

SMARTH SALARIA

SENIOR ENGINEER - AUTOMATION & EMS

+91-9878799808

smarthsalaria@gmail.com

Pune, MH, INDIA

Open to Relocate: Delhi NCR.

www.linkedin.com/smarthsalaria

PROFESSIONAL OVERVIEW

Industrial Automation/EMS Systems Engineer with over 3.5 years of experience in the solution delivery of Energy Management Systems (EMS), Power Plant Controllers (PPC), and SCADA solutions. Specialized in grid-scale renewable and battery storage projects, with expertise spanning system architecture, control logic development, and comprehensive validation (HIL, FAT, SAT) including compliance with the Indian Grid Code.

WORK EXPERIENCE

Senior Engineer

Premier Energies Storage Solutions Pvt. Ltd. - Premier Energies Limited, Pune | Jun 2025 – Present

A subsidiary of Premier Energies Limited Group, PESSPL specializes in Battery Energy Storage Systems (BESS) and EMS product development for renewable energy projects.

- Led EMS product development initiatives through competitor benchmarking and stakeholder-driven requirement alignment.
- Coordinated with vendors for technical evaluation and approval of EMS components.
- Applied IEEE 1547 and IEEE 2800 standards to control system development using MATLAB/Simulink.
- Acted as the technical interface between outsourced software teams and the in-house MATLAB application modelling team to ensure project readiness.
- Designed preliminary control-state logic and operational mode transitions for the EMS product in MATLAB.

Senior Engineer

Anvi Power Industries Pvt. Ltd. - Gensol Group, Pune | Jan 2025 – April 2025

A subsidiary of Gensol Group, Anvi Power specializes in Battery Energy Storage Systems (BESS) and EPC for BESS renewable power plant.

- Contributed to the **70MW/140MWh Standalone BESS** project by designing system architecture encompassing control strategies, safety interlocks, and I/O signal mapping across EMS, PCS, and BMS.
- Prepared and maintained core engineering documents including Scope of Requirements (SoR) and Functional Design Specifications (FDS).
- Coordinated technical reviews, approvals, and vendor interactions for SCADA and EMS systems to ensure full compliance with project specifications and grid code compliance.
- Renewable Energy Projects:
 - 70MW/140MWh Standalone BESS (Bachunda, Gujarat): Performed engineering activities for the EMS and SCADA systems.

EDUCATION

Bachelor's degree | 7.32 CGPA

B.E. – CSE – IOT

Chandigarh University, Mohali
2018-2022

SKILLS

Core Power & Control Systems:

- EMS, PPC, HEMS, SCADA
- BESS, Solar PV, Indian Grid Code Compliance

Communication & Standards

- IEEE 1547, IEEE 2800
- Modbus TCP/IP, IEC 104, IEC 61850

Simulation & Validation

- MATLAB/Simulink
- HIL/FAT/SAT

Automation & Scripting

- Python, Linux, MySQL
- Azure Cloud
- React/Nextjs

PROFESSIONAL DEVELOPMENT

AZ 900

Microsoft – 2024

AZ 104

Microsoft – 2024

Internet of Things

Verzeo - 2021

Web Development

Bolt IoT - 2020

Associate Engineer

Digital Energy Solutions – Power Transmission and Distribution (PT&D), Larsen & Toubro – Chennai, India | July 2022 – Dec 2024

L&T's Digital Energy Solution Business Unit under PT&D, delivers advanced SCADA Integration and plant automation solutions with inhouse built Power Plant Controllers, ESS and HEMS for solar, BESS, and hybrid power plants.

- Engineered and commissioned SCADA and controller systems for large-scale Solar + BESS projects, integrating PPC and HEMS with plant SCADA and RTUs to ensure real-time grid compliance and reliable remote operation.
- Hands-on expertise on Industrial Communication protocols with IEC 61850, Modbus TCP/IP, and IEC 60870-5-104, with practical experience in Linux-based network configuration, cron-jobs, port binding, and related system tuning.
- Led Factory Acceptance Tests (FAT), Site Acceptance Tests (SAT), and Hardware-in-the-Loop (HIL) testing using Opal-RT simulators, SCADA, Inverter Simulator and Ubuntu-based EMS/PPC/HEMS controllers to verify system functionalities and performance under dynamic conditions.
- Tested and troubleshoot control logic functionalities including active/reactive power control, PV smoothing, black start sequences, redundancy, energy time-shift, soc management, and voltage/frequency control, while performing network and protocol analysis using Wireshark to integrate custom software solutions.
- Renewable Energy Projects:
 - **35MW Solar and 12MW/57MWh BESS (Kutch, Gujarat):** Engineered and performed onsite and remote commissioning of HEMS and SCADA systems.
 - **230MW Solar PV and 30MVar Capacitor Bank (Ettaiyapuram, Tamil Nadu):** Executed engineering and onsite commissioning activities for the PPC system.
 - **700MW Solar PV (AR-Rass, Saudi Arabia):** Executed Engineering for PPC till FAT activities.
 - **0.3MWh and 0.6MWh BESS Pilot Project (Telangana):** Completed SCADA and ESS engineering and FAT activities.
- Internal Self-Initiated Projects:
 - Built using Python to **generate in-house PPC-compliant JSON** configurations from Signal List Excel files, significantly reducing configuration time and manual errors.
 - Automated deployment of in-house full-stack application (Apache web server, service files, MySQL, etc.) on bare-metal Ubuntu using Python.
 - Developed a logic-driven Python generator to convert equipment signal lists into **IEC 60870-5-104 mappings** based on plant inputs, minimizing manual protocol configuration effort.