# PLUGGING INTO THE FUTURE: AN EXPLORATION OF ELECTRICITY CONSUMPTION PATTERNS

## 1. INTRODUCTION:

### 1.1 Overview:

India is the third largest producer of electricity in the world. During the fiscal year (FY) 2021–22, the total electricity generation in the country was 1,719 TWh, of which 1,484 TWh was generated by utilities. The gross electricity consumption per capita in FY2019 was 1,208 kWh. India is the third largest producer of electricity in the world. During the fiscal year (FY) 2021–22, the total electricity generation in the country was 1,719 TWh, of which 1,484 TWh was generated by utilities. The gross electricity consumption per capita in FY2019 was 1,208 kWh.

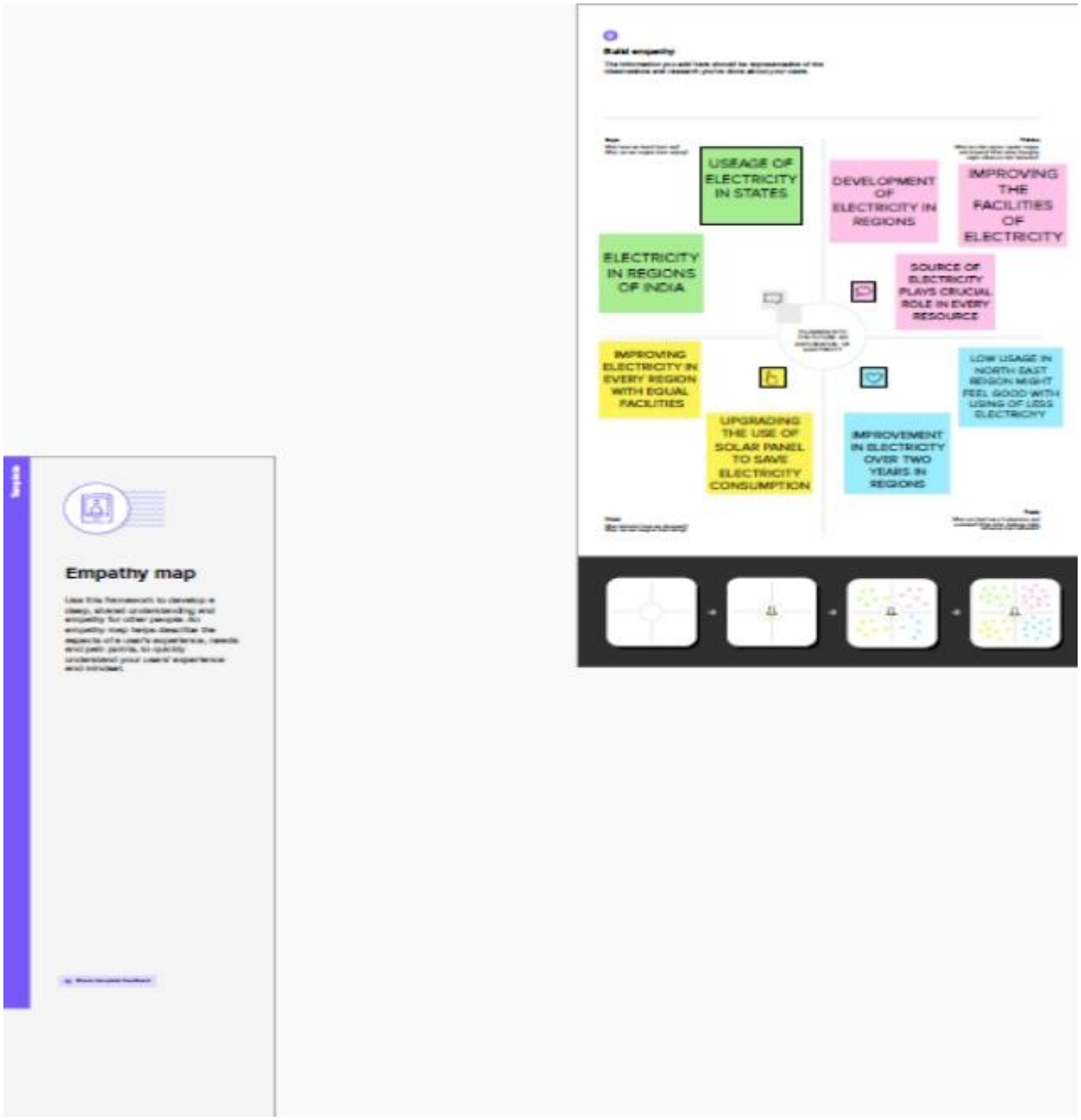
Whereas electricity consumption represents the amount of electrical energy that has been consumed over a specific time, in units of Wh (or kWh), electricity demand represents that rate at which electrical energy is consumed for a needed output rating, in units of W (or kW).

### 1.2 Purpose:

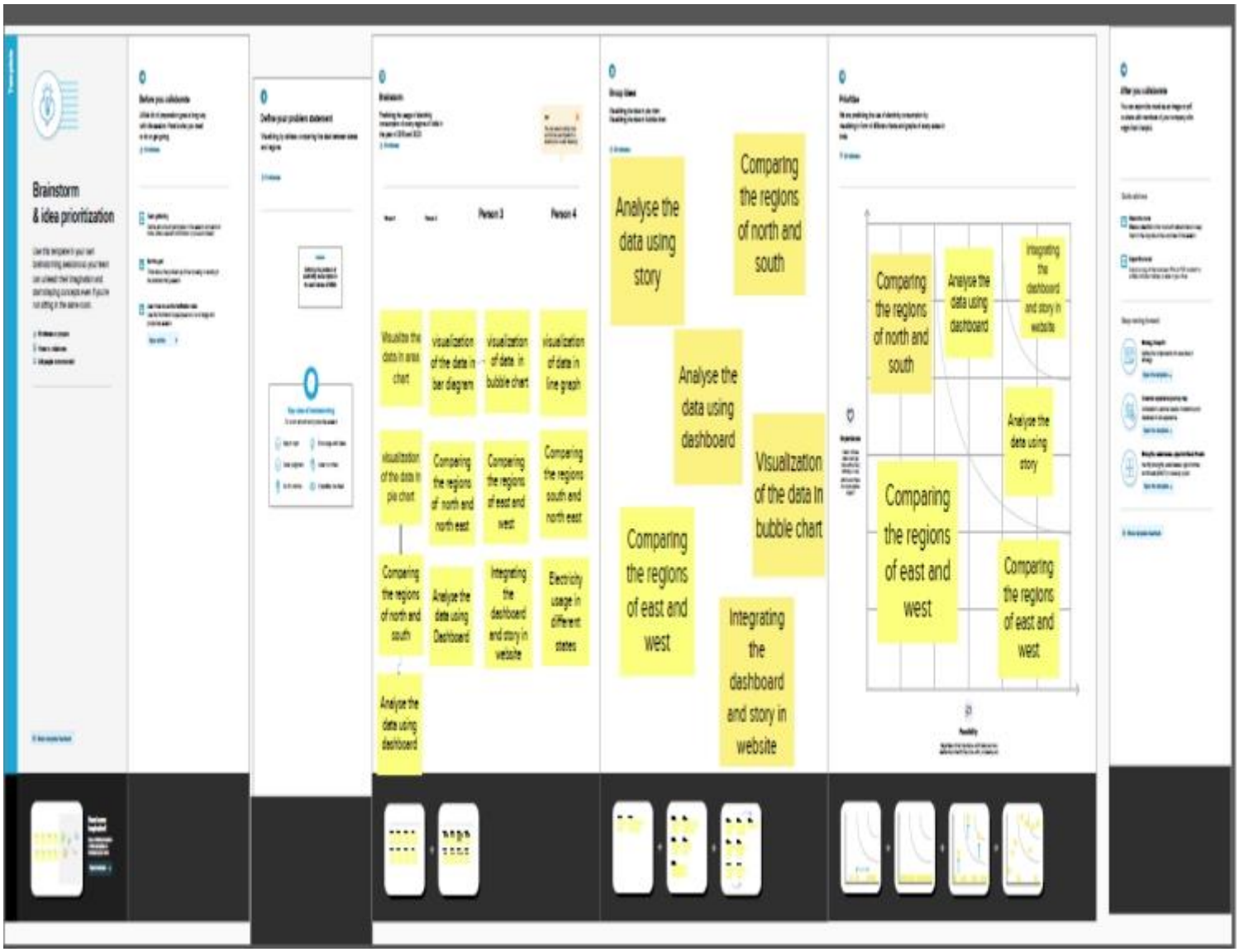
Consumption per capita serves as an important measure of a country's electric power development. Generally speaking, electricity consumption grows faster when the industrialization process develops quickly and goes down rapidly when industrialization is completed or near completion.

## 2. Problem definition and design thinking:

## 2.1. Empathy map:

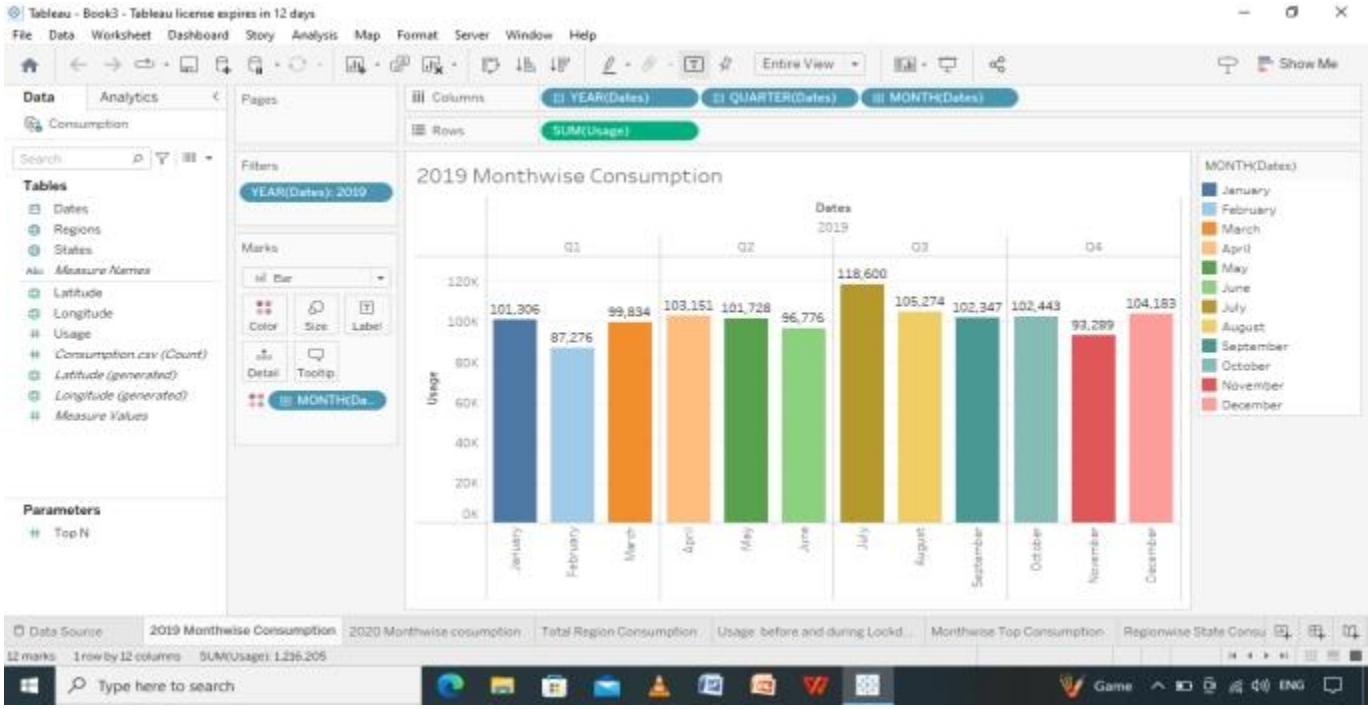


## 2.2. Ideation and Brainstorming map:




**3. Result:**

Through the Analysis of Visualizations, dashboards and Story, We say that, Maharashtra is the Highest Electricity Consumption user of India. Gujarat is the second Highest Electricity consumption user of India. Sikkim is the lowest Electricity consumption of India. While in the Regions, Total Electricity Consumption in Western region is Highest, whereas North eastern Region is Lowest. Electricity Consumption was more in 2019 in month of march-June before lockdown. And less in 2020 in month March- June during the lockdown.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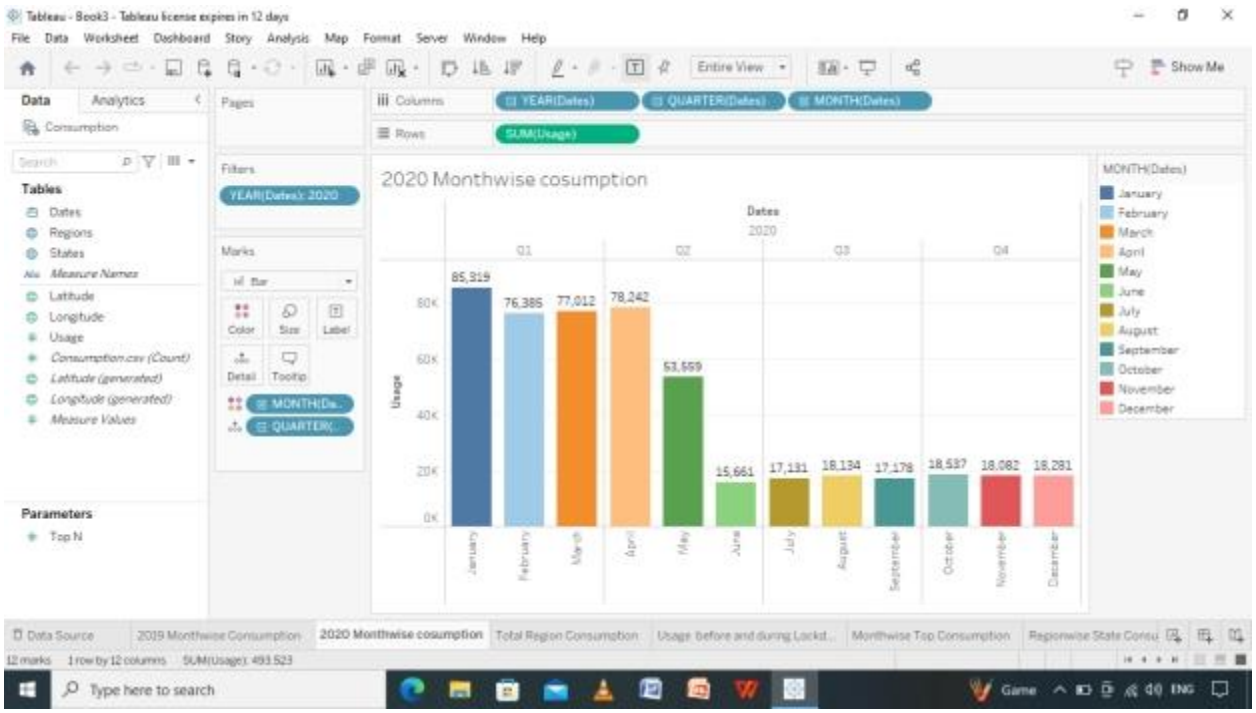
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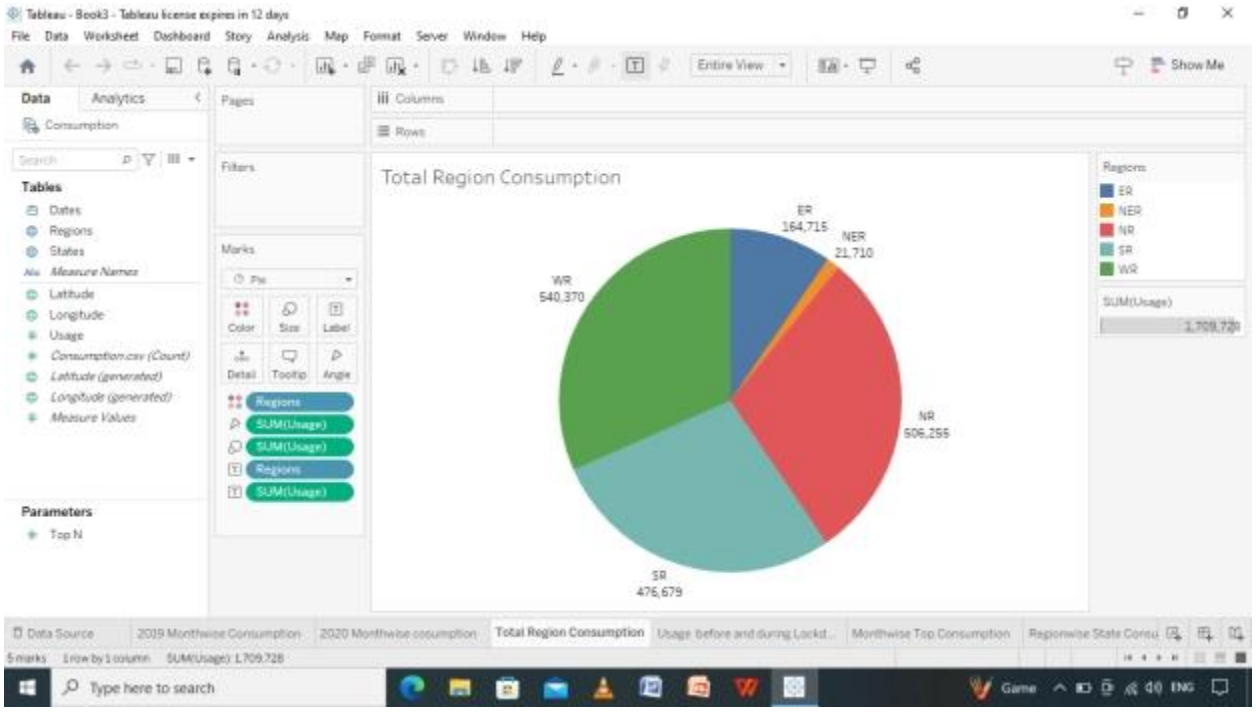
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21,710
NR
506,255
SR
476,679
WR
540,370
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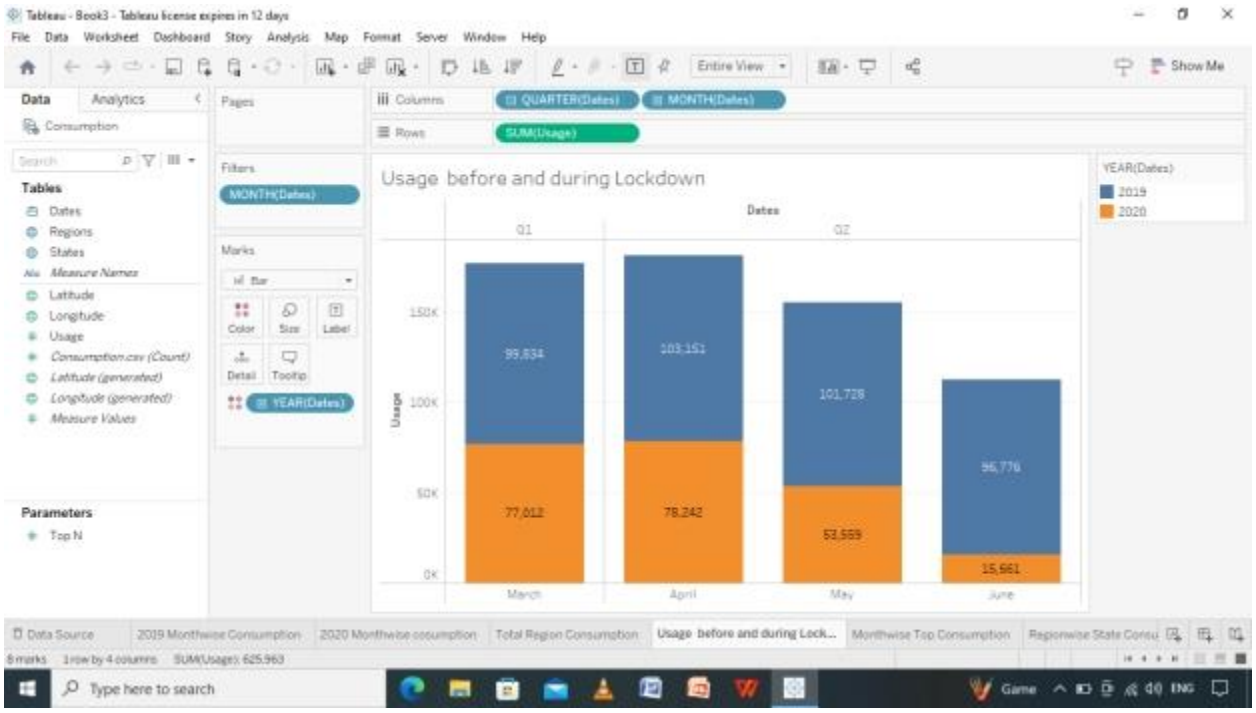
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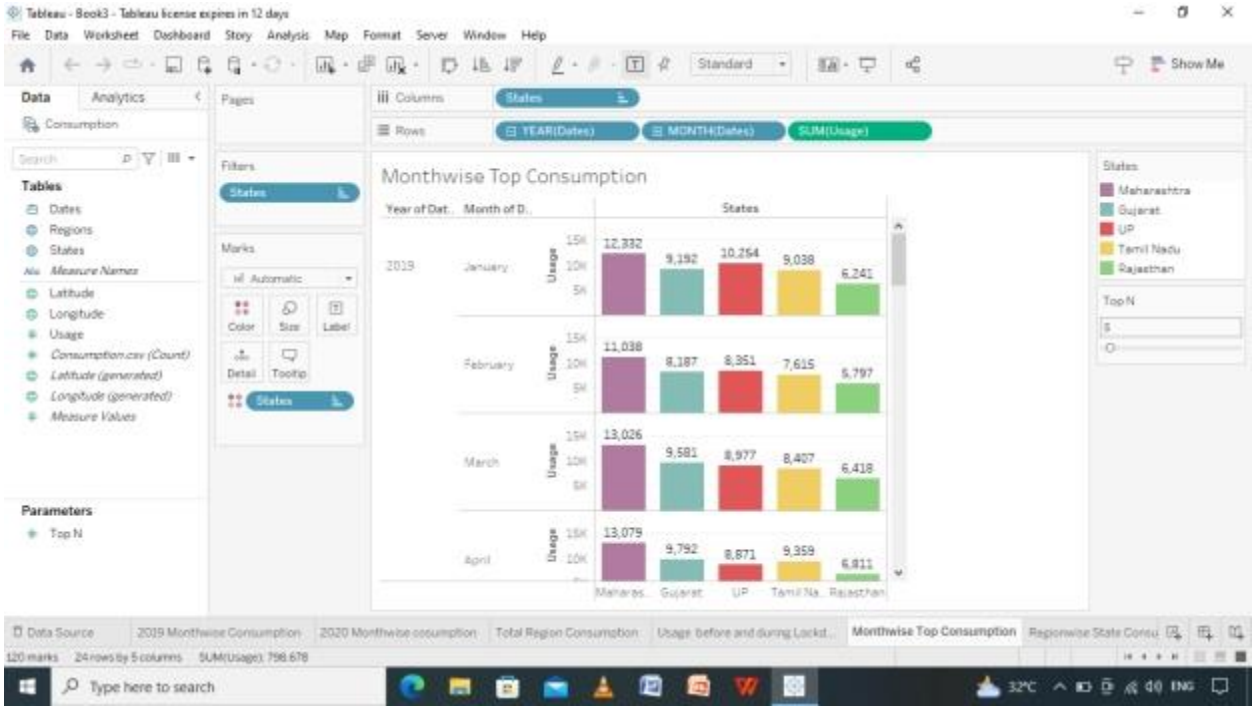
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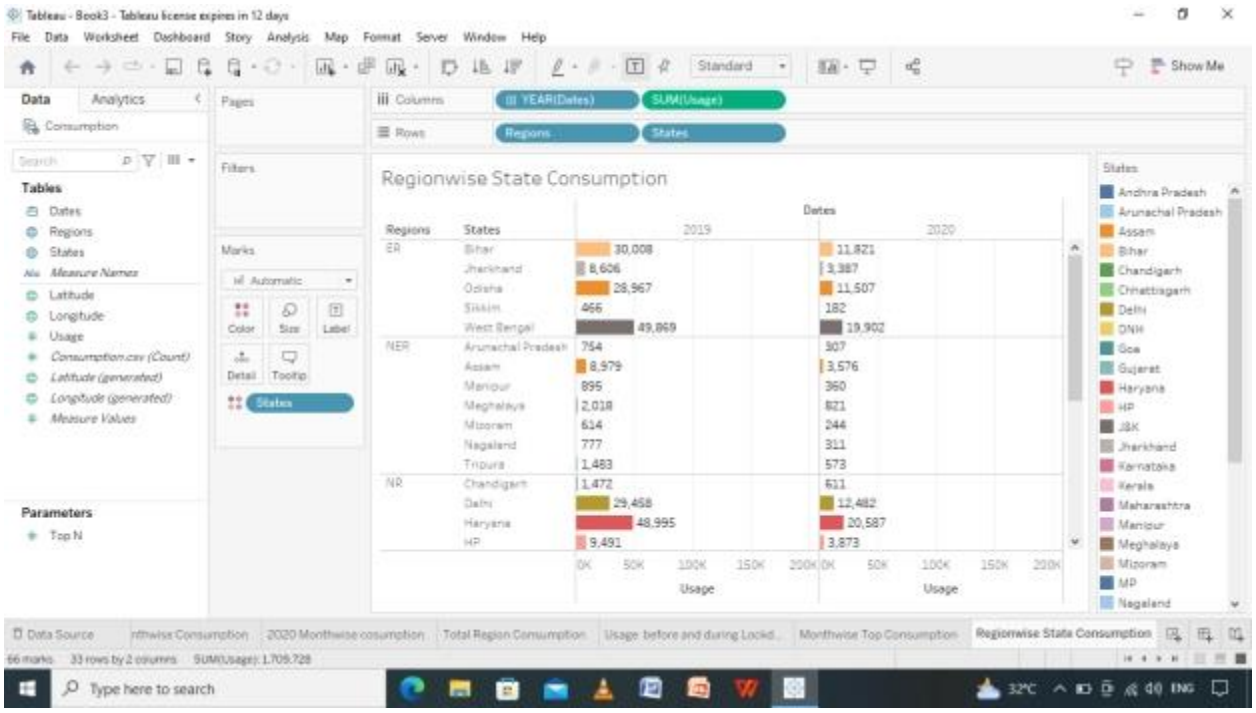
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Jharkhand 8,606 3,387
Odisha 28,967 11,507
Sikkim 466 182
West Bengal 49,869 19,902
NER Arunachal Pradesh 754 307
Assam 8,979 3,576
Manipur 895 360
Meghalaya 2,018 821
Mizoram 614 244
Nagaland 777 311
Tripura 1,483 573
NR Chandigarh 1,472 611
Delhi 29,458 12,482
Haryana 48,995 20,587
HP 9,491 3,873
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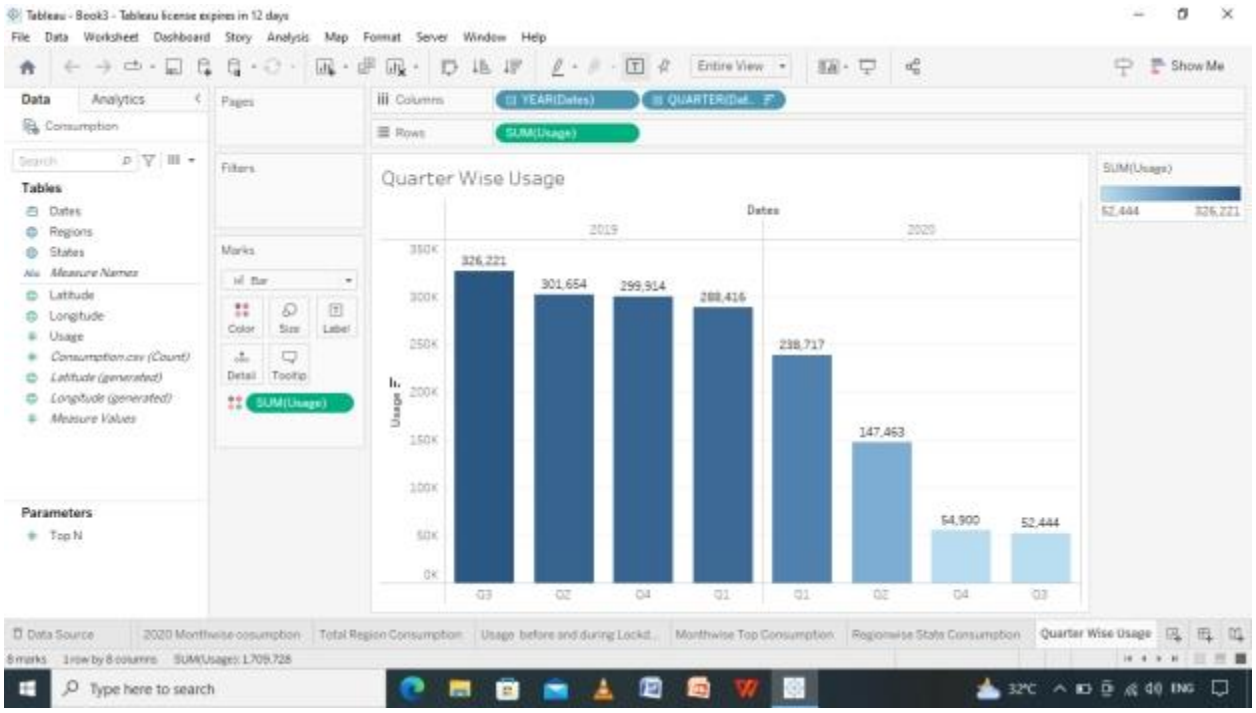
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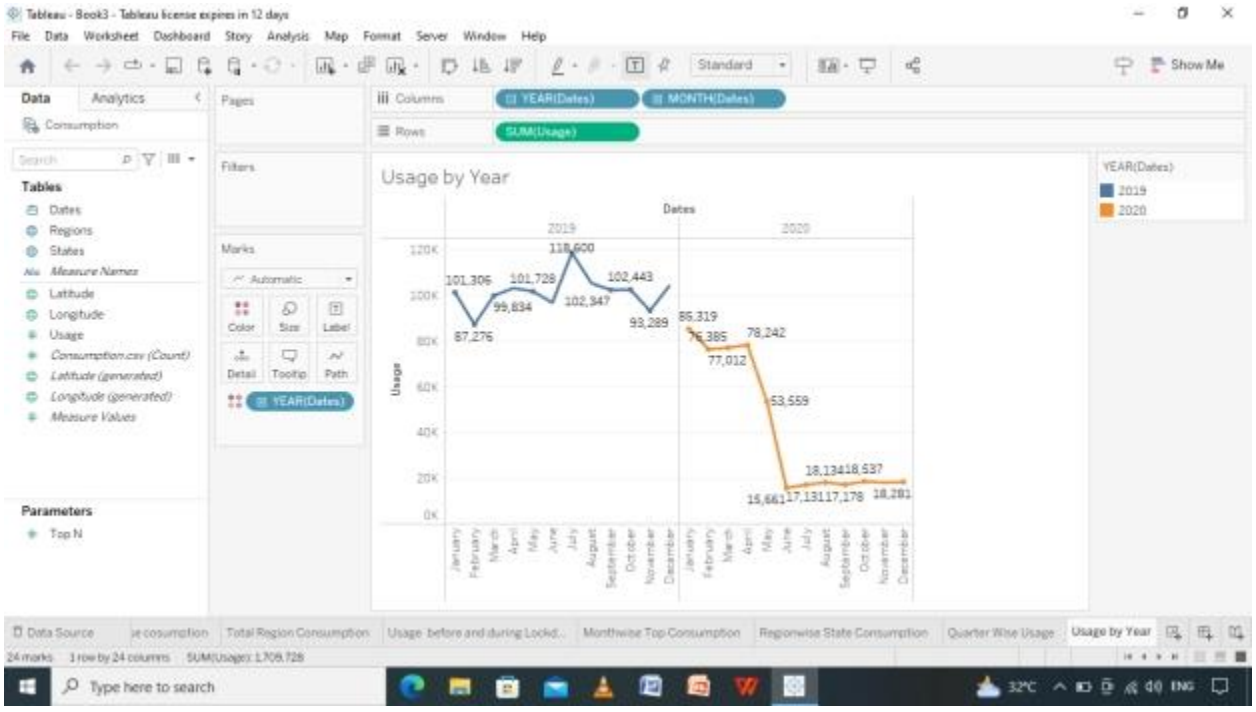
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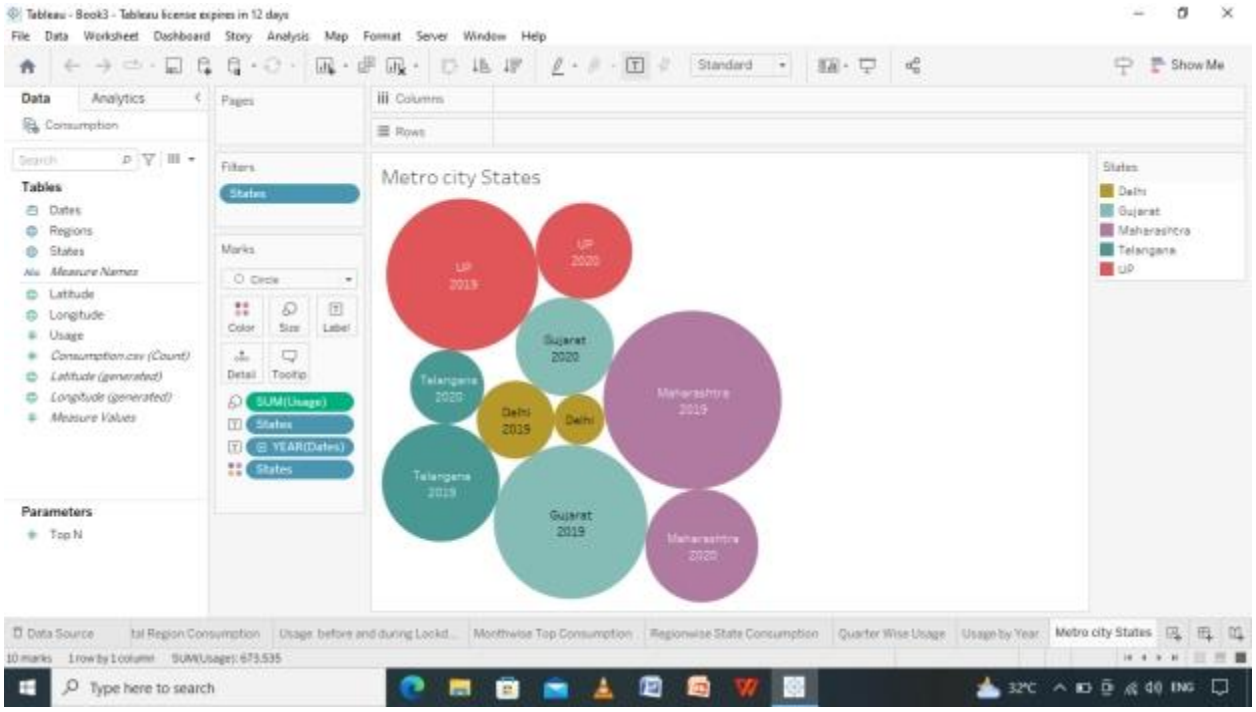
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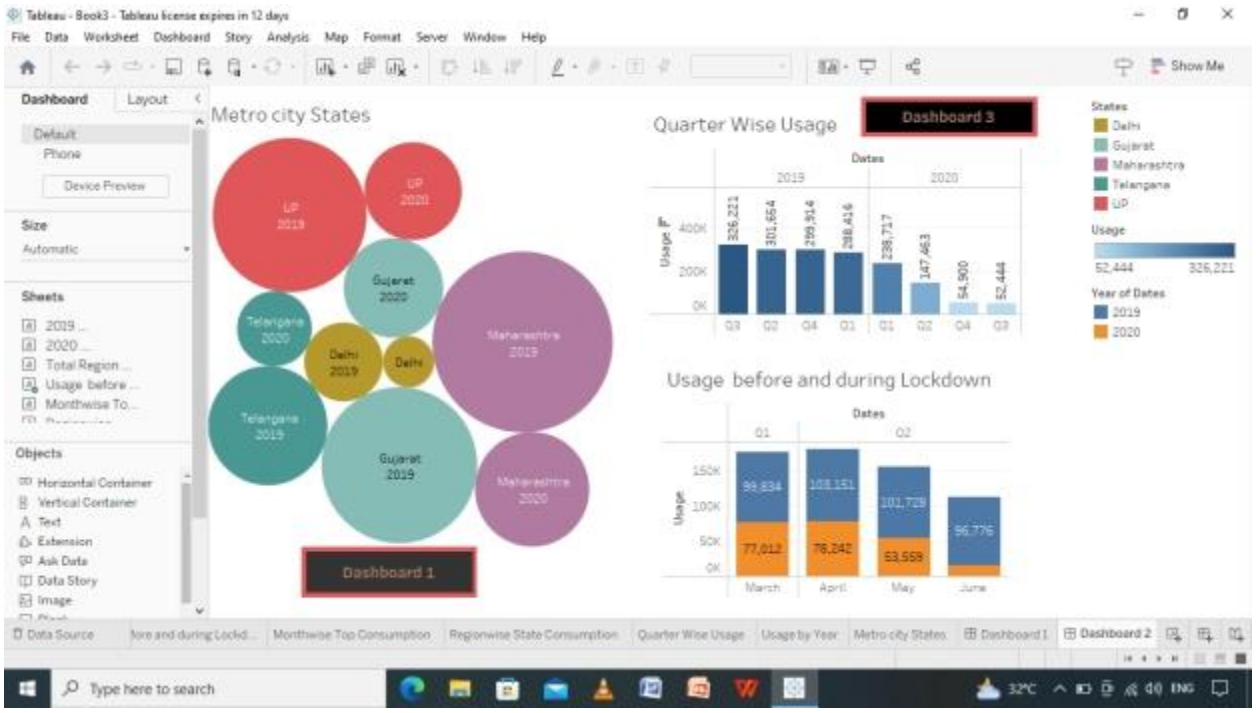
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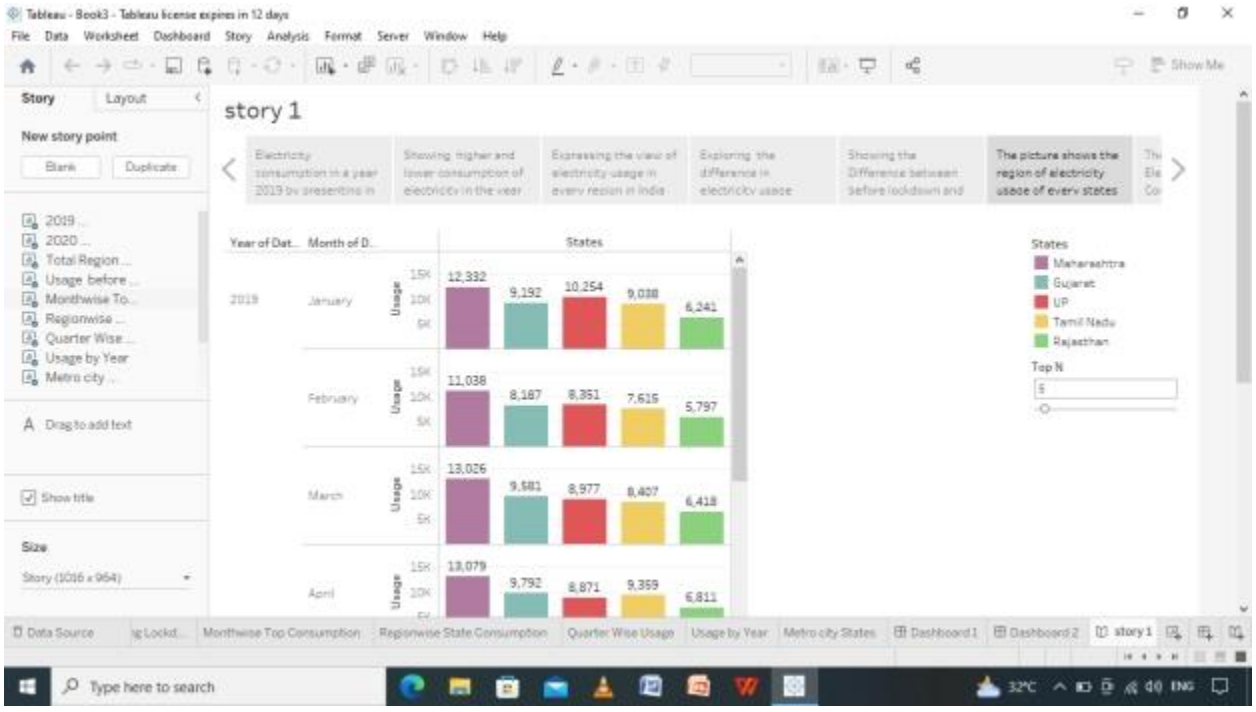
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Electricity consumption in a year 2019 by presenting in
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Exploring the difference in electricity usage
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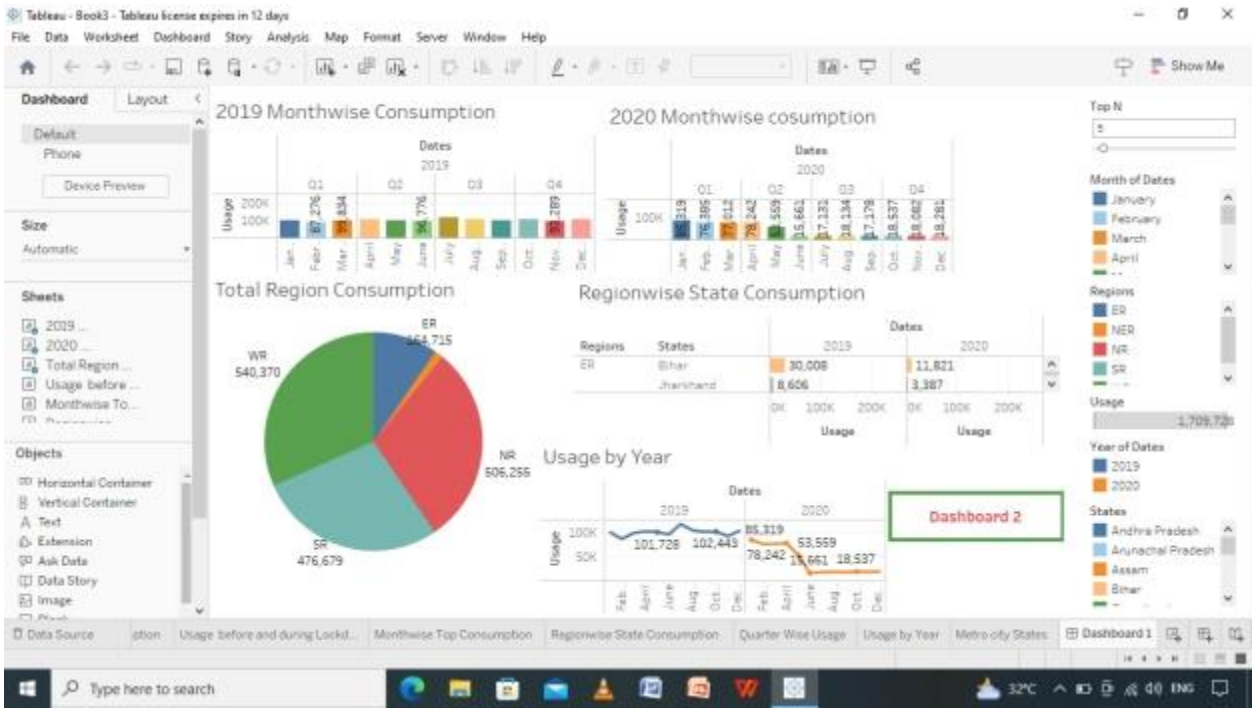


## 4. ADVANTAGES AND DISADVANTAGES

### Advantages:

1. Energy more efficiently is one of the fastest, most cost-effective ways to save and reduce greenhouse gas emissions, create jobs, and meet growing energy demand.

2. Reliable and uninterrupted supply runs the equipment efficiently and continuously.

3. Access to energy is central to issues such as security, climate change, food production, and strengthening economies while protecting ecosystems. Increased access to electricity improves education, entertainment, health, comfort, protection, and productivity.

**Disadvantages:**

1. More expensive than gasoline.

2. Loss of fish species.

3. Sometimes messes up wildlife.

4. Power plants that are used in the production of electricity burn biomass in order to produce sulfur dioxide and nitrogen oxides. These are two major pollutants that harm the environment. A lot of radioactive material is released that can be lethal to humans and other organisms.

## 5. APPLICATION:

The industrial sector uses electricity for operating industrial motors and machinery, lights, computers and office equipment, and equipment for facility heating, cooling, and ventilation.

## 6. CONCLUSION:

Electric energy consumption is energy consumption in the form of electrical energy. About a fifth of global energy is consumed as electricity: for residential, industrial, commercial, transportation and other purposes.

## 7. FUTURE SCOPE:

In the Stated Policies Scenario, **global electricity demand grows at 2.1% per year to 2040**, twice the rate of primary energy demand. This raises electricity's share in total final energy consumption from 19% in 2018 to 24% in 2040. Electricity demand growth is set to be particularly strong in developing economies.

## 8.APPENDIX:

file:///C:/Users/ELCOT/Downloads/index.html