plugging into the future: an exploration of electricity consumption patterns using tableau

DATE	28-02-2026
TEAM ID	LTVIP2026TMIDS89110
PROJECT NAME	plugging into the future: an exploration of electricity consumption patterns using tableau
MAXIMUM MARKS	4 MARKS

3.3 Data Flow Diagram

In the project *Plugging into the Future: An Exploration of Electricity Consumption Patterns Using* Tableau, the data flow begins with collection from multiple sources. Electricity consumption data is sourced from utility companies, smart meters, government energy reports, and open datasets. This raw data often comes in varied formats such as CSV files, Excel spreadsheets, or SQL databases, containing information about time-stamped usage, regional distribution, sector-wise consumption, and energy sources.

Once collected, the data enters the data preprocessing stage, where it is cleaned, validated, and standardized. Missing values are handled, inconsistent entries are corrected, and datasets are transformed into a structured format suitable for analysis. During this stage, additional demographic and economic indicators—like population density, industrial output, and urbanization rates—are integrated to enrich the dataset and enable correlation analyses.

The prepared data is then imported into Tableau, which acts as the central processing and visualization engine. Here, the data is connected through live connections or extracts, depending on the need for real-time updates or historical analysis. Within Tableau, interactive dashboards are designed to allow users to filter by region, sector, or time period, visualize seasonal trends, perform comparative analyses, and forecast future consumption patterns using built-in analytical and predictive tools.