

NMI2023TMIDO2425

Plugging into the future : An exploration of electricity  
consumption patterns

## 1.Introduction

### 1.1.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).

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## 1.2. Advantage of electric consumption patterns

Which breaks with the traditional system of generating electricity in plants that is then distributed to our homes, gives consumer the possibility of generating their own energy.

The main advantage are increased autonomy and reduced costs.

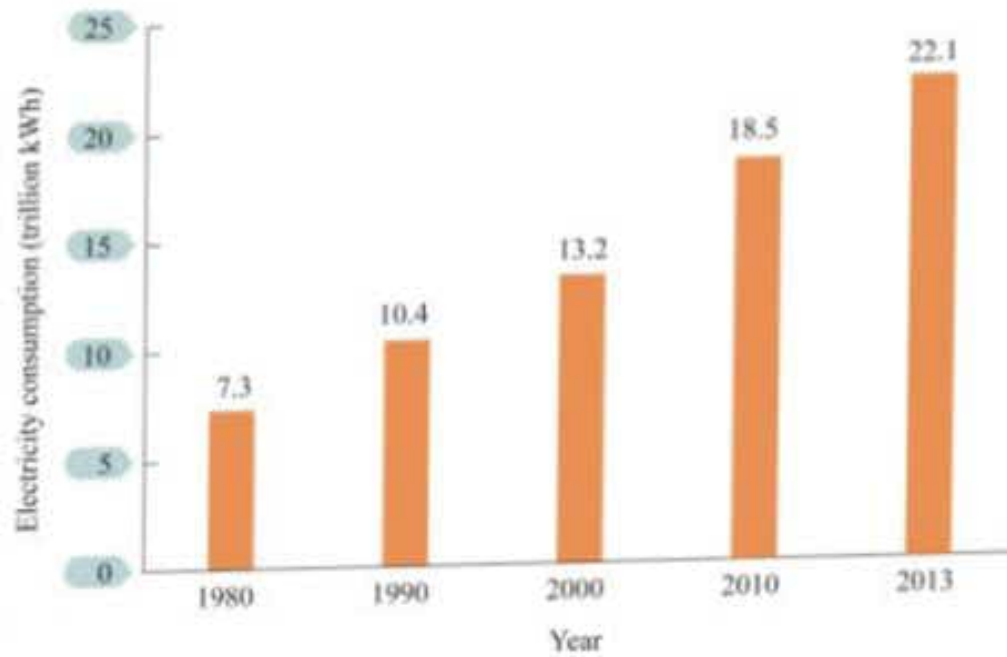
## 1.2. Disadvantages of electric consumption patterns

Power plants that burn biomass release sulfur dioxide and nitrogen oxides, two undesirable pollutants, into the air.

Power plants that burn fossil fuel pump carbon-dioxide into the atmosphere.

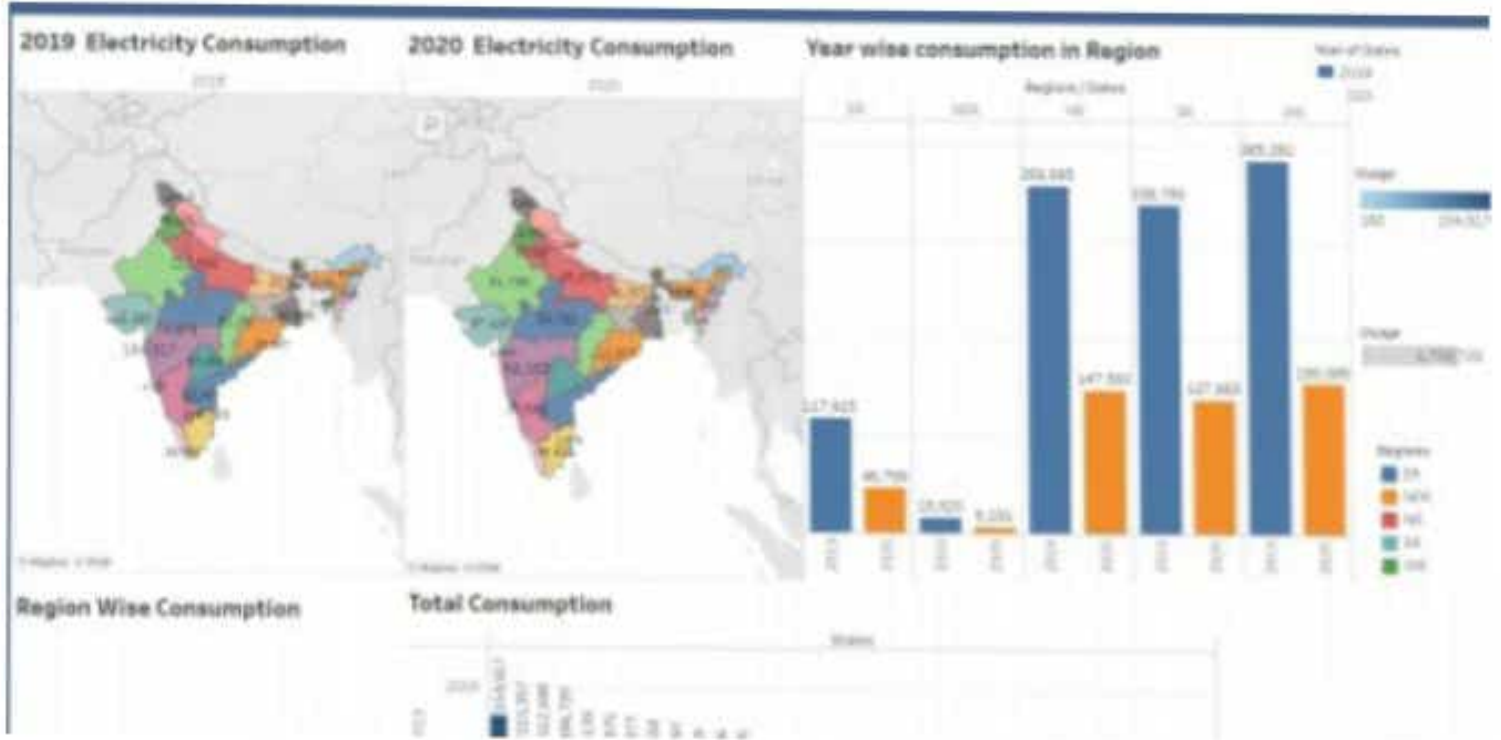
# Project Report

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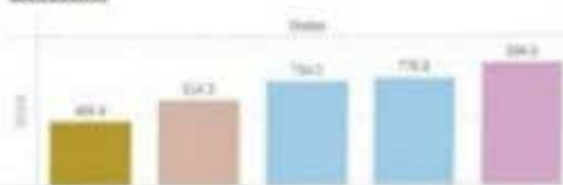
Region Wise State Usage

	2022	2023
North Bengal	44,889	18,902
Baran	31,359	11,803
Odisha	42,967	11,807
Uttaranchal	6,805	1,207
South	400	140
West	1,879	1,879
Uttar Pradesh	2,700	921
Tamil Nadu	1,480	273
Madhya Pradesh	890	380
Karnataka	297	200
Andhra Pradesh	704	207
Assam	624	249
UP	112,889	41,270
Kerala	75,129	31,734
Andhra	49,436	11,361
Odisha	48,888	21,987
West	39,480	12,942
UP	15,802	6,850
Uttar Pradesh	12,889	1,289
UP	4,481	1,875
Uttar Pradesh	1,472	412
Uttar Pradesh	128,707	44,190
Uttar Pradesh	10,101	10,800

TOP N



BOTTOM N



Top 5

Bottom 5

State

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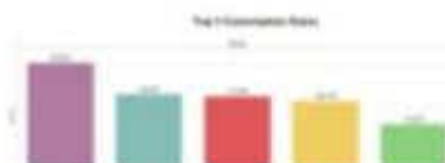
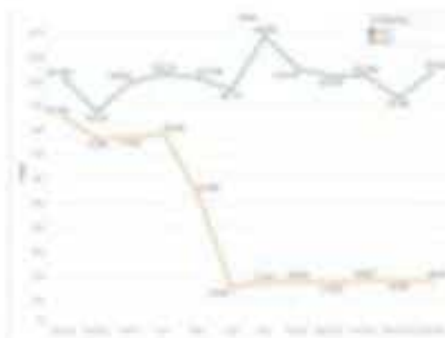
Uttar Pradesh

Uttar Pradesh

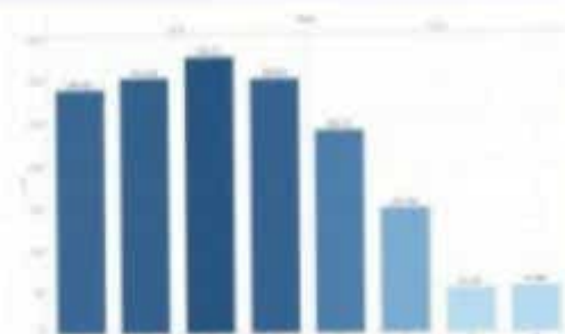
Uttar Pradesh

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## Visualizations



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## Electricity Consumption in Quarters

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

## 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 Quarter 3 was Lowest.



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## 2. 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



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### 3.Future scope

As the Indian government plans to increase electrification of rail-route kilometers from 40 percent presently to 77 percent by 2022, the level of electricity consumption achieved by 2030 could be 35\_43 TWh, growing at 5.0\_6.3 percent CAGR from 17TWh in 2015