Clean Energy Career Pathways Catalog

Over 300 job descriptions for technical and specialty jobs in clean energy

Created for job-seekers, hiring managers, the existing workforce, and the public, ACP’s Clean Energy Career Pathways Catalog presents over 300 job descriptions for technical and specialty jobs within the clean energy industry.

This catalog shows the upward mobility and opportunities that exist within the industry, alongside highlighting the skills and requirements necessary to work in these positions. The aim is to provide a better understanding of how existing transferrable skills could be applied to clean energy jobs or what a career progression within the workforce could look like.

This massive effort is meant to provide workers in other energy industries, veterans, and workers in underrepresented communities a better idea of the jobs available in clean energy, as well as support the industry with recruiting and retention.

Energy Transmission Career Pathways Catalog
This sector-specific catalog presents job descriptions in the Energy Transmission sector. For jobs within all sectors, download the full PDF.

If you have questions about the catalog, please email workforcedev@cleanpower.org.
Clean Energy Occupations can be looked at across Clean Energy Sectors, Industry Segments, Industry Sub Segments, and Occupational Groups & Job Families. The catalog is organized by the hierarchy and groups represented here:
Explanation of Career Maps

Each catalog includes an interactive Career Map that illustrates potential pathways for career growth within the Sector and within five specific Industry Segments.

On the Career Map, each occupation is represented by a clickable dot. Each sector’s Career Map contains three Career Levels:
- Entry Level
- Mid-Level
- Advanced

Dots placed in vertical lines or nearby spaces up through the career levels represent the career progression in a particular field or Industry segment.

**Note:** The vertical paths are not the only potential career options from any given occupation, since those who acquire further education and experience may also make cross-industry segment and sector moves. The more typical career moves from each occupation are outlined on each Occupation Description page.

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### Energy Transmission Career Map

<table>
<thead>
<tr>
<th>A</th>
<th>Project Development</th>
<th>B</th>
<th>Operations &amp; Maintenance</th>
<th>C</th>
<th>Manufacturing</th>
<th>D</th>
<th>Construction/Installation</th>
<th>E</th>
<th>Research &amp; Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>ENTRY-LEVEL</td>
<td>B1</td>
<td>ENTRY-LEVEL</td>
<td>C1</td>
<td>ENTRY-LEVEL</td>
<td>D1</td>
<td>ENTRY-LEVEL</td>
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<td>ENTRY-LEVEL</td>
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<tr>
<td>A2</td>
<td>MID-LEVEL</td>
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<td>MID-LEVEL</td>
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<tr>
<td>A3</td>
<td>ADVANCED</td>
<td>B3</td>
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<td>C3</td>
<td>ADVANCED</td>
<td>D3</td>
<td>ADVANCED</td>
<td>E3</td>
<td>ADVANCED</td>
</tr>
</tbody>
</table>

Click on a career level in an industry segment and you will be taken to that section.
Energy Transmission Career Map

Click on a career level in an industry segment and you will be taken to that section.
### Energy Transmission Career List

<table>
<thead>
<tr>
<th>A: Project Development</th>
<th>B: Operations &amp; Maintenance</th>
<th>C: Manufacturing</th>
<th>D: Construction/Installation</th>
<th>E: Research &amp; Training</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A1</strong> ENTRY-LEVEL</td>
<td><strong>B1</strong> ENTRY-LEVEL PAGE 10-14</td>
<td><strong>C1</strong> ENTRY-LEVEL</td>
<td><strong>D1</strong> ENTRY-LEVEL PAGE 31-34</td>
<td><strong>E1</strong> ENTRY-LEVEL PAGE 40</td>
</tr>
<tr>
<td>- N/A</td>
<td>- High Voltage Technician</td>
<td>- N/A</td>
<td>- Commissioning Technician</td>
<td>- Technical Trainer, Technical Instructor</td>
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<tr>
<td><strong>A2</strong> MID-LEVEL PAGE 7-8</td>
<td><strong>B1</strong> ENTRY-LEVEL</td>
<td><strong>C2</strong> MID-LEVEL</td>
<td><strong>D2</strong> MID-LEVEL PAGE 35-36</td>
<td><strong>E2</strong> MID-LEVEL</td>
</tr>
<tr>
<td>- Strategic Procurement Manager</td>
<td>- Operations Specialist I</td>
<td>- N/A</td>
<td>- Buyer; Procurement Specialist; Procurement Associate</td>
<td>- N/A</td>
</tr>
<tr>
<td><strong>A3</strong> ADVANCED PAGE 9</td>
<td><strong>B2</strong> MID-LEVEL PAGE 15-23</td>
<td><strong>C3</strong> ADVANCED</td>
<td><strong>D3</strong> ADVANCED PAGE 37-39</td>
<td><strong>E3</strong> ADVANCED</td>
</tr>
<tr>
<td>- Transmission Line Engineer, Transmission Engineer, Electrical Power Engineer, Electrical Interconnection Engineer, Electrical Design Engineer</td>
<td>- Analyst</td>
<td>- N/A</td>
<td>- Commissioning Manager</td>
<td>- N/A</td>
</tr>
<tr>
<td><strong>B2</strong> MID-LEVEL</td>
<td><strong>C2</strong> MID-LEVEL</td>
<td><strong>C3</strong> ADVANCED</td>
<td><strong>D3</strong> ADVANCED PAGE 37-39</td>
<td><strong>E3</strong> ADVANCED</td>
</tr>
<tr>
<td>- Electrical Engineer—Powerhouse, Substation or Relay</td>
<td>- High Voltage Reliability Engineering Specialist</td>
<td>- N/A</td>
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<tr>
<td><strong>B3</strong> ADVANCED</td>
<td><strong>C3</strong> ADVANCED</td>
<td><strong>D3</strong> ADVANCED PAGE 37-39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Planner—Renewable Energy</td>
<td>- Mechanical Engineer, Design Engineer, Product Engineer, Equipment Engineer</td>
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<tr>
<td><strong>B3</strong> ADVANCED</td>
<td><strong>C3</strong> ADVANCED</td>
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<tr>
<td>- Director Operations &amp; Maintenance; Director O&amp;M</td>
<td>- Operations Specialist II</td>
<td></td>
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<tr>
<td><strong>B3</strong> ADVANCED</td>
<td><strong>C3</strong> ADVANCED</td>
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</tr>
<tr>
<td>- Director, Quality &amp; Operations Support</td>
<td>- Power and Transmission Scheduler</td>
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<tr>
<td><strong>B3</strong> ADVANCED</td>
<td><strong>C3</strong> ADVANCED</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>- Director, Transmission</td>
<td>- Reliability Engineer</td>
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<tr>
<td><strong>B3</strong> ADVANCED</td>
<td><strong>C3</strong> ADVANCED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Engineering Manager</td>
<td>- Safety Manager I</td>
<td></td>
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<tr>
<td><strong>B3</strong> ADVANCED</td>
<td><strong>C3</strong> ADVANCED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Operations Manager, O&amp;M Manager, Site Manager, Facility Manager—Transmission</td>
<td>- Safety Manager II</td>
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<tr>
<td><strong>B3</strong> ADVANCED</td>
<td><strong>C3</strong> ADVANCED</td>
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<tr>
<td>- Reliability Engineering Manager</td>
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<tr>
<td><strong>B3</strong> ADVANCED</td>
<td><strong>C3</strong> ADVANCED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Transmission Manager, Transmission &amp; Interconnection Manager, Transmission Operations Manager</td>
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</tbody>
</table>
Strategic Procurement Manager

DESCRIPTION
Lead and support the development of strategy for and the procurement of the key components that comprise projects and products, including energy Transmission solutions, tracking systems and other key technologies with a focus on energy Transmission. Perform technology evaluation that considers potential customers, financial structures, and strategic advantages; build specifications with the engineering teams; collaborate on project development and implementation. Maintain supplier relationships; conduct assessments of suppliers, maintain pricing roadmaps. Procure key components and create contracts with suppliers. Lead competitive RFP processes and manage contracting process. Interface with legal, development, engineering and construction on scope, specifications, testing, etc. Support projects and ongoing supplier management.

KNOWLEDGE/SKILLS
Knowledge of renewable energy industry, negotiations, contracting, quantitative and qualitative analysis.

REQUIREMENTS

Education/Training
Bachelor’s degree. MBA or MS degree preferred.

Experience
At least 3 years experience in the energy field; experience in negotiations and analysis.

POSITION REPORTS TO
Director, Energy Transmission

CAREER PATH MOVES FROM THIS ROLE
Director of Transmission Operations or Engineering or Construction or Project Manager on other green energy systems (i.e. Solar)
Transmission Line Engineer

Transmission Engineer, Electrical Power Engineer, Electrical Interconnection Engineer, Electrical Design Engineer

**DESCRIPTION**
Plan routes for power transmission and follow environmental regulations and laws to ensure the development does not encroach on protected land. Evaluate interconnection standards and transmission feasibility, system impact and facility studies or testing new electrical components or designs. Examine maps and GIS files to ensure that the topography is suitable for the new power system. Check for utilities to ensure proper planning. Look for environmental issues, potential engineering safety hazards, and logistical problems. Ensure maximum efficiency from the finished product. May also be on site during a building phase to watch for potential problems that may not have been obvious during the research phase. The role is a mix of office based research and reporting and construction supervision. May also include working on transmission and/or distribution systems.

**KNOWLEDGE/SKILLS**
Digital systems design, differential equations, electrical power circuits, power transmission.

**REQUIREMENTS**

**Education/Training**
Bachelor’s degree in electrical or electronics engineering or related field.

**Experience**
Ideally at least 2-3 years’ experience in energy transmission or distribution.

**Credentialing Required/Optional**
PE (Professional Engineer) This is not required for entry-level engineer roles but is required by some employers.

**POSITION REPORTS TO**
Engineering Manager

**CAREER PATH MOVES FROM THIS ROLE**
Senior Engineer or Lead Engineer
Planner—Renewable Energy

DESCRIPTION
Responsible for assessment and permitting of renewable energy facilities and associated storage and transmission infrastructure. Prepare proposals and provide direction for the development of environmental impact analysis documents, related technical studies, mitigation monitoring, exemptions/exclusions, and discretionary permit applications. Manage projects. Provide leadership for staff. Review field surveys and reports, cultural resources and geotechnical surveys and reports, air quality reports, wetland delineations (where applicable). Oversee preparation of environmental permit applications with various federal, state, and local agencies for a variety of project types/sizes.

KNOWLEDGE/SKILLS
NEPA practices and regulations. Environmental planning. Analysis of data/information, synthesis, and conclusion development. Writing various reports and documents. Constraint analysis. Developing mitigation measures. Reading and interpreting complex documents. Communication with varied groups, including leading meetings and presentations. Proficiency with MS Office suite (e.g., Microsoft Word, Microsoft Teams, Microsoft Project, Adobe Acrobat, Excel). Federal, state, and county permitting processes and applications. Federal and state habitat conservation planning programs.

REQUIREMENTS

Education/Training
Bachelor’s degree in environmental science or related field required. Masters degree preferred. Training/education in a technical field such as air quality, hazardous materials or environmental law a plus.

Experience
Minimum 7 years of applicable professional experience. Minimum 5 years of demonstrated project lead experience. Minimum 3 years in renewable or traditional energy. Experience with environmental permitting for large, utility-scale renewable energy projects.

Credentialing Required/Optional
Industry-specific training (specialized field surveys methods, NEPA courses), certifications (e.g., PWS, CWB®, AICP, HAZWOPER), or species-specific handling permits a plus.

POSITION REPORTS TO
Director Environmental Assessment, Permitting & Compliance

CAREER PATH MOVES FROM THIS ROLE
Director Environmental Assessment, Permitting & Compliance
High Voltage Technician

**DESCRIPTION**
Provide electrical transmission, high voltage (HV), collection system, and substation support and emergency response. Lead maintenance, service, and repair of HV assets in conjunction with other technicians and HV Reliability Engineers. Perform testing, repairs, switching, and construction activities. Provide technical expertise for start-up and initial operating activities. Maintain HV spare parts inventory and warehouse. Perform HV switching. Operate heavy machinery—trucks, forklifts, aerial lifts, and overhead cranes. Report on inspections and maintenance. Perform substation and transmission inspections in accordance with compliance requirements. Work closely with site Operations Managers to ensure day-to-day reliability. Serve as the first responder for emergency and routine repairs on HV equipment. Provide remote HV support to the HV Reliability Engineers for troubleshooting, testing, and proof checking. Ensure adherence to safety requirements. Write reports and use root cause analysis.

**KNOWLEDGE/SKILLS**
Medium and high voltage substation electrical equipment, collection systems, transmission design, and operations; power factor test sets, AC/DC hi-pots, low res ohm meters. Electronic communication systems (SCADA), Order to operate (OTO) and Lock-out Tag-out (LOTO) procedures.

**REQUIREMENTS**

**Education/Training**
HS Diploma or equivalent, plus continuing education in the electro-mechanical field. Valid driver’s license.

**Experience**
5+ years of relevant technical experience. Experience in power generation or distribution preferred.

**Credentialing Required/Optional**
Qualifications required to operate HV (high voltage) equipment.

**POSITION REPORTS TO**
High Voltage Operations Manager, Regional Operations Manager

**CAREER PATH MOVES FROM THIS ROLE**
HV Reliability Engineer or Transmission Engineer
Operations Specialist I

DESCRIPTION
Support day to day Reporting, Performance, and Monitoring (RPM) Center Transmission activities, acting as the on-shift Operations Specialist for assets in the portfolio. Involved in monitoring of plant and system processes. Operate electrical and SCADA systems. Monitor critical elements in a complex and regulated system. Implement real-time actions to ensure the stable and reliable operation. Comply with applicable NERC Reliability Standards and regional rules and tariffs. Monitor and analyze available market information to identify dispatching and trading opportunities. Analyze and evaluate energy transactions.

KNOWLEDGE/SKILLS
Transmission technician knowledge. Plant and system processes, Operation of electrical and SCADA systems, Functional systems interactions.

REQUIREMENTS

**Education/Training**
Bachelor’s degree or formal operations apprenticeship training or equivalent preferred.

**Experience**
Two years’ experience in Operations or in a Transmission Technician Role is preferred. Competent technical knowledge of plant and system processes, and experience in operating electrical and SCADA systems.

**Credentialing Required/Optional**
Must obtain NERC RC certification within 12-months.

POSITION REPORTS TO
Operations Manager or RPM Manager

CAREER PATH MOVES FROM THIS ROLE
Operations Specialist II
Power Distributor / Dispatcher
Control Center Operator, Power System Operator,
Electrical System Operator

DESCRIPTION
Control the systems that generate, control the flow, and distribute electric power between power generation sites to substations and distribute to users/customers. Read charts, meters, and gauges to monitor voltage and electricity flows. Check equipment and indicators to detect evidence of operating problems. Monitor complex controls and intricate machinery to ensure that everything is operating properly. Adjust controls to regulate the flow of power. Start or stop generators, and other equipment as necessary. In exercising control, monitor and operate current converters, voltage transformers, and circuit breakers over a network of transmission and distribution lines. Prepare and issue switching orders to route electrical currents around areas that need maintenance or repair. Detect and respond to emergencies, such as transformer or transmission line failures, which can cause cascading power outages over the network. May work with plant operators to troubleshoot electricity generation issues.

KNOWLEDGE/SKILLS
Mechanical and analytical skills. Science, and math, especially algebra and trigonometry. Controlling and operating electrical power distribution. Once hired, long-term on-the-job training and technical instruction. Several years of onsite training and experience necessary to become fully qualified. Regular refresher training and updates.

REQUIREMENTS
Education/Training
HS diploma or equivalent. College or vocational school degree preferred (technical, math or science field).

Experience
0-2 years in power system operations, power production, control center, related energy operations, or technical field.

Credentialing Required/Optional
Power plant operators, distributors, and dispatchers who are in positions which could affect the power grid may need to be certified through the North American Electric Reliability Corporation’s (NERC) System Operator Certification Program. PJM or other ISO Certifications, as required, or ability to obtain within 6 months.

POSITION REPORTS TO
Control Center Manager

CAREER PATH MOVES FROM THIS ROLE
Senior Control Center Operator, Control Center Manager, Power Marketing, Performance Management
Transmission Associate Technician
Mechanical Assistant

DESCRIPTION
Perform all preventive, scheduled, and unscheduled maintenance on mechanical equipment in safe & efficient manner. Read and follow work procedures, operation and maintenance instructions / manuals, blueprints and schematics. Provide assistance in troubleshooting, installing, replacing, and repairing transmission equipment and components. (This position is not qualified to independently perform Electrical technician work). Align machines and equipment, dismantle and move machinery / equipment. Perform work according to EHS practices, including LOTO procedures. Complete required reports and paperwork, including inputting information into a computer / device.

KNOWLEDGE/SKILLS
Mechanical / technical general skills. Strong mechanical aptitude. Comfortable working in confined spaces. Able to lift repeated weight up to 50 lbs.

REQUIREMENTS
Education/Training
High school diploma. Valid driver’s license.

Experience

POSITION REPORTS TO
Electrical Technician, Field Technician, Maintenance or Operations Manager

CAREER PATH MOVES FROM THIS ROLE
Mechanical Technician, Other Technician Roles
Transmission Technician
Field Service Specialist

DESCRIPTION
Perform all preventive, scheduled, and unscheduled maintenance on mechanical equipment in safe & efficient manner. Read and follow work procedures, operation and maintenance instructions / manuals, blueprints and schematics. Troubleshoot, install, replace and repair transmission equipment and components. Troubleshoot complicated mechanical, hydraulic, and electrical problems and performance maintenance with transmission equipment / facility. Perform some diagnostic/troubleshooting electrical and mechanical analysis and equipment inspections. Write reports and procedures. Assist with installation and commissioning. Provide training and direction to others. Follow Environmental, Health & Safety (EHS) procedures.

KNOWLEDGE/SKILLS
SCADA or transmission management system; Mechanical, hydraulic, and electrical knowledge for troubleshooting, repair, installation, commissioning; EHS practices; PCAT and FCAT commissioning, electrical test equipment; electrical and mechanical schematics, project management, team leadership, using hand tools.

REQUIREMENTS
Education/Training
Depending on Level: HS Diploma or GED, Assoc degree or diploma in electrical or mechanical field, technician or technical field.

Experience
Depending on level of Technician (I-IV), 2+ to 4+ years’ experience in construction, installation or commissioning, mechanical engineering helpful; maintenance experience. Preferably experience working around all levels of voltage.

Credentialing Required/Optional
Certified to perform commissioning on SCADA or transmission management system.

POSITION REPORTS TO
Engineer or Construction / Project / Commissioning Manager

CAREER PATH MOVES FROM THIS ROLE
Other Technician roles, Transmission Engineer, Construction Manager / Project Manager, Commissioning Manager
Analyst

DESCRIPTION
Perform regional energy transmission analysis to find regions with available transmission capacity for possible projects. Submit transmission requests to transmission providers. Analyze and comment on interconnection studies. Perform power flow analysis to estimate potential congestion and curtailment. Advise developers of potential transmission issues and make recommendations related to added project costs or upgrade requirements. Monitor regional transmission expansion activities. Make recommendations for strategic development based on transmission availability. Model and monitor transmission lines and services. Maximize revenue and efficiency for energy customers. Assist in the development of forecasts and pro-forma analyses.

KNOWLEDGE/SKILLS
Business analysis, power flow analysis, strategic business development, energy transmission. Knowledge of field applications is needed to translate the data to usable results and procedures for development and operations teams. Database structures, engineering calculations. Analyzing equipment performance and identifying performance issues using software tools. Performing calculations and collecting and analyzing data. Data analytics and statistics, building models.

REQUIREMENTS
Education/Training
Bachelor’s degree in engineering or technical discipline; Masters degree preferred.

Experience
3+ years in asset management and/or field operations. 3+ years’ experience in energy Transmission. Experience working with large data sets, conducting root cause analyses, and visualizing data in a variety of formats for identifying trends and outliers.

Credentialing Required/Optional
PE (Professional Engineer) a plus

POSITION REPORTS TO
Senior or Lead Analyst, Transmission Manager, Transmission Director

CAREER PATH MOVES FROM THIS ROLE
Senior or Lead Analyst, Transmission Manager, Project Manager
Electrical Engineer—Powerhouse, Substation or Relay

DESCRIPTION
Responsible for correct and safe performance of electrical equipment involved in Powerhouse, Substation or Relay – energy transmission. Support energization of new or modified equipment and testing activities. Direct phase-out activities and/or coordinate with appropriate personnel. Verify ready to start procedures are complete prior to energizing equipment. Coordinate with construction managers and operations managers on various new projects, upgrades, or modifications. Read electrical design documents and work with other personnel and vendors on maintaining energy transmission.

KNOWLEDGE/SKILLS
Control systems, protective relay systems, equipment inspection and test methods, electrical equipment, electrical engineering, reading schematics

REQUIREMENTS
Education/Training
Bachelor’s degree (engineering) preferred or equivalent combination of training & experience.

Experience
3-5 years’ experience replacing transmission line relays, writing up reports.

Credentialing Required/Optional
PE (Professional Engineer) preferred.

POSITION REPORTS TO
Transmission Manager, Transmission Director,
Engineering Manager

CAREER PATH MOVES FROM THIS ROLE
Senior Electrical Engineer,
Transmission Manager, Project Manager
High Voltage Reliability
Engineering Specialist

DESCRIPTION
Provide electrical transmission, high-voltage (HV), collection system, and substation support. Provide feedback regarding electrical design, engineering, testing, and construction. Support and coordinate commissioning, start-up, and initial operating activities. Optimize scheduled maintenance with consideration of fuel resources, weather, and reactive maintenance activities. Report problems and update activities in SAP. Maintain inventory, inspection, and calibration of all tooling and equipment. Manage spare parts inventory. Perform safe switching and grounding of HV equipment. Develop and implement site betterment projects. Support and coordinate electrical equipment maintenance at company facilities with LOTO and outage planning. Serve as an example to others of safe work practices. Perform equipment inspections and testing and store the reports in respective depository to ensure compliance with applicable standards. Perform emergency and routine repairs. Train subordinates and other field personnel.

KNOWLEDGE/SKILLS
Medium and high voltage substation electrical equipment including relay protection systems, collection systems, transmission designs and operations. MS Office, project software, SEL equipment. Relay and protection fundamentals. Operation of capacitor banks, transformer load tap changers, circuit breakers, and motor/manualy operated or disconnect switches.

REQUIREMENTS

Education/Training
Bachelor’s degree in Electrical Engineering or equivalent combination of training & experience.

Experience
5+ years relevant technical experience. Experience with power generation or distribution preferred. Experience establishing High Voltage field service preferred.

Credentialing Required/Optional
Qualifications to operate HV (high voltage) equipment.

POSITION REPORTS TO
High Voltage Operations Manager, Regional Operations Manager

CAREER PATH MOVES FROM THIS ROLE
High Voltage Operations Manager, Project Manager
Mechanical Engineer
Design Engineer, Product Engineer, Equipment Engineer

DESCRIPTION
Design, develop, analyze and test Transmission equipment and products. Design mechanical and electromechanical systems and components for Transmission projects. Develop technical engineering drawings and models. Verify and check project layouts and drawings. Outline materials needed based on engineering and quality standards. Create new and improve upon existing energy Transmission designs to improve efficiency and reliability, and to reduce costs.

KNOWLEDGE/SKILLS
Project management, design for manufacturability (DFM) principles, mechanical and electromechanical assemblies & mechanisms, Energy transmission, 3D cad modeling and drawing creation using SolidWorks software, product design, quality control.

REQUIREMENTS
Education/Training
BS in Engineering or higher degree

Experience
Experience with design of mechanical or electromechanical transmission assemblies and mechanisms. Ideally 3D cad modeling and variety of software.

Credentialing Required/Optional
May require engineering license, PE Professional engineer

POSITION REPORTS TO
Engineering Manager or Director

CAREER PATH MOVES FROM THIS ROLE
Engineering Manager or Director, Materials Scientist
Operations Specialist II

DESCRIPTION
Support day to day Reporting, Performance, and Monitoring (RPM) Center Transmission activities, acting as the on-shift Operations Specialist for assets in the portfolio. Involved in monitoring of plant and system processes. Operate electrical and SCADA systems. Monitor critical elements in a complex and regulated system. Implement real-time actions to ensure the stable and reliable operation. Comply with applicable NERC Reliability Standards and regional rules and tariffs. Monitor and analyze available market information to identify dispatching and trading opportunities. Analyze and evaluate energy transactions.

KNOWLEDGE/SKILLS
Transmission technician knowledge. Plant and system processes, Operation of electrical and SCADA systems, Functional systems interactions.

REQUIREMENTS
Education/Training
Bachelor’s degree or formal operations apprenticeship training or equivalent preferred.

Experience
3-4 years’ experience in Operations or in a Transmission Technician Role is preferred. Competent technical knowledge of plant and system processes, and experience in operating electrical and SCADA systems.

Credentialing Required/Optional
Must obtain NERC RC certification within 12-months.

POSITION REPORTS TO
Operations Manager or RPM Manager

CAREER PATH MOVES FROM THIS ROLE
Operations Manager or RPM Manager
Power and Transmission Scheduler

**DESCRIPTION**
Manage real-time operations including forecasting, scheduling of generation resources, scheduling of contract purchases and sales, real-time purchases and sales of energy/capacity and procurement and management of transmission resources. Monitor real-time transmission positions, analyze forecasts and market obligations to optimize transmission redirects, transmission purchases, and scheduling coordination. Record transactions in relevant deal capture system. Maintain summary of available transmission reservations; manage reservations including performing trans-assignments and redirects as needed. Coordinate with the control center to ensure proper real-time monitoring and alarming of key scheduling, tagging and transmission parameters. Work with analysts to develop tools that track and analyze current and anticipated transmission outages as well as forecasts.

**KNOWLEDGE/SKILLS**
Maintain understanding of the energy markets where Company assets are located and understand commercial practices as they relate to managing merchant power pricing and scheduling.

**REQUIREMENTS**

**Education/Training**
Bachelor’s degree preferred in technical / analytical field. Minimum HS diploma.

**Experience**
Minimum 1+ year of experience related to energy dispatch and/or hourly trading preferred. Recent college graduates with relevant technical / analytical field will be considered.

**POSITION REPORTS TO**
Scheduling Manager, Power Manager

**CAREER PATH MOVES FROM THIS ROLE**
Scheduling Manager, Control Center Supervisor, Remote Control Operator
Reliability Engineer

DESCRIPTION
Assess transmission technical performance and reliability. Identify opportunities for improvement, and recommend remediation actions for operations. Conduct failure mode and effect analysis, root cause assessments, equipment troubleshooting, and system impact studies. Support field operations by performing studies in response to major component and systemic equipment failures. Use information / data to evaluate the future risk to transmission lines.

KNOWLEDGE/SKILLS
Rotational, generational, and power converter equipment knowledge. Reading and understanding plans, specifications, drawings, and technical documents. Assessing performance and reliability. Conducting failure mode and effect analysis, root cause assessments, equipment troubleshooting, and system impact studies. Analyzing and synthesizing data.

REQUIREMENTS
Education/Training
Bachelor’s degree in mechanical, civil, or electrical engineering, OR demonstration of equivalent work experience is required as a minimum.

Experience
2-3 years’ experience in reliability or design engineering. Renewable energy power operations or Electric Utility operations preferred.

POSITION REPORTS TO
Engineering Manager

CAREER PATH MOVES FROM THIS ROLE
Engineering Manager, Project Manager
Safety Manager I

DESCRIPTION
Participate in planning, organizing and implementing safety programs for construction projects while ensuring compliance with federal, state and corporate environmental, health and safety regulations. Develop project specific HSE programs and procedures through interface and teamwork with Project / Operations management/supervisory personnel. Maintain Accountability Programs on all projects for safety-related issues and work with supervision to ensure uniform application of safety related discipline. Serve as a mentor to other HSE professionals. May be the lead safety manager on a small project. Coordinate and present safety training to support the company and client requirements. Participate in EHS project risk assessments. Assist with conducting accident, near miss, and damage investigations with Root Cause Analysis. With oversight, develop and monitor EHS performance, progress, preventive and corrective action plans.

KNOWLEDGE/SKILLS

REQUIREMENTS
Education/Training
High school diploma or GED.

Experience
Minimum of 1 year of construction safety management experience. Demonstrated ability to provide a high level of safety leadership to both management and technicians.

Credentialing Required/Optional
Certified Hygiene Safety Technician (CHST) preferred. CPR/First Aid certification.

POSITION REPORTS TO
EHS Senior Leadership or a Group/Senior Safety Manager

CAREER PATH MOVES FROM THIS ROLE
Senior Safety Manager, Safety Manager II
Safety Manager II

DESCRIPTION
Plan, organize and implement the company safety programs. Demonstrate management skills and the ability to manage all aspects of a project safety program. Develop project specific HSE programs and procedures through interface and teamwork with Project / Operations management/supervisory personnel. Maintain Accountability Programs on all projects for safety-related issues and work with supervision to ensure uniform application of safety related discipline. Be the lead safety manager on a project. Serve as a mentor and manage other direct report safety/EHS managers. Demonstrate skills of a Safety Manager III by progressively increasing responsibility and authority. Develop and facilitate EHS project risk assessments. Lead and conduct accident, near miss, and damage investigations with Root Cause Analysis. Develop and monitor EHS performance, progress, preventive and corrective action plans.

KNOWLEDGE/SKILLS

REQUIREMENTS
Education/Training
Associates / Bachelor’s degree.

Experience
Minimum of 3 years of construction experience managing safety. Demonstrated ability to provide a high level of safety leadership to both management and technicians.

Credentialing Required/Optional
Certified Hygiene Safety Technician (CHST) preferred. Or other BCSP certification preferred. Certification as an OSHA, MSHA. CPR/First Aid instructor preferred.

POSITION REPORTS TO
EHS Senior Leadership

CAREER PATH MOVES FROM THIS ROLE
EHS Senior Leadership
Director, Operations & Maintenance
Director O&M

DESCRIPTION
Manage overall strategic and operational activities for O&M projects in energy transmission. Manage scheduled and unscheduled maintenance work, out of scope transactional work and inspection work. Monitor subcontractors with regard to crane, mechanical, electrical and other work. Develop mid-term and long-term strategic plans for all O&M site operations. Include business plans, hiring strategies, development of strategic capabilities, and contributions to new site setup.

KNOWLEDGE/SKILLS
Strong business acumen, ability to run O&M projects as a business. Highly familiar with site management structure in the US for complex technical projects in the clean power industry. Strong knowledge and appreciation of the technical, commercial, and political aspects driving the energy transmission and renewables industry.
Director, Quality & Operations Support

DESCRIPTION
Standardize and strengthen the company’s quality, environmental, and health & safety approach. Contribute to the quality culture throughout the company. Develop, document, and implement technical documentation, training programs and quality policies to facilitate continuous improvement and the development of a solid QHSE framework. Ensure that subject matter experts review the project specifications, engineering design, and OEM requirements and identify all Quality Control requirements. Train others and manage project QC inspections and documentation to verify compliance with construction or operations Quality Plan(s). Ensure that projects and processes are in line with statutory obligations.

KNOWLEDGE/SKILLS
Business development, site assessments and quality checks. Setting scopes and cost bases for service contracts. Optimizing Operation IT programs, managing and administering subcontractors and partner contractors, conducting investigations, analyzing and reporting findings. Developing and monitoring quality performance. Preventative and corrective action plans.

REQUIREMENTS

Education/Training
Bachelor’s degree required. Master’s degree is preferred.

Experience
10+ years’ of management experience.

POSITION REPORTS TO
Vice President Operations, VP Transmission Business

CAREER PATH MOVES FROM THIS ROLE
Vice President Operations, VP Transmission Business
Director, Transmission

DESCRIPTION
Oversee regional transmission screening analysis to find regions with available transmission capacity for possible projects. Review power flow analysis to estimate potential congestion and curtailment. Advise developers of potential transmission issues and make recommendations related to added project costs or upgrade requirements. Coordinate project design, materials, and contract management for transmission projects. Monitor regional transmission expansion activities and make recommendations for transmission ownership and/or long-term transmission service rights on merchant transmission projects. Participate in the planning strategy for development, advising the team of transmission availability.

KNOWLEDGE/SKILLS
Laws and regulations related to Transmission. Transmission systems operation.

REQUIREMENTS
Education/Training
Bachelor’s or Master’s degree in Business or Energy Management.

Experience
10-15 years in the power industry; helpful to have related real estate sales, development or leasing.

POSITION REPORTS TO
Senior Director—Transmission or VP Operations

CAREER PATH MOVES FROM THIS ROLE
Senior Director—Transmission or VP Operations
Engineering Manager

DESCRIPTION
Provide engineering expertise and general support to the onsite operations and maintenance teams. Ensure there's a successful operations strategy. Implement processes and procedures. Lead and develop the engineering team to work on engineering solutions. Read and interpret documents such as operating and maintenance instructions, procedures manuals, blueprints and schematics. Write reports and correspondence. Solve complex problems in various situations. Make presentations to customers and at trade shows. Conduct root cause analysis and support troubleshooting, fault analysis and technical investigations. Lead development of upgrades. Ensure repairs are performed according to standards and procedures. Develop and implement strategic and tactical plans.

KNOWLEDGE/SKILLS
Engineering expertise. Implementing and advising on operations strategy. Implementing processes and procedures. Leading and developing people. Developing engineering solutions. Reading and interpreting documents such as operating and maintenance instructions, procedures manuals, blueprints and schematics. Writing reports and correspondence. Solving complex problems. Making presentations to customers and at trade shows. Conducting root cause analysis and technical investigations. Leading development of upgrades.

REQUIREMENTS
Education/Training
Bachelor’s degree in Electrical Engineering or related field.

Experience
Minimum of 3 years of transmission technical experience. Collaboration with and leadership of other teams. Experience with various equipment manufacturers, platforms, systems and components. Experience with system design and development of upgrades.

Credentialing Required/Optional
PE (Professional Engineer) certification may be required.

POSITION REPORTS TO
Director of Operations

CAREER PATH MOVES FROM THIS ROLE
Director of Operations, Project Manager
Operations Manager
Transmission & Interconnection Manager, Transmission Operations Manager

DESCRIPTION
Lead all aspects of electrical interconnection, delivery strategies, strategic transmission acquisition and analysis for company generation and transmission projects. Assess transmission opportunities, prepare and file interconnection documents and manage the Company’s overall transmission positions. The position will be responsible for analysis that informs the company’s view and forecast of congestion on various transmission systems. Track transmission projects and overall transmission development within the various markets. Assist Development, Regulatory, Construction, Engineering, Operations, and Dispatch teams with multiple aspects of project development, design and operation. Develop and maintain strong working knowledge of regional transmission systems and providers. Participate in and act as an advocate for the company and the industry in the transmission regulatory process.

KNOWLEDGE/SKILLS
Transmission systems. Construction and field experience. Developing power flow base cases and evaluating results. Leadership and technical experience in the power generation, renewable energy industry, electrical marine lines, military operations or related fields. Experience with mechanical and electrical troubleshooting and maintenance.

REQUIREMENTS
Education/Training
Bachelor’s degree in electrical engineering with emphasis on Power Systems is required. Thorough knowledge of FERC transmission tariffs and interconnection processes.

Experience
Minimum 4 years transmission and interconnection experience. Construction and field experience. Developing power flow base cases and evaluating results.

Credentialing Required/Optional
Professional Engineering (PE) Registration encouraged.

POSITION REPORTS TO
Director O&M (Operations & Maintenance), Regional Operations Manager, Asset Manager/Director

CAREER PATH MOVES FROM THIS ROLE
Director O&M (Operations & Maintenance), Regional Operations Manager, Asset Manager/Director, Director, Transmission
Reliability Engineering Manager

DESCRIPTION
Deliver reliability analytics to the organization. Provide leadership and expertise to the reliability team, which is responsible for development of the reliability analytics for installed energy components, new products under development, and quality issues in the field. Coordinate with other areas across the organization to develop reliability models that provide cost projections to assess and manage cost risk for transmission assets. And work cross-functionally to develop a strategy that supports risk management through reliability modeling. Track and trend reliability predictions compared against actuals and targets. Provide input in new product development through reliability modeling that may foster design trade-off decisions. Improve analytics tools to provide reliability insights specific to components, suppliers, and failure modes in order to properly develop and prioritize productivity & repairs projects.

KNOWLEDGE/SKILLS
Reliability modeling techniques and technologies, problem solving; Reliasoft, JMP, and/or SAS modeling software, R or Python programming language

REQUIREMENTS
Education/Training
Bachelor’s degree in Engineering, Physics, Chemistry, Mathematics, or Computer Science

Experience
Minimum 7 years’ experience, including technical and leadership experience. Transmission experience in design, installation, operation and maintenance.

POSITION REPORTS TO
Reliability Director, Head of Transmission

CAREER PATH MOVES FROM THIS ROLE
Reliability Director, Installation or Design Engineer
Transmission Manager

Transmission & Interconnection Manager, Transmission Operations Manager

DESCRIPTION
Lead all aspects of electrical interconnection, delivery strategies, strategic transmission acquisition and analysis for company generation and transmission projects. Assess transmission opportunities, prepare and file interconnection documents and manage the Company’s overall transmission positions. The position will be responsible for analysis that informs the company’s view and forecast of congestion on various transmission systems. Track transmission projects and overall transmission development within the various markets. Assist Development, Regulatory, Construction, Engineering, Operations, and Dispatch teams with multiple aspects of project development, design and operation. Develop and maintain strong working knowledge of regional transmission systems and providers. Participate in and act as an advocate for the company and the industry in the transmission regulatory process.

KNOWLEDGE/SKILLS

REQUIREMENTS

Education/Training
Minimum 4 years transmission and interconnection experience. Construction and field experience. Developing power flow base cases and evaluating results.

Experience
Bachelor’s degree in electrical engineering with emphasis on Power Systems is required. Thorough knowledge of FERC transmission tariffs and interconnection processes.

Credentialing Required/Optional
Professional Engineering (PE) Registration encouraged.

POSITION REPORTS TO
Director, Transmission

CAREER PATH MOVES FROM THIS ROLE
Director, Transmission; Director Operations & Maintenance
Commissioning Technician

**DESCRIPTION**
Work with team to perform required system inspections on utility energy Transmission. Perform visual and mechanical inspections and electrical testing to specifications of construction documents, prior to energization date. Document all inspection findings and test results, and communicate the findings and test results with Commissioning Lead. Document and assist with transmission system trouble shooting and corrective actions. Oversee third party testing and inspections. (Transformers, audits, cable tests, Fiber optics, etc.) Ensure site documentation is prepared for upcoming sites. Ensure proper use of PPE and conformity to safety procedures. Care for tools and report any missing or broken tools and needed supplies to Lead.

**KNOWLEDGE/SKILLS**
Transmission systems, use of multi-meter, reading and using electrical single-line and three-line diagrams, safe work practices, visual and mechanical inspections and electrical testing.

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**REQUIREMENTS**

**Education/Training**
HS Diploma or equivalent. Training in transmission systems preferred.

**Experience**
Minimum 1 year transmission installation experience.

**POSITION REPORTS TO**
Commissioning Manager

**CAREER PATH MOVES FROM THIS ROLE**
Commissioning Engineer
Construction Manager

DESCRIPTION
Responsible for directing, planning, and managing transmission construction project(s) on jobsite. Oversee all construction contracts within area of responsibility, and supported by Site Teams. Monitor and oversee construction activities and personnel. Keep Superintendent II and Construction Manager II informed of overall construction activity progress and performance. Monitor and review construction performance indicators. Manage construction package elements of procurement process. Follow all health and safety procedures.

KNOWLEDGE/SKILLS
Business development, transmission systems, estimating, construction management, electrical systems and SCADA, planning, procurement, health & safety, MS Office, reading and interpreting blueprints, procedures, government regulations, presentations to management and public groups, writing reports, managing construction crew, interpreting technical instructions using math, algebra & geometry.

REQUIREMENTS
Education/Training
Bachelor’s degree (BS) in Construction management, engineering or related field; equivalent combination of education and experience).

Experience
Three years of construction industry experience / knowledge of construction techniques, estimating and construction management.

POSITION REPORTS TO
Project Manager or Director of Transmission Projects

CAREER PATH MOVES FROM THIS ROLE
Construction Manager II or Project Manager or Superintendent
Electrical / Electronic Line Installer & Repairer

Journeyman Lineman—powerhouse, substation, relay (including lines & towers)

DESCRIPTION
Line installers and repairers install or repair electrical power systems, specifically working with power lines and towers on powerhouse, substation or relay. Install, maintain, or repair the power lines that move electricity. Identify defective devices, voltage regulators, transformers, and switches. Inspect and test power lines and auxiliary equipment. String power lines between poles, towers, and buildings. Climb poles and transmission towers and use truck-mounted buckets to get to equipment. Line workers face hazards on the job, including high-voltage electricity, and working at great heights. The work also can be physically demanding. Although most work full time during regular business hours, some work irregular hours on evenings, nights, weekends, and holidays when needed. Journeyman Linemen may supervise Apprentice Linemen.

KNOWLEDGE/SKILLS
Long-term on the job training. Repair or replace complex electrical lines and equipment. Electrical systems and the appropriate tools needed to fix and maintain them. Troubleshooting skills—must diagnose problems in increasingly complex electrical systems. Able to lift heavy tools, cables, and equipment on a regular basis.

REQUIREMENTS

Education/Training
HS Diploma; algebra and trigonometry. Technical knowledge of electricity or electronics from military service, vocational programs, or community colleges can also be helpful. Electrical trade school community college courses, or 2-year degree in electrical / electronics can be helpful.

Experience
None or Apprenticeship as Lineman before or just after job hire.

Credentialing Required/Optional
May require “Journeyman Lineman” credential.

POSITION REPORTS TO
Electrical Engineer Powerhouse, Substation or Relay (Transmission Line Engineer)

CAREER PATH MOVES FROM THIS ROLE
Electrical Engineer Powerhouse, Substation or Relay (Transmission Line Engineer)
Site Surveyor

DESCRIPTION
Perform miscellaneous duties across the project to include surveying, quality control, and scheduling. Survey and inspect site readiness and capabilities for projects. Conduct land title surveys, topographic surveys, boundary surveys, and construction-staking and as-built surveys. Prepare legal descriptions. Coordinate with crews and technicians. Perform quality control of field activities, project deliverables and related calculations.

KNOWLEDGE/SKILLS
Surveying, Quality Control, Calculations/Math, GIS & mapping, LIDAR, Auto-CAD.
Buyer
Procurement Specialist, Procurement Associate

DESCRIPTION
Provide commercial support to pre & post award projects and report to the assigned Procurement Manager or Director of Procurement. Prepare and issue RFP equipment packages to suppliers. Work with engineering to answer RFP questions. Receive and evaluate proposals. Negotiate pricing with suppliers. Work closely with engineering project management, scheduling, legal and insurance. Secure completed purchase requisition and purchase terms and conditions, and confirm final purchase order. Monitor, support and administer all issued purchase orders. Manage stakeholder & supplier interaction. Assist in schedule development for project proposals. Assist estimating with equipment scope and price.

KNOWLEDGE/SKILLS
Construction Manager II

DESCRIPTION
Responsible for directing, planning, and managing transmission construction project(s) on jobsite. Oversee all construction contracts within area of responsibility, and supported by Site Teams. Monitor and oversee construction activities and personnel. Keep Superintendent II and Construction Manager II informed of overall construction activity progress and performance. Monitor and review construction performance indicators. Manage construction package elements of procurement process. Follow all health and safety procedures.

KNOWLEDGE/SKILLS
Business development, transmission systems, estimating, construction management, electrical systems and SCADA, planning, procurement, health & safety, MS Office, reading and interpreting blueprints, procedures, government regulations, presentations to management and public groups, writing reports, managing construction crew, interpreting technical instructions using math, algebra & geometry.

REQUIREMENTS

Education/Training
Bachelor’s degree (BS) in Construction management, engineering or related field; equivalent combination of education and experience).

Experience
Five years in a supervisory role of construction industry including construction techniques, estimating and construction management.

POSITION REPORTS TO
Project Manager or Director of Transmission Projects

CAREER PATH MOVES FROM THIS ROLE
Construction Manager III or Project Manager or Superintendent
Commissioning Manager

DESCRIPTION
Oversee regional installation and commissioning operations from the transmission project kickoff through customer acceptance. Responsible for planning, checking, quality assurance, monitoring, evaluation, and preparation of commissioning reports to management. Staff, train, and manage transmission commissioning team personnel. Create guidelines and procedures to ensure all project activities are completed according to a standard process, project plan and budget. Conduct routine audits as necessary. Interact with engineering to troubleshoot any technical issues. Manage budgets.

KNOWLEDGE/SKILLS

REQUIREMENTS

Education/Training
Bachelor’s degree in electrical engineering, electronics engineering or technical related field and five to seven years of experience.

Experience
5-7 years’ experience with power generation equipment and commissioning procedures. Construction and commissioning experience in structural assembly, electrical protection and control systems related to the site work.

Credentialing Required/Optional
Optional: REP—Renewable Energy Professional and Certified Energy Manager from the Association of Energy Engineers (aeecenter.org)

POSITION REPORTS TO
Director, Transmission Commissioning; Director, Transmission

CAREER PATH MOVES FROM THIS ROLE
Project Manager—Commissioning, Director, Transmission Commissioning
Construction Manager III

DESCRIPTION
Responsible for directing, planning, and managing transmission construction project(s) on jobsite from inception to completion. Responsible for overall direction and evaluation. Oversee all construction contracts within area of responsibility, and supported by Site Teams. Monitor and oversee construction activities and personnel. Keep Superintendent II and Construction Manager II informed of overall construction activity progress and performance. Monitor and review construction performance indicators. Manage construction package elements of procurement process. Follow all health and safety procedures.

KNOWLEDGE/SKILLS
Business development, transmission systems, estimating, construction management, electrical systems and SCADA, planning, procurement, health & safety, MS Office, reading and interpreting blueprints, procedures, government regulations, presentations to management and public groups, writing reports, interpreting technical instructions using math, algebra & geometry, supervising construction crew, construction tools, machinery methods & procedures, forecasting for projects.

REQUIREMENTS
Education/Training
Bachelor’s degree (BS) in Construction management, engineering or related field; equivalent combination of education and experience).

Experience
Seven years in a supervisory role of construction industry including construction techniques, estimating and construction management.

POSITION REPORTS TO
Project Manager or Director of Transmission Projects

CAREER PATH MOVES FROM THIS ROLE
Director of Transmission Projects
Project Manager

DESCRIPTION
Manage transmission projects to ensure projects are completed within scope, on schedule, and within budget. Work closely with vendors and personnel to engineer, design, site, permit and construct assigned projects. Manage all aspects of projects including the coordination of regulatory approvals, and interface with regulators, local elected officials and town department managers. Ensure all aspects of projects are documented and completed according to company policies and all regulations and laws. Manage financial risk exposure and ensure timely communication and reporting with management including project scope, budget and schedule. Integrate and manage a cross-functional team to achieve project goals including the team’s development of a project plan, schedule, communication plan and control methodology. Manage the planning, engineering, siting/permitting, procurement, construction, commissioning and close out project phases. Manage execution of the project plan and project change control management. Coordinate development of project budget. Coordinate environmental assessment and the necessary regulatory approvals (federal, state and local) needed to begin construction. Mentor Associate Project Managers.

KNOWLEDGE/SKILLS

REQUIREMENTS
Education/Training
Bachelor’s degree in Engineering (preferred). Bachelor’s degree in Finance, Business or equivalent degree considered OR equivalent experience.

Experience
Minimum 5-10 years related experience. Experience with project management methodologies.

Credentialing Required/Optional
PE (Professional Engineer) and project management (PMP) certification are highly desirable.

POSITION REPORTS TO
Manager of Transmission Projects, Manager-Construction—Transmission

CAREER PATH MOVES FROM THIS ROLE
Manager of Transmission Projects, Manager-Construction—Transmission, Manager Commissioning
**Technical Trainer**

**Technical Instructor**

**DESCRIPTION**
Educate employees about energy transmission in various technical topic areas related to processes, equipment, environment, resources, etc. Facilitate classroom training and on the job coaching for businesses, colleges or learning providers. Continue to develop knowledge regarding changes and industry updates, and update training to reflect this. Use field experience to provide real-life scenarios and discussion. Develop training programs, guides, assignments and skill assessments/evaluations. Instruct training and conduct demonstrations on equipment. Supervise trainees in the safe use of equipment and walk-through of procedures. Assess skills, evaluate performance and monitor trainee progress. If applicable, develop relationships with other businesses to provide training experiences for students.

**KNOWLEDGE/SKILLS**
Training & communicating on technical topics. Developing training curriculum. Writing procedures and instructions. Creating successful learning environments, and developing variety of methods of teaching topics so students can learn in ways that work for them. Developing and using JPM’s (job performance measures). Evaluating / assessing skills.

**REQUIREMENTS**

**Education/Training**
Bachelor’s degree preferred, but may not be required.

**Experience**
Minimum 2 years in the topic area in which Trainer will be providing training.

**Credentialing Required/Optional**
Requirements for licensing and certification vary by state.

**POSITION REPORTS TO**
Training Manager

**CAREER PATH MOVES FROM THIS ROLE**
Training Manager, Operations Manager
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Center for Individual & Organizational Effectiveness (C4IOE.com)

Thank You to Research Contributors:

Acciona  GE Renewable Energy  Pattern Energy
Clearway Energy Group  IEA (International Energy Agency)  RWE Renewables
Deutsche Windtechnik  Martin Up Consulting  Wanzek
Duke Energy  Olsson

Additional Research Sources listed on following page.

For questions about this report, please contact Tom Vinson at tvinson@cleanpower.org
American Clean Power Occupations & Career Maps

Additional Research Sources:

BLS – Bureau of Labor Statistics
CANWEA “A Roadmap to Standardized Core Competencies for Wind Turbine Technician Training”
Department of Energy (DOE) https://www.energy.gov/eere/education/explore-clean-energy-careers-0
Energy Futures Initiative (EFI) https://energyfuturesinitiative.org
Get Renewable Energy Jobs http://www.getrenewableenergyjobs.com
Green Citizen https://greencitizen.com/renewable-energy-jobs/
Illinois Solar Energy Association https://www.illinoissolar.org/jobs
Indeed https://www.indeed.com
Interstate Renewable Energy Council (IREC) https://www.irecsolarcareermap.org
Job Descriptions previously compiled by American Clean Power (ACP)
LinkedIn https://www.linkedin.com
Midwest Renewable Energy Association (MREA) (solar) https://www.solarenergy.jobs
National Association of State Energy Officials (NASEO) https://www.naseo.org
NAICS/SOC codes
National Solar Jobs Census 2019, Washington, DC, February, https://www.thesolarfoundation.org/national/#:~:-text=As%20of%202019%2C%20the%20National,nationwide%20from%202018%20to%202019
US Energy Jobs https://www.usenergyjobs.org/
American Clean Power is the voice of companies from across the clean power sector that are powering America’s future, providing cost-effective solutions to the climate crisis while creating jobs, spurring massive investment in the U.S. economy and driving high-tech innovation across the nation. We are uniting the power of America’s renewable energy industry to advance our shared goals and to transform the U.S. power grid to a low-cost, reliable, and renewable power system. Learn more about the benefits clean power brings to America at www.cleanpower.org.