



WHY ELECTRICIANS ARE CRITICAL

Although some processes in the water/wastewater industry rely on gravity, electrical power is required for many aspects of water/wastewater collection, storage, treatment, and distribution.

When water or wastewater is pumped from one location to another, when treatment is performed to produce potable water or to clean wastewater, and when administrative activities are performed, electricity is required. In the power industry, electricians/electrical workers are needed to install and maintain critical power generation and transmission equipment. Skilled electricians, electrical workers, and electrical line workers are necessary to ensure operational reliability for both the construction of new facilities and the operation and maintenance of existing facilities.

WHERE CAN I LEARN MORE?

BAYWORK

www.baywork.org

Work for Water

www.workforwater.org

National Joint Apprenticeship and Training Committee

www.njatc.org

National Electrical Contractors Association

www.necanet.org

National Labor-Management Cooperation Committee

www.nlmcc.org

International Brotherhood of Electrical Workers

www.ibew.org

California Division of Apprenticeship Standards

www.dir.ca.gov/das/ElectricalTrade.htm

Los Medanos College, Electrical and Instrumentation Technology

www.losmedanos.edu/eetec/degrees.asp

College of San Mateo, Electrical Power Systems

www.collegeofsanmateo.edu/powersystems

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baywork.org
sfwater.org



BE AN ELECTRICIAN

IN THE WATER/WASTEWATER/ POWER INDUSTRY



Services of the San Francisco
Public Utilities Commission

bay area water/wastewater workforce reliability



WHAT ELECTRICIANS DO

Electricians, electrical workers and electrical line workers install, repair, operate, and maintain the electrical and power systems for homes, businesses, factories, and infrastructure within the water, wastewater and power industry.

They are responsible for the wiring and control equipment through which electricity flows and the electrical equipment that it powers. They read blueprints, solve problems, and enjoy using tools to plan and carry out the operations needed to do their job. In the water, wastewater, and power sectors, electricians/electrical workers may install, operate, and maintain:

- ▶ large-scale electrical system of a hydroelectric plant;
- ▶ electrical wiring within a building or facility;
- ▶ electrical vehicle charging stations and solar photovoltaic panels;
- ▶ security and communication systems;
- ▶ high-voltage systems for machines and repair shops, pumping stations, and generators; and
- ▶ high-quality electrical supplies for computers and laboratory equipment.

Electrical line workers install and maintain the network of power lines that move electricity from generating plants to customers. They routinely work with high-voltage electricity. They also maintain equipment such as transformers, substations, voltage regulators, and switches.

EDUCATION AND EXPERIENCE

A high school diploma is generally the minimum educational requirement to apply to an electrician apprenticeship, although a two-year associates' degree is a plus.

To become a journey-level electrician, electrical worker, or electrical line worker, an apprenticeship is required (typically four to five years), which combines paid, on-the-job training with related classroom instruction. Schools that offer coursework approved by the California Division of Apprenticeship Standards can be found at www.dir.ca.gov/das/listofapprovedschools.html.

There are also programs which use guideline standards established by the United States Department of Labor (DOL) Office of Apprenticeship. The DOL representative for your State can be found at www.doleta.gov/oa/stateoffices.cfm. Training programs for electricians/electrical workers/electrical line workers in the San Francisco Bay Area can be found on the BAYWORK Training Opportunities map at baywork.org

Electricians/electrical workers and electrical line workers must be able to use a computer to document completed work and time. Electricians/electrical workers typically must maintain a Class C driver's license, while electrical line workers must maintain a Class A or B driver's license.

EXAMPLE MONTHLY SALARY RANGE

The salary range provided varies from utility to utility. A journey-level electrician at the San Francisco Public Utilities Commission can expect to earn a monthly salary of more than \$6,000 per month.



Source: BAYWORK Salary Survey, 2014.