9.16 - Reading Data

Generator Data

- imported JSON file into a `generatorData` dictionary
- **`generatorData`** dictionary keys
  - `type` → `FeatureCollection`
  - `generator` → `overpass-turbo`
  - `copyright` → `The data included in this document is from www.openstreetmap.org. The data is made available under ODbL.`
  - `timestamp` → `2024-09-13T17:37:30Z`
  - `features` → all the generator data
- length of the `features` value in the `generatorData` dictionary: `631`
  - **631** total generators
  - all generators can be accessed through the `features` value with **`list(generatorData.items())[4][1]`**
- first generator in this is `generatorData.items())[4][1][0]`
  - {'type': 'Feature', 'properties': {'@id': 'way/204596169', 'building': 'hut', 'generator:method': 'combustion', 'generator:output:electricity': '6 kW', 'generator:source': 'diesel', 'power': 'generator'}, 'geometry': {'type': 'Polygon', 'coordinates': [[[-0.1574508, 9.3693323], [-0.1574613, 9.3693087], [-0.1574315, 9.3692959], [-0.1574211, 9.3693194], [-0.1574508, 9.3693323]]]}, 'id': 'way/204596169'}

- Data is saved in a list of dictionaries. Each dictionary represents one generator
  - each dictionary is *ideally* formatted as:

- coordinates layout in Overpass Turbo *(from chatgpt)*
  - **Polygon Coordinates**
    - *Polygons are defined by a series of latitude and*

    - { `"ID" : "way/204596169"`, "`method" : "combustion"`, `"output" : "electricity"`, `"source" : "diesel"`, `"coordinates" : "[[[-0.1574508, 9.3693323], [-0.1574613, 9.3693087], [-0.1574315, 9.3692959], [-0.1574211, 9.3693194], [-0.1574508, 9.3693323]]]"` }
    - any variation is due to missing/inconsistent formatting

longitude pairs. The coordinates should form a closed loop, meaning the last point should be the same as the first point, although some systems handle polygons that do not explicitly close.

- The format is typically a series of points separated by commas: `polygon: (lat1, lon1), (lat2, lon2), (lat3, lon3), (lat1, lon1)`

- NEXT STEPS: exporting data into spreadsheet, then repeating for Transmission Line & population/load JSON files as well

Transmission Line Data