

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

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| Date | 22 February 2026 |
| Team ID | LTVIP2026TMIDS35939 |
| 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 us 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 visualiza 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 | Usability | Dashboard should be easy to understand and interactive for non-technical users. Visualizations must be clear and self-explanatory. |
| NFR-2 | Security | Dataset used must be public/non-confidential and protected from unauthorized modification. |
| NFR-3 | Reliability | Dashboard should display accurate and consistent results based on the dataset. |
| NFR-4 | Performance | Dashboard should load and respond to filters quickly without lag. |
| NFR-5 | Availability | Dashboard should be accessible anytime through Tableau Public. |

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| NFR-6 | Scalability | Solution should allow addition of future years and more states without redesigning the dashboard. |
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