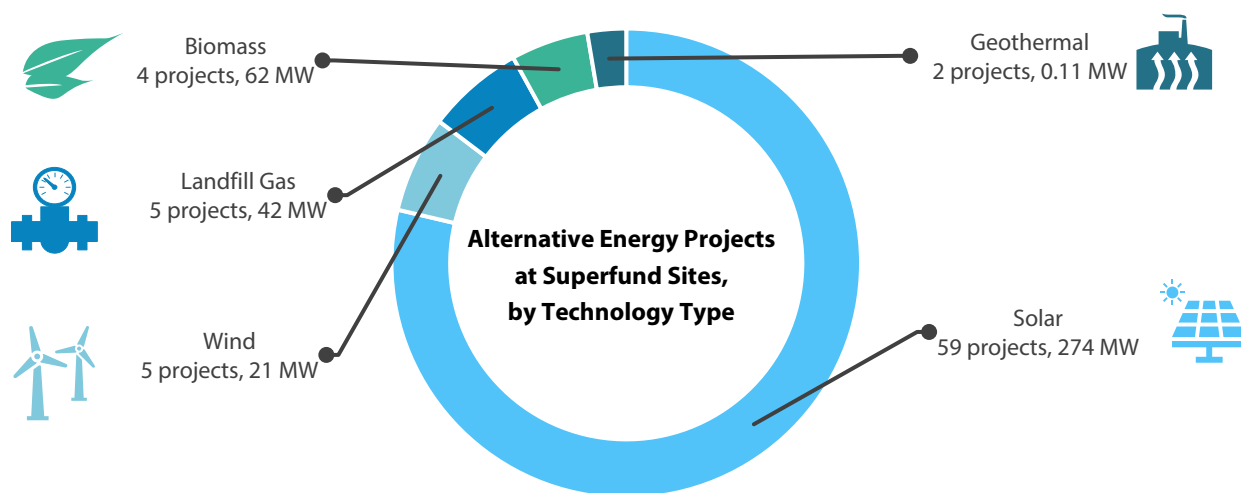


EPA’s Superfund Redevelopment Program helps communities reclaim and return contaminated lands to productive use. Many Superfund sites are well suited to support alternative energy production, including solar, wind, landfill-gas-to-energy, geothermal and biomass projects.

Alternative Energy at Superfund Sites

Number of Superfund Sites	73
Number of Projects	75
Installed Capacity (MW)	399

As of September 2021, alternative energy facilities are located at 73 Superfund sites.¹ They support 75 alternative energy projects with an installed capacity of about 399 megawatts (MW), enough to power more than 92,000 homes per year.^{2,3} Of these projects, 79% are solar projects and 7% are wind projects. Biomass, landfill gas and geothermal facilities make up the remaining 14% of the projects. In total, 64% 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 25% of these projects offset on-site energy demands of cleanup efforts or directly power site-related cleanup activities.



Planning for additional projects is underway. Reuse planning activities can evaluate and estimate the potential capacity of alternative energy facilities. For example, a planning assessment at the Big River Mine Tailings/St. Joe Minerals Corp. site, in St. Francois County, Missouri, identified potential solar footprints.

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

² Installed capacity information is available for 73 out of the 75 projects. Estimated annual output information is available for 55 of the 75 projects. These figures are estimates, based on publicly available information, direct communication with EPA staff and feedback from project stakeholders.

³ Based on average annual electricity consumption of 10,715 kilowatt-hours (kWh): <https://www.eia.gov/tools/faqs/faq.php?id=97&t=3>.

Active Alternative Energy Installations, by Superfund Site

Site	EPA ID	Technology Type
AEROJET GENERAL CORP.	CAD980358832	Solar
AMERICAN CYANAMID	NJD002173276	Solar
APACHE POWDER CO.	AZD008399263	Solar
ARSENIC TRIOXIDE SITE	NDD980716963	Geothermal
BARKHAMSTED-NEW HARTFORD LANDFILL	CTD980732333	Solar
BRICK TOWNSHIP LANDFILL	NJD980505176	Solar
BROOKHAVEN NATIONAL LABORATORY (USDOE)	NY7890008975	Solar
BRUNSWICK NAVAL AIR STATION	ME8170022018	Solar
BRUNSWICK NAVAL AIR STATION	ME8170022018	Biomass
CAMP PENDLETON MARINE CORPS BASE	CA2170023533	Solar
CENTRAL LANDFILL	RID980520183	Landfill gas
CHARLES GEORGE RECLAMATION TRUST LANDFILL	MAD003809266	Solar
CHEVRON QUESTA MINE	NMD002899094	Solar
CIBA-GEIGY CORP.	NJD001502517	Solar
CINNAMINSON TOWNSHIP (BLOCK 702) GROUND WATER CONTAMINATION	NJD980785638	Solar
CONTINENTAL STEEL CORP.	IND001213503	Solar
CONTINENTAL STEEL CORP.	IND001213503	Wind
DAVISVILLE NAVAL CONSTRUCTION BATTALION CENTER	RI6170022036	Solar
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
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
INDUSTRI-PLEX	MAD076580950	Solar
IRON HORSE PARK	MAD051787323	Solar
JET PROPULSION LABORATORY (NASA) LANDFILL & DEVELOPMENT CO.	CA9800013030	Solar
JET PROPULSION LABORATORY (NASA) LANDFILL & DEVELOPMENT CO.	NJD048044325	Solar
LAWRENCE AVIATION INDUSTRIES, INC.	NYD002041531	Geothermal
LAWRENCE LIVERMORE NATL LAB, (MAIN SITE) (USDOE)	CA2890012584	Solar
LEVIATHAN MINE	CAD980673685	Solar
LOWRY LANDFILL	COD980499248	Landfill gas
MARTIN-MARIETTA, SODYECO, INC.	NCD001810365	Biomass
NATIONAL SEMICONDUCTOR CORP.	CAD041472986	Solar
NEBRASKA ORDNANCE PLANT (FORMER)	NE6211890011	Solar
NEWMARK GROUND WATER CONTAMINATION	CAD981434517	Solar

Site	EPA ID	Technology Type
NORTHWEST PIPE & CASING/HALL PROCESS COMPANY	ORD980988307	Solar
NYANZA CHEMICAL WASTE DUMP	MAD990685422	Solar
OAK RIDGE RESERVATION (USDOE)	TN1890090003	Solar
OMEGA HILLS NORTH LANDFILL	WID000808568	Landfill gas
ORONOGO-DUENWEG MINING BELT	MOD980686281	Solar
OTIS AIR NATIONAL GUARD BASE/CAMP EDWARDS	MA2570024487	Wind
PALMERTON ZINC PILE	PAD002395887	Solar
PANTEX PLANT (USDOE)	TX4890110527	Wind
PEMACO MAYWOOD	CAD980737092	Solar
PETERSON/PURITAN, INC.	RID055176283	Solar
PICATINNY ARSENAL (USARMY)	NJ3210020704	Solar
PICILLO FARM	RID980579056	Wind
PINE BEND SANITARY LANDFILL	MND000245795	Landfill gas
PRICE LANDFILL	NJD070281175	Solar
REFUSE HIDEAWAY LANDFILL	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
SCIENTIFIC CHEMICAL PROCESSING	NJD070565403	Solar
SOLVENTS RECOVERY SERVICE OF NEW ENGLAND	CTD009717604	Solar
SOUTH BRUNSWICK LANDFILL	NJD980530679	Solar
SOUTHSIDE SANITARY LANDFILL	IND980607360	Landfill gas
STROTHER FIELD INDUSTRIAL PARK	KSD980862726	Solar
SULLIVAN'S LEDGE	MAD980731343	Solar
TRAVIS AIR FORCE BASE	CA5570024575	Solar
TUCSON INTERNATIONAL AIRPORT AREA	AZD980737530	Solar
UNITED CHROME PRODUCTS, INC	ORD009043001	Solar
VENTRON/ VELSICOL	NJD980529879	Solar
W.R. GRACE & CO., INC. (ACTON PLANT)	MAD001002252	Solar
WASHINGTON COUNTY LANDFILL	MND980704738	Solar
WELSBACH & GENERAL GAS MANTLE (CAMDEN RADIATION)	NJD986620995	Solar
WEST KINGSTON TOWN DUMP/URI DISPOSAL AREA	RID981063993	Solar
YORK COUNTY SOLID WASTE AND REFUSE AUTHORITY LANDFILL	PAD980830715	Solar

Notes:

USDOE = U.S. Department of Energy

Alternative Energy Spotlight: Ciba-Geigy Corp.

The 1,350-acre Ciba-Geigy Corp. Superfund site is in Toms River, New Jersey. Starting in 1952, Ciba-Geigy Corporation (then called Toms River Chemical Company) operated a resin and dye manufacturing facility on site. Improper chemical waste disposal contaminated soil and groundwater. Investigations by EPA and the New Jersey Department of Environmental Protection found leaking drums of waste and carcinogenic compounds on site. EPA added the site to the Superfund program's National Priorities List (NPL) in 1983. With EPA oversight, the potentially responsible party (PRP) cleaned up the site. Cleanup activities included on-site soil treatment, excavation and off-site removal of 47,000 drums, and cap installation over parts of the site. Cleanup also included putting in a groundwater extraction and treatment system. Groundwater treatment and monitoring are ongoing.

In 2009, BASF purchased the site property. In addition to taking over the ongoing remediation activities at the site, BASF coordinates high school environmental science classes conduct wildlife surveys on site. Tours provided by BASF help students learn about the site's history, contamination and cleanup as well as wildlife species on site. Forested areas of the site provide habitat for coyotes, red and gray foxes, turkeys, raccoons, deer and birds.

In 2019, BASF leased 166 acres of the site for a 35-megawatt direct current (MW DC) grid-tied solar array system. The project is almost entirely within the footprint of the site's former manufacturing area and connects to an on-site substation. A smaller 2-MW DC net-metered solar array provides nearly 100% of the electricity required to power the groundwater extraction and treatment system. EPA worked with BASF to make sure all solar arrays on site are ground mounted and do not penetrate the caps. The design ensures that the reuse is compatible with the remedy and that the remedy remains protective of human health and the environment.



Solar panels at the capped Ciba-Geigy Corp. site.

*For more information about EPA's Superfund Redevelopment Program, please visit:
<https://www.epa.gov/superfund-redevelopment>.*