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

4.1 Problem-Solution Fit

The central problem addressed in *Plugging into the Future: An Exploration of Electricity Consumption Patterns Using* Tableau revolves around the difficulty of understanding complex electricity consumption patterns and converting raw energy data into actionable insights. Utility managers, policymakers, and energy analysts often face fragmented datasets, static reports, and limited analytical tools, making it challenging to identify trends, forecast demand, and plan for efficient energy usage. Seasonal spikes, regional disparities, and sector-wise consumption differences further complicate decision-making, while the lack of interactive visualization reduces clarity and slows response to changing energy needs.

The solution provided by this project directly addresses these challenges through a combination of data integration, preprocessing, visualization, and predictive analytics. By consolidating electricity consumption data from multiple sources—utility databases, smart meters, government reports, and demographic indicators—into a structured format, the project ensures data accuracy, completeness, and consistency. Tableau then enables the creation of interactive dashboards, allowing users to filter data by region, sector, and time period, explore trends, and perform comparative analyses easily. Advanced forecasting features allow stakeholders to predict future demand, while drill-down capabilities help uncover sector-specific or region-specific insights that were previously hidden in static reports.