PLUGGING INTO THE FUTURE: AN EXPLORATION OF ELECTRICITY CONSUMPTION PATTERNS

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INTRODUCTION

- Electricity consumption is an important area to investigate due to its impact on the environment, economy and daily life.
- The purpose of this project is to explore the factors that influence electricity consumption, including the different sources of energy and their effects on the environment, ways to minimize electricity usage and reduce energy waste, as well as the costs and benefits of using various types of energy sources.

OVERVIEW

- Electricity consumption refers to the amount of electric power consumed by a household, business, or industry over a given period of time. It is typically measured in kilowatt-hours (kWh) and can vary based on several factors such as lifestyle choices, energy efficiency measures, and technological advancements.
- Renewable energy sources like solar, wind or hydroelectric power have been introduced as an alternative to traditional fossil fuel consumption, but they still only make up a small percentage of the electricity generated and consumed worldwide.
- Understanding electricity consumption patterns and trends is important in developing policies and strategies for reducing greenhouse gas emissions, as electricity production is a significant contributor to global carbon emissions.

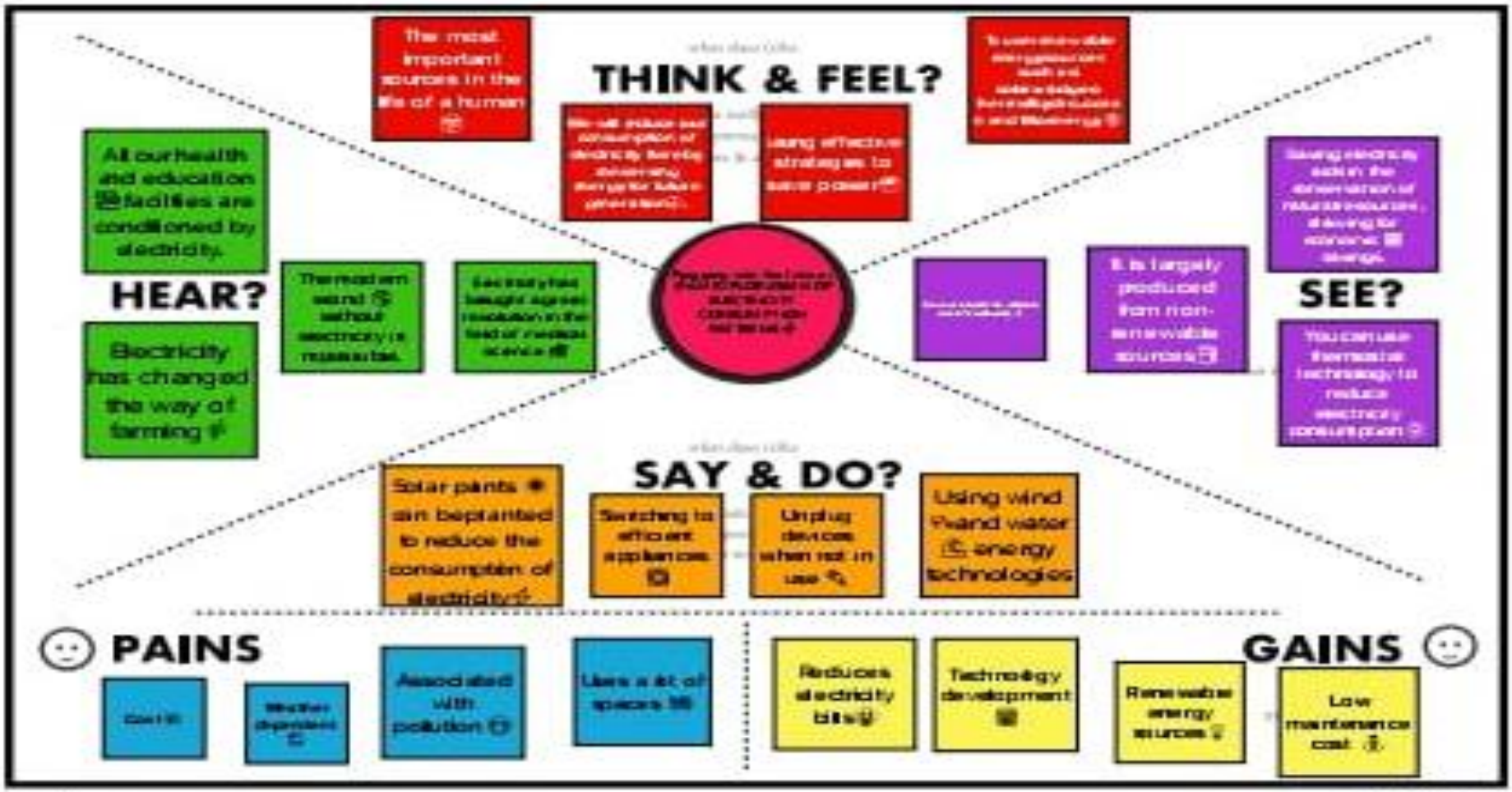
PURPOSE

- The purpose of exploring electricity consumption is to gain a better understanding of how much energy is being used, where it is being used, and how it can be reduced or optimized. This information can help individuals, businesses, and policymakers make informed decisions about energy use, which can have a range of benefits including:

I. Reducing energy costs: By understanding how electricity is being consumed, individuals and businesses can identify opportunities to reduce energy usage and lower their utility bills.

II. Improving energy efficiency: Understanding electricity consumption patterns can help identity areas where energy-efficient appliances and systems can be installed or retrofitted, leading to more sustainable and cost-effective energy use.

EMPATHY MAP


THINK & FEEL?
The most important sources in the life of a human
Using effective strategies to save power
HEAR?
All our health and education facilities are conditioned by electricity.
Electricity has changed the way of farming
SEE?
It is largely produced from non-renewable sources
SAY & DO?
Solar panels can be planted to reduce the consumption of electricity
Switching to efficient appliances
Unplug devices when not in use
Using wind and water energy technologies
PAINS
Associated with pollution
Uses a lot of space
Reduces electricity bills
Technology development
GAINS
Renewable energy sources
Low maintenance cost

DEFINE YOUR PROBLEM STATEMENT

Plugging into the future: An exploration of electricity consumption patterns

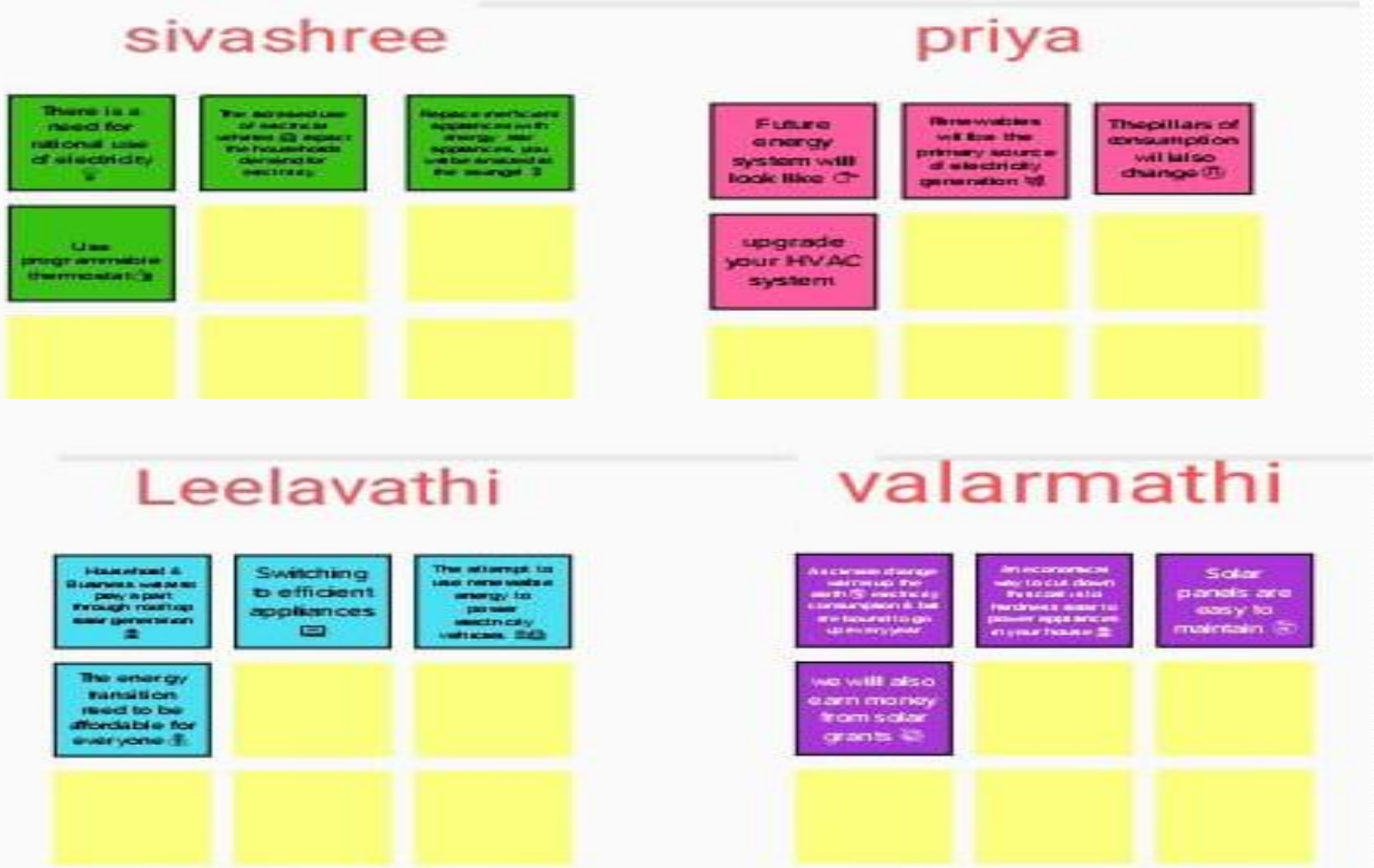
Electricity consumption refers to all the energy to perform an action

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Defer judgment.
- Go for volume.
- Encourage wild ideas.
- Listen to others.
- If possible, be visual.

BRAINSTORM


sivashree
priya
Leelavathi
valarmathi
Switching to efficient appliances
Future energy system will look like
upgrade your HVAC system
Solar panels are easy to maintain
we will also earn money from solar grants

GROUP IDEAS

Renewable sources will help to reduce the electricity consumption and electricity bill

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

using effective strategies to save power like wind and water energy technologies

People can charge their electric vehicles with renewable energy

Using renewable sources is better than non-renewable sources and it's also consider as technology development

PRIORITIZE

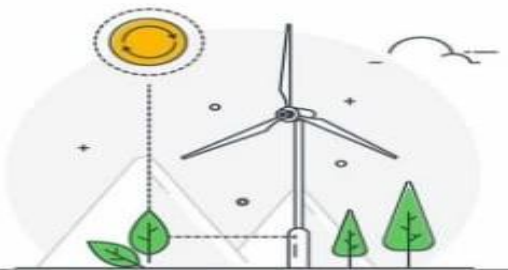
Using effective strategies to save power

we will reduce power consumption of electricity thereby conserving energy for future generation

using renewable sources to reduce the consumption of electricity

TIP

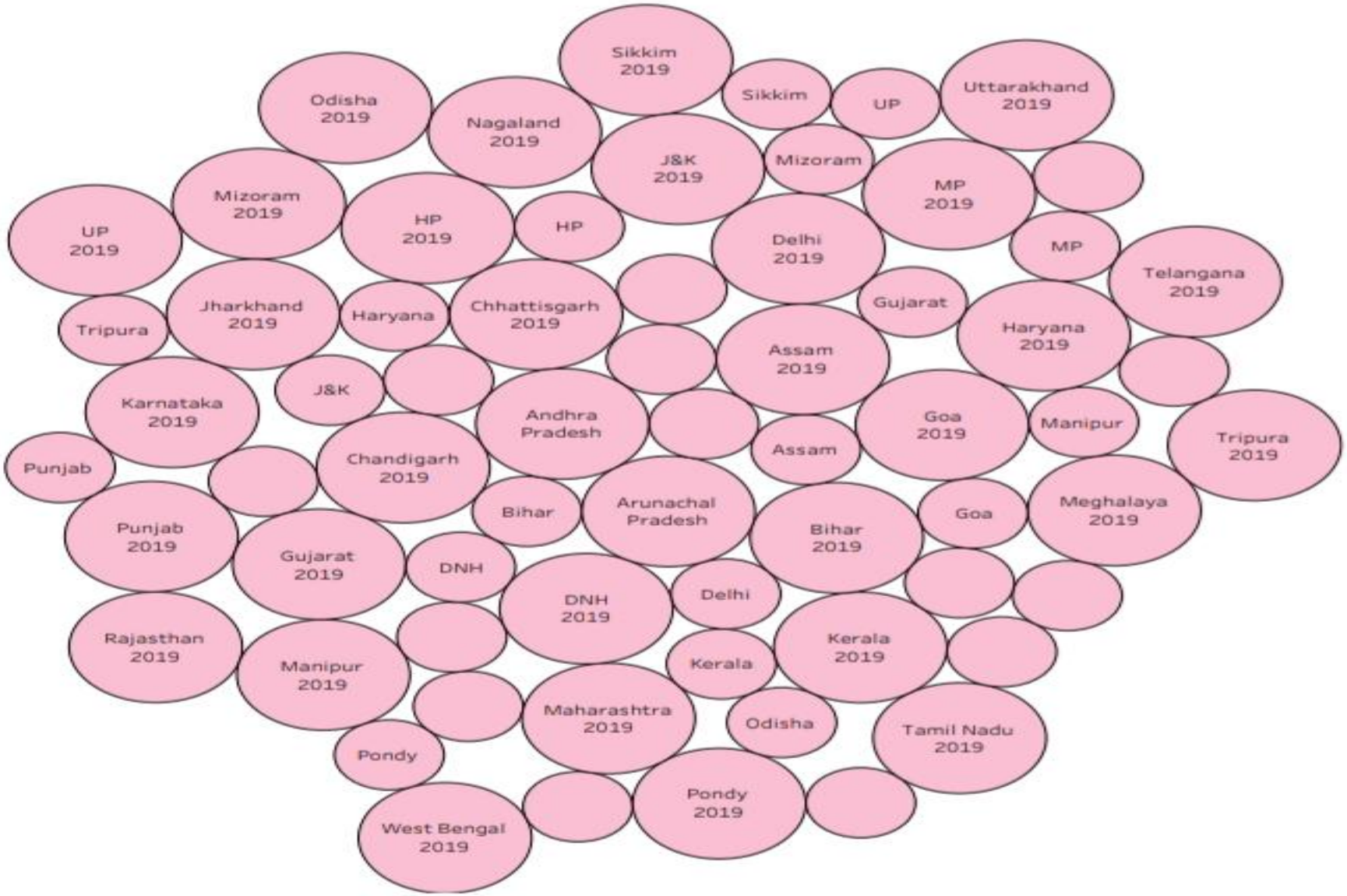
Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H key** on the keyboard.



STORY ABOUT THE ELECTRICITY CONSUMPTION

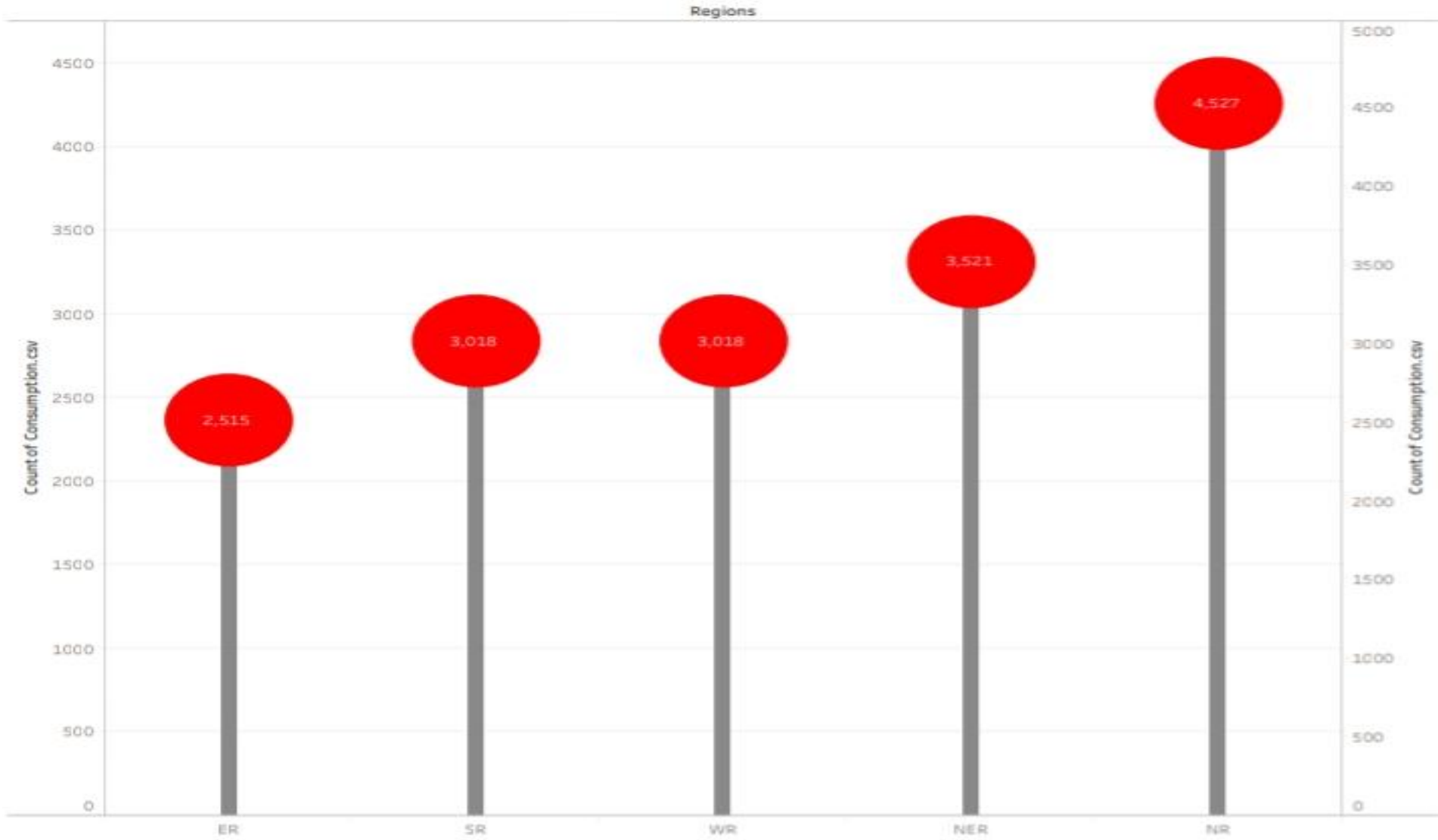
ELECTRICITY CONSUMPTION

STATE WISE COMPARISON	YEAR AND STATE	CONSUMPTION WITH REGIONS	TOTAL LONGITUDE AND TOTAL LATITUDE



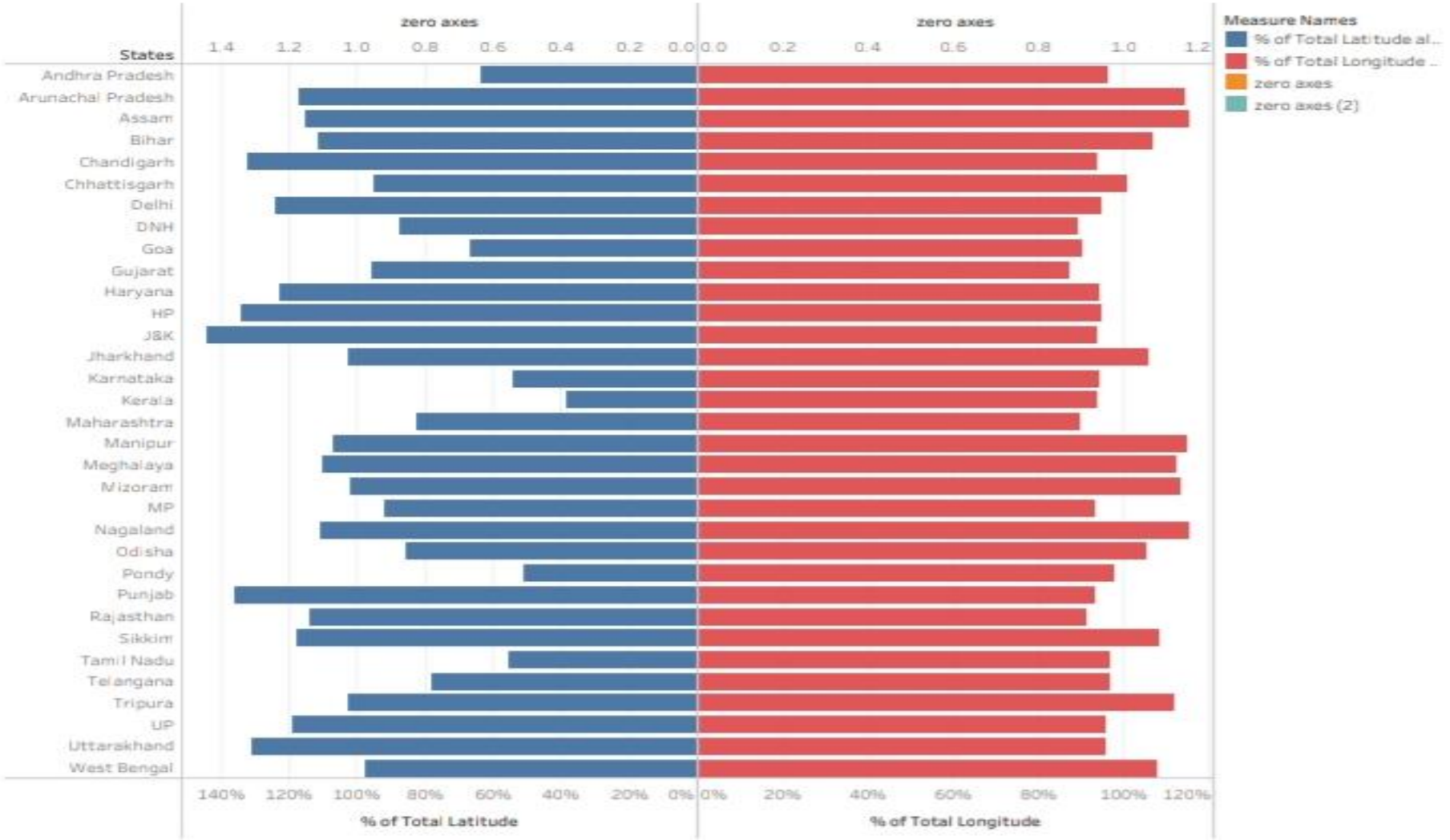
ELECTRICITY CONSUMPTION

STATE WISE COMPARISON | YEAR AND STATE | **CONSUMPTION WITH REGIONS** | TOTAL LONGITUDE AND TOTAL LATITUDE



ELECTRICITY CONSUMPTION

STATE WISE COMPARISON | YEAR AND STATE | CONSUMPTION WITH REGIONS | **TOTAL LONGITUDE AND TOTAL LATITUDE**



AN EXPLORATION OF ELECTRICITY CONSUMPTION

ADVANTAGES

- Identifying energy-saving opportunities
- Improved energy efficiency
- Reduced carbon footprint
- Informed decision making
- Renewable energy sources

DISADVANTAGES

- Cost
- Time-consuming
- Energy inequality
- Negative impact on the environment
- The risk of cyber attacks

APPLICATION

- ***RESIDENTIAL USE***:

  Electricity is used in households for lighting, cooking, heating, cooling, and other appliances like TVs, refrigerators, washing machines, and air conditioners.

- ***COMMERCIAL USE***:

  Businesses use electricity to power their operations. This includes lighting, heating and cooling systems, office equipment such as computers, printers and other digital devices, elevators and escalators.

- ***INDUSTRIAL USE***:

  The industrial sector is the largest consumer of electricity. Heavy industries such as manufacturing, pulp and paper mills, chemical processing factories and steel production use electricity to power their machinery, assembly lines and other activities.

- ***TRANSPORTATION*** :

  The use of electric vehicles is gaining popularity among consumers and businesses alike. As opposed to gasoline powered vehicles, electric vehicles use batteries that need to be charged using electricity. This means that electric vehicles contribute to the increase in electricity consumption.

- ***MILITARY APPLICATIONS*** :

  Military applications of electricity include powering weapons, communications systems, aircraft and vehicles like tanks and ships.

- ***MEDICAL APPLICATIONS***:

  Electricity is crucial in many medical applications such as x-rays, MRI scan and electrocardiograms among others.

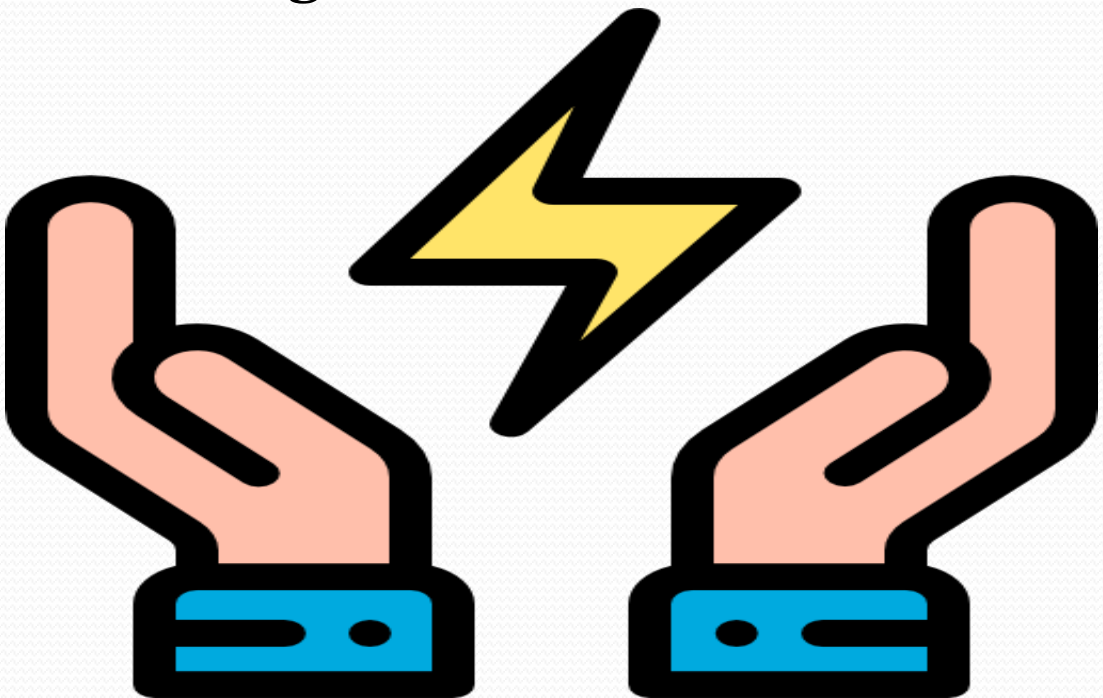
- ***PUBLIC SECTORS***:

  Governments use electricity for public sector operations such as street lighting, police, fire services dispatch systems and public transportation.

CONCLUSION

* Electricity consumption is a crucial aspect of our daily lives that has a significant impact on both the environment and our finances.
* Reducing our electricity consumption through the adoption of energy efficient technologies and implementing energy conservation strategies can significantly reduce our carbon footprint while saving us money.
* Governments and utility companies have a significant role to play on promoting energy efficient practices and providing incentives for consumes to reduce electricity use.

* Reducing our electricity consumption requires a concerted effort from individuals, businesses and governments to make significant strides in creating a more sustainable and greener world.
* By reducing our carbon footprint, we can create a better future for generations to come...



FUTURE SCOPE

- **SMART GRID TECHNOLOGY**:

  As electricity consumption patterns change with the rise of renewable energy smart grid technology has the potential to ensure that energy supply and demand are managed efficiently.

- **ENERGY STORAGE SOLUTIONS**:

  Battery storage solutions and other energy storage technologies can help to store excess electricity generated from renewable sources for use in peak demand periods.

- **ELECTRIC VEHICLE ADOPTATION**:

  With the increasing adoption of electric vehicles, electricity consumption patterns will be further impacted, and it will be important to investigate the impact of th9s transition on overall electricity usage.

- **ENERGY EFFICIENT BUILDINGS**:

  Building design and construction practices can have a significant impact on electricity consumption. Investigating ways to design and construct energy efficient buildings can help to reduce electricity usage.

- **BEHAVIOURAL CHANGES**:

  Exploring ways to encourage behaviour changes among consumers can assist in reducing electricity consumption. This could include energy efficient habits, such as turning off lights when not in use, and using energy efficient appliances.

- **POLICY AND REGULATIONS**:

  Further research on policy and regulation changes that can help to reduce energy consumption such as renewable energy targets, incentives for energy efficient appliances and taxes on carbon emissions.

- **COLLABORATION ACROSS STAKEHOLDERS**:

  There is a need for collaboration across stakeholders including consumers, utilities, policy makers and developers, to explore and implement solutions to reduce electricity consumption.

THANK YOU