# To Eliminate Energy Wastage Through Innovations in Continuous Energy Optimization

## Associate Engineer – (Execution) BMS Team.

### Summary

Smart Joules' Associate BMS Engineers are responsible for coordinating with supporting the BMS Managers and Engineers in BMS design and execution & commissioning of the projects on site with overall execution targets across various sites project client sites and coordination of the planning activities in the sites.:

### Qualifications:

1. Passes JouleFit (Core Values assessment)
2. At least 6 month of training/internship experience with hands on experience on installation testing and commissioning of field instruments such as DDC controllers, temperature sensors, and basic knowledge of instrumentations. Basics knowledge of flowmeters, pressure sensors, motorized control valve, VFDs and control panel to centrally provide support.
3. Bachelor's Degree in Instrumentation/Electronics/Power Systems Engineering.
4. Basic Domain Knowledge of HVAC and other processes.
5. Knowledge and exposure to Equipment like Chillers, HVAC pumps, cooling tower, AHU, heat pumps, energy meters, BMS controller and sensors.
6. Basic knowledge on RS485 protocols like Modbus.
7. Has basic knowledge on operation of VFDs
8. Has been a part of BMS Project Execution under supervision of project managers with minimal guidance
9. knowledge of 3rd party integration.
10. Strong Knowledge on drafting tools like Auto-CAD.
11. Basic computer skills (Web Search, Email, Word, Excel, Power Point)
12. Communication: Must speak English and Hindi. Must be able to make effective presentations to a variety of audiences.

## Reporting:

Associate Engineer will report to BMS Engineer of BMS Central Team.

## KRAs/Responsibilities:

1) **Innovation:**

- New ways of saving energy.
- Ways to pursue the Company's Mission, Vision and Goals in line with our Core Values.

2) **Planning, Data collection and Site survey:**

- Support and coordinate with the BMS Managers/Engineers and prepare planning documents for DeJoule Deployment and upload it on the SJPL on central drive to help design the BMS better.
- Support the BMS Manager in the documentation based on the on-site planning derived from the checklists and prepare the planning documents as follows:
  - IO summary
  - Control Mapping
  - Installation Locations (Panels, Meters, Sensors etc.)
  - BOQ
  - High-side Schematic diagrams
  - Wiring Layouts
  - Wiring Estimations
  - Integration Mapping Points
- Solicitate proposals and making comparisons of techno-commercial proposals from various local service providers.
- Support the BMS Central Team Engineers to track and update the planning documents during the planning stage based on the discussion with BMS Manager.
- Prepare incident reports across sites related to any failures reported by SEEs, BMS Managers/ BMS Engineers.
- Prepare Plant Room Schematics, SLDs, As-Built Diagrams using CAD tools in coordination with the BMS Managers, Field Engineers and Project Design Team, and

get it verified by the BMS Project Manager ensuring Zero mistakes planning documentation.

3) **DeJoule Execution:**

- Support BMS Managers/Engineers for project execution activities in Smart Joules' project sites and ensure proper panel installation of panels, sensors/instrumentation, wire terminations and networking.
- Support the TechSupport team and the BMS Engineers/Managers in testing the devices on site.
- Supervise and ensure that the on-site installation done by the service providers are as per SJPL's standards.
- Verify the procured materials and perform basic quality checks while receiving the materials on sites and submit the signed hard copy of invoice & material received photos to your manager.
- Coordinate with BMS Manager related to installation works subjected to shutdown requirement. (e.g., Energy meter, flow meter, VFD connections and sensor installations)
- Escalate unplanned deviations to BMS Manager notify the significant changes required before executing it on site. (changes in cable routing, VFD malfunctions, CCN card failures, Panel location changes etc.)
- Prepare daily reports comprising of work completed, manpower that worked on site, materials consumed, duration of works and planned upcoming works for the next day based on standard formats should be reported to the BMS Manager.
- Ensure Internet connections provided on sites are stable and backup sim networks are available on site.

4) **DeJoule Commissioning:**

- Ensure all ModScan reports/screenshots, Earthing Reports, Multimeter data/values/screenshots/snapshots are recorded and upload on the project drive folder for all tested and commissioned devices.
- Complete Point to Point testing using Joule Track for each and every readable and writable point included in the IO List, and generate a report Snag List clearly identify which I/O points are not working. Resolve the on-site snags during the testing phase.

- Prepare Resistive Sensors End to End Testing Report which contains the values obtained in the Controllers' end as well as sensors' end.
- Record the sources of each snags from the I/O List that appears in the Snag List (equipment issues, deployment issues, hardware issues, software issues, network issues, etc.).
- Coordinate with the relevant teams of SJPL (Site Energy Engineers/Projects Execution Team/Technical Support, etc.) to resolve each and every snag and bring down the Default Rate to 0.
- Place the IO-Sheets in the controller panels.
- Prepare Network Testing Report using the Diagnostics Page as a tool and ensure network strength is more than 80 at each Controller.
- Prepare the detailed commissioning report to manager with all the commissioning reports, final material installed report, with images attached in the commissioning report. (e.g. Modscans, sensors, network, Earth testing reports & Joule track data reports etc.).
- Coordinate with the BMS Central Team to ensure the configuration is done as desired and report in case of any deviation in the configuration plan.

**5) BMS Handover:**

- Prepare and ensure all the handover documents like final IO Sheets, cable layouts, controller mappings, network architecture, cable schedule, field instrument installation locations, CAD drawings, etc. are completed before the handover to the SJPL team with 0 snags.
- Train the client operators to use DeJoule with the BMS workstation provided to the client from SJPL and ensure the workstation is commissioned properly on site.

**6) Supporting the Project Execution Team and Operations Team:**

- Ensure support to the Project Execution team and BMS design & commissioning team for deployment of DeJoule at the site in parallel with new equipment.
- Support the Site Energy Engineers/Project Managers to understand the use of DeJoule through basic training exercises for effective use of DeJoule on sites.

**Location**

Delhi/ Some Travel may be required for pilot projects.