Seattle City Light

2015 Engineering Internships

ABOUT OUR 2015 ENGINEERING INTERNSHIPS

Seattle City Light, the Nation's Greenest Utility, is recruiting for a number of internships that will start in Summer 2015. We will offer a mix of summer-only and year-long internships. Year-long positions are ideal for full-time students based in the Seattle area who are available to work part-time during the academic year and build a richer work experience with us.

POSITIONS

In this document, you will find job descriptions for the following 2015 College Internships:

- Electrical Engineering Intern (Energy Delivery)
- Electrical Service Engineering Intern (Customer Care)
- Electrical Power Systems Engineering Intern
- Energy Management Analyst Intern

HOW TO APPLY

Visit the City of Seattle Career Center and select the **Engineering Internships–Seattle City Light** posting.

Complete the online application. In the supplemental questions, you may indicate up to three positions you want to be considered for.

You will also attach the following documents:

- Your unofficial transcript: including current coursework and cumulative GPA
- Resume
- Cover letter explaining how your coursework and experience qualify you for an Engineering Internship

All application materials must be submitted by February 17, 2015 at 4:00 p.m. Pacific Time. Incomplete application packages will not be considered.

Job offers are contingent on the verification of credentials and other information required by the employment process including the completion of a background check and criminal history review.

The City of Seattle is an Equal Opportunity Employer that is committed to diversity in the workplace. Accommodations for people with disabilities are provided on request. The City is a Drug Free Workplace.

MORE ABOUT SEATTLE CITY LIGHT

- Seattle City Light
- 2015-2020 Strategic Plan
- Internship Program

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Electrical Engineering Interns (Energy Delivery)

Job type:	Eleven College Interns (Year-long)
Start/End dates:	June 2015 – May 2016
Hours:	Approximately 40 hours per week during the summer and up to 20 hours per week while class is in session. Hours scheduled between 8:00 am - 5:00 pm, Mon-Fri, and adjusted to class schedule.
Location:	Seattle, Washington (Multiple locations)
Salary:	$18.31-$20.62/Hour

POSITION DESCRIPTION

Seattle City Light's Energy Delivery Division is looking for 11 electrical engineering student interns. The Energy Delivery positions will report to an Electrical Power Systems Engineer or Principal in Electrical Engineering. Due to the amount of training provided, we are looking for a minimum of a one-year commitment. Maximum length of internship is two years. Students must be enrolled for the duration of the internship.

JOB RESPONSIBILITIES

Students will perform the following tasks:

- Overhead and underground electrical distribution system design and new electric service engineering.
- Assist engineers with Network's Load Flow Program, system design studies.
- Assist Substation Engineers with project construction and as-built drawings; and /or replacement of major substation equipment
- Safe, reliable and cost-effective planning of the City Light transmission and distribution system (load studies and system modeling).
- Capital Improvement projects
- Interns will rotate through different aspect of engineering design including pole, overhead electrical, underground electrical and transformer overload replacement
- Projects assigned may include field checking of drawings, as-built documentation of various power plant equipment, and work management implementation.

EDUCATIONAL BENEFIT TO THE STUDENT

- Familiarity with a public utility engaged in the business of Generation, Transmission, and distribution of electrical power.
- Familiarity with the business practices, facilities, conductors and equipment used by an electrical utility.
- Experience using Excel, Access, PowerPoint and other business software.
- Experience creating and updating drawings using AutoCAD.
- Experience creating and updating maps using Esri ArcGIS (Geographic Information Systems) software.
- Experience reading and interpreting electrical drawings and schematics relating to the design and operation of an electrical utility.
- Experience with Oracle Work and Asset Management software Work Asset Management Systems (WAMS).
- Exposure to a diverse workforce with a wide variety of cultural, educational and scientific backgrounds.

QUALIFICATIONS

Education: Open to full-time rising junior undergraduate students studying Electrical or Power Engineering. Students must be enrolled full time and maintain at least a 2.5 GPA throughout the internship.

Skills: Students who have training or experience in AutoCAD, or similar CAD programs; and experience or knowledge of engineering drawing standards. Candidates are asked to emphasize any experience in performing project coordination or record keeping tasks. Students will work independently and may be assigned miscellaneous AutoCAD projects.

Ideally, candidate is enrolled in a program with power option, power systems engineering, distribution system modeling software, software programming, and/or high-voltage substation facilities drawings. Ideally, candidate has experience on computer programs such as AutoCAD and Microsoft Office.

Certification/License: Current Washington State Driver's License

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Electrical Service Engineering Intern (Customer Care)

Job type: One College Intern (Summer)

Start/End dates: June-September 2015

Hours: Approximately 40 hours per week during the summer between 8:00 am - 5:00 pm, Mon-Fri

Location: Seattle Municipal Tower, Seattle, Washington

Salary: $18.31-$20.62/Hour

POSITION DESCRIPTION

The Customer Care Division of Seattle City Light is recruiting an intern in the Electrical Services Engineering group. This group is responsible to provide professional engineering advice on large complex electrical service installations to commercial, industrial and government agencies. This position will report to the Electrical Services Engineering Manager.

JOB RESPONSIBILITIES

This position will work to create a comprehensive design and plan to convert individual properties in South Lake Union from City Light's radial distribution system to the new network distribution sytem. A detailed plan of the electrical, civil, cost and timeframe for each of these projects created by the intern will be incorporated into City Light's overall stratigic plan for the Denny Substation and South Lake Union Area. The intern will also support electrical service engineers by taking on tasks related to large development: i.e. coordinating with crews for outages, reviewing temporary service requests, arc flash studies, and creating service letters which provide the design and requirements to the customers.

EDUCATIONAL BENEFIT TO THE STUDENT

The intern will have the opportunity to work with engineers on the design of services on Seattle City Light's largest and most prominent projects. The ESE group is unique in that it works with a very large number of groups within City Light as well as external contracts, electricians, engineers, and consultants. This is ideal for a student wanting to determine where their interests lie. The intern will have an opportunity to learn about how electrical distribution works. It will be a great opportunity to apply what they are learning in school to an electric utility.

The intern will have a chance to apply their AutoCAD skills, determine vault sizing, prepare for customer request outages, review customer technical plans, and coordinate work with crews and other engineering groups. The intern will have the unique opportunity to work on transitioning the South Lake Union area from looped radial to a network service area as part of the larger Denny Substation project.

QUALIFICATIONS

Education: Open to full-time rising junior and senior undergraduate students studying Electrical Engineering. Ideally the student is enrolled in an Electrical Power Engineering track. Student must be registered full time for the Fall 2015 quarter/semester. Student must be enrolled full time and maintain at least a 2.5 GPA for the duration of the internship.

Skills: Student must possess strong written and verbal communication skills, as well as strong technical skills. Experience with AutoCAD is a plus.

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Electrical Power Systems Engineering Intern

Job type: One College Intern (Year-long)

Start/End dates: June 2015 – May 2016

Hours: Approximately 40 hours per week during the summer and up to 20 hours per week while class is in session. Hours scheduled between 8:00 am - 5:00 pm, Mon-Fri, and adjusted to class schedule.

Location: Seattle, Washington (Ballard area)

Salary: $18.31-$20.62/Hour

POSITION DESCRIPTION

We are seeking a Student Engineer Intern who will closely work with System Operations Engineers to provide effective operation solutions and meet all the requirements of the North American Electric Reliability Corporation (NERC) and the Western Electric Coordinating Council (WECC) reliability standards. This position will help System Operations Engineers develop operation horizon study models, perform specialized Power System Analysis, provide technical supports for real time system operators including coordinated operation plans, pre- and post- contingency mitigation plans, and other operation guidance and solutions.

JOB RESPONSIBILITIES

- Review Seattle City Light generation and transmission outage plan and update records daily.
- Review and archive daily Load Forecast data files.
- Review and archive daily Generation Estimates data files.
- Review regional monthly (initial, coordinated, and final) outage plans and compare with the information from WECC Coordinated Outage System. Work with outage office to solve any discrepancies.
- Help System Operations Engineer prepare and maintain operation horizon (next-day, outage coordination, and seasonal) study cases including facility data, system operating limits configuration, and display files.
- Help System Operations Engineer review future WECC Operating Cases for approval.
- Learn NERC Reliability Standards and review proposed changes to evaluate possible impact to SCL operations.

EDUCATIONAL BENEFIT TO THE STUDENT

Intern will be introduced to Power System Engineering, with an emphasis on system operations, dynamic analyses, and interconnection studies. Intern will participate in Transmission System Planning, including the development, preparation, and implementation of system power flow, short circuit, dynamic analyses, and generation interconnection studies using a variety of computer programs, including PowerWorld.

QUALIFICATIONS

Education: Open to full-time rising junior and senior undergraduate students and graduate students studying Electrical Engineering. Ideally the student will be specialized in Electric Power Systems. Students must be enrolled full time and maintain at least a 2.5 GPA (undergraduate) or 3.0 GPA (graduate) throughout the internship.

Skills: Experience with Microsoft Office, Windows Operating System, and Power System Software. Must possess a willingness to learn and a sense of professional responsibility. Ideally student will have experience with PowerWorld simulator.

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Energy Management Analyst Intern

Job type: One College Intern (Year-long)

Start/End dates: June 2015 – May 2016

Hours: Approximately 40 hours per week during the summer and up to 20 hours per week while class is in session. Hours scheduled between 8:00 am - 5:00 pm, Mon-Fri, and adjusted to class schedule.

Location: Seattle, Washington (Downtown)

Salary: $18.31-$20.62/Hour

POSITION DESCRIPTION

The Conservation Resources Division is seeking an intern to introduce and apply software that assesses energy savings via pre-post billing data comparisons. The purpose will be to supplement a small percent of our current estimates of energy savings with a method that lends itself well to long-term assessment if it is possible to remove the effects of external variables such as weather.

The benefits of this work will be: (1) Improved customer service. (2) Improved section accountability and record-keeping so that supervisors, managers, and internal and external auditors can more easily track the effectiveness of some of our energy conservation investments. (3) Development of tools by which lessons learned can be efficiently shared to improve results in subsequent work. (4) Increased persistence-of-savings for energy conservation programs, benefiting the utility and the customer. (5) Energy Conservation Field staff training in an approach that has been little employed at City Light since the 1990s, an approach that is heavily promoted today by our trade allies, new program pilots, and big-data enthusiasts. This internship will be a small but valuable step toward a more IT-savvy method of doing business.

JOB RESPONSIBILITIES

- Survey and summarize available software for normalizing pre-post energy consumption to estimate energy savings.
- Work with supervisor and other interested staff in selecting and obtaining the software.
- Write up guidelines for field staff addressing use of the software, contents for follow-up reports, and how to conduct follow-up visits to the customer sites.
- Train EMAs in use of the software and assist them on an as-requested basis in following up on this work.
- Apply selected software to specific projects to estimate actual consumption. For each project, write up findings in a short report for the customer and utility. Visit the customers with the projects' respective Energy Management Analysts to share the findings with each customer. Explore with each customer what has changed, if anything, since the City Light pre-payment inspections. Upon return to the office, add a section to the follow-up report explaining any changes observed, and recommendations to customer for sustaining and augmenting savings.

EDUCATIONAL BENEFIT TO THE STUDENT

Increased analytical and communication skills. Increased understanding of energy conservation in commercial buildings. Evaluation of vendors. Developing and writing business reports, guidelines, and procedures. Delivering effective customer service to multiple internal and external stakeholders.

QUALIFICATIONS

Education: Open to full-time rising junior and senior undergraduate students and graduate students studying an engineering field, ideally Mechanical Engineering. Students must be enrolled full time and maintain at least a 2.5 GPA (undergraduate) or 3.0 GPA (graduate) throughout the internship.

Skills: Excellent in Excel. Ability to write reasonably well. Ability to communicate well through conversation and presentations. Friendly, curteous, hard working, enjoys creating clear graphs, enjoys writing. Eager to learn. Ideally possess skills in energy analysis, experience handling large amounts of data, and an interest in a long-term career in energy conservation.

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