**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 31 January 2025 |
| Team ID | LTVIP2025TMID48259 |
| 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.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | Data Collection & Preprocessing | Upload electricity consumption dataset (CSV)  Handle missing and categorical values |
| FR-2 | Time-of-Day Usage Analysis | Visualize hourly electricity usage across regions and sectors  Identify peak and low-demand periods |
| FR-3 | Seasonal Consumption Trends | Compare seasonal electricity usage  Display forecasting charts for high/low demand periods |
| FR-4 | Sector-Based Visualization | Segment electricity usage data into Residential, Commercial, Industrial  Create sector-specific dashboards |
| FR-5 | Tableau Story Integration | Combine dashboards into a single interactive Tableau Story  Add filters for region, time, and sector for dynamic analysis |

**Non-functional Requirements:**

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

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | Intuitive Tableau dashboards with easy navigation and filters |
| NFR-2 | **Security** | Data used is anonymized and securely stored |
| NFR-3 | **Reliability** | Dashboards load correctly and consistently without data loss |
| NFR-4 | **Performance** | Fast loading dashboards optimized for large electricity datasets |
| NFR-5 | **Availability** | Accessible by stakeholders during presentations and reviews |
| NFR-6 | **Scalability** | Capable of integrating future datasets from different regions or years |