John Murphy

Assignment #3

**1. The Data File in Excel or CSV format (3 points).**

The data file is called “*electricity\_data\_US.csv*” and is found in this repo.

**2. Detailed description of the data. See**[**https://help.osf.io/article/217-how-to-make-a-data-dictionaryLinks to an external site.**](https://help.osf.io/article/217-how-to-make-a-data-dictionary)**for ideas on how to create a good data dictionary. (3 points)**

The data dictionary is in a file called “*DataDictionary\_EnergyGeneration\_TimeSeries.xlsx*”.

**3. Data Collection Methodology (2 points). State how the data is collected, by whom, how often, etc.**

You can find this data hosted on Kaggle. The U.S. Energy Information Administration ([www.eia.gov](http://www.eia.gov)) meticulously compiles information regarding net electricity generation in the United States. This governmental agency gathers data at both the state and national levels on a monthly basis.

It is important to note that while the U.S. Energy Information Administration routinely updates its monthly net electricity generation data, the dataset available on Kaggle remains static. This dataset is historical in nature, covering the period from January 1st, 2001, through to March 1, 2022. No further updates are expected.

**4. Why does this data set intrigue you? (2 points).**

I studied mechanical engineering as an undergraduate student at Rutgers University. During my studies, I became interested in power generation and had even taken a course in power plant design while at Rutgers. After I graduated as a mechanical engineer, I started working at Foster Wheeler, which is an engineering design firm known for its expertise in designing power plants and energy generation systems.

I am excited to explore the trends and potential seasonality patterns in electricity generation in the United States over the recent decade. It will be particularly interesting to discover the impact that technology has had on our electrical power generation. These technologies include the impact of electric vehicles (EVs) on our electrical grid, the demand from cryptocurrency mining operations over the last decade, and the prevalence of computers and computer technology in our lives.