**Milestone 1: Define Problem / Problem Understanding**

**Activity 1: Specify the business problem**

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 5th December 2020. This

dataset contains a record of Electricity consumption in each state

**Activity 2: Business requirements**

The business requirements for analyzing analysis on electricity consumption in

IndiaIdentify the current patterns of electricity consumption in different regions and

sectors of India. This information can be used to identify areas where consumption is

high and areas where it is low. Identify opportunities for improving energy efficiency

and reducing consumption in different sectors and regions. This information can be

used to develop policies and programs to promote energy efficiency. This informationcan be used by government agencies, electricity providers, and investors to develop

policies and make investment decisions that promote sustainable energy

development and consumption in India.

**Activity 3: Literature Survey (Student Will Write)**

A literature survey is a method of researching existing literature and studies related to a

specific topic.The topic of electricity consumption in India is a well-researched area, with

many studies having been conducted to understand consumption patterns and trends,

as well as the impact of government policies and investment opportunities.A study by

(Kumar et al., 2020) analyzed the electricity consumption patterns in India and identified

the major contributors to the consumption. The study found that the residential sector

was the largest consumer of electricity, followed by the commercial and industrial

sectors.Another study by (Jain and Rathi, 2019) analyzed the impact of government

policies on electricity consumption in India. The study found that policies promoting

energy efficiency and renewable energy development have had a positive impact on

reducing electricity consumption in India.

Electricity consumption in India has grown very rapidly since the early 1950s and has been mainly constrained by the ability of the growing state electricity grids to meet rising demands for peak capacity and energy needed for the modernization and growth of the industrial and agricultural sectors. Category wise, consumption trend of electricity during the period 1951-52 to 1978-79 is shown in Table 14. The industrial sector has been the major consumer of electricity, its share marginally decreasing from about 72% in 1951-52 to 64% in 1978-79. Aluminum, iron and steel, textiles, fertilizer, chemicals, cement, paper, and engineering industries constitute more than 50% of the industrial demand. While the industrial demand has grown at an annual rate of about 7% over the last 15 years, demand in the aluminum, chemicals, fertilizer and engineering industries were growing between 9 and 15% annually. The shares of domestic (9%), commercial (6%), public lighting (1%), public water works (3.5%), and railways (3%) have not changed much over the past three decades, but the share of the agricultural sector has grown from about 3% in 1951-52 to more than 14% in 1978-79 and is expected to rise further with widely spreading rural electrification programs, strongly supported by the central and state governments in India. Agricultural sector demand mainly comes from energized pumpsets used for irrigation and from other agricultural machinery using electricity. The growth in the number of electrified villages and pumpsets is shown in Table 15.

**Activity 4: Social or Business Impact.**

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.

Improved access to electricity: The exploration of electricity consumption can help identify areas where electricity access is limited or unreliable. By addressing these issues, people living in these areas will have access to reliable electricity, which can improve their quality of life, increase their productivity, and reduce poverty.

Health benefits: Access to reliable electricity can also improve healthcare outcomes. For example, hospitals and clinics will be better equipped to provide critical services, such as refrigeration for vaccines, and medical equipment that require electricity to operate.

Education: Reliable electricity can improve access to education, as students will have access to technology and resources needed to learn, such as computers, internet access, and lighting for studying