PROJECT REPORT

PLUGGING INTO THE FUTURE AN EXPLORATION OF ELECTRICITY CONSUMPTION PATTERNS

I – INTRODUCTION

Overview

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). Electricity Consumption is an essential components of the modern life. It not only provides clean and safe light throught the day, but also in many countries refreshes homes on hot summer days, and in other warms them in winter. In all countries, it allows the use of electrical and electronic equipment in which the use of electricity is essential to ensure their proper functioning.

India is the world's third-largest producer and third-largest consumer of electricity. Thenational electric grid in India has an installed capacity of 370.106 GW as of 31 March2020. Renewable power plants, which also include large hydroelectric plants, constitute35.86% of India's total installed capacity. 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.

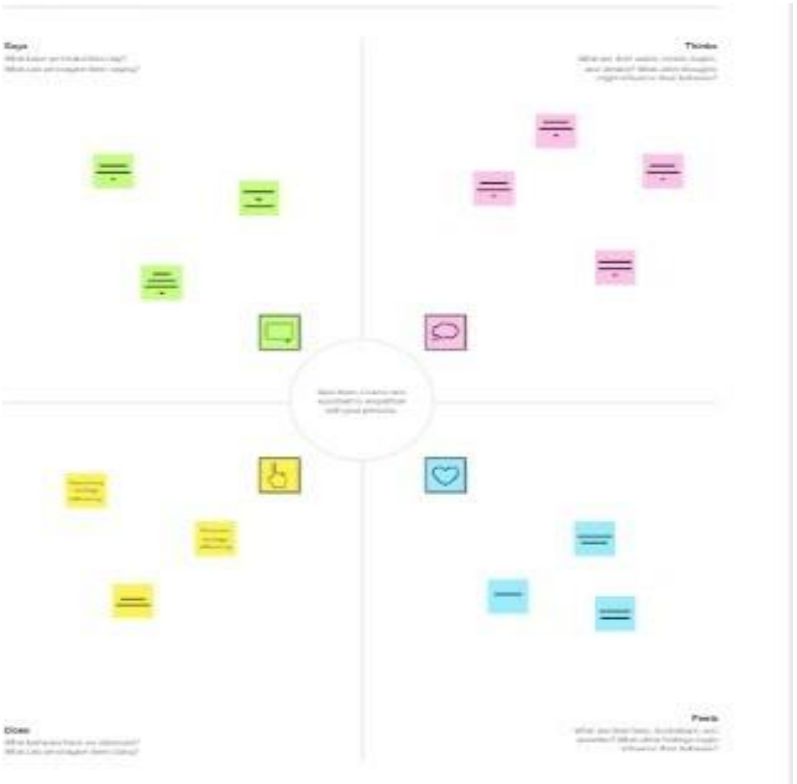
Purposes

Insights from smart metering data eMARC is an initiative by Prayas (Energy Group) to provide insights on electricity consumption in Indian homes. Under

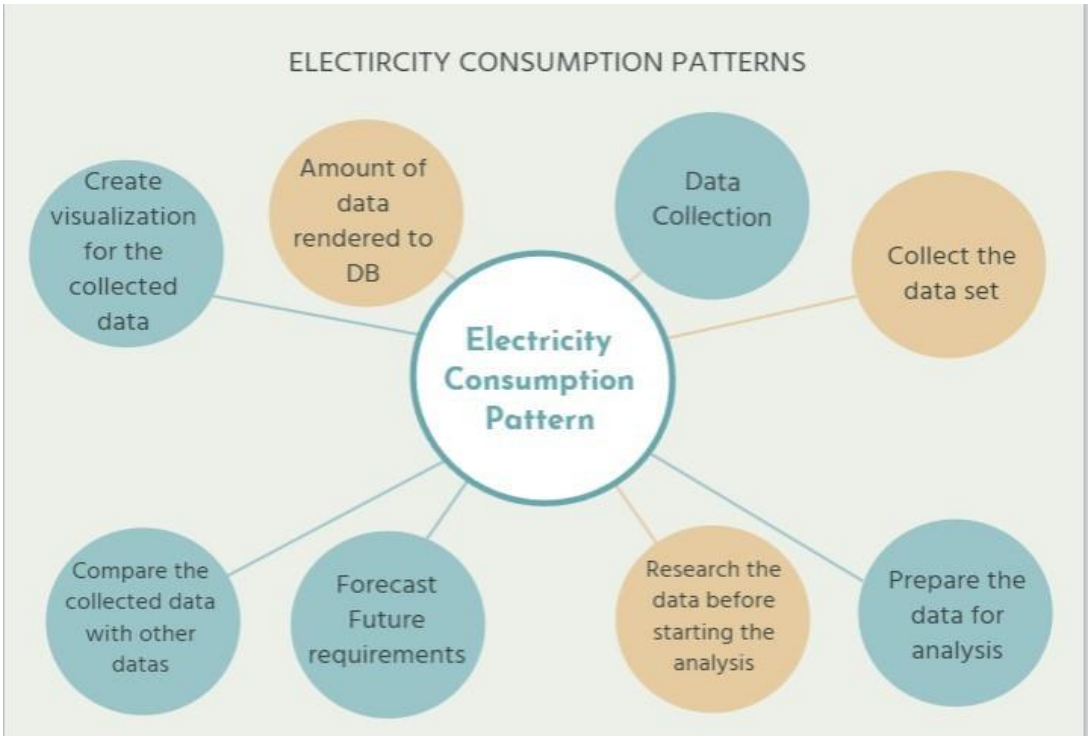
eMARC, minute-wise data related to electricity consumption is collected using smart meters from a sample of households and appliances. Interactive dashboards based on the analysis of this data are available on the eMARC website. In this blog series we present key observations based on the data collected from 115 households from January 2018 to June 2020. The households include urban households from Pune City and semi-urban and rural households from the districts of Pune, Aurangabad, Kanpur Rural, and Gonda. In this post we present the insights on the electricity consumption patterns of the sample households.

2 PROBLEM DEFINITION & DESIGN THINKING

Empathy Map



2.2 Ideation & Brainstorming Map



3 RESULT

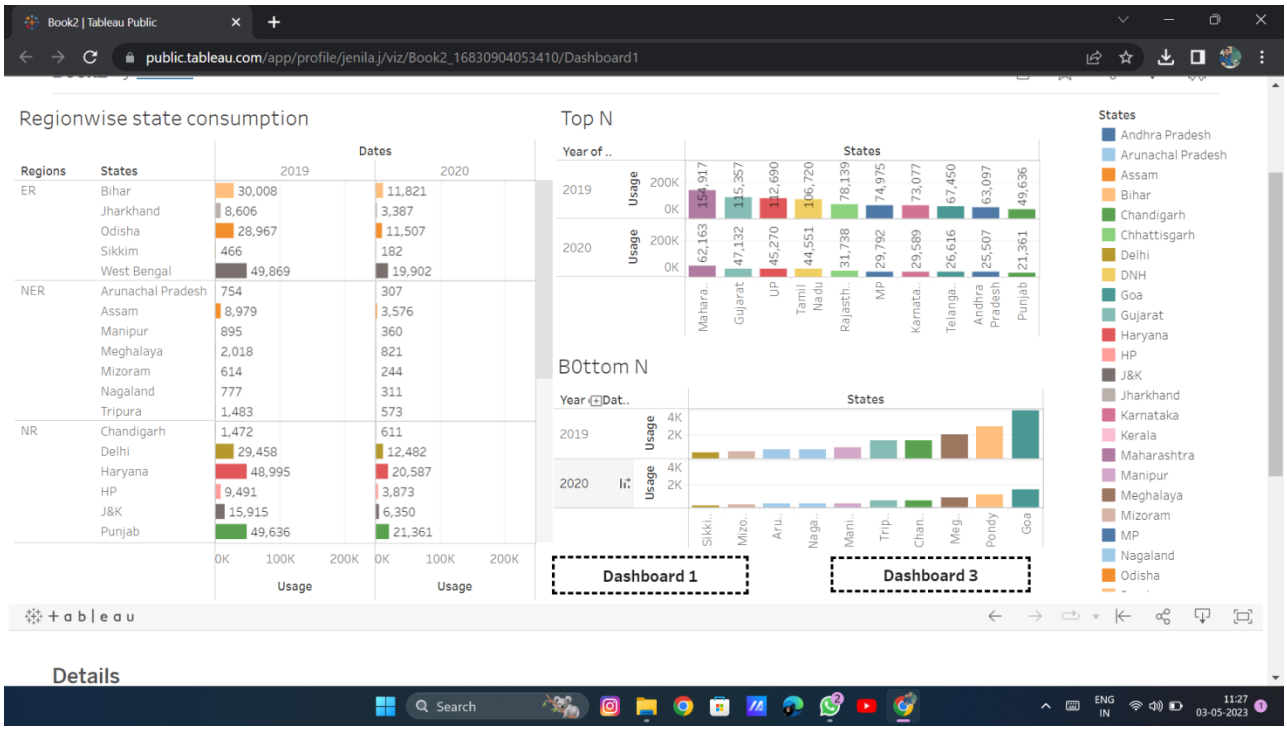
Social Impact

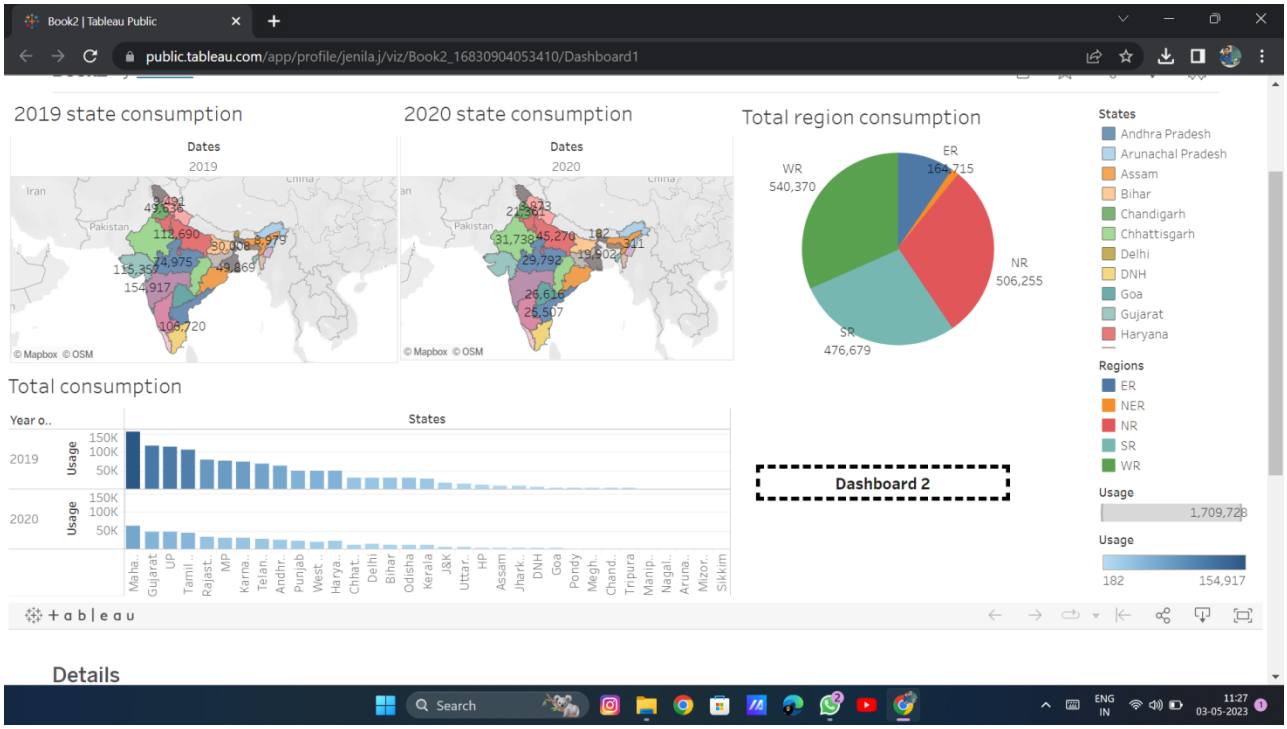
By providing access to electricity, the analysis can help to improve the quality of life for people living in areas without access to electricity, including providing access to lighting, heating, and cooling, and powering essential services such as hospitals and schools.

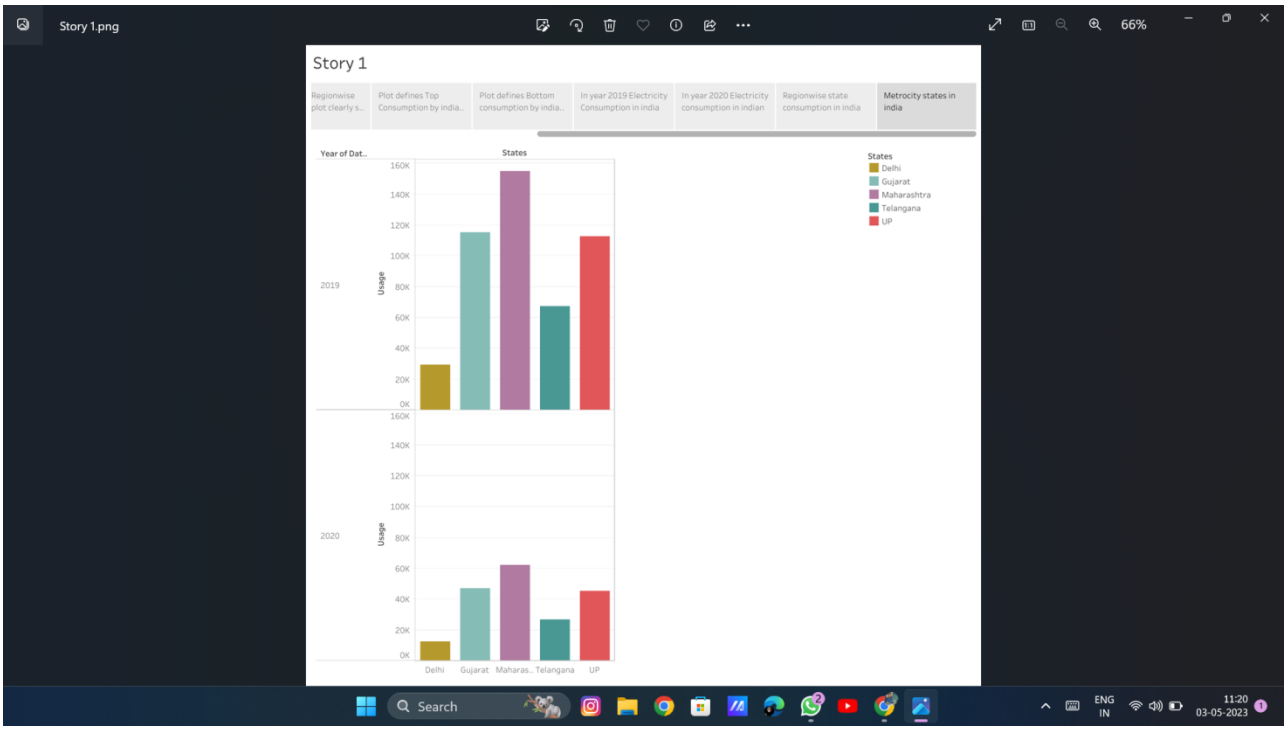
Business Model / Impact

By understanding consumption patterns and trends, the analysis can help businesses identify market opportunities and develop strategies to meet the growing demand for electricity in India.

Activity & Screenshot



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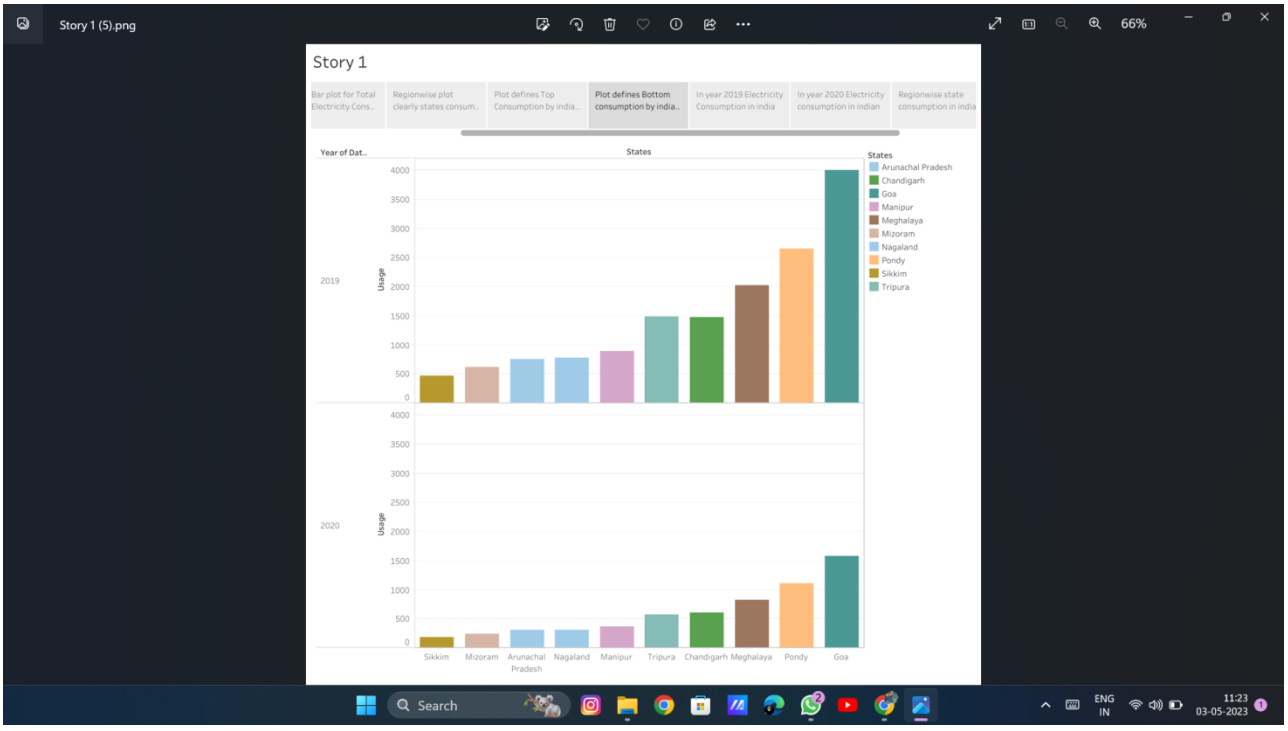
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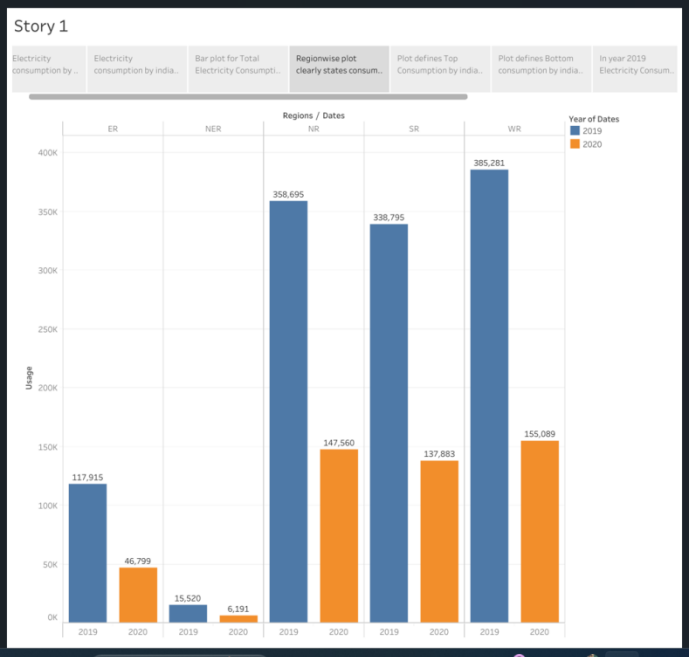
Story 1 (7).png



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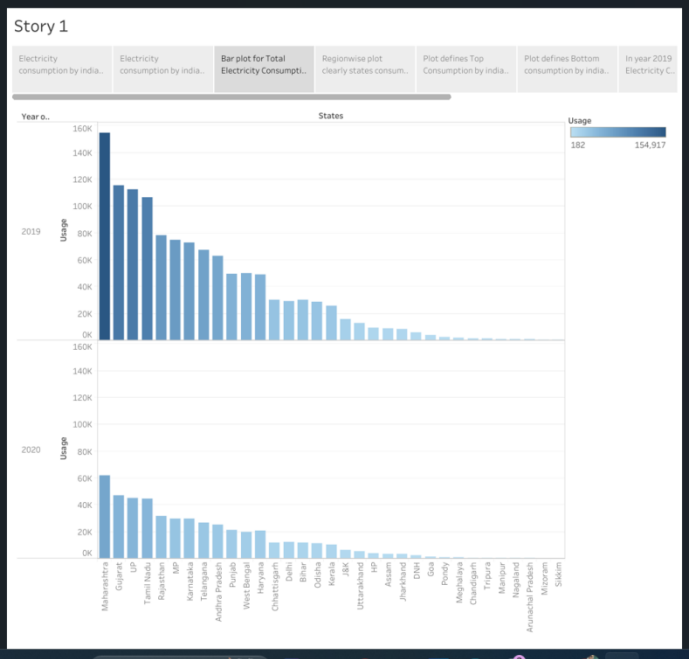

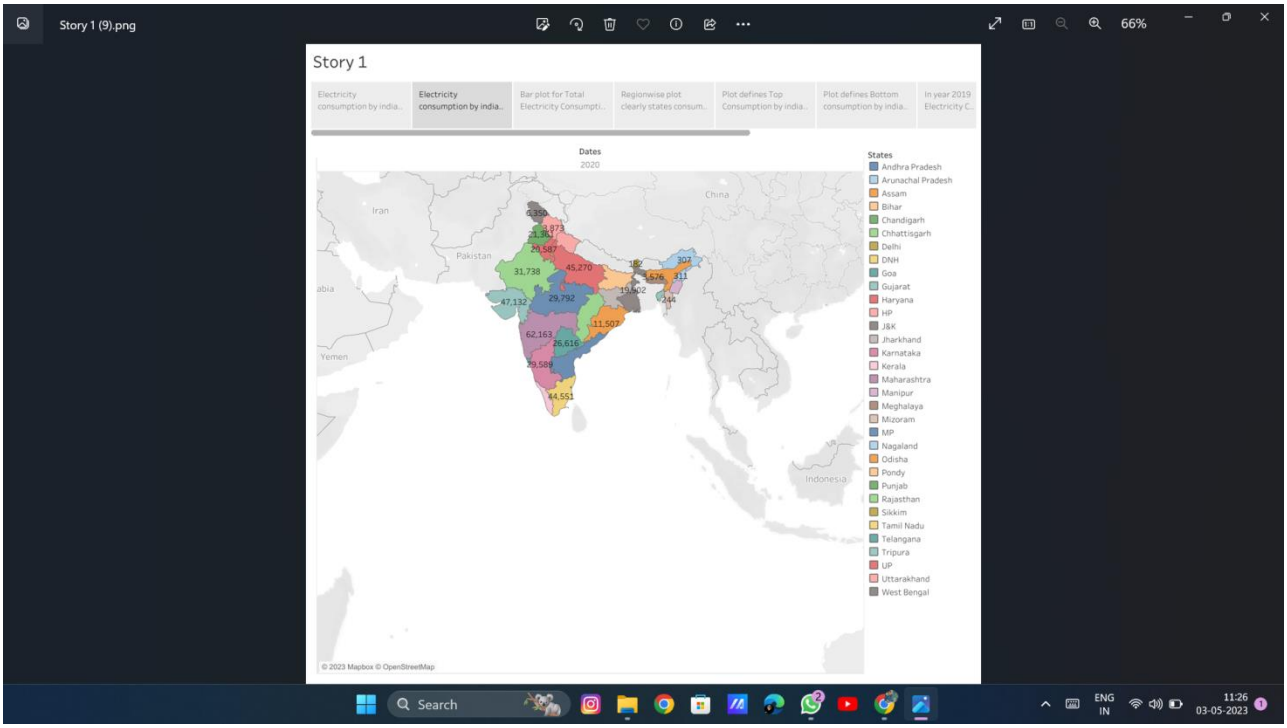
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Chhattisgarh
Delhi
DNH
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Haryana
HP
J&K
Jharkhand
Karnataka
Kerala
Maharashtra
Manipur
Meghalaya
Mizoram
MP
Nagaland
Odisha
Pondy
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
UP
Uttarakhand
West Bengal
Iran
Pakistan
China
Yemen
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29,792
47,132
62,163
26,616
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44,551
11,507
15,902
1,576
311
307
244
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4 TEAM DETAILS

Team Lead – J. JENILA

Team Member 1 – S. SIVA JOTHI

Team Member 2 – S. ARUL PRINCY

Team Member 3 – M.KALADEVI

Team Member 4 – L. ARUL JOSELIN

5 ADVANTAGES & DISADVANTAGES

ADVANTAGES

- It is a clean, safe, cheap and convenient source of energy.
- Lower maintenance cost.
- More efficient.
- No tailpipe emission.
- We all know that it can be set up in many sizes.

DISADVANTAGES :

- More expensive than gasoline
- Loss of fish species

6. APPLICATION

- Entertainment
- Healthcare
- Engineering
- Transport and Communication
- Outdoors
- Household

7. CONCLUSION

We can conclude that energy is a very important natural resources. It should be saved because it's not at all free. Energy conservation is the effort made by us to reduce the consumption of energy by using less of an energy service or using reneuable energy.

8. FUTURESCOPE

India will reach 405 gigawatts of renewable energy capacity by 2030. It's expected to surpass the government's target of producing 50% of its electricity from non-fossil fuel sources by the end of the decade.

APPENDIX

SOURCE CODE - DASHBOARD

https://public.tableau.com/views/Book2_16830904053410/Dashboard1?:language=en-US&:display_count=n&:origin=viz_share_link

SOURCE CODE - STORY

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