

# An Exploration of Electricity Consumption Patterns

## Project Report

### Introduction:

#### Overview:

Consumption pattern of energy shows the percentage use of different sources (solar energy, wind energy, geothermal energy, biogas, and tidal power). The consumption pattern of energy changes over time. Commercial sources of energy: Commercial energy makes up about 65% of the total energy consumed in India.

#### Purpose:

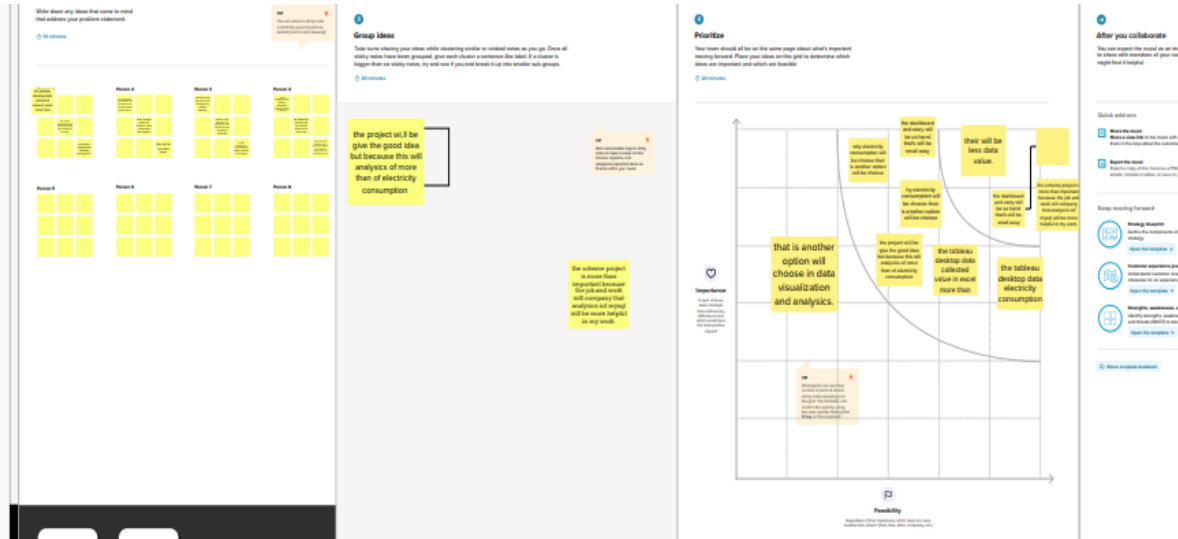
- Annual electricity consumption per capita serves as an important measure of a country's electric power development.
- Electricity consumption grows faster when the industrialization process develops quickly and goes down rapidly when industrialization is completed or near completion.

### Problem Definition & Design Thinking:

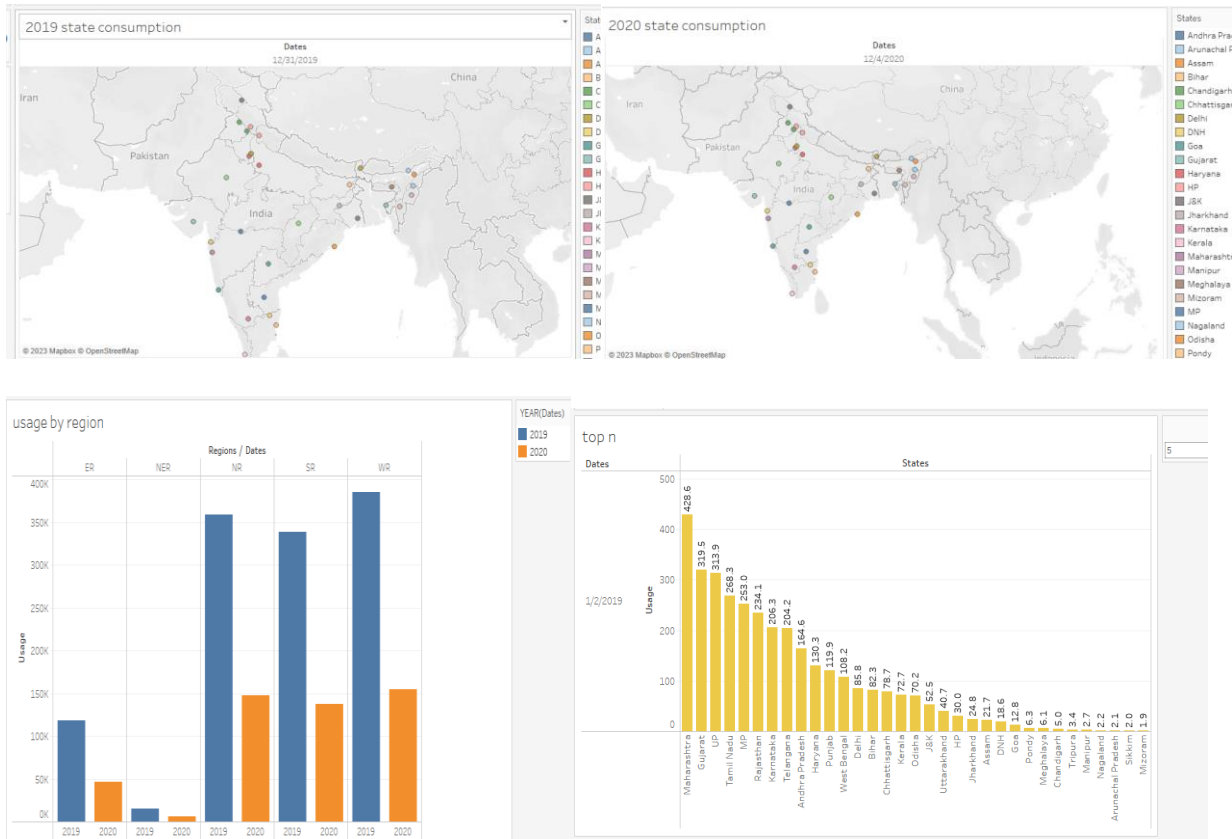
#### Empathy map:

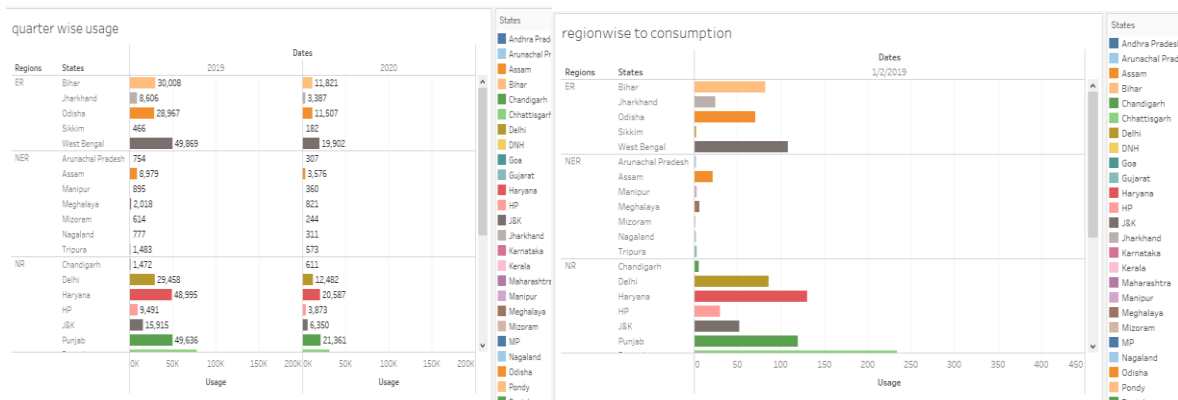
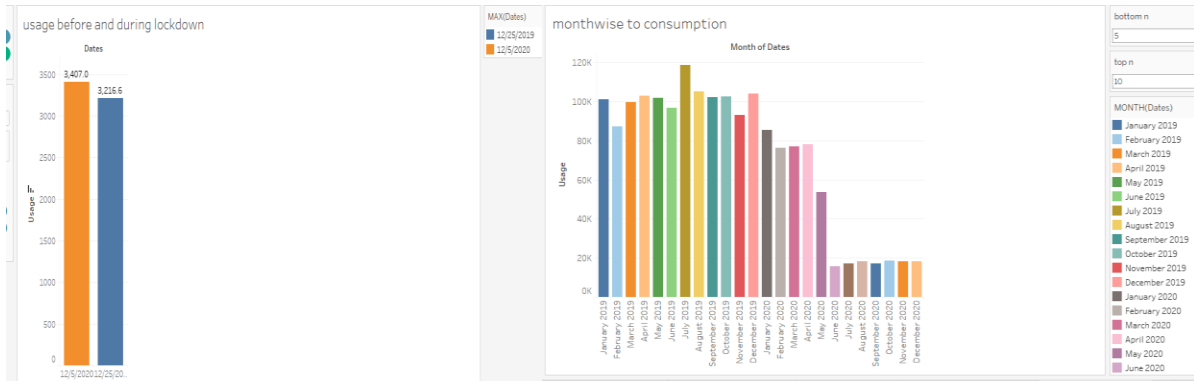
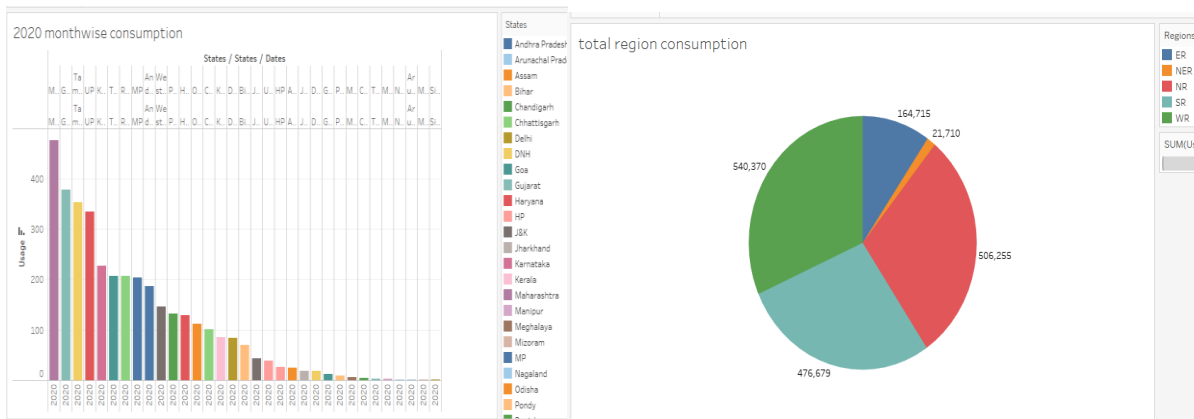
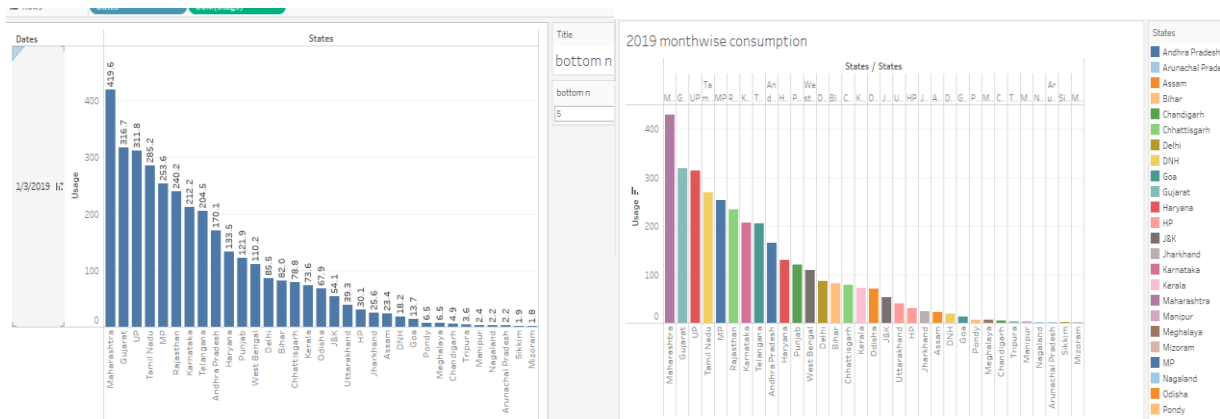


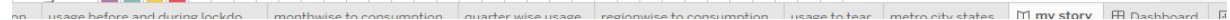
# Ideation & Brainstorming Map:



# Result:







## **Advantages:**

- By actively measuring your businesses energy consumption allows you to determine whether energy usage is high.
- This can directly affect the cost of electricity bills, the cost of infrastructure, and allows your business to examine a way for them to become more sustainable and competitive.

## **Disadvantages:**

- Your overuse will contribute to a scarcity in this energy supply and thus an increase in overall electricity costs. .
- Over the long term, the rise in demand may place additional burdens on threatened environmental areas -- such as coastal areas or wildlife refuges -- to ensure adequate resources.

## **Application:**

By measuring power using power analyzers at the main panel, you can get information on the general consumption of your facility and compare the energy consumed by the installation with that recorded by the meter.

## **Conclusion:**

Current through a given area of a conductor is the net charge that passes per unit time through the conductor. To keep up a gradual current, we must have a circuit within which an electrical phenomenon occurs from lower to higher mechanical energy.

## **Future Scope:**

Electricity consumption is measured in Watt-hours, a unit of energy, or the total energy used in a given amount of time

(e.g., daily, annually). Consumption is determined by multiplying each load by the number of hours it operates—the same information used to create the load profile.