**Global Power Plant Database**

**Project Description**

The Global Power Plant Database is a comprehensive, open source database of power plants around the world. It centralizes power plant data to make it easier to navigate, compare and draw insights for one’s own analysis. The database covers approximately 35,000 power plants from 167 countries and includes thermal plants (e.g. coal, gas, oil, nuclear, biomass, waste, geothermal) and renewables (e.g. hydro, wind, solar). Each power plant is geolocated and entries contain information on plant capacity, generation, ownership, and fuel type. It will be continuously updated as data becomes available.

**Key attributes of the database**

The database includes the following indicators:

* `country` (text): 3 character country code corresponding to the ISO 3166-1 alpha-3 specification [5]
* `country\_long` (text): longer form of the country designation
* `name` (text): name or title of the power plant, generally in Romanized form
* `gppd\_idnr` (text): 10 or 12 character identifier for the power plant
* `capacity\_mw` (number): electrical generating capacity in megawatts
* `latitude` (number): geolocation in decimal degrees; WGS84 (EPSG:4326)
* `longitude` (number): geolocation in decimal degrees; WGS84 (EPSG:4326)
* `primary\_fuel` (text): energy source used in primary electricity generation or export
* `other\_fuel1` (text): energy source used in electricity generation or export
* `other\_fuel2` (text): energy source used in electricity generation or export
* `other\_fuel3` (text): energy source used in electricity generation or export
* `commissioning\_year` (number): year of plant operation, weighted by unit-capacity when data is available
* `owner` (text): majority shareholder of the power plant, generally in Romanized form
* `source` (text): entity reporting the data; could be an organization, report, or document, generally in Romanized form
* `url` (text): web document corresponding to the `source` field
* `geolocation\_source` (text): attribution for geolocation information
* `wepp\_id` (text): a reference to a unique plant identifier in the widely-used PLATTS-WEPP database.
* `year\_of\_capacity\_data` (number): year the capacity information was reported
* `generation\_gwh\_2013` (number): electricity generation in gigawatt-hours reported for the year 2013
* `generation\_gwh\_2014` (number): electricity generation in gigawatt-hours reported for the year 2014
* `generation\_gwh\_2015` (number): electricity generation in gigawatt-hours reported for the year 2015
* `generation\_gwh\_2016` (number): electricity generation in gigawatt-hours reported for the year 2016
* `generation\_gwh\_2017` (number): electricity generation in gigawatt-hours reported for the year 2017
* `generation\_gwh\_2018` (number): electricity generation in gigawatt-hours reported for the year 2018
* `generation\_gwh\_2019` (number): electricity generation in gigawatt-hours reported for the year 2019
* `generation\_data\_source` (text): attribution for the reported generation information
* `estimated\_generation\_gwh\_2013` (number): estimated electricity generation in gigawatt-hours for the year 2013
* `estimated\_generation\_gwh\_2014` (number): estimated electricity generation in gigawatt-hours for the year 2014
* `estimated\_generation\_gwh\_2015` (number): estimated electricity generation in gigawatt-hours for the year 2015
* `estimated\_generation\_gwh\_2016` (number): estimated electricity generation in gigawatt-hours for the year 2016
* `estimated\_generation\_gwh\_2017` (number): estimated electricity generation in gigawatt-hours for the year 2017
* 'estimated\_generation\_note\_2013` (text): label of the model/method used to estimate generation for the year 2013
* `estimated\_generation\_note\_2014` (text): label of the model/method used to estimate generation for the year 2014
* `estimated\_generation\_note\_2015` (text): label of the model/method used to estimate generation for the year 2015
* `estimated\_generation\_note\_2016` (text): label of the model/method used to estimate generation for the year 2016
* `estimated\_generation\_note\_2017` (text): label of the model/method used to estimate generation for the year 2017

Fuel Type Aggregation

We define the "Fuel Type" attribute of our database based on common fuel categories.

Prediction :   Make two prediction  1) **Primary** **Fuel**   2)**capacity\_mw**

**Dataset Link-**

* <https://github.com/wri/global-power-plant-database/blob/master/source_databases_csv/database_IND.csv>