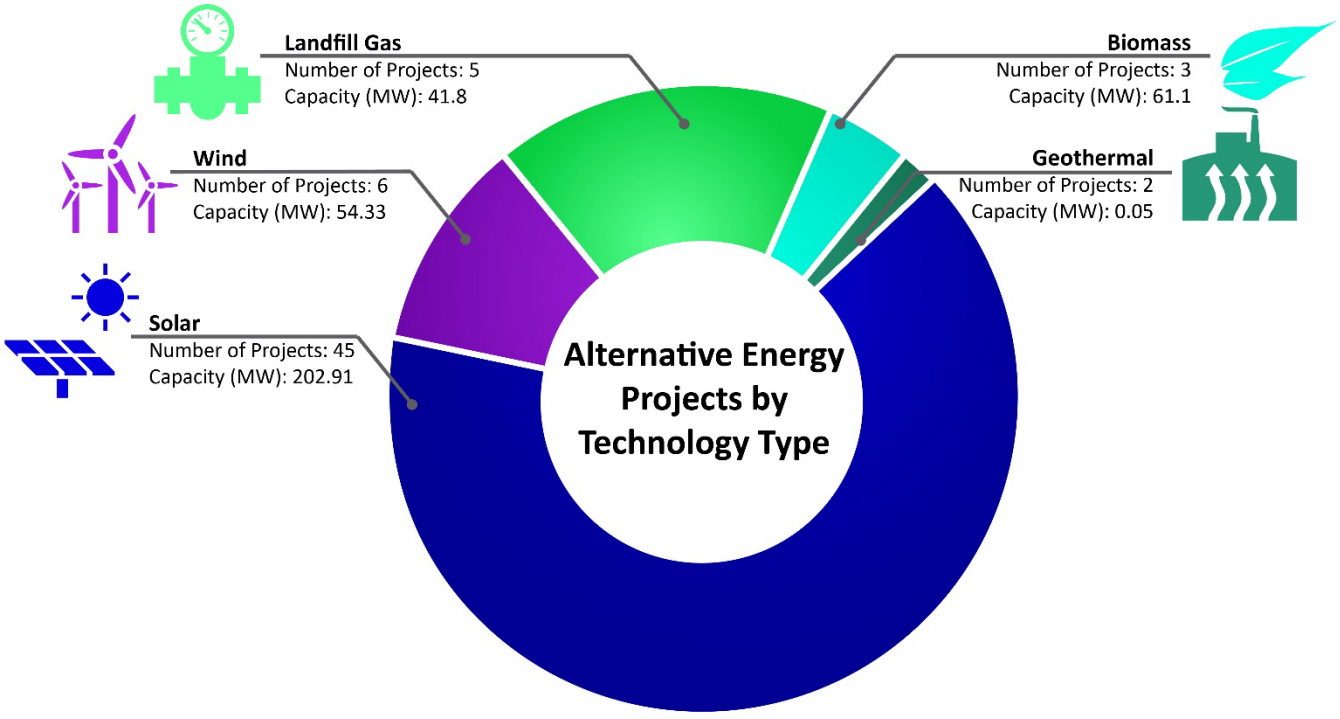
Alternative Energy Installations – September 2018

As of September 2018, alternative energy facilities are located at 59 Superfund sites.[1] They support 61 alternative energy projects with an installed capacity of about 360 megawatts (MW).[2] Nearly 75 percent are solar powered. Wind, solar and landfill gas facilities make up about 92 percent of the projects. 64 percent of these efforts have an installed capacity of 1 MW or more. The largest alternative energy facility is a 37.5-MW biomass energy plant at the Gallup's Quarry site in Connecticut. About 26 percent of these projects offset on-site energy demands of cleanup efforts or directly power site-related cleanup activities.

Alternative Energy at Superfund Sites

Number of Superfund Sites:	**59**
Number of Projects:	**61**
Installed Capacity (MW):	**360**
Estimated Annual Output (MW hours):	**991,136***

*** Output information available for 44 of the 61 projects.**



EPA's Superfund Redevelopment Initiative (SRI) also tracks renewable energy projects at Superfund sites that are in the planning and construction stages. Projects under development include a 10-MW solar project at the Auburn Road Landfill site in New Hampshire and a 3-MW solar project at the Pacific Coast Pipe Lines site in California.

[1] Alternative energy is defined here as non-fossil and non-nuclear based sources of energy.

[2] These figures are estimates. They are based on publicly available information, direct communication with EPA staff and feedback from project stakeholders.

Active Alternative Energy Installations, by Superfund Site

Site	Site ID	Technology Type
AEROJET GENERAL CORP.	CAD980358832	solar
AMERICAN CYANAMID	NJD002173276	solar
APACHE POWDER CO.	AZD008399263	solar
ARSENIC TRIOXIDE SITE	NDD980716963	geothermal
BETHLEHEM STEEL CORP/LACKAWANNA PLANT[a]	NYD002134880	solar
	NYD002134880	wind
BRICK TOWNSHIP LANDFILL	NJD980505176	solar
BROOKHAVEN NATIONAL LABORATORY (USDOE)	NY7890008975	solar
CAMP PENDLETON MARINE CORPS BASE	CA2170023533	solar
CENTRAL LANDFILL	RID980520183	landfill gas
CHARLES GEORGE RECLAMATION TRUST LANDFILL	MAD003809266	solar
CHEVRON QUESTA MINE	NMD002899094	solar
CONTINENTAL STEEL CORP.	IND001213503	solar
	IND001213503	wind
DELILAH ROAD	NJD980529002	solar
E.I. DU PONT DE NEMOURS & CO., INC. (NEWPORT PIGMENT PLANT LANDFILL)	DED980555122	solar
ELIZABETH MINE	VTD988366621	solar
ELLSWORTH AIR FORCE BASE	SD2571924644	solar
F.E. WARREN AIR FORCE BASE	WY5571924179	wind
FMC CORP. (FRIDLEY PLANT)	MND006481543	solar
FORT DETRICK AREA B GROUND WATER	MDD985397249	solar
FORT DIX (LANDFILL SITE)	NJ2210020275	solar
FRONTIER FERTILIZER	CAD071530380	solar
GALLUP'S QUARRY	CTD108960972	biomass
GE - HOUSATONIC RIVER	MAD002084093	solar
GROVELAND WELLS	MAD980732317	solar
IRON HORSE PARK	MAD051787323	solar
JET PROPULSION LABORATORY (NASA)	CA9800013030	solar
LANDFILL & DEVELOPMENT CO.	NJD048044325	solar
LAWRENCE AVIATION INDUSTRIES, INC.	NYD002041531	geothermal
LAWRENCE LIVERMORE NATIONAL LABORATORY	CA2890012584	solar
LOWRY LANDFILL	COD980499248	landfill gas
MARSHALL LANDFILL	COD980499255	solar
MARTIN-MARIETTA, SODYECO, INC.	NCD001810365	biomass
NATIONAL SEMICONDUCTOR CORP.	CAD041472986	solar
NEBRASKA ORDNANCE PLANT (FORMER)	NE6211890011	wind
NORTH CAROLINA STATE UNIVERSITY (LOT 86, FARM UNIT #1)	NCD980557656	solar
OAK RIDGE RESERVATION (USDOE)	TN1890090003	solar
OMEGA HILLS NORTH LANDFILL	WID000808568	landfill gas
OTIS AIR NATIONAL GUARD BASE/CAMP EDWARDS	MA2570024487	wind

Site	Site ID	Technology Type
PANTEX PLANT (USDOE)	TX4890110527	wind
PEMACO MAYWOOD	CAD980737092	solar
PETERSON/PURITAN, INC.	RID055176283	solar
PICATINNY ARSENAL (USARMY)	NJ3210020704	solar
PINE BEND SANITARY LANDFILL	MND000245795	landfill gas
REFUSE HIDEAWAY	WID980610604	solar
REILLY TAR & CHEMICAL CORP. (INDIANAPOLIS PLANT)	IND000807107	solar
RE-SOLVE, INC.	MAD980520621	solar
ROSE HILL REGIONAL LANDFILL	RID980521025	solar
SAVANNAH RIVER SITE (USDOE)	SC1890008989	biomass
SOUTH BRUNSWICK LANDFILL	NJD980530679	solar
SOUTHSIDE SANITARY LANDFILL	IND980607360	landfill gas
SULLIVAN'S LEDGE	MAD980731343	solar
SUMMITVILLE MINE	COD983778432	solar[b]
TUCSON INTERNATIONAL AIRPORT AREA	AZD980737530	solar
UNITED CHROME PRODUCTS, INC.	ORD009043001	solar
WASHINGTON COUNTY LANDFILL	MND980704738	solar
WEST KINGSTON TOWN DUMP/URI DISPOSAL AREA	RID981063993	solar
W.R. GRACE & CO., INC. (ACTON PLANT)	MAD001002252	solar
YORK COUNTY SOLID WASTE AND REFUSE AUTHORITY LANDFILL	PAD980830715	solar

Notes:

[a] Not on the Superfund program's National Priorities List (NPL).

[b] Due to altitude constraints, solar energy used to power the treatment plant is generated at an off-site solar farm.

USDOE = U.S. Department of Energy

Alternative Energy Spotlight: Iron Horse Park – Using Solar Energy to Power Schools

EPA coordinated with developers on plans to support energy infrastructure at the Iron Horse Landfill site. While Shaffer Landfill was not developable for conventional uses, it drew the attention of alternative energy developer UGT as a potential location for solar power infrastructure. EPA worked with UGT on plans that would maximize use of available land, account for the landfill's steep slopes and ensure the integrity of the landfill cap. EPA determined that installation of a large solar array would not require substantial modifications to the landfill. Resulting plans had strong support from the town of Billerica, the Massachusetts Department of Environmental Protection and National Grid, the electric utility.

Following the plan's approval in 2012, UGT began construction of the 6-MW, 25-acre array in 2013. To account for the landfill's steep slopes, UGT installed the array's 20,000 panels in small sub-arrays rather than one large installation. To ensure the integrity of the cap, UGT installed the panels on ballasted racks instead of a more traditional rack system that would pierce the cap. EPA provided project developers with a comfort letter indicating that they had submitted plans to EPA and were coordinating development with the Agency. In addition, the letter provided the developers with EPA statutory and policy information to help them make informed decisions and facilitate the reuse of the property.

Project construction finished in 2014. Two additional solar projects have followed. A 4-MW array is located near the entrance to the Iron Horse Park facility. The third project, completed in 2017, is partially located on top of a former asbestos landfill. A virtual net metering agreement means that subscribers received a credit on their electric bills for excess energy produced by their share of the solar project. Through such an agreement, the 6-MW project currently provides the energy for four school systems and the local government.

For more information about EPA's Superfund Redevelopment Initiative, visit: http://www.epa.gov/superfund-redevelopment-initiative.