PROJECT REPORT

1. INTRODUCTION

1.1. Overview

In 2019 electric energy consumption in India was recorded to be higher than 2020 due to Covid 19 pandemic situation, when everyone has been under lockdown for the month of March to June. Analysing Electricity Consumption in India from Jan 2019 till 5th December 2020. This project Analysing Electricity Consumption in India from Jan 2019 till 5th December 2020.

This project contains the record of Electricity consumption in each states of India, here we have analysed State wise, Region wise and Overall Electricity consumption in India.

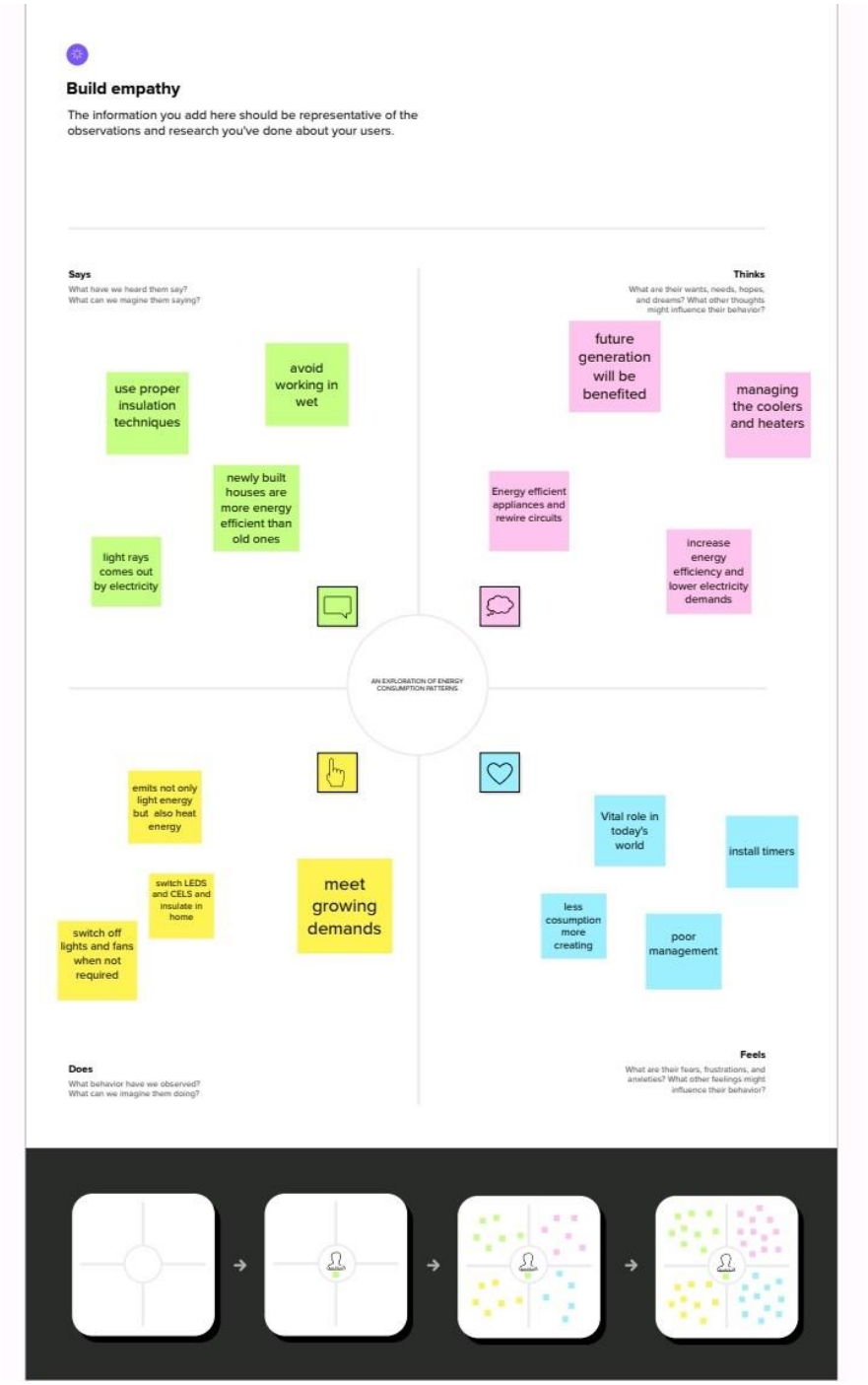
1.2. Purpose

India is the world's third-largest producer and third-largest consumer of electricity. The main objective of this project Plugging into the Future: An Exploration of Electricity Consumption Patterns is to analyse the energy consumption before and during lockdown.

Measuring energy consumption assists us to quantify the energy required by different states of India.

2. PROBLEM DEFINITION & DESIGN THINKING

2.1. Empathy Map



2.2 Ideation & Brainstroming Map

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

TIP

You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

Person 1

- Install a programmable thermostat
- Awareness in human behaviour towards energy
- Usage of power strip in residents and other places

Person 2

- Properly insulate and air seal your home.
- Switch to LEDs from CFLs
- Conduct a Thermography Inspection

Person 3

- Replace bulbs with tube light
- Utilise natural light by using electronic chokes and regulators
- Optimise use of light in malls, multiplexes and hotels

Person 4

- switch off the equipments when not in use
- reduce the use of high consumption electric equipments frequently
- avoid high wastage and leakage of energy

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

Type your paragraph...

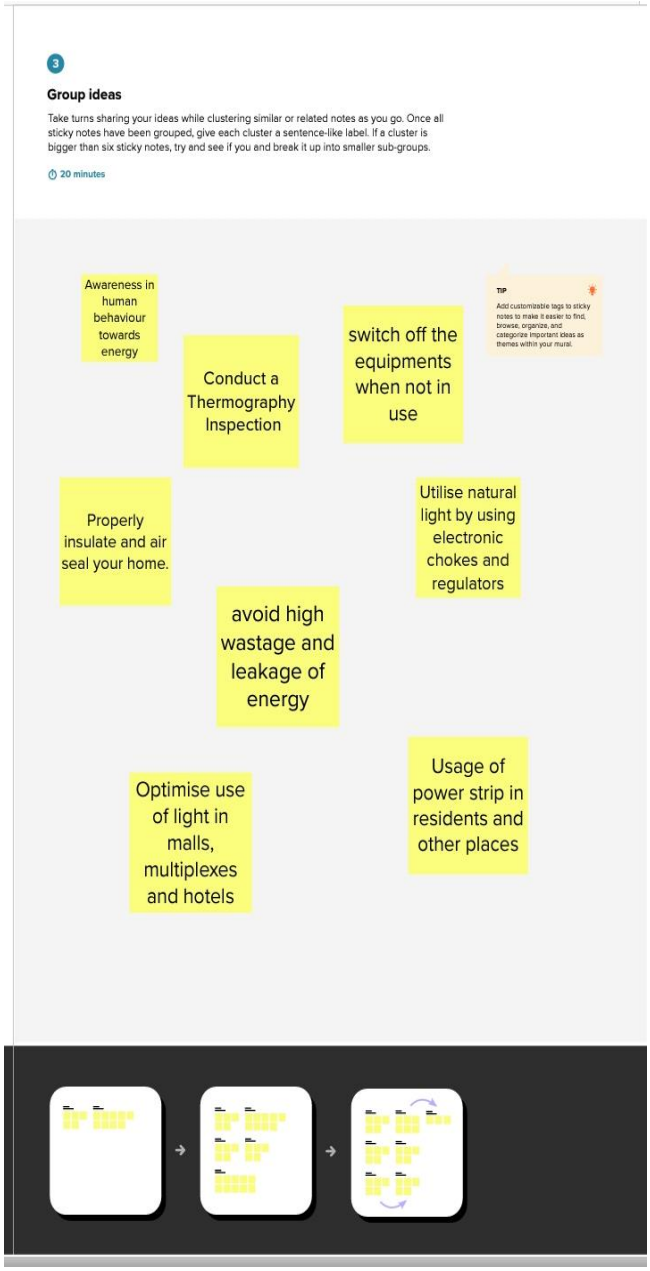
Increase the energy efficiency to meet the future demands and reduce environmental impact

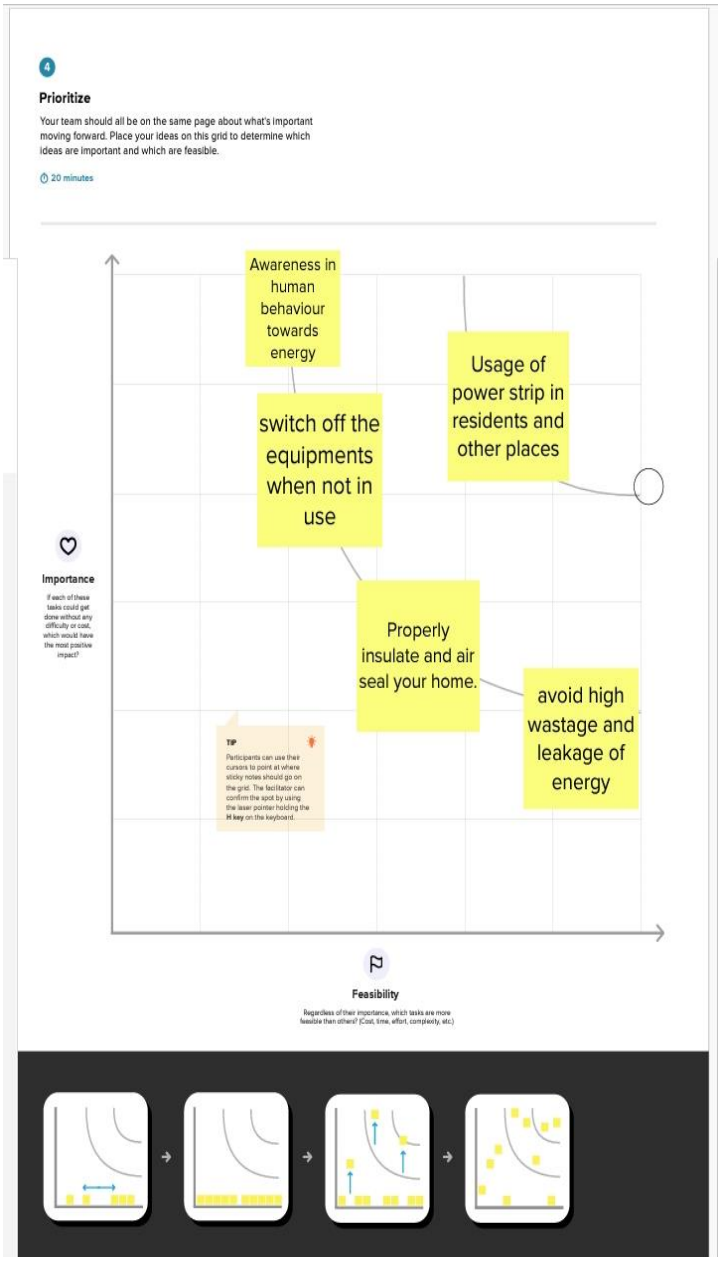
Key rules of brainstroming

To run an smooth and productive session

Stay in topic.

Encourage wild ideas.

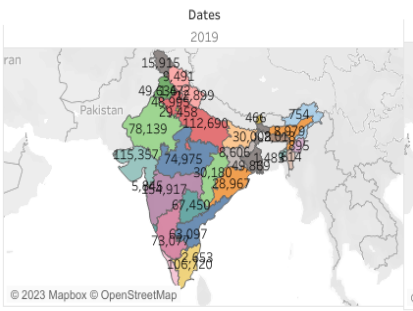




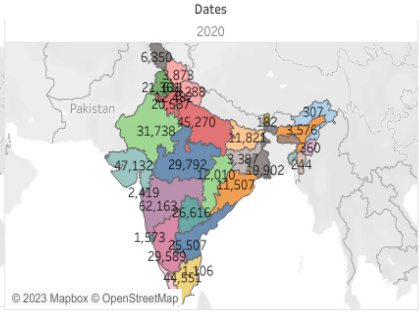
3. RESULT

3.1. Dashboard

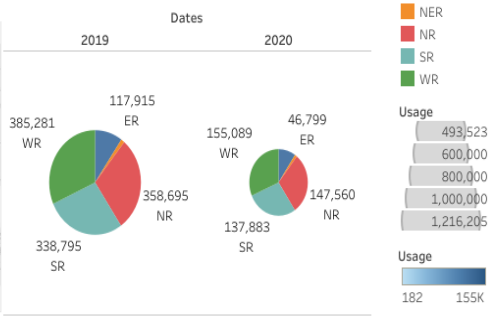
2019 STATE CONSUMPTION



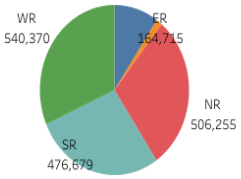
2020 STATE CONSUMPTION



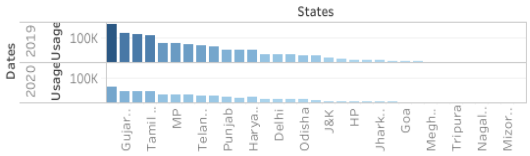
YEARWISE CONSUMPTION IN REGION



TOTAL REGION CONSUMPTION

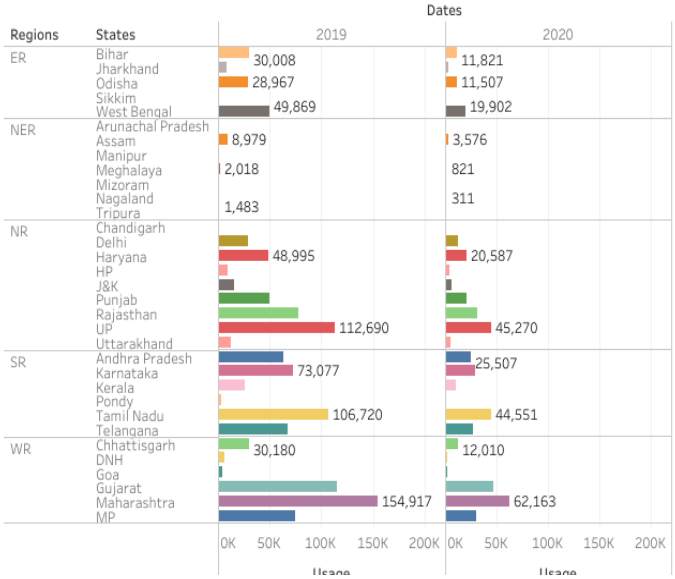


TOTAL CONSUMPTION

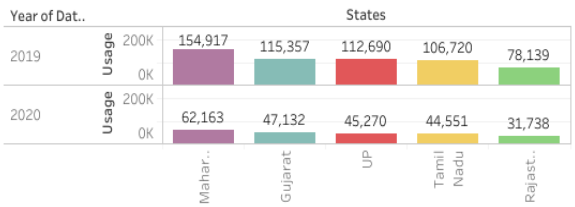


Dashboard 2

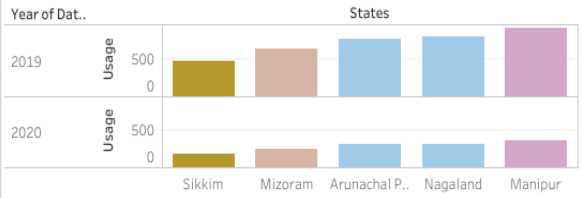
REGIONWISE STATE CONSUMPTION



TOP N

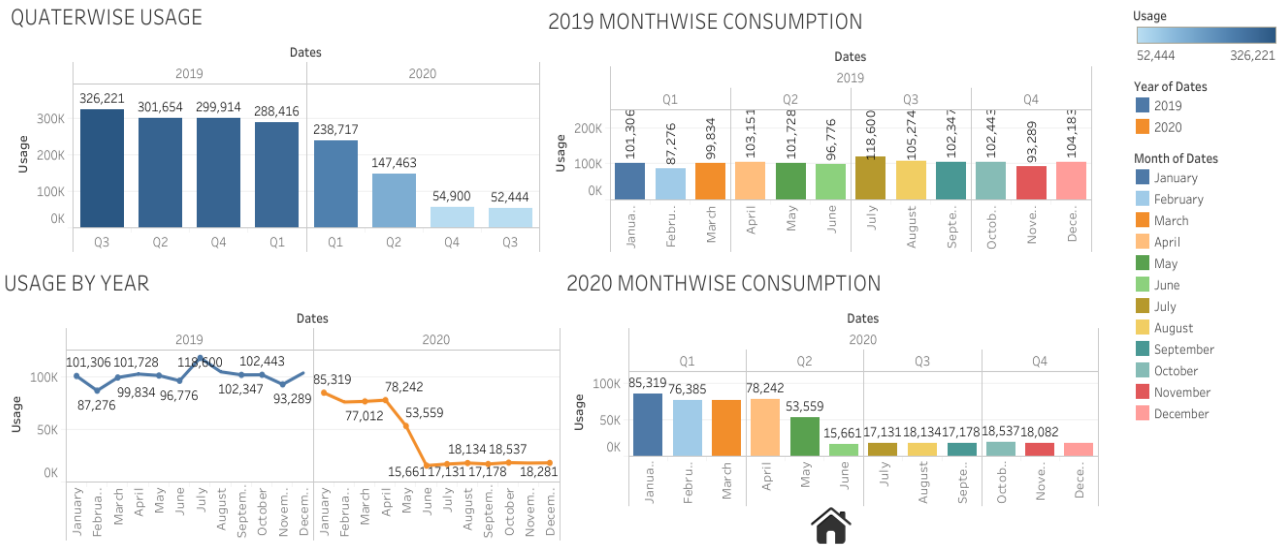


BOTTOM N

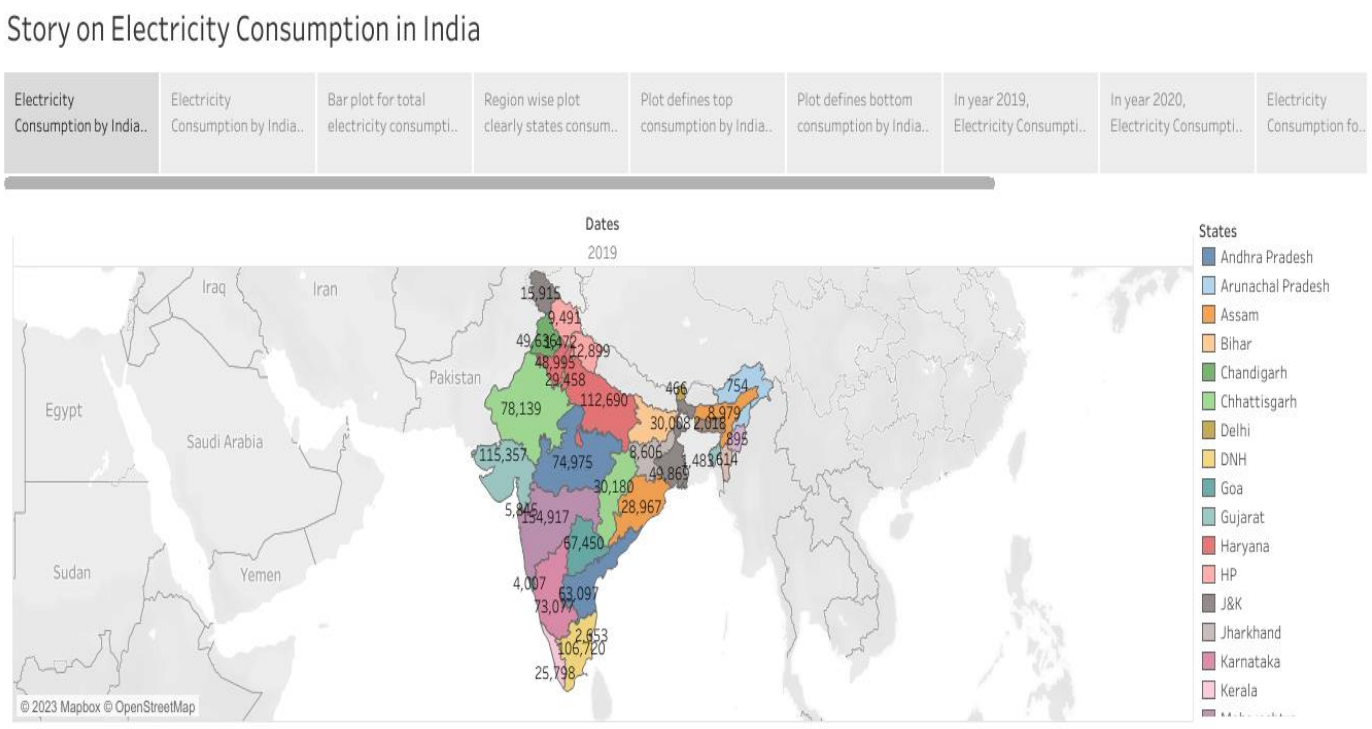


Dashboard 1

Dashboard 3

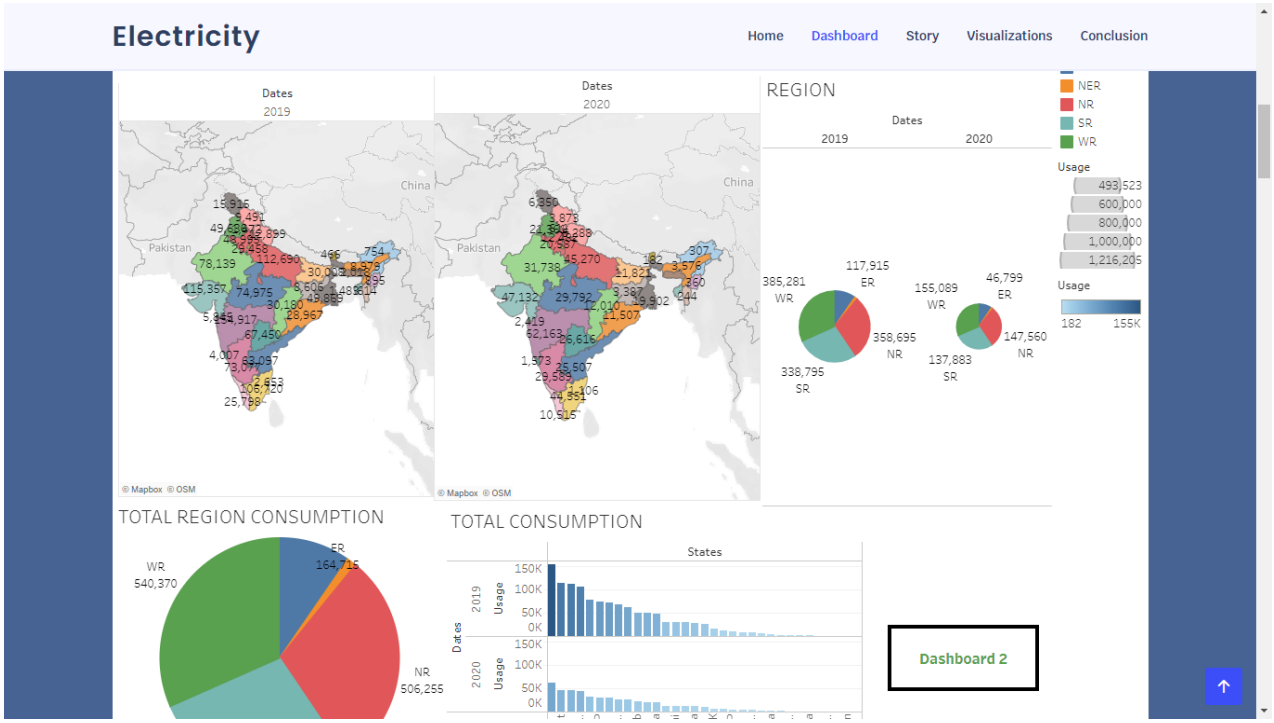


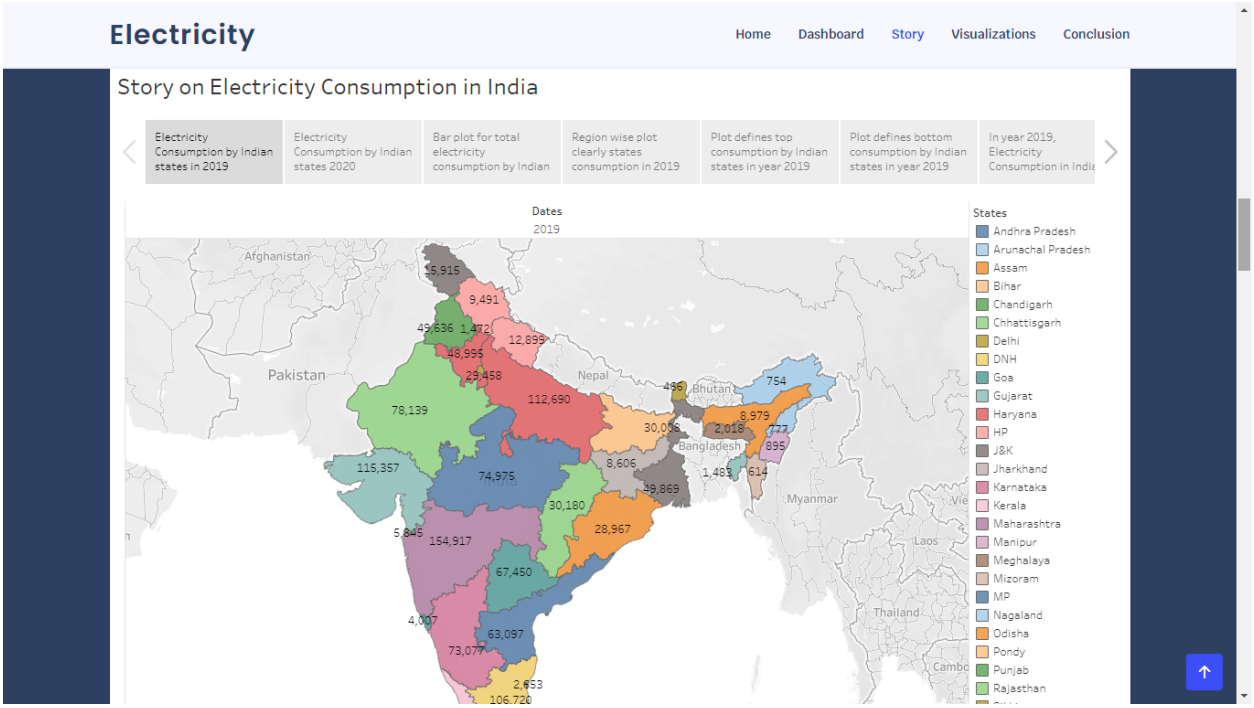
3.2. Story

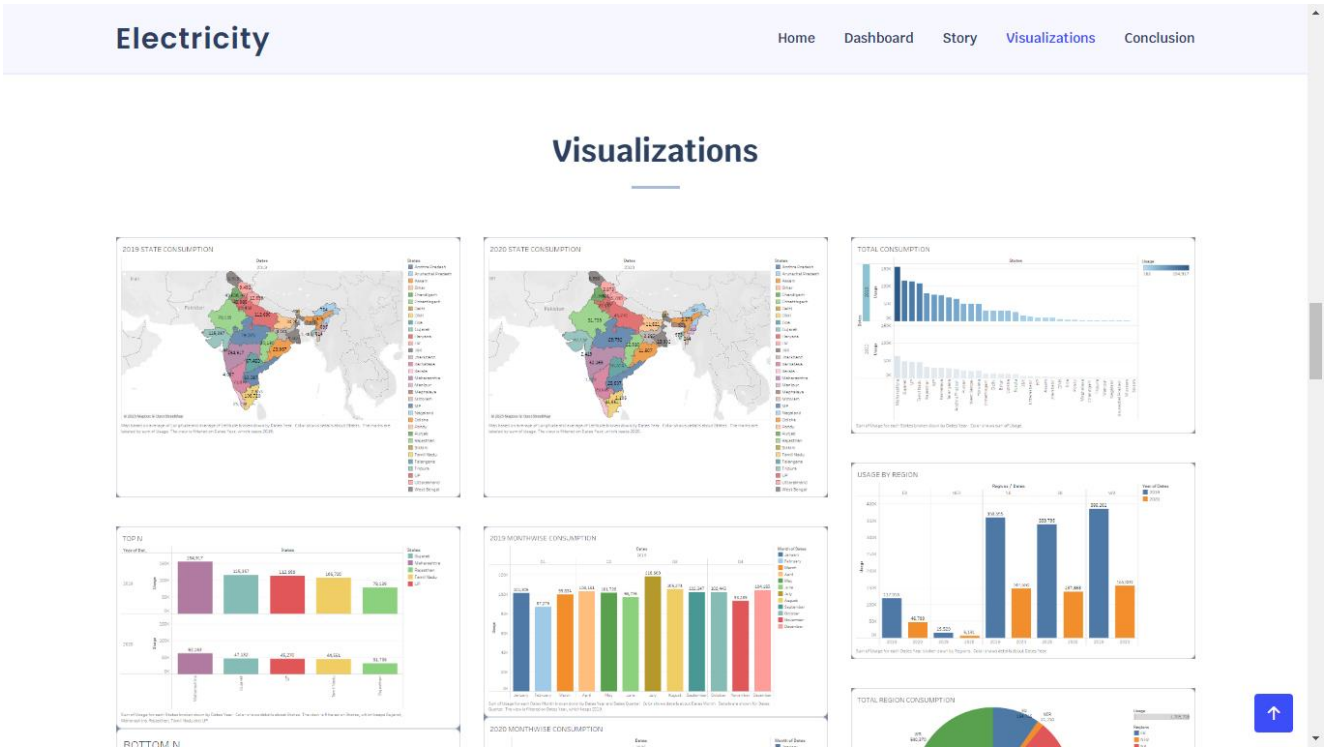


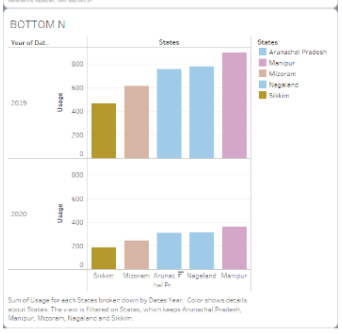
3.3. Web Integration

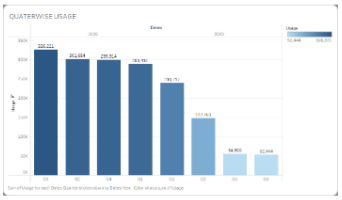

Electricity
Home
Dashboard
Story
Visualizations
Conclusion
Analysis On Electricity Consumption In India
India is the world's third-largest producer and third-largest consumer of electricity.During the fiscal year (FY) 2019–20, the total electricity generation in the country was 1,598 TWh, of which 1,383.5 TWh generated by utilities. The gross electricity consumption per capita in FY2019 was 1,208 kWh.
Get Started
1 POWER PLANT
STEP-UP TRANSFORMER
TOWER
2 TRANSMISSION SUBSTATION

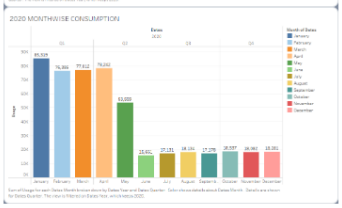

Electricity
Home
Dashboard
Story
Visualizations
Conclusion
Dates
2019
Dates
2020
REGION
Dates
2019
2020
NER
NR
SR
WR
Usage
493,523
600,000
800,000
1,000,000
1,216,205
Usage
182
155K
China
Pakistan
385,281
WR
117,915
ER
358,695
NR
338,795
SR
155,089
WR
46,799
ER
147,960
NR
137,883
SR
TOTAL REGION CONSUMPTION
WR
540,370
ER
164,715
NR
506,255
TOTAL CONSUMPTION
States
Dates
2019
2020
Usage
150K
100K
50K
0K
Dashboard 2

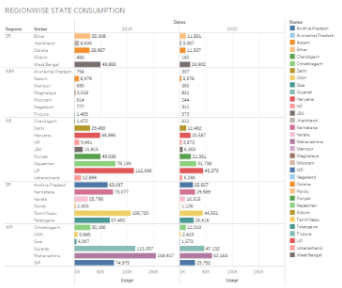

Electricity
Home
Dashboard
Story
Visualizations
Conclusion
Story on Electricity Consumption in India
Electricity Consumption by Indian states in 2019
Electricity Consumption by Indian states 2020
Bar plot for total electricity consumption by Indian
Region wise plot clearly states consumption in 2019
Plot defines top consumption by Indian states in year 2019
Plot defines bottom consumption by Indian states in year 2019
In year 2019, Electricity Consumption in India
Dates
2019
States
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Delhi
DNH
Goa
Gujarat
Haryana
HP
J&K
Jharkhand
Karnataka
Kerala
Maharashtra
Manipur
Meghalaya
Mizoram
MP
Nagaland
Odisha
Pondy
Punjab
Rajasthan
Afghanistan
Pakistan
Nepal
Bhutan
Bangladesh
Myanmar
Laos
Thailand
15,915
9,491
49,636
1,472
12,899
48,995
29,458
112,690
78,139
115,357
74,975
30,180
28,967
5,845
154,917
67,450
4,007
63,097
73,077
2,653
106,720
496
754
8,979
2,018
777
895
1,483
614
8,606
39,869
30,056

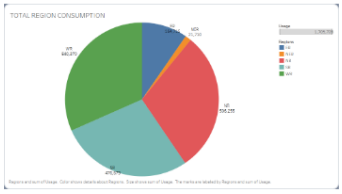

Electricity
Home
Dashboard
Story
Visualizations
Conclusion
Visualizations
2019 STATE CONSUMPTION
2020 STATE CONSUMPTION
TOTAL CONSUMPTION
USAGE BY REGION
TOP N
2019 MONTHWISE CONSUMPTION
2020 MONTHWISE CONSUMPTION
TOTAL REGION CONSUMPTION
BOTTOM N

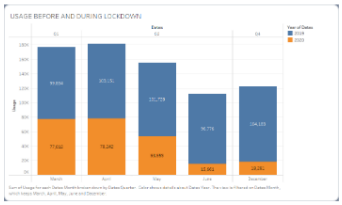


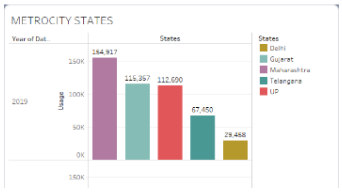






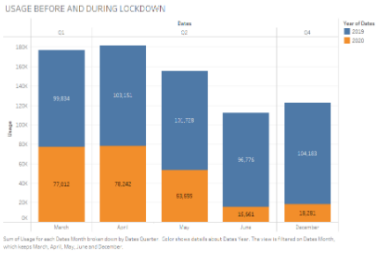


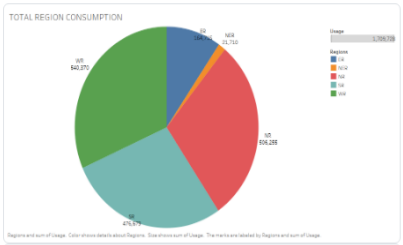




ELECTRICITY CONSUMPTION BEFORE AND DURING LOCKDOWN

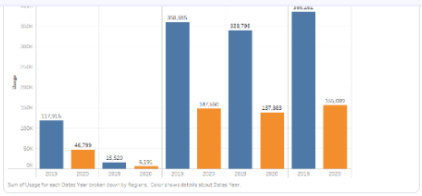
- Electricity Consumption Before Lockdown for Q2 was Highest.
- Electricity Consumption During Lockdown for Q2 was Less compared to Q2 Before Lockdown.



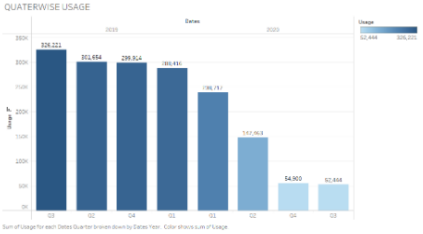


Electricity Consumption in Regions.

- Total Electricity Consumption in Western Region is Highest.
- Total Electricity Consumption in North Eastern Region is Lowest.
- Electricity Consumption in 2020 for every Region was low compared to 2019.



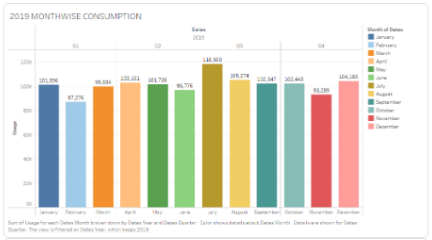
QUATERWISE USAGE

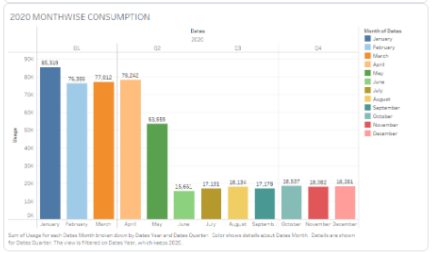


- Electricity Consumption in 2019 for Quater 3 was Highest.
- Electricity Consumption in 2019 for Quater 1 was Lowest.
- Electricity Consumption in 2020 for Quater 1 was Highest.
- Electricity Consumption in 2020 for Quater 3 was Lowest.

Electricity

Home Dashboard Story Visualizations Conclusion





Electricity Consumption MONTHWISE.

- 2019 Monthwise Consumption in July was Highest.
- 2019 Monthwise Consumption in February was Lowest.
- 2020 Monthwise Consumption in January was Highest.
- 2020 Monthwise Consumption in June was Lowest.

4. ADVANTAGES & DISADVANTAGES

4.1. Advantages

- The first step of rational consumption of electric energy is analyzing the level of electricity.
- An Electric Energy Consumption Analysis is an effective tool for evaluating efficiency programs and formulating new program design plans.
- This Project examines the crisis that emerged from the Covid 19 pandemic in the sector of electric energy consumption
- Analysis helps to get ready to meet the growth of electricity demand in India

4.2. Disadvantages

- The Elecric Energy Consumption Analysis shows that Energy-Saving awareness in India is generally not high.
- Results of the analysis shows that there is a large Electricity Consumption Gap occurred from the month of March to June.

5. APPLICATIONS

- Analysis Of Electricity Consumption 2019-2020 explores the opportunities and challenges in India's industrialisation and urbanisation.
- The pandemic hit can be vanquished and recovery strategies can be put on by using the this analysis project .
- This project will benefit the Government Of India or other electrical companies to optimize the energy offering efficiency and upgrad customer level services.
- Analyzing the data of energy consumption is useful in energy sales companies to predict probable future consumption and applying the costs for electrical units on the opt market

6. CONCLUSION

By understanding consumption patterns and trends in different regions and sectors of India, this information was used to identify areas where consumption was high and areas where it was low. For example, the analysis shows that the electricity consumption in the state Maharastra tops other states of India.

Based on the Analysis of Electricity Consumption in India it is concluded that compared to the period before lockdown there was a great downfall of electricity consumption during the Covid 19 lockdown.

7. FUTURE SCOPE

India is the world’s third-largest energy consuming country. There is a number of aspects that future Data Analytics research in the electricity sector should incorporate in order to move the field forward.

8. APPENDIX

electricity.html