

# Power\_Plants

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## Identification Information:

**Citation:**

**Citation Information:**

**Publication Date:** 20160307

**Title:** Power\_Plants

**Geospatial Data Presentation Form:** Vector Digital Data Set (Point)

**Larger Work Citation:**

**Citation Information:**

**Title:** Foundation Energy Data

**Geospatial Data Presentation Form:** GIS Data Project/Collection

**Online Linkage:** <https://hifld-dhs-gii.opendata.arcgis.com>

**Description:**

**Abstract:** This feature class represents power plants. Power plants are all the land and land rights, structures and improvements, boiler or reactor vessel equipment, engines and engine-driven generators, turbo generator units, accessory electric equipment, and miscellaneous power plant equipment are grouped together for each individual facility. Included are the following plant types: hydroelectric dams, fossil fuel (coal, natural gas, or oil), nuclear, solar, wind, geothermal, and biomass. \*\*\*\* Geographical coverage includes the Continental United States. \*\*\*\*This feature class has a one-to-many relationship class (Power Plant Generating Units) with the "Generating Units" table. This captures the relationship between power plants and their generating units. "Power Plants" feature class is the origin using PLANT\_CODE as the primary key. "Generating Units" table is the destination using PLANT\_CODE as the foreign key.

**Purpose:** This feature class is for the Homeland Infrastructure Foundation Level Database (HIFLD) (<https://gii.dhs.gov/HIFLD>) as well as the Energy modelling and simulation community.

**Supplemental Information:** If you are using this dataset as a shapefile, please be aware that it was converted from a Geodatabase. As a result, this shapefile may have attribution and metadata errors resulting from the conversion process. The following are known issues: null values may have been changed to 0s (zeros) or to blank values, numbers (including latitude and longitude) may have been rounded up or down, there may be issues with Unicode character strings, and time cannot be stored in a date field. Field names may have been truncated to no longer than 10 characters or completely changed, lengthy string attributes may have been truncated to 254 characters, and attribute columns may have been deleted. Shapefiles do not support coded domains and subtypes therefore the original file geodatabase attribution and metadata information for coded domains and subtypes could be incorrect or missing in the shapefile version. Please visit the following ESRI website for more information: <http://pro.arcgis.com/en/pro-app/tool-reference/appendices/geoprocessing-considerations-for-Shapefile-output.htm>

**Time Period of Content:**

**Time Period Information:**

**Range of Dates/Times:**

**Beginning Date:** 20140407

**Ending Date:** 20150930

**Currentness Reference:** observed

**Status:**

**Progress:** Complete

**Maintenance and Update Frequency:** Continually

**Spatial Domain:**

**Bounding Coordinates:**

**West Bounding Coordinate:** -124.238063

**East Bounding Coordinate:** -67.003119

**North Bounding Coordinate:** 48.990284

**South Bounding Coordinate:** 24.563178

**Keywords:**

**Theme:**

**Theme Keyword Thesaurus:** None

**Theme Keyword:** fossil fuels

**Theme Keyword:** power plants

**Theme Keyword:** homeland security

**Theme Keyword:** address

**Theme Keyword:** biomass

**Theme Keyword:** geothermal

**Theme Keyword:** generation

**Theme Keyword:** hydroelectric

**Theme Keyword:** megawatts

**Theme Keyword:** energy infrastructure

**Theme Keyword:** fuel

**Theme Keyword:** homeland defense

**Theme Keyword:** electric

**Theme Keyword:** power

**Theme Keyword:** emergency response

**Theme Keyword:** grid

**Theme Keyword:** nuclear

**Theme Keyword:** solar

**Theme Keyword:** generating units

**Theme Keyword:** wind

**Theme Keyword:** operators

**Theme Keyword:** capacity

**Theme:**

**Theme Keyword Thesaurus:** ISO 19115 Topic Categories

**Theme Keyword:** structure

**Place:**

**Place Keyword Thesaurus:** None

**Place Keyword:** USA

**Place Keyword:** Continental United States

**Access Constraints:** None (Public Domain Information)

**Use Constraints:** None (Public Use). Users are advised to read the data set's metadata thoroughly to understand appropriate use and data limitations.

**Point of Contact:**

**Contact Information:**

**Contact Organization Primary:**

**Contact Organization:** Oak Ridge National Laboratory

**Contact Address:**

**Address Type:** mailing and physical

**Address:** One Bethel Valley Rd, MS-6017

**City:** Oak Ridge

**State or Province:** TN

**Postal Code:** 37831

**Country:** US

**Contact Voice Telephone:** 865-241-3976

**Contact Facsimile Telephone:** 865-241-6261

**Data Set Credit:** Oak Ridge National Laboratory (ORNL) Geographic Information Science and Technology (GIST) Group, Los Alamos National Laboratory (LANL), Idaho National Laboratory (INL), National Geospatial-Intelligence Agency (NGA) Homeland Security Infrastructure Program (HSIP) Team

**Native Data Set Environment:** Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; Esri ArcGIS 10.1.1.3143

**Data Quality Information:**

**Attribute Value Accuracy Information:**

**Attribute Accuracy Report:** No formal attribute accuracy test was conducted. Data from the authoritative sources (as identified in other sections of this metadata) is assumed to be correct and accurate. See also "Overview Description" in the "Entities and Attributes" metadata section.

**Logical Consistency Report:** Data were extracted from sources (identified in the SOURCE field) and other open source websites to populate the attribute fields; NOT AVAILABLE values (for string and date data types) and Null values (for numeric data types) denote missing data that was not present in the source data. During quality control, attributes were checked to ensure that they fell within the expected ranges or had expected/valid values. Text attribute values were checked for spelling and usage consistency. No topology tests were conducted. All records were verified to occur within the spatial domain of the feature class.

**Completeness Report:** Data is complete given available sources.

**Positional Accuracy:**

**Horizontal Positional Accuracy:**

**Horizontal Positional Accuracy Report:** None; all efforts are made to place the geographic representation of the facility on-entity using the best available imagery from a wide variety of sources. Users should read and understand the METHOD metadata as well as the Processing Steps.

**Vertical Positional Accuracy:**

**Vertical Positional Accuracy Report:** None; dataset contains no vertical data.

**Lineage:**

**Source Information:**

**Source Citation:**

**Citation Information:**

**Title:** see SOURCE field

**Geospatial Data Presentation Form:** Other

**Publication Information:**

**Publisher:** see SOURCE field

**Type of Source Media:** None

**Source Citation Abbreviation:** see SOURCE field

**Process Step:**

**Process Description:**

Authoritative data sources are identified through open source research. That data is then acquired and transformed into a usable data format. The properly formatted data then goes through preprocessing steps that includes a geocoding operation to give spatial context to the data. The data goes through further refinement using remote sensing techniques. After preprocessing, every record goes through a review process and each point is moved to a facility based on-entity location based on interpretation of the best available imagery and open source information. The DATE field indicates the date in which the review step took place.

**Spatial Data Organization Information:**

**Direct Spatial Reference Method:** Vector

**Point and Vector Object Information:**

**SDTS Terms Description:**

**Point and Vector Object Count:** 6958

**Entity and Attribute Information:**

**Detailed Description:**

**Entity Type:**

**Entity Type Label:** Power\_Plants

**Entity Type Definition:** Attribute fields were populated using sources identified in the SOURCE field for the period covered in the Time Period metadata and other open source data. NOT AVAILABLE values (for string and date data types) and Null values (for numeric data types) denote missing data that was not present in the source data. However, the missing data may be present in other sources not yet discovered and used in the creation and/or maintenance of this dataset. These records may be populated with valid information in future update cycles.

**Entity Type Definition Source:** Originator defined

**Attribute:**

**Attribute Label:** UTILITY\_ID

**Attribute Definition:** Identification number associated with the power plant operator.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** OBJECTID

**Attribute Definition:** Internal feature number.

**Attribute Definition Source:** Esri

**Attribute Domain Values:**

**Unrepresentable Domain:** Sequential unique whole numbers that are automatically generated.

**Attribute:**

**Attribute Label:** LONGITUDE

**Attribute Definition:** The angular distance east or west from the prime meridian on the earth's surface.

**Attribute Definition Source:** Originator defined

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** -124.238063

**Range Domain Maximum:** -67.003119

**Attribute Units of Measure:** Decimal Degrees

**Attribute:**

**Attribute Label:** Shape

**Attribute Definition:** Feature geometry.

**Attribute Definition Source:** Esri

**Attribute Domain Values:**

**Unrepresentable Domain:** Coordinates defining the features.

**Attribute:**

**Attribute Label:** PLANT\_CODE

**Attribute Definition:** Code number associated with the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** OPERATOR

**Attribute Definition:** Name of the power plant operator.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** SOURCE

**Attribute Definition:** Original source used to identify geospatial location and/or attribution for the feature. Frequently occurring sources include: Energy Information Administration's Annual Electric Generator data (EIA 860), Annual Electric Utility data (EIA 923), and the United States Environmental Protection Agency's Emissions; Generation Resource Integrated Database (eGRID).

**Attribute Definition Source:** Originator defined

**Attribute:**

**Attribute Label:** METHOD

**Attribute Definition:** Methodology used to validate geospatial location and/or attribution for the feature.

**Attribute Definition Source:** Originator defined

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** IMAGERY

**Enumerated Domain Value Definition:** The best available imagery used to determine the location.

**Enumerated Domain Value Definition Source:** Originator defined

**Enumerated Domain:**

**Enumerated Domain Value:** UNVERIFIED

**Enumerated Domain Value Definition:** Feature could not be located or the feature has not yet been validated.

**Enumerated Domain Value Definition Source:** Originator defined

**Enumerated Domain:**

**Enumerated Domain Value:** OTHER

**Enumerated Domain Value Definition:** Open source information used to determine the location.

**Enumerated Domain Value Definition Source:** Originator defined

**Enumerated Domain:**

**Enumerated Domain Value:** IMAGERY AND OTHER

**Enumerated Domain Value Definition:** Imagery and supplemental open source information used to determine the location.

**Enumerated Domain Value Definition Source:** Originator defined

**Attribute:**

**Attribute Label:** CITY

**Attribute Definition:** City name.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** GEN\_UNITS

**Attribute Definition:** Number of generating units at the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 73

**Attribute:**

**Attribute Label:** SUB\_2

**Attribute Definition:** Name of secondary substation (feature class) through which the power plant feeds electricity into the transmission grid.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** SUB\_1

**Attribute Definition:** Name of primary substation (feature class) through which the power plant feeds electricity into the transmission grid.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** CAPACITY\_FACTOR

**Attribute Definition:** A measure of how much electricity a power plant produced relative to the maximum it could produce at continuous full power operation during the same period. Equal to the quotient of NET\_GEN divided by SUMMER\_CAP multiplied by 8,760, the total hours in a year.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** -2.18451

**Range Domain Maximum:** 95

**Attribute:**

**Attribute Label:** NET\_GEN

**Attribute Definition:** Power plant's net generation in megawatt hours (MWh)

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** -971903

**Range Domain Maximum:** 31431080

**Attribute Units of Measure:** Megawatt hours (MWh)

**Attribute:**

**Attribute Label:** SECOND\_FUEL

**Attribute Definition:** Secondary fuel type used at the power plant

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** OIL

**Enumerated Domain Value Definition:** Includes distillate/diesel oil, jet fuel, kerosene, other oil, other liquid, petroleum coke, refinery gas, residual oil, and waste oil.

**Enumerated Domain Value Definition Source:** Producer defined

**Enumerated Domain:**

**Enumerated Domain Value:** DFO

**Enumerated Domain Value Definition:** Distillate Fuel Oil (including diesel, No. 1, No. 2, and No. 4 fuel oils)

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** WND

**Enumerated Domain Value Definition:** Wind

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** GAS

**Enumerated Domain Value Definition:** Includes natural gas, propane gas, and butane gas

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** WAT

**Enumerated Domain Value Definition:** Water at a Conventional Hydroelectric Turbine, and water used in Wave Buoy Hydrokinetic Technology, Current Hydrokinetic Technology, and Tidal Hydrokinetic Technology

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** BIOMASS

**Enumerated Domain Value Definition:** Includes agricultural byproducts, bagasse, black liquor, digester gas, landfill gas, methane, biogenic municipal solid waste, other biomass liquid, other biomass solids, paper pellets, sludge waste, wood (waste) liquids, and wood

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** NOT AVAILABLE

**Enumerated Domain Value Definition:** A valid value for a feature in all likelihood exists but has not yet been found via open source or other means. These records may be populated with valid information in future update cycles.

**Enumerated Domain Value Definition Source:** Originator defined

**Enumerated Domain:**

**Enumerated Domain Value:** None

**Enumerated Domain Value Definition:** None

**Enumerated Domain Value Definition Source:** Originator defined

**Enumerated Domain:**

**Enumerated Domain Value:** COAL

**Enumerated Domain Value Definition:** Includes anthracite coal, bituminous coal, lignite coal, subbituminous coal, syncoal, refined coal, waste coal, and coal-derived synthetic gas

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** DATE

**Attribute Definition:** Date when geospatial location and/or attribution were last validated for the feature.

**Attribute Definition Source:** Originator defined

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 0

**Attribute:**

**Attribute Label:** NAICS

**Attribute Definition:** The North American Industry Classification System (NAICS) code is the standard used by Federal statistical agencies in classifying business

establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

**Attribute Definition Source:** Originator defined

**Attribute Domain Values:**

**Codeset Domain:**

**Codeset Name:** North American Industry Classification System, 2012

**Codeset Source:** US Census (<http://www.census.gov/eos/www/naics/>)

**Attribute:**

**Attribute Label:** DESCRIPTION

**Attribute Definition:** Description of the power plant.

**Attribute Definition Source:** Originator defined

**Attribute:**

**Attribute Label:** NAME

**Attribute Definition:** Feature name.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** RETIRED\_UNIT

**Attribute Definition:** Number of retired generating units at the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 26

**Attribute:**

**Attribute Label:** RETIRED\_CAP

**Attribute Definition:** Megawatt (MW) capacity taken out of service at the power plant based on retired generating units.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 2650.1

**Attribute Units of Measure:** Megawatt (MW)

**Attribute:**

**Attribute Label:** WEBSITE

**Attribute Definition:** The feature specific website.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** PLANNED\_UNIT

**Attribute Definition:** Number of future planned generating units at the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 16

**Attribute:**

**Attribute Label:** PLANNED\_CAP

**Attribute Definition:** Planned proposed future megawatt (MW) capacity for installation at the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 2500

**Attribute Units of Measure:** Megawatt (MW)

**Attribute:**

**Attribute Label:** WINTER\_CAP

**Attribute Definition:** Steady hourly megawatt (MW) output the power plant is expected to supply to system load as demonstrated by tests at the time of winter peak demand.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 7079

**Attribute Units of Measure:** Megawatt (MW)

**Attribute:**

**Attribute Label:** SUMMER\_CAP

**Attribute Definition:** Steady hourly megawatt (MW) output the power plant is expected to supply to system load as demonstrated by tests at the time of summer peak demand.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 7079

**Attribute Units of Measure:** Megawatt (MW)

**Attribute:**

**Attribute Label:** OIL\_USED

**Attribute Definition:** Amount of oil in barrels consumed by the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 367422

**Attribute Units of Measure:** Barrels

**Attribute:**

**Attribute Label:** NGAS\_USED

**Attribute Definition:** Amount of natural gas in thousand cubic feet (Mcf) consumed by the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 154313819

**Attribute Units of Measure:** Mcf

**Attribute:**

**Attribute Label:** COAL\_USED

**Attribute Definition:** Amount of coal in short tons consumed by the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 12393796

**Attribute Units of Measure:** Short Tons

**Attribute:**

**Attribute Label:** NOTES

**Attribute Definition:** Any supplemental notes about the power plant.

**Attribute Definition Source:** Originator defined

**Attribute:**

**Attribute Label:** NAICS\_DESC

**Attribute Definition:** The North American Industry Classification System (NAICS) definition is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

**Attribute Definition Source:** Originator defined

**Attribute Domain Values:**

**Codeset Domain:**

**Codeset Name:** North American Industry Classification System, 2012

**Codeset Source:** US Census (<http://www.census.gov/eos/www/naics/>)

**Attribute:**

**Attribute Label:** LINES

**Attribute Definition:** Number of transmission lines that are linked to the power plant.

**Attribute Definition Source:** Originator defined

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 25

**Attribute:**

**Attribute Label:** OPER\_CAP

**Attribute Definition:** Maximum manufacturer rated megawatt (MW) output of power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 0

**Range Domain Maximum:** 6809

**Attribute Units of Measure:** Megawatt (MW)

**Attribute:**

**Attribute Label:** LATITUDE

**Attribute Definition:** The angular distance north or south from the equator on the earth's surface.

**Attribute Definition Source:** Originator defined

**Attribute Domain Values:**

**Range Domain:**

**Range Domain Minimum:** 24.563178

**Range Domain Maximum:** 48.990284

**Attribute Units of Measure:** Decimal Degrees

**Attribute:**

**Attribute Label:** PRIMARY\_FUEL

**Attribute Definition:** Primary fuel type used at the power plant.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** BFG

**Enumerated Domain Value Definition:** Blast Furnace Gas

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** WC

**Enumerated Domain Value Definition:** Waste/Other Coal (incl. anthracite culm, bituminous gob, fine coal, lignite waste, waste coal)

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** RG

**Enumerated Domain Value Definition:** Unknown

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** LFG

**Enumerated Domain Value Definition:** Landfill Gas

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** COG

**Enumerated Domain Value Definition:** Unknown

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** DG

**Enumerated Domain Value Definition:** Unknown

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** WND

**Enumerated Domain Value Definition:** Wind

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** SUN

**Enumerated Domain Value Definition:** Solar

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** PC

**Enumerated Domain Value Definition:** Petroleum Coke

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** NOT AVAILABLE

**Enumerated Domain Value Definition:** A valid value for a feature in all likelihood exists but has not yet been found via open source or other means. These records may be populated with valid information in future update cycles.

**Enumerated Domain Value Definition Source:** Originator defined

**Enumerated Domain:**

**Enumerated Domain Value:** WAT

**Enumerated Domain Value Definition:** Water at a Conventional Hydroelectric Turbine, and water used in Wave Buoy Hydrokinetic Technology, Current Hydrokinetic Technology, and Tidal Hydrokinetic Technology

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** NUC

**Enumerated Domain Value Definition:** Nuclear (including Uranium, Plutonium, and Thorium)

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** OG

**Enumerated Domain Value Definition:** Other Gas

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** LIG

**Enumerated Domain Value Definition:** Lignite Coal

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** DFO

**Enumerated Domain Value Definition:** Distillate Fuel Oil (including diesel, No. 1, No. 2, and No. 4 fuel oils)

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** OTH

**Enumerated Domain Value Definition:** Other primary fuel used.

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** BLQ

**Enumerated Domain Value Definition:** Black Liquor

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** AB

**Enumerated Domain Value Definition:** Agricultural By-Products

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** WDS

**Enumerated Domain Value Definition:** Wood/Wood Waste Solids (incl. paper pellets, railroad ties, utility poles, wood chips, bark, and wood waste solids)

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** MSB

**Enumerated Domain Value Definition:** Biogenic Municipal Solid Waste

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** WO

**Enumerated Domain Value Definition:** Waste/Other Oil (including crude oil, liquid butane, liquid propane, naphtha, oil waste, re-refined motor oil, sludge oil, tar oil, or other petroleum-based liquid wastes)

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** GEO

**Enumerated Domain Value Definition:** Geothermal

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** BIT

**Enumerated Domain Value Definition:** Bituminous Coal

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** SUB

**Enumerated Domain Value Definition:** Subbituminous Coal

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Enumerated Domain:**

**Enumerated Domain Value:** NG

**Enumerated Domain Value Definition:** Natural Gas

**Enumerated Domain Value Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** COUNTRY

**Attribute Definition:** Country Code (3 character).

**Attribute Definition Source:** Originator defined

**Attribute Domain Values:**

**Codeset Domain:**

**Codeset Name:** Geopolitical Entities, Names, and Codes (GENC) Standard

**Codeset Source:** National System for Geospatial Intelligence (NSG) Standards Registry (<https://nsgreg.nga.mil/genc/discovery>)

**Attribute:**

**Attribute Label:** ZIPCODE

**Attribute Definition:** Zip Code (5 digit).

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Codeset Domain:**

**Codeset Name:** US Postal Zip Codes

**Codeset Source:** United States Postal Service (<https://www.usps.com>)

**Attribute:**

**Attribute Label:** STATE

**Attribute Definition:** State abbreviation.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute Domain Values:**

**Codeset Domain:**

**Codeset Name:** Two-Letter State and Possession Abbreviations

**Codeset Source:** United States Postal Service (<https://www.usps.com>)

**Attribute:**

**Attribute Label:** PHONE

**Attribute Definition:** General telephone number in the following format or reformatted to from the SOURCE to: (xxx) xxx-xxxx ext xxx.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Attribute:**

**Attribute Label:** ADDRESS

**Attribute Definition:** Primary street address or PO Box.

**Attribute Definition Source:** The responsible organization as identified in the SOURCE field.

**Overview Description:**

**Entity and Attribute Overview:**

Attribute fields were populated using sources identified in the SOURCE field for the period covered in the Time Period metadata and other open source data. NOT AVAILABLE values (for string and date data types) and Null values (for numeric data types) denote missing data that was not present in the source data. However, the missing data may be present in other sources not yet discovered and used in the creation and/or maintenance of this dataset. These records may be populated with valid information in future update cycles.

**Entity and Attribute Detail Citation:** Oak Ridge National Laboratory

**Distribution Information:**

**Distributor:**

**Contact Information:**

**Contact Organization Primary:**

**Contact Organization:** HIFLD Subcommittee

**Contact Electronic Mail Address:** [hifld@hq.dhs.gov](mailto:hifld@hq.dhs.gov)

**Distribution Liability:** Distributor assumes no liability for misuse of data.

**Standard Order Process:**

**Digital Form:**

**Digital Transfer Information:**

**Format Name:** Vector Digital Data Set (Point)

**Fees:** None. No fees are applicable for obtaining the data set.

**Metadata Reference Information:**

**Metadata Date:** 20160302

**Metadata Contact:**

**Contact Information:**

**Contact Organization Primary:**

**Contact Organization:** Oak Ridge National Laboratory

**Contact Address:**

**Address Type:** mailing and physical

**Address:** One Bethel Valley Rd, MS-6017

**City:** Oak Ridge

**State or Province:** TN

**Postal Code:** 37831

**Country:** US

**Contact Voice Telephone:** 865-241-3976

**Contact Facsimile Telephone:** 865-241-6261

**Metadata Standard Name:** FGDC Content Standard for Digital Geospatial Metadata

**Metadata Standard Version:** FGDC-STD-001-1998

**Metadata Time Convention:** local time