MAJOR FUNCTION

This is a highly advanced and very responsible professional and technical power systems control and advanced applications engineering work in the design, specification, and management of computer hardware and software support for the City's power management and control systems. Work involves providing and maintaining computer hardware and software support for the City's power management computer system; writing, editing compiling, and networking various computer language programs for the power management system and its associated peripheral control systems; and planning and evaluating the hardware and software additions necessary to improve the power management and control system's ability to monitor, analyze, and control an interconnected power system. Work is performed under the general direction of the Engineering Operations Manager – System Operations Technical Support with considerable independence, initiative and professional discretion in discharging responsibilities. The work is reviewed through conferences, reports, and by results obtained.

ESSENTIAL AND OTHER IMPORTANT JOB DUTIES

Essential Duties

Provides System Control Center Operations technical hardware and software support for the power management and control system. Programs modifications and additions to the power management system and its peripheral control systems using various computer languages. Ensures compliance with applicable North American Electric Reliability Corporation (NERC) reliability standards. Acts in the capacity of subject matter expert for assigned NERC reliability standards. Plans, evaluates, and administers implementation of all hardware and software improvements to the power management and its associated peripheral controls systems in order to enhance the electric and control system. Evaluates, proposes, and coordinates installation of electrical, electronic monitoring and communication equipment needed by the power management and control system and its associated peripheral control systems. Trains System Control Operations and supervisory staff in the use of Supervisory Control And Data Acquisition/Automatic Generation Control (SCADA/AGC), advanced applications programs and power management peripheral control systems. Provides direction in interpreting results of complex state estimation, load flow, contingency analysis, optimal power flow, unit commitment, power plant maintenance, production simulation and other advanced application programs for System Control and Department staff. Evaluates, plans, programs, and implements improvements to software and hardware, which provide system operators with effective man-machine interface to monitor and control the electric system. Evaluates, plans, proposes, and manages all projects associated with power system generation, interchange, load control, demand side management, power system data exchange, geographical information system, gas monitoring and control, emissions monitoring/environmental dispatch, energy source control and fuels dispatch as they pertain to the total power management and control. Performs other duties as required.

Other Important Duties

Completes special projects as assigned. Performs related work as required.

DESIRABLE QUALIFICATIONS

Knowledge, Abilities and Skills

Considerable knowledge of electric utility power system operations, control and Supervisory Control and Data Acquisition/Automatic Generation Control/Energy Management System (SCADA/AGC/EMS) Systems, on line advanced applications, programs, databases and programming. Considerable knowledge of various computer languages. Thorough knowledge of electric utility power systems, generation, transmission and distribution. Thorough knowledge of NERC reliability standards and cyber protection schemes. Knowledge of applicable cyber security applications and techniques. Ability to communicate results of complex power system on-line advanced applications and results of SCADA/AGC controls to power system operators and supervisory staff. Ability to plan, implement,

manage, and improve electric and power control systems. Ability to communicate clearly and concisely orally and in writing. Skill in the use of microcomputers, networking systems, communications systems and the programs and applications necessary for successful job performance.

Minimum Training And Experience

Possession of a bachelor's degree in electrical or electronic engineering, computer science or a related field and six years of professional work experience that includes electric utility power system controls or related networking/IT operations; or an equivalent combination of education and experience.

Necessary Special Requirements:

A valid class E State driver's license is required at the time of appointment.

Individuals in this classification are considered essential during emergency and storm situations and must be able to work 16 hours per day for extended periods of time and may be required to be away from their family.

Individuals in this classification must be available to serve on-call and are subject to having to work outside of their assigned shift/schedule to meet operational needs.

Employees in this classification that are required to have unescorted access to the Electric Control Center will be required to complete a personnel risk assessment consisting of an identity verification and seven-year criminal history screening (minimum) and maintain satisfactory clearance for continued employment.

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