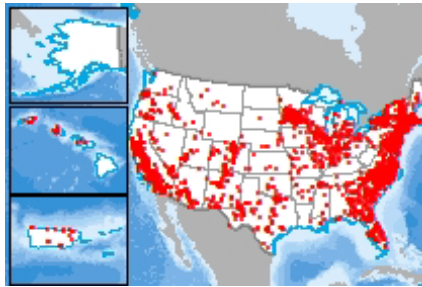


# Power Plants - Solar



## Tags

energy, infrastructure, electricity, power plants, biomass, coal, geothermal, hydroelectric, natural gas, nuclear, petroleum, pumped storage, solar, wind, USA, EIA, shapefile, United States

## Summary

This data was created for the purpose of identifying and providing detailed information on operable electric generating plants in the United States.

## Description

This is a point dataset representing operable **solar** electric generating plants in the United States by energy source. This includes plants that are operating, on standby, or short- or long-term out of service. The surveys collect data on all plants with a combined nameplate capacity of 1 MW or more. Source: EIA-860, Annual Electric Generator Report, EIA-860M, Monthly Update to the Annual Electric Generator Report, and EIA-923, Power Plant Operations Report. Data period: August 2021.

## Credits

U.S. Energy Information Administration

## Use limitations

None (public use). Users are advised to thoroughly review the metadata to understand the appropriate use and limitations of the data. These data and related graphics, if available, are not legal documents and are not intended to be used as such. The information contained in these data is dynamic and may change over time. The U.S. Energy Information Administration gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data.

## Extent

<b>West</b>	-171.712439	<b>East</b>	-65.279560
<b>North</b>	71.292000	<b>South</b>	17.947115

## Scale Range

<b>Maximum (zoomed in)</b>	1:5,000
<b>Minimum (zoomed out)</b>	1:150,000,000

## Topics and Keywords

THEMES OR CATEGORIES OF THE RESOURCE location  
\* CONTENT TYPE Downloadable Data  
EXPORT TO FGDC CSDGM XML FORMAT AS RESOURCE DESCRIPTION No  
PLACE KEYWORDS United States  
PLACE KEYWORDS United States, USA  
THEME KEYWORDS energy, infrastructure, electricity, power plants, biomass, coal, geothermal, hydroelectric, natural gas, nuclear, petroleum, pumped storage, solar, wind, USA, EIA, shapefile, geospatial

## Citation

\* TITLE plant\_power\_eia\_v8  
PUBLICATION DATE 2020-07-10  
PRESENTATION FORMATS \* digital map

## Resource Details

DATASET LANGUAGES \* English (UNITED STATES)  
DATASET CHARACTER SET utf8 - 8 bit UCS Transfer Format  
SPATIAL REPRESENTATION TYPE \* vector  
\* PROCESSING ENVIRONMENT Version 6.2 (Build 9200) ; Esri ArcGIS 10.8.0.12790  
CREDITS  
U.S. Energy Information Administration  
ARCGIS ITEM PROPERTIES  
\* NAME plant\_power\_eia\_v8

## Extents

EXTENT  
GEOGRAPHIC EXTENT  
BOUNDING RECTANGLE  
EXTENT TYPE Extent used for searching  
\* WEST LONGITUDE -171.712439  
\* EAST LONGITUDE -65.279560  
\* NORTH LATITUDE 71.292000  
\* SOUTH LATITUDE 17.947115  
\* EXTENT CONTAINS THE RESOURCE Yes  
EXTENT IN THE ITEM'S COORDINATE SYSTEM  
\* WEST LONGITUDE -19114941.272351  
\* EAST LONGITUDE -7266887.378409  
\* SOUTH LATITUDE 2031359.375771  
\* NORTH LATITUDE 11502860.587292  
\* EXTENT CONTAINS THE RESOURCE Yes

## Resource Points of Contact

POINT OF CONTACT  
INDIVIDUAL'S NAME EIA mapping feedback: mapping@eia.gov  
CONTACT'S ROLE originator

## Resource Maintenance

RESOURCE MAINTENANCE  
UPDATE FREQUENCY quarterly

## Resource Constraints

### CONSTRAINTS

#### LIMITATIONS OF USE

None (public use). Users are advised to thoroughly review the metadata to understand the appropriate use and limitations of the data. These data and related graphics, if available, are not legal documents and are not intended to be used as such. The information contained in these data is dynamic and may change over time. The U.S. Energy Information Administration gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data.

## Spatial Reference

### ARCGIS COORDINATE SYSTEM

\* TYPE Projected

\* GEOGRAPHIC COORDINATE REFERENCE GCS\_WGS\_1984

\* PROJECTION WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

\* COORDINATE REFERENCE DETAILS

#### PROJECTED COORDINATE SYSTEM

WELL-KNOWN IDENTIFIER 102100

X ORIGIN -22041257.952553775

Y ORIGIN -30241100

XY SCALE 144148035.48642668

Z ORIGIN -100000

Z SCALE 10000

M ORIGIN -100000

M SCALE 10000

XY TOLERANCE 0.001

Z TOLERANCE 0.001

M TOLERANCE 0.001

HIGH PRECISION true

LATEST WELL-KNOWN IDENTIFIER 3857

WELL-KNOWN TEXT PROJCS["WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere",GEOGCS  
["GCS\_WGS\_1984",DATUM["D\_WGS\_1984",SPHEROID  
["WGS\_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT  
["Degree",0.0174532925199433]],PROJECTION["Mercator\_Auxiliary\_Sphere"],PARAMETER  
["False\_Easting",0.0],PARAMETER["False\_Northing",0.0],PARAMETER  
["Central\_Meridian",0.0],PARAMETER["Standard\_Parallel\_1",0.0],PARAMETER  
["Auxiliary\_Sphere\_Type",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",3857]]

### REFERENCE SYSTEM IDENTIFIER

\* VALUE 3857

\* CODESPACE EPSG

\* VERSION 8.8(9.3.1.2)

## Spatial Data Properties

### VECTOR

\* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

#### GEOMETRIC OBJECTS

FEATURE CLASS NAME plant\_power\_eia\_v8

\* OBJECT TYPE point

\* OBJECT COUNT 10847

### ARCGIS FEATURE CLASS PROPERTIES

FEATURE CLASS NAME plant\_power\_eia\_v8

\* FEATURE TYPE Simple

\* GEOMETRY TYPE Point

\* HAS TOPOLOGY FALSE

\* FEATURE COUNT 10847

\* SPATIAL INDEX TRUE

\* LINEAR REFERENCING FALSE

# Lineage ►

## LINEAGE STATEMENT

EIA-860, Annual Electric Generator Report, EIA-860M, Monthly Update to the Annual Electric Generator Report, and EIA-923, Power Plant Operations Report.

## PROCESS STEP

### DESCRIPTION

Data for each power plant was aggregated from more granular generator level information. Each plant's primary energy source was determined by the energy source for that plant with the largest nameplate capacity.

# Distribution

## DISTRIBUTION FORMAT

\* NAME File Geodatabase Feature Class

# Fields

## DETAILS FOR OBJECT plant\_power\_eia\_v8

\* TYPE Feature Class

\* ROW COUNT 10847

## DEFINITION SOURCE

EIA

## FIELD OBJECTID

\* ALIAS OBJECTID

\* DATA TYPE OID

\* WIDTH 4

\* PRECISION 0

\* SCALE 0

## \* FIELD DESCRIPTION

Internal feature number.

## \* DESCRIPTION SOURCE

Esri

## \* DESCRIPTION OF VALUES

Sequential unique whole numbers that are automatically generated.

## FIELD Plant\_Code

\* ALIAS Plant Code

\* DATA TYPE Integer

\* WIDTH 4

\* PRECISION 0

\* SCALE 0

## FIELD DESCRIPTION

EIA-assigned plant identification number.

## DESCRIPTION SOURCE

EIA

## FIELD Plant\_Name

\* ALIAS Plant Name

\* DATA TYPE String

\* WIDTH 254

\* PRECISION 0

\* SCALE 0

## FIELD DESCRIPTION

Name of power plant.

## DESCRIPTION SOURCE

EIA

FIELD Utility\_ID

- \* ALIAS Utility ID
- \* DATA TYPE Integer
- \* WIDTH 4
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

EIA-assigned identification number for the company that is responsible for the day-to-day operations of the generator.

DESCRIPTION SOURCE

EIA

FIELD Utility\_Na

- \* ALIAS Utility Name
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

FIELD City

- \* ALIAS City
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

City location of power plant.

DESCRIPTION SOURCE

EIA

FIELD sector\_nam

- \* ALIAS Sector Name
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

FIELD County

- \* ALIAS County
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

County location of power plant.

DESCRIPTION SOURCE

EIA

FIELD StateName

- \* ALIAS State Name
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

State location of power plant.

DESCRIPTION SOURCE

EIA

#### FIELD Zip

- \* ALIAS Zip Code
- \* DATA TYPE Integer
- \* WIDTH 4
- \* PRECISION 0
- \* SCALE 0

#### FIELD DESCRIPTION

Zip code of power plant.

#### DESCRIPTION SOURCE

EIA

#### FIELD PrimSource

- \* ALIAS Primary Energy Source
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

#### FIELD DESCRIPTION

The most predominant type of energy that fuels the generator. The primary energy source is determined by net summer capacity.

#### DESCRIPTION SOURCE

EIA

#### FIELD Street\_Add

- \* ALIAS Street
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

#### FIELD Install\_MW

- \* ALIAS Nameplate (Installed) Capacity (MW)
- \* DATA TYPE Double
- \* WIDTH 8
- \* PRECISION 0
- \* SCALE 0

#### FIELD DESCRIPTION

The total combined generator nameplate capacity (installed). Installed capacity is determined by the highest value on the generator nameplate in megawatts rounded to the nearest tenth. The maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer and expressed in megawatts (MW).

#### DESCRIPTION SOURCE

EIA

#### FIELD Total\_MW

- \* ALIAS Maximum Summer Output (MW)
- \* DATA TYPE Double
- \* WIDTH 8
- \* PRECISION 0
- \* SCALE 0

#### FIELD DESCRIPTION

The maximum output, as measured in alternating current (AC), commonly expressed in megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of summer peak demand (period of June 1 through September 30.) This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

FIELD Coal\_MW

\* ALIAS Net Summer Capacity from Coal (MW)  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0

FIELD DESCRIPTION

Net summer capacity of coal-fired electric generators in megawatts (MW).

DESCRIPTION SOURCE

EIA

FIELD NG\_MW

\* ALIAS Net Summer Capacity from Natural Gas(MW)  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0

FIELD DESCRIPTION

Net summer capacity of natural gas fired electric generators in megawatts (MW).

DESCRIPTION SOURCE

EIA

FIELD Crude\_MW

\* ALIAS Net Summer Capacity from Crude Oil (MW)  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0

FIELD DESCRIPTION

Net summer capacity of petroleum-fired electric generators in megawatts (MW).

DESCRIPTION SOURCE

EIA

FIELD Bio\_MW

\* ALIAS Net Summer Capacity from Biomass (MW)  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0

FIELD DESCRIPTION

Net summer capacity of biomass electric generators in megawatts (MW).

DESCRIPTION SOURCE

EIA

FIELD Hydro\_MW

\* ALIAS Net Summer Capacity from Hydro (MW)  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0

FIELD DESCRIPTION

Net summer capacity of hydroelectric generators in megawatts (MW).

DESCRIPTION SOURCE

EIA

FIELD **HydroPS\_MW**

- \* **ALIAS** Net Summer Capacity from Pumped Storage (MW)
- \* **DATA TYPE** Double
- \* **WIDTH** 8
- \* **PRECISION** 0
- \* **SCALE** 0

FIELD **DESCRIPTION**

Net summer capacity of pumped-storage hydroelectric generators in megawatts (MW).

DESCRIPTION **SOURCE**

EIA

FIELD **Nuclear\_MW**

- \* **ALIAS** Net Summer Capacity from Nuclear (MW)
- \* **DATA TYPE** Double
- \* **WIDTH** 8
- \* **PRECISION** 0
- \* **SCALE** 0

FIELD **DESCRIPTION**

Net summer capacity of nuclear power electric generators in megawatts (MW).

DESCRIPTION **SOURCE**

EIA

FIELD **Solar\_MW**

- \* **ALIAS** Net Summer Capacity from Solar (MW)
- \* **DATA TYPE** Double
- \* **WIDTH** 8
- \* **PRECISION** 0
- \* **SCALE** 0

FIELD **DESCRIPTION**

Net summer capacity of solar powered electric generators in megawatts (MW).

DESCRIPTION **SOURCE**

EIA

FIELD **Wind\_MW**

- \* **ALIAS** Net Summer Capacity from Wind (MW)
- \* **DATA TYPE** Double
- \* **WIDTH** 8
- \* **PRECISION** 0
- \* **SCALE** 0

FIELD **DESCRIPTION**

Net summer capacity of wind turbine electric generators in megawatts (MW).

DESCRIPTION **SOURCE**

EIA

FIELD **source\_des**

- \* **ALIAS** Source Description
- \* **DATA TYPE** String
- \* **WIDTH** 254
- \* **PRECISION** 0
- \* **SCALE** 0



FIELD Geo\_MW

- \* ALIAS Net Summer Capacity from Geothermal (MW)
- \* DATA TYPE Double
- \* WIDTH 8
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

Net summer capacity of geothermal powered electric generators in megawatts (MW).

DESCRIPTION SOURCE

EIA

FIELD Bat\_MW

- \* ALIAS Net Summer Capacity from Batteries (MW)
- \* DATA TYPE Double
- \* WIDTH 8
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

Net summer capacity of battery powered electric generators in megawatts (MW).

DESCRIPTION SOURCE

EIA

FIELD Other\_MW

- \* ALIAS Net Summer Capacity from Other (MW)
- \* DATA TYPE Double
- \* WIDTH 8
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

Net summer capacity of electric generators powered by other energy sources not specified in the other categories in megawatts (MW). These include energy storage technologies (e.g., compressed air, batteries, and fly wheels), purchased steam, waste heat not directly attributed to a fuel source, and tire-derived fuels.

DESCRIPTION SOURCE

EIA

FIELD tech\_desc

- \* ALIAS Technology Description
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

The type(s) of technology (prime mover). The engine, turbine, water wheel, or similar machine that drives an electric generator; or, for reporting purposes, a device that converts energy to electricity directly (e.g., photovoltaic solar and fuel cells).

DESCRIPTION SOURCE

EIA

FIELD Source

- \* ALIAS Data Source
- \* DATA TYPE String
- \* WIDTH 254
- \* PRECISION 0
- \* SCALE 0

FIELD DESCRIPTION

The EIA source surveys for the power plants map data.

DESCRIPTION SOURCE

EIA

#### FIELD Period

\* ALIAS Data Time Period (YYYYMM)  
\* DATA TYPE Integer  
\* WIDTH 4  
\* PRECISION 0  
\* SCALE 0

#### FIELD DESCRIPTION

The reporting period (currency) of the data (yyyymm).

#### DESCRIPTION SOURCE

EIA

#### FIELD Latitude

\* ALIAS Latitude  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0

#### FIELD DESCRIPTION

The latitude of the power plant in decimal degrees calculated in ArcMap using GCS:  
WGS 84 (EPSG:4326)

#### DESCRIPTION SOURCE

EIA

#### FIELD Longitude

\* ALIAS Longitude  
\* DATA TYPE Double  
\* WIDTH 8  
\* PRECISION 0  
\* SCALE 0

#### FIELD DESCRIPTION

The longitude of the power plant in decimal degrees calculated in ArcMap using GCS:  
WGS 84 (EPSG:4326)

#### FIELD Shape

\* ALIAS Shape  
\* DATA TYPE Geometry  
\* WIDTH 0  
\* PRECISION 0  
\* SCALE 0

#### \* FIELD DESCRIPTION

Feature geometry.

#### \* DESCRIPTION SOURCE

Esri

#### \* DESCRIPTION OF VALUES

Coordinates defining the features.

## Metadata Details

\* METADATA LANGUAGE English (UNITED STATES)  
METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format  
SCOPE OF THE DATA DESCRIBED BY THE METADATA \* dataset  
SCOPE NAME \* dataset  
\* LAST UPDATE 2022-08-23

#### ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0  
METADATA STYLE FGDC CSDGM Metadata  
STANDARD OR PROFILE USED TO EDIT METADATA FGDC  
CREATED IN ARCGIS FOR THE ITEM 2022-08-09  
LAST MODIFIED IN ARCGIS FOR THE ITEM 2022-08-23  
AUTOMATIC UPDATES  
HAVE BEEN PERFORMED Yes  
LAST UPDATE 2022-08-23