



**Job Title:** Electrical and Instrumentation (E & I) Maintenance Technician

**Reports to:** Operations & Maintenance Manager

**Location:** Frederickson Power Plant; Tacoma, Washington

**Summary:** The Electrical and Instrumentation Maintenance Technician is responsible for the maintenance and repair of plant electrical equipment and applicable control systems. The position supports plant operations to ensure maximum reliability is maintained through implementation of best practices and prompt response to process. The Electrical and Instrumentation Technician monitors the effectiveness of the electrical and instrumentation equipment maintenance program, making ongoing improvements through input and refining of maintenance techniques.

**Job Description:**

With safety of yourself and all those around you as the highest priority, the E & I Maintenance Technician is expected to:

- Plan and implement control system expansions and upgrades from inception to project closeout. This process may include developing the necessary budget requirement, project justification, technical and financial analysis, consultation with plant staff, vendor selection, contract negotiation, and warranty claim resolution
- Develop request for quotes (RFQ) for the plants to communicate to vendors expectations set forth in the designed work and/or upgrades. This may involve preparing technical specifications for plant I&C design including I/O list, instrument list, control panels, panel and field instruments, control system hardware and software including the material to support installation, control strategies, historical and data reporting, alarm management, SCADA, HMI software, DCS, GT Control Systems, and PLCs.
- Review contractor submittals for conformance with design requirements and develop technical tabulation to support the selection of control systems
- Perform factory witness testing of Control System equipment
- In consultation with plant Technicians and Manager, develop and maintain contingency plans and common spare parts lists for all control systems (ABB DCS, Mark 6e turbine controls), tone protection and metering equipment, protective relays, PLCs, vibration monitoring equipment, exciters, and HV breakers
- Coordinate completion of updated arc flash surveys and identify / implement consistent methods to reduce the arc blast hazards at all facilities
- Conduct partial discharge monitoring and data interpretation for all sites
- Provide outage planning support as needed
- Help in refinement of long-term capital plans with respect to control system and high voltage electrical system replacement / upgrades / contingency planning
- Review and consolidation of Preventative Maintenance Plans relating to E/I work

- Oversee Drawing Management System, providing guidance to plant Technicians. This Includes occasionally updating electronic prints in AutoCad or using plotter/scanner to add full size hardcopy prints from all sites in to DMS program
- Provide feedback to site team regarding system failures, problem resolution, and lessons learned
- Diagnose faulty operations, maintenance, and process procedures and implement corrections
- Conduct tests that analyses Design, Feasibility, Operation, and Performance of control systems components, and equipment
- Coordinate regular periodic plant reviews to ensure that proper regulatory plans are in place and updated as needed
- Use input from System Sponsors, identifying and eliminating chronic electrical and instrumentation problems with utilization of best practices approach
- Developing and running controlled experiments to assess effectiveness of new ideas or approaches, as they relate to plant electrical and/or control equipment
- Providing Team Members with training for electrical and control system equipment on an ongoing basis
- Ensuring work areas are kept neat and orderly, and participating in a plant-wide cleanup and preservation program
- Ensuring compliance with plant safety and environmental rules for all outside vendors and contractors under your control
- Liaising with vendors/contractors for supply and technical support

**Requirements:**

***Education***

- High School graduate or equivalent

***Experience***

- Qualified Electrician, Washington State Electrical License preferred.
- Valid driver's license
- Minimum 5 years of experience in steam and electric power plant operations
- Knowledgeable in all applicable codes and regulations
- Extensive instrumentation and control system training, including DCS, Mark 6e, PLC's and general calibration of instrumentation devices
- Comply with all Safety & Environmental policies, practices and procedures
- Thorough understanding of data analysis and root cause analysis techniques
- Ability to assess opportunities for improvement
- Effective communication skills both written and verbal

***Work Process Skills***

- While engaged in company business, employees are expected to conduct themselves in a courteous business-like manner, showing respect and consideration for fellow employees and other site personnel, such as contractors and guests, with a focus on servant leadership;
- Cooperate with your co-workers in a manner that is positive and constructive; accept that there are different opinions and ideas; discuss issues in a professional manner looking for solutions that can be resolved at your level;

- To communicate work related issues along with recommended solutions to your coworkers and/or supervisor in a timely and professional manner;
- Be accepting of changes to your day to day routing as the business needs dictate;
- To be appropriately dressed and ready for work prior to the start of a working shift through to the end of the shift;
- Comply with all Atlantic Power policies and procedures.

***Physical Requirements***

- Ability to perform manual tasks including but not limited to operation of hand and power tools;
- Ability to lift at least 80 lbs.;
- Ability to bend and maneuver in tight, cramped quarters;
- Ability to work in hot, noisy and dark environments;
- Ability to work at heights;
- Ability to work with and wear respiratory protection;
- Ability to reach with hands and arms above shoulder level and at shoulder level;
- Ability to walk, stand, stoop, kneel, and bend for prolonged periods of time;
- Able to grip and manually manipulate, often with repetitive motion, items such as, but not limited to, hand tools and machine parts;
- Ability to communicate clearly with plant personnel, including the ability to give and receive instructions over a radio;
- Ability to see clearly; safely and readily identifying the labels, gauges, dials and indicators typically encountered in performing job duties;
- Ability to read, write and understand instructions and procedures in English;
- Ability to work outside of a normal shift rotation during call-outs or planned maintenance outages.