

## Homework 2

### Group Members:

- Saisree Pamidi
- Calvin Bao
- Nivetha Sivaprakasam

### 3 Topic Ideas:

- Light Up America \*
- Where do Americans go for Vacation?
- Mapping Literacy Rates across the U.S.A

### Light Up America:

- Why? The proposed visualization allows users to understand how different factors(such as energy generation, distribution, consumption, population) affect the change in the cost of electricity from one industry to another depending on the geographic region(state).
- Other Goals: In the future we hope to incorporate information regarding residential electricity uses and cost consumption patterns that way we can easily compare industrial usage vs residential usage. This would be interesting to a general audience, as people can see how their consumption compares to all sorts of industrial consumption.
- Important to Businesses/Industries as it helps to understand cost and energy consumption patterns.
- Industries: Oil and Gas, Pharmaceuticals, Mining, Software, Medical/Healthcare.

### Data variables / Filtering Features / Organizing Data:

- By region (Power Markets: CAISO(California Independent System Operator), MISO , ISO-NE, Northwest, PJM, NYISO, SPP, Southeast, Southwest, SPP ) or by state
  - 1900s and 2000s (two decades)
  - Quarters of the Year(Jan - March, April - June, July - Sept, Oct - Dec)
  - Industries (cost of electricity, electricity received, electricity sold) (Oil/Gas,
    - Hours of the day (insight into peak times)
      - Peak times are (4-8 pm) during Summer (M-F)
      - Peak times are (6-10 am & 4-8pm) during Winter (M-F)
- Note: Energy consumption is measured in: kWh/capita
- Data Source Confidence Rating: The group is (4/5) (fairly confident) that we will find the appropriate data sources.

### Data Sources:

- <http://www.ferc.gov/default.asp>:
  - CAISO: <http://www.ferc.gov/market-oversight/mkt-electric/california.asp>
  - MISO: <http://www.ferc.gov/market-oversight/mkt-electric/midwest.asp>
  - ISO-NE: <http://www.ferc.gov/market-oversight/mkt-electric/new-england.asp>
  - NYISO - <http://www.ferc.gov/market-oversight/mkt-electric/new-york.asp>
  - Northwest: <http://www.ferc.gov/market-oversight/mkt-electric/northwest.asp>
  - PJM: <http://www.ferc.gov/market-oversight/mkt-electric/pjm.asp>
  - Southeast: <http://www.ferc.gov/market-oversight/mkt-electric/southeast.asp>
  - Southwest: <http://www.ferc.gov/market-oversight/mkt-electric/southwest.asp>
  - SPP: <http://www.ferc.gov/market-oversight/mkt-electric/spp.asp>
  - ERCOT: <http://www.ferc.gov/market-oversight/mkt-electric/spp.asp>
  - Industrial Electricity: [http://www.eia.gov/electricity/sales\\_revenue\\_price/pdf/table5\\_c.pdf](http://www.eia.gov/electricity/sales_revenue_price/pdf/table5_c.pdf)

- Peak Hours for Season: <https://www.pacificpower.net/ya/po/otou/ooh.html>

Previous Work:

1. [Electric Power Markets](#)
2. [ETP 2015 Data Visualization - How will the overall energy system evolve by 2020?](#)
3. [NYC energy consumption by block](#)