PREVALON
A Mitsubishi Power Americas and EES Joint Venture

400 International Parkway, Suite 200
Heathrow, FL 32746
PrevalonEnergy.com

Engineer, EMS SCADA

Location: Heathrow, FL / Hybrid

About Prevalon

Prevalon Energy LLC (Prevalon), a Mitsubishi Power Americas and EES joint venture, is a leading global energy storage technology and services company that is empowering companies to deploy flexible energy solutions and accelerate a more sustainable energy future.

With 10 years of global battery energy storage experience and over 4 GWh of utility-scale battery energy storage projects deployed, Prevalon develops an end-to-end integrated battery energy storage solution that delivers throughout the entire lifecycle of your project and ensures performance.

Working with our customers to develop a solution to meet the demands of their energy system today and into the future, we are grounded by the principles of commitment, reliability and expertise to guide our decision making, design philosophy, and relationship building.

Our Culture and Values

Responsibility
Safety is at the core of everything we do. From the well-being and health of people to the quality of the products we develop and implement, sustainability is the foundation of our operations. Our expertise guides our decision-making and design development, and lives at the core of our mission.

Community
People are the focus and heartbeat of what we do. We prioritize the well-being of our customers, employees, and communities we work with. Through teamwork, collaboration, and open communication, we work together to continuously innovate.

Innovation
We value and encourage creativity in the ways we work and are always forward thinking. We embrace diversity of thought and adapt to emerging trends and technologies. We recognize the importance of respecting traditions but not beholden by them.

Accountability
We are focused on taking responsibility and ownership for our actions and decisions. We deliver on promises in a transparent and reliable manner. We are accountable in our commitment to sustainable practices and products.

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Job Summary

The EMS SCADA Engineer reports to the EMS SCADA Manager and will be responsible for configuring and programming the SCADA Platform for battery power plants integrated by Prevalon Energy. This individual will work closely with the SCADA developers and OT Administrators to achieve the deployment of production ready plant OT networks. This position will specifically deploy data acquisition systems & networks for utility scale energy storage solutions with direct integration to LFP DC Blocks batteries, inverters, and balance of plant equipment required to provide supervisory and control for a battery power plant. The EMS SCADA Engineer will also support the EMS Controls Engineer and Commissioning Lead in constructing an HMI that can streamline deployments of new projects.

Essential Duties & Responsibilities

Essential duties and responsibilities include, but are not limited to the following:

- Deploy Ignition gateways and construct various gateway network architectures that fit the needs of each BPP project being executed.
- Implement and maintain Ignition gateway configurations such as users & roles, devices, history providers and module configuration.
- Implement and maintain a version control system utilizing GIT for gateway configurations, HMI projects & Scripts for new and existing deployments.
- Implement and maintain version control on UDT objects for new and existing BESS deployments.
- Diagnose and troubleshoot SCADA production telemetry issues by analyzing logs, network equipment and existing monitoring infrastructure.
- Develop HMI projects utilizing Ignition Perspective module, CSS and utilizing advanced components to make responsive HMI screens.
- Implement and maintain Ignition Python scripts embedded on HMI screens and gateway scripts.
- Provide support on developing new features or improving existing components for Prevalon's InsightOS.
- Provide support on developing scripts to automate FAT, SAT and QA Simulation activities.
- Implement and maintain centralized SCADA system including adding new connections through MQTT cirrus link modules to new projects and creating new databases on Azure data explorer.

- Develop and maintain a SCADA DEV environment to test new features and perform simulations on new BESS deployments.
- Create and maintain document artifacts for knowledge transfer and for knowledge base.
- Develop and maintain new and existing Grafana displays by utilizing data stored on the Azure cloud.
- Provide support on modeling UDT namespaces and HMI projects for new BESS projects.
- Provide support on performing Factory Acceptance Tests on new equipment at HQ.
- Provide support on the configuration of Moxa switches during Site Acceptance Tests on new project locations.
- Provide support on creating and maintaining PRTG centralized server for monitoring on-site EMS/SCADA racks.
- Create local historians for capture of plant data and assist in product SQL DB maintenance.
- Develop and implement Modbus data maps, HMI configurations, and other development tasks required for the ongoing development of SCADA within the EMS platform.
- Lead plant network deployment and commissioning of all IEDs within the Battery Power Plant, ensuring all have stable network connectivity.
- Configure and conduct Site Acceptance Testing to ensure all IEDs are connected to the data acquisition system and tag validity is 100% good quality.
- Expect 20%-30% travel, most project sites across North and South America; and sometimes to Prevalon Energy's HQ in Lake Mary, Florida.
- Perform other duties as assigned.

Knowledge, Skills, & Abilities

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Able to work independently with minimal supervision while providing high quality work and finishing tasks on time.

- Able to work in an Agile and fast-paced environment.
- Be able to learn and implement new applications and equipment.
- Be able to collaborate as a team member and be able to be a self-starter.
- Be able to follow instructions and work on priorities.
- Excellent at providing knowledge transfer on new tools, configurations or solutions found.
- Ability to attend a daily standup meeting and report on individual tasks progress.
- Always demonstrate willingness to accomplish assigned tasks.
- Ability to utilize online sources, manuals and AI to obtain answers to issues, unknowns or to accelerate productivity.
- Gain familiarity with the network and virtualized products used in the creation of the EMS SCADA System.
- Deploying centralized or de-centralized SCADA systems, utilizing Induction Automation's Ignition platform.
- Develop UDT tag templates and OPC-UA tag namespaces on a project basis.
- Develop and deploy Ignition gateway configuration instances within site EMS racks and establish remote data exports using MQTT to Prevalon's Azure Cloud environment.
- Assist in configuring Hypervisors with VMWare products such as Vsphere and Vcenter.
- Configuration of controllers, IEDs, VMs, and network devices before FAT & SATs.
- Protect confidential information by not communicating, disclosing to, or using for benefit of 3rd parties.
- Comply with all EHS policies, practices and procedures reporting all unsafe activities to Management and/or Human Resources.
- Work in the global environment to maintain standards and latest practices.
- Coordinate directly with the SCADA Developers in testing new features and designs deployed within the EMS before it is deployed to the production sites.
- <u>Reasoning Ability</u>
    - Able to define problems, collect data, establish facts, and draw valid conclusions. Able to interpret an extensive variety of technical instructions, read

and understand network, mechanical and electrical drawings.

- General Technical Skills

  - **Software Development**: Python, Java, C#, HTML5/CSS, Node.js.
  - **Operating Systems**: Ubuntu/Linux and Windows Server 2022.
  - **Virtualization**: VMWare (Vsphere, Vcenter), Windows Hyper-V.
  - **Cloud:** Azure IOTHUB, Azure Eventhub, Azure Data Explorer, Azure Data Lake.
  - **Vision Control Tools**: GIT, GITHUB, Bitbucket, SVN, Azure Repos.
  - **SCADA**: Ignition Inductive Automation, Perspective, MQTT Cirrus link modules Transmission, Engine, Distributor and Azure Injector.
  - **Monitoring Tools**: Grafana, PRTG.
  - **General Tools**: Wireshark, tcpdump, Linux utilities to monitor network traffic, Excel, VScode, notepad++, PuTTY, RDP, Windows APP.

Education & Experience

- Bachelor's degree in: Electrical Engineering, Computer Engineering, or Computer Science with a minimum of three (3) years of related experience in industry.

- Master's degree in engineering or computer science (preferred).

- Inductive Automation Ignition Certification (plus).
- Experience developing HMI screens using Perspective (plus).

- Expert in TCP/IP networks along with software application configuration is a must.

- Essential to have worked on deploying centralized SCADA system in the past.

- Experience to have worked on maintaining real time SCADA systems in the energy industry.

- Experience with NERC CIPS or other compliance standards.

- Specific Work Experience

  - **Code Development**: With heavy use of Python, Java, C#, Windows Batch, Power Shell,
    Bash, implementing code to be used in specific tasks.
  - **UI/UX Development**: CSS, HTML, Responsive design using perspective.
  - **Controls Logic**: IEC 61131-3 ST, SFC, or another equivalent controls language.
  - **Automation Controllers**: RTAC, EPIC Groov, Hitachi RTU540, Siemens Simatic, Schnieder M262, or Moxa ioThinx4530.
  - **SCADA Protocols**: TCP/MODBUS, RTU/MODBUS, DNP 3.0, OPC-UA, MQTT / MQTT Sparkplug-B, SEL FMB, C37.118 PMU, IEC 61850 variants, P2P.

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Physical Requirements & Work Environment

The physical demands and work environment characteristics described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Regularly required to stand and walk.
- Frequently lift and/or move up to 25 pounds.
- Occasionally lift and/or move up to 50 pounds.
- The noise level in the work environment is usually moderate to loud. Hearing protection may be recommended and/or required in some work locations.