

## **TRADE UP FOR SUCCESS:**

# **A GUIDE TO APPRENTICESHIPS AT SEATTLE CITY LIGHT**

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Thank you for inquiring about Seattle City Light's apprenticeship programs. We have put together this packet to supply you with information about our seven apprenticeship programs, and show you the pathway to a great career in the utility industry at Seattle City Light.

We are looking for employees who have a good work ethic, are eager to learn, are physically fit, and who bring integrity to a diverse work force. Employees are taught to work safely and efficiently with the tools of their trade.

Seattle City Light offers seven apprenticeship programs:

1. Cable Splicer
2. Electrician Constructor
3. Generation Electrician Constructor
4. Hydroelectric Maintenance Machinist
5. Meter Electrician
6. Pre-Apprentice Lineworker (a prerequisite for Lineworker Apprenticeship.)
7. Utility Construction Worker

To be placed on the mailing list for notification of future apprenticeship openings, we encourage you to contact the Apprenticeship Hiring Hotline. If you have general questions regarding the actual programs and their content, you can contact the Apprenticeship office directly.

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**APPRENTICESHIP HIRING HOTLINE: (206) 733-9924**  
**TALENTACQUISITIONUNIT.SCL@SEATTLE.GOV**

**APPRENTICESHIP OFFICE: (206) 386-1603**

**[www.seattle.gov/light/apprenticeship](http://www.seattle.gov/light/apprenticeship)**

## FREQUENTLY ASKED QUESTIONS

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### Are these paid positions?

Yes. Starting from the date of hire, an apprentice is paid at the current negotiated rate as a full-time employee (40 hours a week) along with benefits associated with full-time employment. Benefits include medical, dental and retirement, as well as various other options.

To view current wages, visit:

<http://www.seattle.gov/personnel/resources/schedule.asp>

For Benefit options and information, visit:

<http://www.seattle.gov/personnel/services/benefits.asp>

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### What are the work hours and where would I report to work?

The workday at Seattle City Light is *generally* 7:45 AM to 4:15 PM, Monday through Friday. This is a regular 40-hour workweek.

Apprentice Lineworkers, and Electrician Constructors, are assigned to one of two worksites: South Service Center (4th & Spokane) or the North Service Center (97th Ave & Stone Way N). Cable Splicers and Meter Electricians are assigned to the North Service Center. Hydroelectric Maintenance Machinists and Generation Electrician Constructors report to remote locations at Skagit and Boundary facilities; travel between these Seattle City Light facilities is required of these positions.

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### What is the application and selection process?

1. **Application Form** When an apprenticeship is advertised, you can pick up an application from one of Seattle City Light's many locations or print from online. Complete and return the application form along with a complete five-year driver's abstract. If you meet the minimum qualifications for the position and have an acceptable driving record, you will be invited to take a:
2. **Written exam** This measures aptitude for math, electrical and mechanical theory (the content of the test depends upon the craft. See individual craft descriptions). If you are one of the *most competitive* candidates on the written exam, you will be invited to move on to:
3. **Working Test and Physical Capacity Exam** (Physical Capacity Exam is for **Pre-apprentice Lineworkers only**.) This allows you to demonstrate your

knowledge of basic hand tools, ability to perform work functions and to measure mechanical aptitude, skill and safety. If you are *most competitive* in these stages you will be invited to move on to:

4. **Panel Interview** This allows you to demonstrate your work experience and how you would handle yourself in certain situations on the job.
5. **Contingent Job Offers** Once interviews have concluded, the hiring manager(s) select the *most competitive* candidates and extend contingent job offers to them. (The amount of apprentices hired each year varies.) The offer is contingent on the candidates passing a: 1.) professional reference check, 2.) criminal background check, 3.) education and employment verification, 4.) pre-employment physical, and 5.) Commercial Drivers License (CDL) background check and drug test (this only applies to apprenticeships with a CDL requirement)
6. **Final Job Offer** Once a candidate successfully passes all the contingent job offer stages, they will be extended a final job offer and will be notified of their official start date and location.

\*If a candidate with a contingent job offer cannot successfully pass all the final stages, their job offer may be rescinded.

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### **How long are the Apprenticeships?**

The **Cable Splicer, Generation Electrician Constructor, Hydroelectric Maintenance Machinist** and **Electrician Constructor Apprenticeships** are four-year training programs

The **Lineworker** and **Meter Electrician Apprenticeships** are three-year programs. Lineworker apprentices must also complete a **6 month Pre-Apprentice** program or be approved for advanced placement.

The **Utility Construction Worker Apprenticeship** is 18 months.

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### **When does a Pre-Apprentice Lineworker become a Line Worker Apprentice?**

Pre-Apprentices become Line Worker Apprentices upon successful completion of the **Graduation Physical Fitness, Skills and Pole Climbing Tests** and **1040 hours** of on the job training. The testing occurs at the end of the fifth month.

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## What are the minimum requirements to apply?

### ***For all apprenticeship programs, you must:***

- Be at least 18 years old;
- Have a high school diploma or GED;
- Have a Washington State Driver's License or the ability to obtain one;
- Have successfully passed a high school level algebra class or the equivalent. Documented proof may be required.
- Have the ability to obtain a Class "A" Commercial Drivers License (CDL) if applying for Pre-Apprentice Lineworker, Electrician Constructor, Generation Electrician Constructor, and Utility Construction Worker.

For, ***Cable Splicer, Meter Electrician, Generation Electrician Constructor and Electrician Constructor Apprenticeships*** you also must have completed at least one of the following:

- Successfully completed at least one year of high school training in electrical theory; or
- Successfully completed at least one-half year high school training installing, configuring, maintaining or repairing electrical equipment; or
- Successfully completed at least one semester (at least 15 weeks) of post-high school level training in electrical theory; or
- Successfully completed at least one semester (at least 15 weeks) of post-high school level training in installing, configuring, maintaining, or repairing electrical, or electrical utility equipment; or
- At least three months prior experience (paid or volunteer) applying electrical theory or installing, configuring, maintaining, or repairing electrical or electric utility equipment
- Completion of the Basic Electricity and Math (BEAM) Class sponsored by Seattle City Light

For ***Hydroelectric Maintenance Machinist Apprentices*** you must also have completed at least one of the following:

- Six months experience working in a machine shop, as a machinist or related trade, or
- Six months of documented education in the machinist trade or related fields

Candidates for Hydroelectric Maintenance Machinist must be willing to attend classes in Seattle or other remote locations as part of the apprenticeship program, the individuals selected will be required to rotate annually between Seattle, Boundary and Skagit sites.

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## How can I prepare for the written test?

### ***For Pre-Apprentice Lineworker, Hydroelectric Maintenance Machinist and Utility Construction Worker:***

The written test includes high school level algebra, tool recognition, and mechanical reasoning. You do not need to know how to answer journey level questions, but you will have to show the potential to learn material. You must score competitively on this test to continue in the hiring process.

### ***For Cable Splicer, Meter Electrician, Electrician Constructor and Generation Electrician Constructor:***

The written test includes high school level algebra, basic electrical theory, and mechanical reasoning. You do not need to know how to answer journey level questions, but you will have to show the potential to learn material. You must score competitively on this test to continue in the hiring process.

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## What's on the Pre-Apprentice Lineworker Physical Capacity Test?

There are three stations to evaluate your physical ability. Chin-ups, up-right rows and grip measurement. These measure your ability to perform upper body strength activities. You must pass each of these tests to continue in the application process. Doing your best on each physical test improves your score and your chances of being invited to the interview.

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## What's on the working test for an apprenticeship?

Candidates will be asked to do a work simulation activity. They will be asked to complete some basic tasks using hand tools and equipment. Evaluators assess each candidate's ability to follow instructions and use their hands to perform a task (the working test varies depending on the apprenticeship).

You must pass and score competitively on this test to continue in the hiring process.

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## What are interview panels like?

The panel will ask the same prepared questions to each candidate interviewed. Typical interview questions may include candidates past experiences, skills, strengths and weaknesses, and situational questions. You will have the opportunity to ask the panel questions at the completion of your interview.

Only the most competitive candidates will advance to the interview stage.

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## What is included in the Pre-Employment Physical?

- A pre-employment physical is conducted by medical professionals and paid for by Seattle City Light for all apprenticeships. Pre-Employment physicals ensure you are physically able to safely perform the duties of the job throughout your apprenticeship and as a journey-level worker.

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## Does Seattle City Light do drug testing?

The City of Seattle does not drug test all employees, only those who are required to obtain and maintain a Commercial Drivers License (CDL) for their job classification. The apprentices required to have a CDL are Pre-Apprentice Lineworker, Electrician Constructor, Generation Electrician Constructor and Utility Construction Worker. Apprentices in these crafts will be drug tested at the beginning of employment and then placed in the random drug testing pool.

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## How many people will Seattle City Light hire this year?

The size and frequency of apprenticeship hiring varies from year to year based upon the utilities needs. For notification when these opportunities occur, please contact the Apprenticeship Hiring Hotline (206) 733-9924 to be placed on our mailing list. Seattle City Light does not follow a custom hiring schedule.

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## What does Veterans' Preference Mean?

The City of Seattle honors **Veterans' Preference**. In the State of Washington, to be eligible for Veterans' preference an individual must have served during a time of war/conflict or been awarded an armed forces expeditionary medal. If you meet these qualifications and chose to claim Veteran's Preference, you must notify City personnel during the testing process. You will need to provide a copy of your DD214.

As a veteran, the following percentages are added to your written test score based upon a possible rating of one hundred points (candidate must achieve passing score prior to points being added):

- **Ten percent** to a Veteran who is not receiving any Veterans retirement payments.
  - **Five percent** to a Veteran who is receiving Veterans retirement payments.
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## Can I use my G.I. Bill?

Candidates may be eligible for Veteran's Benefits if they have entered active duty for the first time after June 30, 1985, and served continuously for three years. For eligibility requirements contact the Department of Veteran Affairs at 1-800-827-1000. Benefits end 10 years from the date of your last discharge from active duty. If there are special circumstances, please contact the Department of Veterans Affairs.

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## What kind of worker attributes do these careers require?

### A successful candidate will:

- **Have a strong work ethic:** As part of a small crew, each member is expected to do his/her part to complete the job. The more efficient each member is, the better the team functions.
- **Have a sense of humor:** In a team environment, a sense of humor helps people to relate to one another. Mistakes and conflict are inevitable. The more a person is able to work through the challenges as well as the daily tasks will determine his/her long-term success in this industry.
- **Have a willingness to take initiative:** Are you a go-getter, or do you wait for others to lead the way? It takes a pioneering attitude to be successful in a dynamic environment like Seattle City Light. Remember, energy and initiative are contagious.
- **Be determined, and confident:** All of our apprenticeships are challenging. Three or four years might seem like a lifetime at times. The ability to see a long-term goal will help you through the challenging days.
- **Be adaptable:** Apprentices will work with many types of people. They will be exposed to a variety of different teaching and working styles. Work conditions often change quickly. A crew might shift between a routine task to one that requires urgent action. A person with the ability to adapt during challenging times will be more likely to enjoy long-term success as an apprentice and beyond.
- **Have the aptitude to work as part of a team:** Each apprenticeship has unique qualities that appeal to different types of people. A Lineworker apprentice works on teams as small as three or as large as twelve, depending on the type of work assigned. A Meter Electrician apprentice, in contrast, generally works with only one other person on a daily basis. Take a look at the specific duties and expectations of each position while examining your own qualities.

Which apprenticeship matches your attributes the best? Don't be afraid to ask questions. The Apprenticeship Office is available to help candidates decide which program is best suited for them.

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## How dangerous are these jobs?

All the skilled electrical apprenticeships at Seattle City Light are hands on. The lineworker apprenticeship has the most demanding physical requirements. **Lineworker Apprentices** must be able to climb wooden poles and properly lift heavy tools and materials as part of their daily work. They work with high voltage electric lines on a regular basis. They must also respond to emergency situations like car versus pole accidents and windstorms. **Cable Splicer Apprentices** work with high voltage in underground tunnels and vaults where electrical hazards are especially challenging. **Electrical Constructors, Hydroelectric Maintenance Machinists and Generation Electrical Constructors** work on or around large equipment, during inclement weather and in elevated structures at the hydroelectric facilities. **Utility Construction Workers** frequently work on roadways and with heavy equipment. These jobs can be very dangerous. Through solid training, sound safety practices and teamwork, these careers are also very rewarding.

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## What kinds of clothing are required?

New apprentices are required to furnish their own work clothes. These include **natural fiber** (cotton, wool or silk) work pants, shirts, and coat (due to the hazard of electrical arcs, **natural fibers** provide the greatest level of safety against electrical arcs). Lineworker climbing boots and climbing gaffs are the biggest expense. Seattle City Light will provide each apprentice line worker with a hard-hat, safety glasses, climbing belt and safety strap.

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## What are Seattle City Light's "Pillars of Apprenticeship"?

- On the Job Training (OJT) 40-hours a week
  - Monthly evaluations by journey level workers
  - Related Supplemental Instruction (night school)
  - Competency Testing
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## Will Seattle City Light hire me as a journey-level employee after I have completed the apprenticeship?

Upon successful completion of the apprenticeship requirements, you will be expected to pass a journey level exam given by Seattle City Light before you will be hired. Passing scores in this exam will generate a State of Washington "Certificate of Completion" which is recognized by the City of Seattle and the International Brotherhood of Electrical Workers Union.

***Good Luck with your efforts!***

## ***CABLE SPLICER APPRENTICE***

Cable Splicer Apprentices learn to splice, terminate, and maintain low and high voltage power cables in a network distribution system. Apprentices will learn to install and maintain conductors, transformers, network protectors, switches, and related electrical equipment. They will also learn to locate and repair electrical faults and will perform physically demanding work in confined areas such as manholes, vaults and tunnels. They work as teams to install steel conduit systems that supply the underground network.

Apprentices in this craft spend their time in the “Networks” of the downtown, First Hill, and University district areas of Seattle. The Network is a specialized electrical system that feeds the high-density populations who live and work downtown. Different from the suburbs, the system needs to continuously supply power to a large amount of people in a condensed area. This specialized group spends the majority of their time in small underground vaults and in utility rooms of high-rise buildings. It takes a person who has no fear of spiders, snakes, rodents, frogs or lizards to spend the time doing the detailed work in these facilities.

The work itself is varied. Some jobs entail installing large equipment like transformers, terminating high voltage cables, or building electrical vaults, while a specialty in this craft might test the fire protection system that detects overheated equipment and calibrate network protectors. Apprentices will learn all facets of this craft.

Working as a team is a major component of this trade. The equipment is large, the workspace often confined and the need to work with others is essential. At Seattle City Light, the diverse population of workers enhances the flow of ideas and work styles. The outcome is a quality product made with skill and teamwork.

The International Brotherhood of Electrical Workers, Local 77, negotiates the wages and benefits. New apprentices are required join the Union within 30 days of hire.

### **Qualifications to Apply:**

- High school diploma or equivalent
- A valid Washington State Driver’s License or the ability to obtain one
- Must be 18 years of age
- Successful completion of coursework equivalent to one year of high school level algebra

### **Additional Qualifications:**

A candidate must have a combination of training and/or experience that is equivalent to any of the following:

- Successful completion of at least one year of high school training in electrical theory; or
- Successful completion of at least one-half year high school training installing, configuring, maintaining or repairing electrical equipment; or
- Successful completion of at least one semester (at least 15 weeks) of post-high school level training in electrical theory; or
- Successful completion of at least one semester (at least 15 weeks) of post-high school level training in installing, configuring, maintaining, or repairing electrical, or electrical utility equipment; or
- At least three months prior experience (paid or volunteer) applying electrical theory or installing, configuring, maintaining, or repairing electrical or electric utility equipment; or
- At least four months prior experience (paid or volunteer) handling or assisting in installation and/or configuration of electrical equipment or electrical utility equipment.
- Successful completion of Basic Electricity and Math (BEAM) Class (sponsored by Seattle City Light)

## ***ELECTRICIAN CONSTRUCTOR APPRENTICE***

Apprentice Electrician Constructors learn to work with low and high voltage electrical circuits while they install, maintain and repair equipment at substations throughout the Seattle City Light Power System. During this four-year program, apprentices perform work on commercial and residential transformers, conductors, circuit breakers, switches, and control devices. They will work on elevated structures as well in underground vaults. At times, the work is physically demanding and is performed in adverse weather conditions.

Electrician Constructors also work indoors testing and repairing transformers and network protectors. They test rubber goods that all electrical workers use for safety.

Apprentices hone their critical thinking ability as they learn to read prints, construct major components of a substation, install wire and troubleshoot control circuits. The larger pieces of a substation consist of tower structures that support the insulators, buss work and high voltage wires. Electronic relays are small in comparison and involve intricate wiring. Apprentices are expected to learn all aspects of this craft. Patience and attention to detail are valuable attributes.

The majority of the work is performed at the substations in Seattle City Light service territory. Teamwork is an essential element of this position. Effective communication with a diverse pool of people enhances the quality of the work.

The International Brotherhood of Electrical Workers, Local 77, negotiates the wages and benefits. New apprentices are required join the Union within 30 days of hire.

### **Minimum Qualifications to Apply:**

- High school diploma or equivalent
- A valid Washington State Driver's License or the ability to obtain one
- Must be 18 years of age
- Successful completion of coursework equivalent to one year of high school level algebra
- The ability to obtain a Class "A" Commercial Drivers License (CDL)

### **Additional Qualifications:**

A candidate must have a combination of training and/or experience that is equivalent to any of the following:

- Successful completion of at least one year of high school training in electrical theory; or

- Successful completion of at least one-half year high school training installing, configuring, maintaining or repairing electrical equipment; or
- Successful completion of at least one semester (at least 15 weeks) of post-high school level training in electrical theory; or
- Successful completion of at least one semester (at least 15 weeks) of post-high school level training in installing, configuring, maintaining, or repairing electrical, or electrical utility equipment; or
- At least three months prior experience (paid or volunteer) applying electrical theory or installing, configuring, maintaining, or repairing electrical or electric utility equipment; or
- At least four months prior experience (paid or volunteer) handling or assisting in installation and/or configuration of electrical equipment or electrical utility equipment.
- Successful completion of the Basic Electricity and Math (BEAM) class (Sponsored by Seattle City Light).

## ***GENERATION ELECTRICIAN CONSTRUCTOR APPRENTICE***

Apprentices learn to work with low and high voltage electricity and provide service and maintenance to powerhouses and substation equipment at Seattle City Light Hydroelectric generating facilities during this four-year program. Under the supervision of journey-level workers, apprentices perform work on transformers, exciters, electronic governor's motor controllers, conductors, high voltage circuit breakers, switches, protective devices, and cutouts. They will work on elevated structures like towers, ladders and cranes as well as over water. Underground vaults and other confined spaces are also work locations. They will perform physically demanding work in adverse weather conditions and around rotating equipment. Candidates for this program must be willing to work at and live near one of our many remote hydroelectric facilities:

- Boundary Hydroelectric Project – Metaline Falls, WA
- Skagit Hydroelectric Project – Newhalem, WA
- Cedar Falls Hydroelectric Project – North Bend, WA

Apprentices will hone their critical thinking ability as they learn to maintain, construct, troubleshoot and repair major components of powerhouses using blueprints, manuals and raw materials. The larger pieces they work with could consist of generator components, spill gates, cranes, buss work and high voltage wires. They will work with electronic relays and their components that involve intricate wiring. They will work in confined spaces, which require agility and flexibility. Apprentices are expected to learn all aspects of this craft.

The work is performed at powerhouses at remote hydroelectric facilities. A worker who enjoys rural lifestyle would be suited for this position. Teamwork is an essential element. The material is heavy and the work may be at an elevation that requires an agile team to install and maintain the multitude of equipment this craft specializes in. Effective communication with a diverse pool of people enhances the quality and safety of the work.

The International Brotherhood of Electrical Workers, Local 77, negotiates the wages and benefits. New apprentices are required join the Union within 30 days of hire.

### **Minimum Qualifications to Apply:**

- High school diploma or equivalent
- A valid Washington State Driver's License or the ability to obtain one
- Must be 18 years of age at
- Successful completion of coursework equivalent to one year of high school level algebra
- The ability to obtain a Class "A" Commercial Drivers License (CDL)

### **Additional Qualifications:**

A candidate must have a combination of training and/or experience that is equivalent to any of the following:

- Successful completion of at least one year of high school training in electrical theory; or
- Successful completion of at least one-half year high school training installing, configuring, maintaining or repairing electrical equipment; or
- Successful completion of at least one semester (at least 15 weeks) of post-high school level training in electrical theory; or
- Successful completion of at least one semester (at least 15 weeks) of post-high school level training in installing, configuring, maintaining, or repairing electrical, or electrical utility equipment; or
- At least three months prior experience (paid or volunteer) applying electrical theory or installing, configuring, maintaining, or repairing electrical or electric utility equipment; or
- At least four months prior experience (paid or volunteer) handling or assisting in installation and/or configuration of electrical equipment or electrical utility equipment.
- Successful completion of the Basic Electricity and Math (BEAM) class (Sponsored by Seattle City Light).

## ***HYDROELECTRIC MAINTENANCE MACHINIST APPRENTICE***

Hydroelectric Maintenance Machinist Apprentices learn the machinist trade in this four-year program. They are part of a crew who maintain and repair large hydroelectric turbine generators at each of Seattle City Light's Hydroelectric Dams. These turbine generators were originally installed when the dams were built in the early 1930s through 1960's. Once a year, Seattle City Light begins rebuilding a different turbine at one of its hydroelectric projects. Most of the worn parts are recreated or repaired at the South Service Center machine shop by machinists and apprentices.

Apprentices perform progressively more difficult, physically demanding and technical work assignments such as: maintaining and repairing equipment and machinery; analyzing and diagnosing problems; and disassembling, machining and reinstalling unavailable parts. Apprentices use progressively higher levels of math and critical thinking skills as well as perform intricate work on complex machinery. Workers who are detail oriented will thrive in this precision trade.

The construction of hydroelectric facilities is inherently dangerous and full of variety. Apprentices work at great heights and around deep water. In contrast, they also work in confined spaces. A worker who enjoys the wide open spaces, but can work in small cramped ones, would do well here.

As part of the apprenticeship program, the individuals selected will be required to rotate annually between Seattle City Light's five hydroelectric facilities. The desire to live in a rural setting is necessary.

Apprentices attend classes at various regional colleges one or two evenings per week. Upon completion of the apprenticeship, new journey level employees work at their original hire location, although journey level positions require occasional travel.

The International Association of Machinist and Aerospace Workers Local #79 negotiate the wages and benefits. New apprentices are required join the union within 30 days of hire.

### **Minimum Qualifications:**

- High school diploma or equivalent
- A valid Washington State Driver's License or the ability to obtain one
- Must be 18 years of age
- Successful completion of coursework equivalent to one year of high school level algebra

**Additional Qualifications:**

A candidate must have a combination of training and/or experience that is equivalent to any of the following:

- Six months experience working in a machine shop, machinist or related trade or
- Six months of documented education in machinist trade or related fields.

## ***LINEWORKER APPRENTICE***

Apprentices in this craft will learn to install and maintain overhead and underground distribution and transmission electrical circuits. This includes installing and maintaining poles, wires, transformers, switches, terminations, underground cables, etc. Climbing wooden poles is an essential skill. Apprentices will respond to emergencies like car versus pole accidents and storms in order to restore power to Seattle City Light customers. They must be prepared to work in adverse weather conditions.

Working on high voltage electric lines is no small task. It can be exhilarating. The dual challenge of working high voltage while on a pole or in an aerial lift can be thrilling, but it requires the ability to maintain a train of thought; no daydreaming here. A fear of heights is not a trait line workers share. They must be aware of potential danger while working closely with their crewmates in a variety of situations. A mundane task can be instantly replaced with a call for assistance from a car versus pole accident or perhaps a sudden windstorm. Adaptability is a plus.

Teamwork is 90% of the job once the basic skills are acquired. Crews range in size from a two-person service crew to a big crew that might have 12 people on it. Communication is essential. Virtually every task involves teamwork to accomplish. There are inherent hazards to the work and people must be able to watch out for and communicate with one another.

An apprentice in this craft is expected to learn to climb wooden poles and steel structures that support overhead power lines. Physical fitness, sequential reasoning and the ability to stay calm in adverse conditions are essential attributes for success in this program.

The International Brotherhood of Electrical Workers, Local 77, negotiates the wages and benefits. New apprentices are required to join the Union within 30 days of hire.

### **Minimum Qualifications to Apply:**

- High school diploma or equivalent
- A valid Washington State Driver's License or the ability to obtain one
- Must be 18 years of age
- Successful completion of coursework equivalent to one year of high school level algebra
- The ability to obtain a Class "A" Commercial Drivers License (CDL)

## **Additional Qualifications:**

In order to be a Lineworker Apprentice, candidates must first successfully complete a paid, six-month training position designed to help employees gain the necessary skills to become Lineworker Apprentices. These employees are referred to as Pre-Apprentice Lineworkers (PALs). They work 40 hours a week out on the line crews, learning a multitude of tasks and assisting with the work. Three afternoons a week, Pre-Apprentices report to the workout facility for occupationally pertinent fitness with the fitness trainer. Instruction in pole climbing begins gradually once a week.

Before graduating into the Lineworker Apprenticeship, pre-apprentices must successfully pass a Graduation Physical Capacity Test and a 15-day Climbing School. Graduates enter the three-year (6000 hour) Lineworker Apprenticeship.

## **Lineworker Pre-Apprenticeship Physical Capacity Test:**

Line work requires physical strength and a high aerobic capacity. To determine if you are physically qualified for the job, you will need to pass three physical tests.

### **1. Chin-Up**

For this test, you must perform consecutive chin-ups using an underhand grip on the chin-up bar. You must start each chin-up with your arms completely straightened and lift your body until your chin is above the bar. Then lower yourself down again. You may not swing your lower body or use any lower body action (such as climbing the wall with your feet) to assist you in your efforts. Only those attempts, which begin with straight arms and end with your chin above the bar, will count towards your total. More chin-ups give you a better score.

1 chin-up = **Minimum**      2 chin-ups = **Passing**      9 chin-ups = **Maximum**

### **2. Up-Right Row - 50 Pounds**

You must perform consecutive up-right rows with a 50-pound weight. Your buttocks and shoulder blades must be against the wall with your heels about one foot from the wall. Using an overhand grip, grasp the bar in the center, with your hands no more than one fist's width apart. Start each attempt with your arms completely straightened. Raise the bar to the top of your breastbone and then lower it back down.

5 reps = **Minimum**      9 reps = **Passing**      24 reps = **Maximum**

### 3. Grip

For this test, a grip-testing device measures your grip strength. You are to squeeze the handle as hard as you can to move the gauge's needle. Your strength in pounds of pressure is then registered on the gauge. You will be allowed three attempts on each hand. Your best score from either hand will be recorded.

86 pounds = **Minimum**      96 pounds = **Passing**      129 pounds =  
**Maximum**

#### **Physical Capacity Test Scoring:**

Your performance on these tests may be better than the passing standard. You will receive additional points up to a maximum amount listed below. You may use additional points from one test to make up for not achieving the passing standard on another test. However, you must meet the minimum qualifying standard in order to continue to the rest of the test. If you fail to meet the minimum, you will be disqualified from the current hiring process.

#### **Physical Ability Test Preparation Tips:**

Seattle City Light's **Lineworker Pre-Apprentice** hiring process includes a physical capacity test. This test consists of 3 test stations. An effective workout — months in advance — is the best way to ensure you will successfully pass each test station. Getting the best score possible on each test is the best way to get invited to the next step of the hiring process, the working test. Good luck with your workout!

#### **STATION #1 CHIN-UPS**

- Use an underhand grip, with hands on the bar, shoulder-width apart. The chin-up is only harder if your grip is too wide or too narrow!
- Practice perfect form — all the way down — until arms are straightened.
- The bigger you are, the harder these are. A sound aerobic workout program will help you to lose body fat and lighten your load. Do not go on a drastic diet, or you will just lose the muscle you need to lift yourself up to the bar.
- **BEST PRACTICE** — use a helper or feet on a bench to lift part of your weight (some health clubs have “weight assisted chin-up stations”). Gradually make your arms do more of the lifting until you can lift your full weight.

- Practice on any overhead pulley-type weight lifting machine. Find the largest amount you can lift 3-9 times. Gradually increase the weight until you can hoist more than your body weight.

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### **STATION #2 UP-RIGHT ROW**

- This test is very hard on the internal structure of your shoulders. Practice this one *very* carefully. Do not overdo it!
- Warm-up your shoulders well and *don't* practice with a heavier weight.
- Stretch your shoulders overhead and rotate them inward to prepare for this lift.
- Keep your elbows only slightly higher than the bar at the top of the lift.

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### **STATION #3 GRIP STRENGTH MEASUREMENT**

- This test is a numerical measurement of how hard you can squeeze your hand.
- Don't waste time squeezing a tennis ball to prepare for this test.
- One "at-home" workout can be performed with tin-snips, wire cutters, or pruning shears. Gradually practice pruning a slightly larger branch. Do it once on the hardest branch you can, rest several minutes, and try again.

#### **Additional Tips:**

The tests are done in a particular order. Get used to doing them in the order shown. Working out is specific; you'll only get better at the exact things you work on. Make sure you practice for the tests using the exact form, weights, etc.

## ***METER ELECTRICIAN APPRENTICE***

The Meter Electrician Apprenticeship is a three-year training program. Apprentices learn to install single and poly-phase, transformer-related, and self-contained meters as well as advanced metering infrastructure (AMI) using wireless technology and instrument transformers. They learn about lab and field test meters, substation and co-generation metering, instrument repair, calibration, and acceptance testing. They perform progressively more challenging and technical work.

Self-starters will be at home in this craft since journey level Meter Electricians often work alone, although apprentices are always supervised. Workers in this craft have frequent contact with customers and contractors; good communication skills are essential.

The Meter Electrician Craft is in a state of rapidly advancing technology. Workers who are able to learn new technology and apply it to their work on a real-time basis will thrive. Physical fitness is important. A worker must be able to climb ladders, carry tools and install metering equipment. They often working in construction sites where noise and physical hazards like machinery and uneven walking surfaces exist.

The International Brotherhood of Electrical Workers, Local 77, negotiates the wages and benefits. New apprentices are required join the Union within 30 days of hire.

### **Minimum Qualifications to Apply:**

- High School diploma or equivalent
- A Valid Washington State Driver's License is required for employment
- Must be 18 years of age
- Successful completion of coursework equivalent to one year of high school level algebra or geometry

### **Additional Qualifications:**

- A candidate must have a combination of training and/or experience that is equivalent to any of the following:
- Successful completion of at least one year of high school training in electrical theory; or
- Successful completion of at least one-half year high school training installing, configuring, maintaining or repairing electrical equipment; or
- Successful completion of at least one semester (at least 15 weeks) of post-high school level training in electrical theory; or

- Successful completion of at least one semester (at least 15 weeks) of post-high school level training in installing, configuring, maintaining, or repairing electrical, or electrical utility equipment; or
- At least three months prior experience (paid or volunteer) applying electrical theory or installing, configuring, maintaining, or repairing electrical, or electric equipment utility equipment; or
- At least four months prior experience (paid or volunteer) handling or assisting in installation and/or configuration of electrical equipment or electrical utility equipment.
- Successful completion of the Basic Electricity and Math (BEAM) class.

## ***UTILITY CONSTRUCTION WORKER APPRENTICE***

The Utility Construction Worker (UCW) Apprenticeship is an 18-month program. As an apprentice, workers will learn to use hand, electric, and pneumatic tools for the construction, maintenance and repair of Seattle City Light's electrical distribution system infrastructure and other components of the City power grid. Apprentices will learn utility construction guidelines and print reading, electrical recognition, vault and confined space safety, trench safety and emergency response. They will learn the safest and most efficient methods to install the conduit and vault system that house the underground electrical network at Seattle City Light. They will learn how to operate heavy construction equipment and provide work site protection.

A worker in this craft is comfortable with manual labor, large machinery and roadside worksites. The work is done in all weather conditions. During the process of installing conduit and vaults, apprentices and journey level workers must climb in and out of trenches and enclosed spaces. Workers perform physically demanding tasks like operating shovels and pneumatic tools like jackhammers that require physical strength and fitness.

Apprentices will hone their natural critical thinking ability as they learn to maintain and construct conduits systems using prints and raw materials. The attention to detail put into this craft is the foundation for the electrical wires and equipment that are installed by Cable Splicers, Lineworkers, and Electrician Constructors.

Working as a team is a major component of this trade. The equipment is large, the workspace often confined and the need to work with others is essential. At Seattle City Light, the diverse population of workers enhances the flow of ideas and work styles. The outcome is a quality product made with skill and teamwork.

The Public Service Industrial Employees Local 1239 negotiates the wages and benefits. New apprentices are required join the Union within 30 days of hire.

### **Minimum Qualifications to Apply:**

- High School diploma or equivalent
- A Valid Washington State Driver's License is required for employment
- Must be 18 years of age

### **Desired Qualifications:**

A combination of training and/or experience that is equivalent to any of the following:

- Successful completion of a pre-apprenticeship program or
- Prior experience in the construction trades or
- Other related school or work experience