

Plugging into the Future: An Exploration of Electricity Consumption Patterns

INTRODUCTION

1.1 Overview:

India is the world's third-largest producer and third-largest consumer of electricity. The national electric grid in India has an installed capacity of 370.106 GW as of 31 March 2020. Renewable power plants, which also include large hydroelectric plants, constitute 35.86% 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. In 2015-16, electric energy consumption in agriculture was recorded as being the highest (17.89%) worldwide. The per capita electricity consumption is low compared to most other countries despite India having a low electricity tariff. In light of the recent COVID-19 situation, when everyone has been under lockdown for the months of March to June the impacts of the lockdown on economic activities have been faced by every sector in a positive or a negative way. The dataset is exhaustive in its demonstration of energy consumption state wise. Analysing Electricity Consumption in India from Jan 2019 till 5 th December

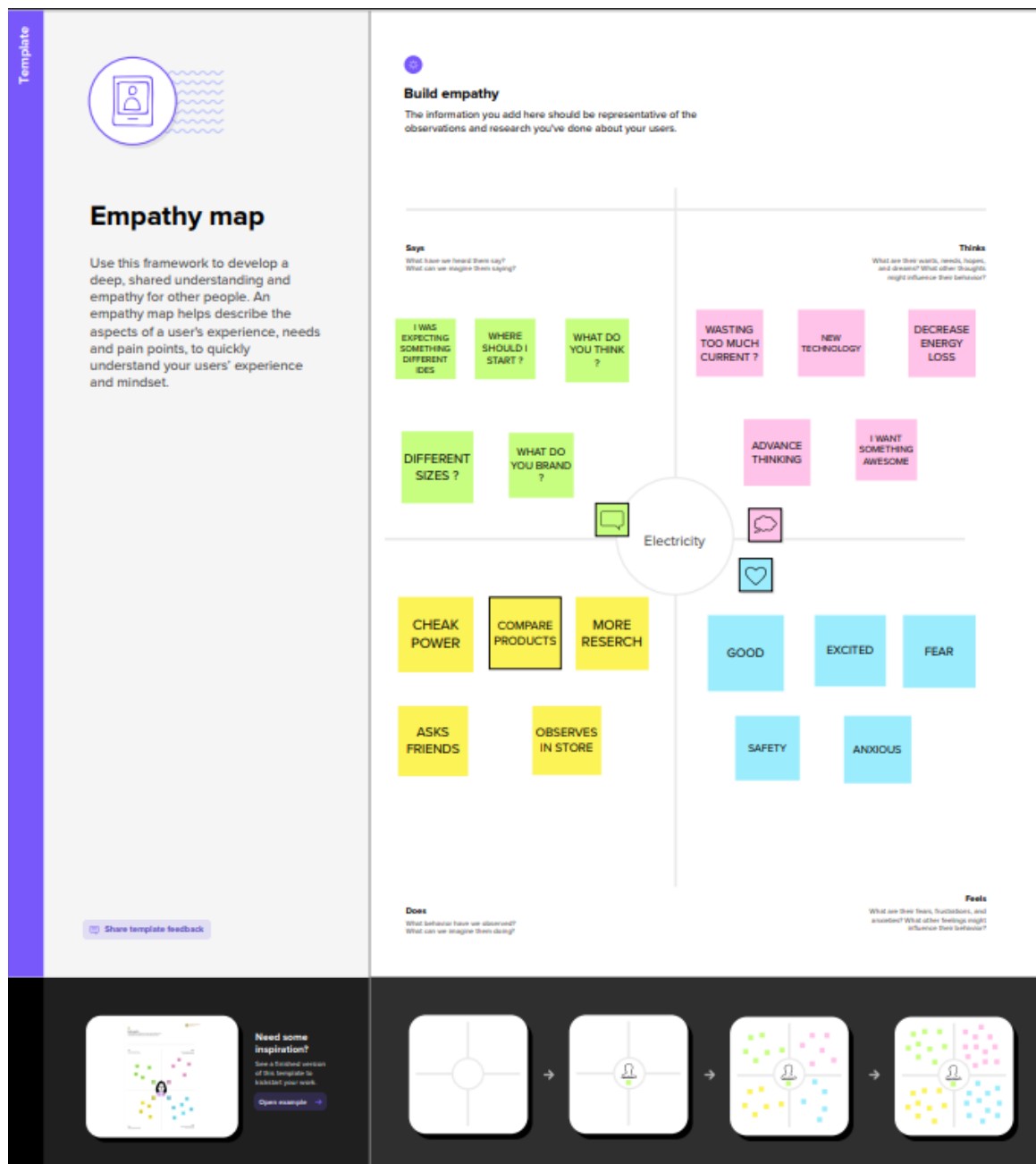
2020. This dataset contains a record of Electricity consumption in each states of India, here we are going to analyse State wise , Region wise and Overall Electricity consumption in India.

1.2 Purpose :

Annual electricity 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.


Problem Definition & Design Thinking :

2.1 Empathy Map



2.2 Ideation & Brainstorming Map

Template



Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

⌚ 10 minutes to prepare
🕒 1 hour to collaborate
👥 2-8 people recommended

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

⌚ 10 minutes

A Team gathering
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B Set the goal
Think about the problem you'll be focusing on solving in the brainstorming session.

C Learn how to use the facilitation tools
Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#) →

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

PROBLEM

1.COST
2.LOSS CURRENT
3.QUALITY
4.SAFETY
5.POWERCUT

Key rules of brainstorming

To run an smooth and productive session

🗣️ Stay in topic. 💡 Encourage wild ideas.

2 Brains

Write down that add

⌚ 10 min

Person 1

More people like

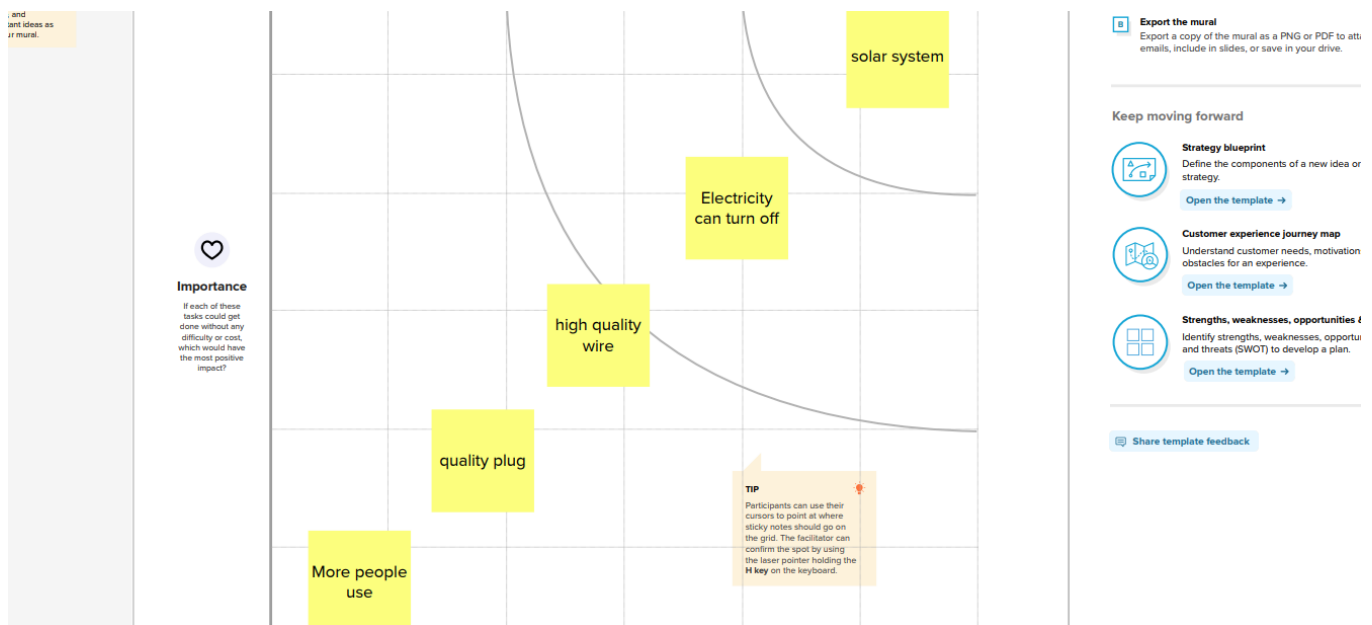
Electricity can turn off

Person 5

Power being

Use wind

and sent ideas as a mural.



Importance
If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

quality plug

high quality wire

Electricity can turn off

solar system

More people use

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.

B Export the mural
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

Keep moving forward

Strategy blueprint
Define the components of a new idea or strategy.
[Open the template](#) →

Customer experience journey map
Understand customer needs, motivation, obstacles for an experience.
[Open the template](#) →

Strengths, weaknesses, opportunities & threats (SWOT)
Identify strengths, weaknesses, opportunities and threats (SWOT) to develop a plan.
[Open the template](#) →

[Share template feedback](#)

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!



3

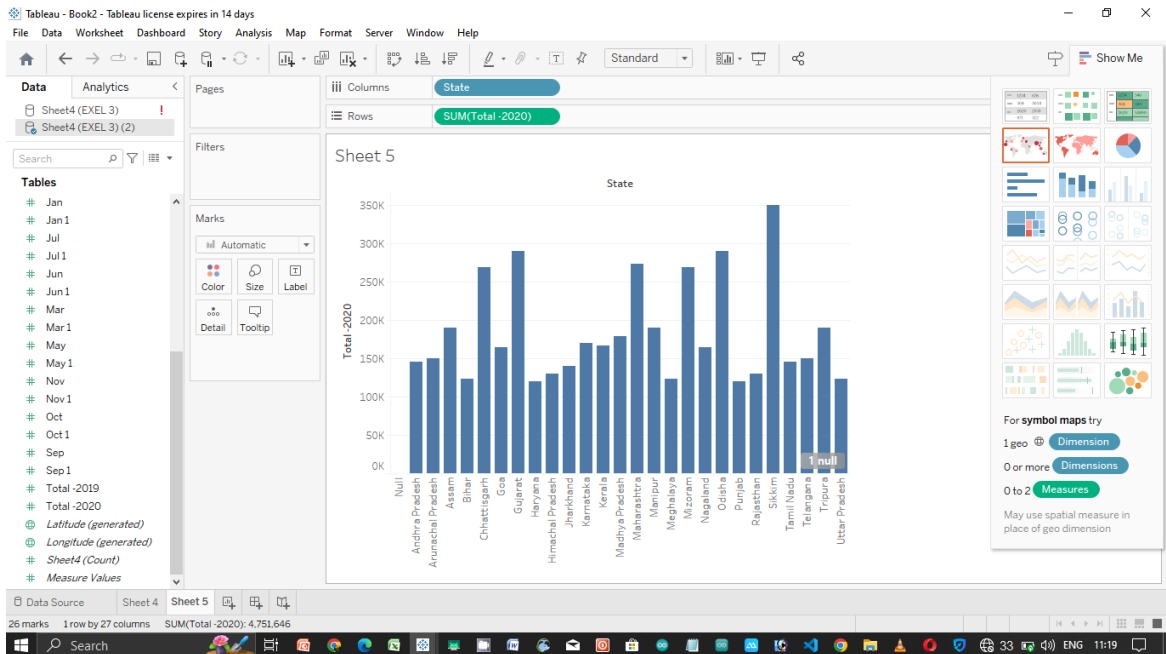
Group ideas

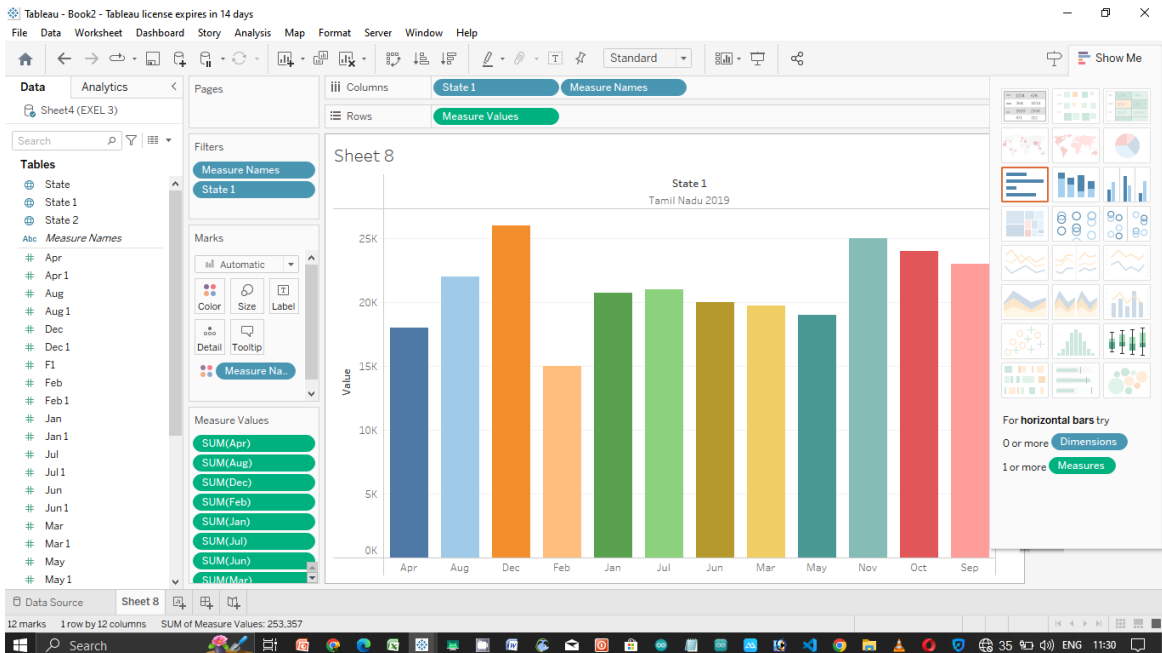
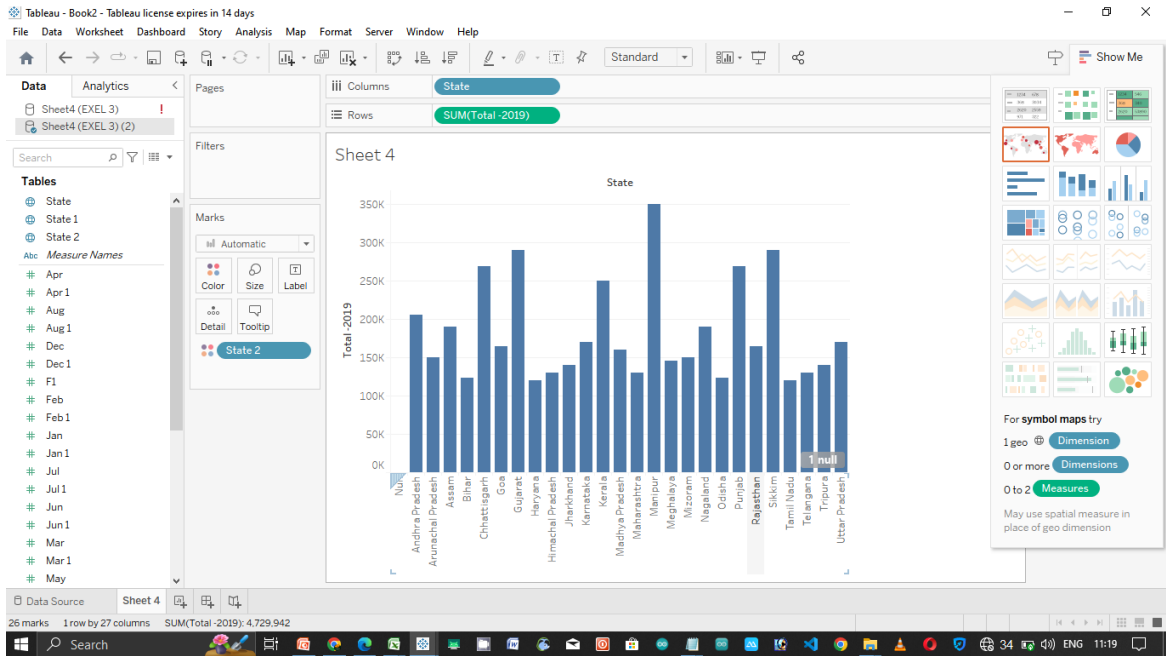
Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

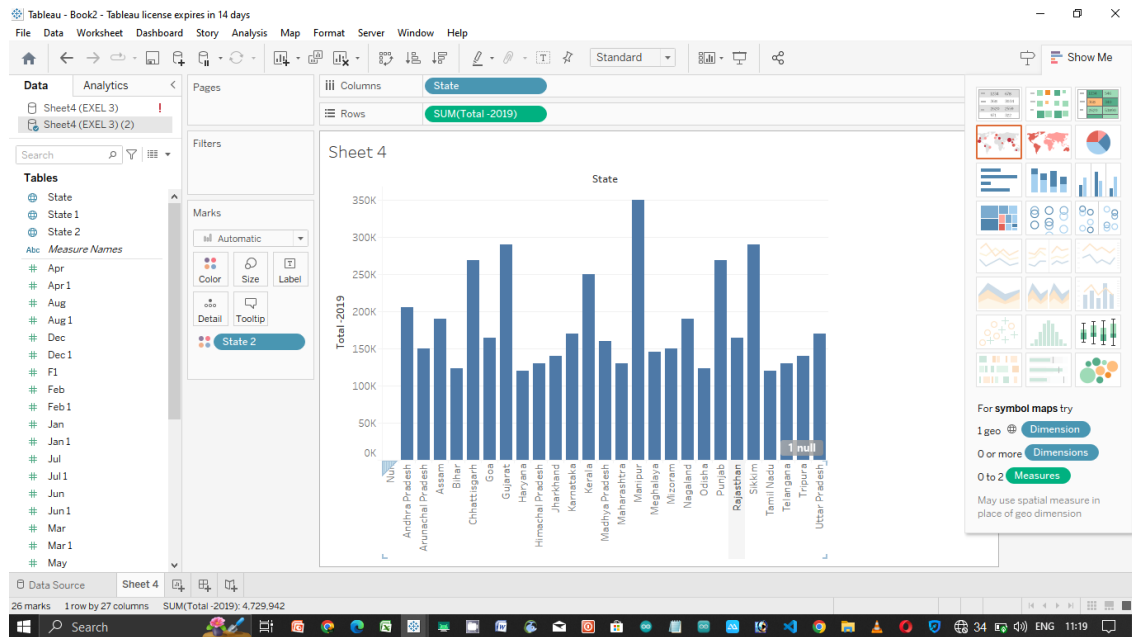
20 minutes

This is cost solving problem solution first is more people and discount and free electricity and limit usage and power saving. 2.loss current solving good conductor and brand wires and short length and quality plug and external loss 3.quality high quality wire and high quality components and chemicals quality boards quality check. 4.electrical can turn off and electrical suit and not use water and test start work 5.power cut solving form ups and solar system and generator and use wind turbine and using base

RESULT :







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
- It doesn't require as many employees

- Reduces greenhouse emission
- Makes barely any pollution compare to other ways of creating or generating electricity
- Relatively low maintenance cost
- Hydroelectric station are inexpensive to operate
- Hydroelectricity produces no gas emissions or waste
- A station can operate and run for long periods of time
- It is renewable

DISADVANTAGES

- More expensive than gasoline
- Loss of fish species
- Sometimes messes up wildlife
- Dependent on precipitation
- More power plants and more pollution

- Damming can cause loss of land suitable for agriculture as well as recreation
- Cost for construction
- Change in river or stream quality
- An electric vehicle is not completely emission free
- In electricity, there are a limited number of feasible sites for a large number of dams
- Drought can affect power production
- Hydroelectric natural seasonal changes in river and ecosystems can be destroyed

APPLICATIONS

- Smappee. Available on: iOS and Android. ...
- Energy Cost Calculator. Available on: iOS. ...
- Meter Readings. Available on: iOS. ...
- Energy Consumption Analyzer. Available on:
Android. ...
- Energy Tracker. ...
- Consumptions. ...
- Sense Home Energy Monitor. ...
- EyeOnWater.

CONCLUSION

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 renewable energy.

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.

APPENDIX

purpose

[https://www.google.com/search?q=Plugging+into+the+Future%3A+An+Exploration+of%0D%0AElectricity+Consumption+Patterns+purpose&ei=AsY7ZOz7GsHg2roPx4qLsA8&ved=0ahUKEwjshluRka7-AhVBsFYBHUFfAvYQ4dUDCA8&uact=5&oq=Plugging+into+the+Future%3A+An+Exploration+of%0D%0AElectricity+Consumption+Patterns+purpose&gs_lcp=CgxnD3Mtd2l6LXNlcnAQAzIOCAAQ6gIQtAIQ2QIQ5QIyDggAEOoCELQCENkCEOUCMg4IABDqAhC0AhDZAhDIAjIOCAAQ6gIQtAIQ2QIQ5QIyDggAEOoCELQCENkCEOUCMg4IABDqAhC0AhDZAhDIAjIOCAAQ6gIQtAIQ2QIQ5QIyDggAEOoCELQCENkCEOUCMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBSgQIQRgAUABY-k5gx1FoAXAAeACAAQCIAQCSAQCYAQCGAQGGgAQKwARLAAQHaaQYIARABGAo&sclient=gws-wiz-serp](https://www.google.com/search?q=Plugging+into+the+Future%3A+An+Exploration+of%0D%0AElectricity+Consumption+Patterns+purpose&ei=AsY7ZOz7GsHg2roPx4qLsA8&ved=0ahUKEwjshluRka7-AhVBsFYBHUFfAvYQ4dUDCA8&uact=5&oq=Plugging+into+the+Future%3A+An+Exploration+of%0D%0AElectricity+Consumption+Patterns+purpose&gs_lcp=CgxnD3Mtd2l6LXNlcnAQAzIOCAAQ6gIQtAIQ2QIQ5QIyDggAEOoCELQCENkCEOUCMg4IABDqAhC0AhDZAhDIAjIOCAAQ6gIQtAIQ2QIQ5QIyDggAEOoCELQCENkCEOUCMg4IABDqAhC0AhDZAhDIAjIOCAAQ6gIQtAIQ2QIQ5QIyDggAEOoCELQCENkCEOUCMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBMg0IABCPARDqAhC0AhgBSgQIQRgAUABY-k5gx1FoAXAAeACAAQCIAQCSAQCYAQCGAQGGgAQKwARLAAQHaaQYIARABGAo&sclient=gws-wiz-serp)

advantage and disadvantages

<https://www.ecstuff4u.com/2018/08/advantages-of-electricity.html>

future scope

https://www.google.com/search?q=Electricity+Consumption+future+scope+notes&ei=zck7ZPiSKNKC2roP8qagwAl&ved=0ahUKEwi4rZnglK7-AhVSgVYBHXITCCgQ4dUDCA8&uact=5&oq=Electricity+Consumption+future+scope+notes&gs_lcp=Cgxnd3Mtd2l6LXNlcnAQAzIFCCEQoAE6CggAEecQ1gQQsAM6CgghEBYQHhAPEB06CAghEBYQHhAdSgQlQRgAUJxKWNRVYMZbaANwAXgAgAGtBlgB6A6SAQkyLTQuMS4wLjGYAQCgAQHIAQjAAQE&sclient=gws-wiz-serp

CONCLUSION

https://www.google.com/search?q=electricity+consumption+conclusion&ei=7Mk7ZKCzEfnc2roP57exmAl&oq=Electricity+Consumption+CONCLUSION&gs_lcp=Cgxnd3Mtd2l6LXNlcuAQARgAMgUIABCABDIICAAQigUQhgMyCAgAEIoFEIYDMggIABCKBRCGAzIICAAQigUQhgM6CggAEEcQ1gQQsANKBAhBGABQ9j1YwVpghXVoA3ABeAKAAaMqiAHaU5IBBzUtMS45LTKYAQCgAQGgAQLIAQjAAQE&sclient=gws-wiz-serp