



Job Title: Instrument & Controls Technician

Location: Morris Cogeneration

Reports to: Maintenance Manager

Summary: This position is responsible for installing, maintaining, testing, and troubleshooting of instrumentation, controls, and electrical /electronic system at a combined cycle Cogeneration power generation plant. This position requires a high degree of knowledge on instrumentation, controls, low, medium and high voltage switchgear, transformers, generators, protective relays, motor control centers and continuous emissions monitoring systems (CEMS). This person will also advise and train Operations and Maintenance on instruments, controls and electrical equipment.

Job Description:

With safety of yourself and all those around you as the highest priority, the I&C 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;
- Calibrate, test, maintain, troubleshoot and install all power plant instrumentation, control systems and electrical equipment.
- 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, CT Control Systems, and PLCs;
- Embrace and project Servant Leadership qualities;
- Comply with all Safety & Environmental policies, practices and procedures;
- 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 (DCS, Emerson Ovation controls for steam turbine & combustion turbines, PLCs), 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;

- Be available within a reasonable response time for emergency call-ins and overtime;
- 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;
- Maintain, calibrate and acquire data from CEMS equipment.
- Other duties as assigned.

Requirements:

Education

- High School graduate or equivalent;
- Post-secondary degree or certificate from a technical or trade school preferred.

Experience

- Minimum of (5) years' experience as an I&C technician and/or Electrician in a power plant environment, preferably with a strong electrical background up to and including voltages up to 135KV.
- Knowledgeable in all applicable codes and regulations;

- Extensive instrumentation and control system training, including DCS, Mark V, Emerson (Ovation) controls, PLC's and general calibration of instrumentation devices.

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 and work collaboratively with your team to solve such issues in a timely and professional manner;
- Thorough understanding of data analysis and root cause analysis techniques;
- Ability to understand DCS and PLC ladder logic;
- Ability to run trends to proactively diagnose potential issues;
- Ability to learn the principles and operations of power plant equipment;
- Basic knowledge and understanding of the fundamental principles related to physics, mathematics, AC and DC electrical theory, heat transfer and fluid flow, thermodynamics, chemistry and metallurgy;
- Ability to understand and read mechanical and electrical drawings such as P&ID's, single line diagrams, technical manuals, procedures, schematics and logic's;
- Knowledge of power plant safety, especially in areas such as chemical handling, high energy systems, incident energy/ arc flash, confined spaces, incipient fire suppression, first aid, rotating machinery, and heavy equipment operations;
- Ability to operate valves, switches, controls, keyboards and other devices associated with power plant and material handling equipment, as well as basic hand, portable and pneumatic tools and basis rigging equipment;
- Ability to successfully handle multiple tasks simultaneously;
- Approach issues with customer service mentality and skills to work towards a resolution;
- Comply with all Atlantic Power policies and procedures.

Physical Requirements

- Ability to lift, push, pull and carry at least 75 lbs;
- Ability to bend and maneuver in tight, cramped quarters;
 - Ability to work in hot, noisy and dark environments;
 - Ability to work in inclement weather conditions;
 - Ability to work at heights and climb ladders up to 75';
 - Ability to work with and wear respiratory protection;
 - Ability to communicate clearly with plant personnel, including the ability to give and receive instructions over a radio;



- Ability to see clearly and distinguish colors; safely and readily identifying the labels, gauges, dials and indicators typically encountered in performing job duties;
- Ability to perform mathematical computations;
- Ability to read, write and understand instructions and procedures in English.