



CITY OF SANTA CLARA
invites applications for the position of:

Electric and Water System Operator

SALARY: \$74.80 - \$95.67 Hourly
\$12,965.90 - \$16,583.51 Monthly
\$155,590.80 - \$199,002.12 Annually

OPENING DATE: 08/18/22

CLOSING DATE: Continuous

EXAM WEIGHT: 100% Oral, Qualifying Supplemental

TENTATIVE EXAM INFORMATION:

DESCRIPTION:

The Department - Silicon Valley Power (SVP)

SVP currently provides over 40 percent of Santa Clara's electricity from carbon-free renewable resources. In addition to using green energy from large-scale wind, solar, geothermal and hydroelectric projects outside of the area, SVP employs innovative ways to locally produce electricity by capturing and burning methane gas from a closed city landfill and using power from solar generating systems on city-owned garages and vacant, unusable land. It is the mission of Silicon Valley Power to be a progressive, service-oriented utility, offering reliable, competitively priced services for the benefit of Santa Clara and its customers. Being competitive in the marketplace with a continuous focus on customer service, SVP can provide economic value to the City of Santa Clara and its customers while maintaining low residential rates and offering competitive rates for all customers.

The Position:

Electric and Water System Operators ensure that all Electric, Water and Storm sewer systems are operated reliably, efficiently and effectively in a safe manner and restoring service in a timely way to all customers. Has responsibility for operation of the City's municipal electric power and water, production, transmission and distribution systems for planned and unplanned outages. As a Transmission Operator, operating personnel in this position have the responsibility to comply with NERC reliability standards and the authority to implement real-time actions to ensure the stable and reliable operation of the Bulk Electric System; these efforts to be coordinated with the appropriate Reliability Coordinator (RC), affected Transmission Operator(s) (TO) and affected Balancing Authorities (BA).

This recruitment may be used to fill multiple positions in this, or other divisions or departments. If you are interested in employment in this classification, you should apply to ensure you are considered for additional opportunities that may utilize the applicants from this recruitment.

Meeting the minimum qualifications does not guarantee admittance into the examination process. Only the most qualified candidates who demonstrate the best combination of qualifications in relation to the requirements and duties of the position will be invited to test.

Federal law requires all employees to provide verification of their eligibility to work in this country. Please be informed that the City of Santa Clara will not sponsor, represent, or sign documents related to visa applications/transfers for H1B or any other type of visa which requires an employer application.

PERMANENT CITY EMPLOYEES PREFERENCE POINTS: Current permanent employee candidates who receive a passing score on the examination will have an additional five (5) points added to their final score.

TYPICAL DUTIES:

Each position in this classification may not include all the duties listed below, nor do the examples cover all duties that may be performed.

Under general direction of the Senior Electric and Water System Operators:

- Initiates, issues and validates switching orders and electrical clearances for planned and unplanned work including work carried out on protection schemes with the goal of restoring power to all impacted customers, or facilitating work to be carried on the 12kV System and above in a safe, reliable and efficient manner in accordance with the department procedures
- Receives, troubleshoots, prioritizes and dispatches appropriate personnel and equipment for all non 911 emergency and non emergency calls for the electric system during business hours and for the electric, water, storm sewer, streets, traffic lights and any other City services during non business hours
- Monitors Water & Sewer (SCADA) to detect abnormal conditions; performs operations or adjustments to correct such abnormalities or refers the problem to specialized maintenance personnel
- Monitors the Electric System including prescribed off-site facilities using real-time or near real-time tools; uses these tools to make adjustments, perform operations or perform analysis to use as a basis in the direction of operations on the Electric System as necessary to maintain system requirements and reliability
- Maintains logs and other electric and water system reports. Updates all prescribed electric databases and mapping systems with real-time changes including updated asset data that affect the operation and troubleshooting of the Electric Network. All changes are to be validated by operators on subsequent shifts based on departmental standards and established practices
- Interacts courteously and calmly with the key customer stakeholders, including contractors, the general public, key business customers, City departmental supervisory and journey level personnel to address requests for non 911 emergency and non emergency service
- Maintains the work area and all records in a neat and orderly manner
- Performs duties involving basic arithmetic and algebraic calculations
- Assists in the training of new electric and water system operators as needed
- Performs related work as required

MINIMUM QUALIFICATIONS:

EDUCATION AND EXPERIENCE

Minimum Requirements:

- Graduation from high school or possession of a GED and
- 1) Two (2) years of experience in an electric utility performing complex load dispatching and switching or
- 2) Four (4) years of experience in an electric utility as a generating plant or substation operator with sub-dispatching responsibility or
- 3) Four (4) years of experience with the City of Santa Clara Electric Department, including at least one (1) year as an journey-level or higher, electrician or lineman/linewoman or
- Completion of a recognized State of California Electric System Operator apprentice program

Desirable Qualification:

A valid Transmission Operator Certificate issued by the North American Electric Reliability Corporation (NERC)

LICENSE

Possession of a valid California Class C driver's license is required at time of appointment and for the duration of employment.

CERTIFICATES

Possession of the following certificate is required within one year of hire date and for the duration of appointment:

- A valid Water Distribution System Operator Certificate (Grade D-1 or above) issued by the California Department of Health Services (DHS).
- A valid Transmission Operator Certificate issued by the North American Electric Reliability Corporation (NERC).

Incumbents will be required to obtain and maintain any other license or certification mandated by NERC for the position of Transmission Operator and necessary for the performance of duties under the current scope of responsibilities pertaining to the SVP Transmission System.

OTHER REQUIREMENTS

- Prior to hire, candidates will be required to successfully pass a pre-employment background check, which may include employment verification, a DMV record check, a criminal history check and Department of Justice (DOJ) and Federal Bureau of Investigations (FBI) fingerprinting. Any information obtained will be used to determine eligibility for employment in accordance with the law. A conviction history will not necessarily disqualify an applicant from appointment, however failure to disclose a conviction when required will result in disqualification from the recruitment process.
- Incumbents may be assigned to work on a rotating 12-hour shift schedule
- Incumbents must have the ability to work, as assigned, to schedules that may include weekends, holidays, and non-traditional work hours; and a willingness to work overtime as required
- Incumbents may have to pass an initial and periodic comprehensive background checks, which may include fingerprinting, to meet Federal, State and/or industry security requirements
- Must be able to perform all of the essential functions of the job assignment

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- Potential hazards involved to life and property resulting from switching operations
- Fundamentals of electricity theory regarding power flow in the operation of electric power systems
- Electric power system equipment such as transformers, circuit breakers, air switches, capacitors, motors, generators, pumps, instruments, prime movers, bridge mains and taps, vacuum and oil switches; water pumps and storage tanks; and vaults, manholes and pull boxes
- The operation of electric and water production, transmission, and distribution systems
- Occupational hazards and standard safety precautions
- Environmental and safety practices, procedures and standards

Ability to:

- Understand and follow written and oral instructions and read and interpret maps
- Communicate effectively and exercise tact and maintain poise in addressing service requests, disputes and differences arising from customer, inter-divisional, inter-departmental, contractor, general public and outside regulatory agency interactions
- Maintain accurate records
- Perform simple single and three phase electrical calculations and arithmetic and algebraic calculations
- Work collaboratively in a team based environment to achieve common goals
- Establish and maintain a cooperative working relationship with those contacted in the course of work, including the general public
- Work under pressure with accuracy and speed in a complex work environment
- Effectively handle multiple priorities, organize workload and meet strict deadlines
- Operate a personal computer and related programs such as Microsoft Office and technical systems such as Geographic Information System (GIS) and Supervisory Control and Data Acquisition (SCADA)
- Read and interpret measuring devices such as charts, and computer displays; monitoring water and electricity flows as loads are changed; recognize and correct unsatisfactory conditions when

tolerance parameters are exceeded

- Learn and effectively utilize the SCADA, Distribution Management, Outage Management and Mapping systems
- Learn and understand protection scheme philosophy, logic, interdependencies and vulnerabilities within the SVP System
- Bend, stoop, reach, carry, crawl, climb and lift as necessary to perform assigned duties

Additional Information:

You must answer all job-specific questions in order to be considered for this vacancy or your application will be deemed incomplete and withheld from further consideration. Applications must be filled out completely (i.e. do not write "see resume or personnel file.") To receive consideration for the screening process, candidates must submit a **1) Cover Letter and, 2)**

Resume. Incomplete applications will not be accepted. Application packets may be submitted online through the "Apply Now" feature on the job announcement at www.santaclaraca.gov. Applications must be submitted by the filing deadline of Friday, March 15, 2022 at **4:00 PM**.

The City of Santa Clara is an equal opportunity employer. Applicants for all job openings will be considered without regard to age, race, color, religion, sex, national origin, sexual orientation, disability, veteran status or any other consideration made unlawful under any federal, state or local laws. The City of Santa Clara is committed to offering reasonable accommodations to job applicants with disabilities. If you need assistance or an accommodation due to a disability, please contact us at (408) 615-2080 or HumanResources@santaclaraca.gov.

APPLICATIONS MAY BE FILED ONLINE AT:
<http://www.santaclaraca.gov>

Position #47-22-390
ELECTRIC AND WATER SYSTEM OPERATOR
AL

1500 Warburton Ave.
Santa Clara, CA 95050
408-615-2080
Fax: 408-985-0667

humanresources@santaclaraca.gov

Equal Opportunity Employer

Electric and Water System Operator Supplemental Questionnaire

* 1. Select how you meet the minimum qualifications:

- Graduation from high school or possession of a GED and two (2) years of experience in an electric utility performing complex load dispatching and switching.
- Graduation from high school or possession of a GED and four (4) years of experience in an electric utility as a generating plant or substation operator with sub-dispatching responsibility.
- Graduation from high school or possession of a GED and four (4) years of experience with the City of Santa Clara Electric Department, including at least one (1) year as an journey-level or higher, electrician or lineman/linewoman.
- Graduation from high school or possession of a GED and completion of a recognized State of California Electric System Operator apprentice program (attached certification of completion).
- I don't meet the minimum qualifications.

2. Please briefly summarize your electric utility experience. Include in your answer the names of the employers and your responsibilities.

3. Scenario question: There are 60kV lines in your area that are protected with a set of primary and back-up relays and the circuit breakers can be remotely operated. You receive a SCADA alarm indicating a primary protection fail for a 60kV line. The back-up protection

for this line has been cut out for maintenance work and cannot be cut-in. How would you proceed?

4. Please list the following events in the order that you would respond if you only had five minutes left and you are the single system operator on shift. A) Customers in a 4 block area on the Northside of the system call in with no power. B) You receive a SCADA alarm indicating a feeder with 3000 customers has relayed on the Eastside of the system C) Public Safety dispatch reports an energized wire down on the Westside of the system D) You receive a SCADA alarm indicating a feeder with 1000 customers has relayed on the Eastside of the system. This circuit provides station power for a major transmission station, Station "A". E) You lose Station "A" monitoring and control capability

5. List the following in the correct order of response if you were the single system operator on shift when an outage occurred. A. Restore B. Assess C. Stabilize

* Required Question