

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	22 February 2026
Team ID	LTVIP2026TMIDS35954
Project Name	Plugging into the Future: An Exploration of Electricity Consumption Patterns Using Tableau
Maximum Marks	4 Marks

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data Collection & Import	Import electricity consumption dataset into Tableau Support CSV/Excel data format Clean and prepare dataset for visualization
FR-2	Data Processing	Perform data cleaning (remove null values, formatting) Create calculated fields for year, region and monthly usage Categorize states into regions (WR, NR, SR, ER, NER)
FR-3	Visualization Creation	Create yearly electricity consumption trend chart Create region-wise consumption pie chart Create Top N and Bottom N states bar charts Create month-wise consumption charts Create India state consumption maps
FR-4	Dashboard Development	Build interactive dashboards combining multiple visualizations Enable filtering by year and region Add titles, legends and labels for clarity Provide comparative view of 2019 vs 2020 data

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	Dashboard should be easy to understand and interactive for non-technical users. Visualizations must be clear and self-explanatory.
NFR-2	<b>Security</b>	Dataset used must be public/non-confidential and protected from unauthorized modification.
NFR-3	<b>Reliability</b>	Dashboard should display accurate and consistent results based on the dataset.
NFR-4	<b>Performance</b>	Dashboard should load and respond to filters quickly without lag.
NFR-5	<b>Availability</b>	Dashboard should be accessible anytime through Tableau Public.

NFR-6	<b>Scalability</b>	Solution should allow addition of future years and more states without redesigning the dashboard.
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