Engineering Internship - Electrical
Seasonal
Tracking Code 2981
Job Location Boise, ID
Wage $21.00 (non-exempt)
Application Deadline 11/21/2016

JOB DESCRIPTION

Seeking five Electrical Engineering Interns for our summer 2017 program.

The Engineering intern will work within an assigned group to assist engineering staff while gaining valuable skills and experience. The assignments are as follows:

**Arc Flash Hazard Analysis – Electrical**
Safety is a core value at Idaho Power Company (IPC). The assessment of electrical arc flash hazards is a critical aspect of our safety program implementation within company facilities throughout the IPC service territory. The intern will assist with the analyses of potential arc flash hazards at IPC facilities with the purpose of determining the appropriate level of personal protective equipment (PPE) that must be worn when working on energized equipment (or if the equipment must be de-energized prior to performing work). The intern will work directly with Power Production engineers and plant operators to verify existing models using correct drawings, making site visits, and developing various operating scenarios. The intern may also recommend arc flash mitigation options and apply applicable labels in the field. Through this process, the intern will have the opportunity to improve their knowledge of interpreting electrical drawings, short-circuit modeling software, arc flash fundamentals, and applicable standards and codes. Additionally, the intern will gain familiarity with low voltage power plant equipment through field experience.

**Distribution Feeder Relay Modeling – Electrical**
Idaho Power Company (IPC) currently analyzes the distribution system with detailed GIS based models. These models are built with Synergi Electric modeling and analysis software and include detailed representations of the physical distribution system assets starting at the substation out to all IPC customers, customer load profiles and control settings for protective devices and voltage regulating equipment. The intern will work directly with Reliability Engineers and others to validate feeder breaker relay models and settings, and develop tools for updating the feeder breaker relays in the Synergi Electric models. This will provide accurate models used for protective device coordination and arc flash incident energy calculations. The intern will also have the opportunity to learn fundamental concepts of protective device coordination, including how electromechanical and microprocessor relays are used for feeder breaker and recloser control. In addition, the intern will participate in field trips and other cross training opportunities to learn how the distribution system operates.

**Geographic Representation of Low Voltage Data – Electrical**
One of the challenges that a power utility faces is serving customers in remote areas with adequate voltage in a cost-effective manner. The intern will work with Idaho Power Compaoy (IPC) planners to facilitate the integration of low voltage data from IPC’s automatic metering infrastructure into a GIS tool. This will enable planners to rapidly respond to low voltage issues on the distribution system. The intern will create specifications for the viewing tool, and then perform low voltage analyses.

**Transmission Fault Clearing Time Study & Remedial Action Scheme Update – Electrical**
High speed clearing of transmission system electrical faults is necessary to ensure the stability and reliability of the power system. The intern will determine which communication or protection system outages are critical and analyze the transient stability performance under those outage states. Stability analyses will be performed on Idaho Power Company (IPC) lines with delayed fault clearing times to identify the risks to system reliability and power system performance for communication or protection system outages. For a second project the intern will work with System Planning Engineers to develop and model updated Remedial Action Scheme (RAS) settings. The RAS maximizes transmission flow capability on a key IPC transmission path.
Wood River Electrical Plan Update Preparation – Electrical

Idaho Power Company (IPC) works with the communities it serves to develop long term plans for electrical infrastructure. The plans focus on following siting criteria goals developed by the community as well as meeting forecasted electrical demand. The Transmission and Distribution Planning Intern will develop, with supervision, the groundwork for an update to the build out electrical plan for the Wood River area of the IPC service territory. He or she will gather and utilize future land-use information from different county and municipal jurisdictions, determine electrical load densities for each land-use type, and determine the anticipated long-term load requirements for the area. Following the data gathering and load analyses, the intern will identify and recommend infrastructure to serve the projected electrical load. As the Wood River Electrical Plan is the first repeat electrical plan for IPC, the intern will also have the unique opportunity to assist in the realignment of the electrical plan process.

REQUIRED SKILLS

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<th>Knowledge of:</th>
<th>(Electrical Engineers) AC, DC and 3-phase circuits, basic understanding of electric machinery, economic analysis.</th>
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<td>Skills in:</td>
<td>Oral and written communication, Excel, Word, and database software.</td>
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<td>Ability to:</td>
<td>Work independently, be a self-starter, communicated effectively, accurately gather and organize technical data, interpret and create maps and drawings.</td>
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MINIMUM REQUIREMENTS

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<th>Education:</th>
<th>Must be currently enrolled in an accredited program majoring in Electrical engineering at a sophomore, junior, or non-graduating senior status.</th>
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<td>Licenses &amp; Certifications</td>
<td>Valid driver’s license with an acceptable driving record based on driving requirements for the position.</td>
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JOB COMPETENCIES

- Initiating Action, Work Standards, Decision Making, Communication, Planning and Organizing.

ADDITIONAL REQUIREMENTS/INFORMATION

- Candidate must be able to work indoors/outdoors, and hike and walk over uneven terrain possibly in inclement weather.
- Occasional overnight travel required.
- Must be able to pass a background check and drug screen.
- This is a Seasonal position. No housing or relocation benefits are provided. Seasonal employees are only eligible to apply for internal job postings if the posting is in their current department. Internal, regular employees who are successful candidates will be placed as regular employees in a Temporary Duty Assignment job classification. Qualified employees must have been in their current position for at least six months and have supervisory approval to participate in order for their current position to be held open for the duration of the assignment or filled temporarily.

To be considered for this position, please visit our website at [www.idahopower.com/careers](http://www.idahopower.com/careers) and complete our online application.

Idaho Power is an Equal Opportunity Employer
All qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex (including pregnancy), age, sexual orientation, gender identity, genetic information, veteran status, physical or mental disability, marital status, and any other status protected by applicable federal and state laws.
If you have questions, or require assistance or accommodation to complete the online application, please contact us at:
Phone: 208-388-2965 or Email: jobs@idahopower.com