Great Lakes Energy – Fiber Pilot Job Description
ISP Network Engineer

Department: ISP Operations   **Last Updated:** 05/01/2018
Reports To: Manager, ISP Network Operations
Classifications:

X	Non-Bargaining Unit	X	Exempt		Supervisory		Senior Staff
	Bargaining Unit		Non-Exempt		Non-Supervisory Management		Executive Team

Supervises: n/a
Incumbent(s):   None

Job descriptions are subject to modification to reasonably accommodate individuals with disabilities, depending on risk to health and safety of the employee and/or others. The basic requirement of every position is to perform all tasks as assigned. Duties and scope of position may change based on needs of the Company. This document does not create an employment contract, implied or otherwise.

GLE staff members are required to work in a safe manner in accordance with regulatory standards and requirements and with the procedures listed in the Cooperative's Safety Handbook.

Efficient and cooperative work is required of staff, which includes regular, dependable, punctual attendance except when required by law, and timely and accurate performance of duties.

Position Summary:
Design and maintain ISP network systems and equipment necessary to deliver quality broadband service.

Experience/Education:
- High school diploma or equivalence certificate in addition to proficiency in ISP network architecture, typically attained through a Bachelor's degree in Computer Networks and Systems or related field and three or more years of experience, or equivalent education/experience.
- Proficiency with Local and Wide Area Networking equipment, Virtual Operating Systems, Hyper Converged Compute and Storage systems, Firewalls, Linux, Passive Optical Networks, and other related technologies.
- Proficiency with DNS, DHCP, IPAM, TCP, UDP, IPv4, IPv6, BGP, OSPF, Netflow, Syslog, SNMP, Radius, and other related protocols.
- Fundamental knowledge of the Open Systems Interconnection (OSI) model.
- Proficient with position-specific software and applications.
- Proficient with position specific equipment.
- Proficient with Microsoft Office: Outlook, Excel, Word
- Competent with general office equipment.

Essential Duties/Responsibilities:
- Under moderate supervision, maintain delivery of high quality broadband voice and data services over a passive optical network up to the outside plant (point of demarcation from ISP facilities) utilizing and installing a variety of optical and electrical interfaces. This includes the installation, construction, operation and break-fix remediation, with root cause analysis of equipment associated with Headend (HE), Central Offices (CO) and Customer Premise Equipment (CPE.), participating as assigned in an on-call rotation.

- Utilize performance tools to assess availability and performance of network and systems to maximize reliability.
- Maintain security of communication networks and systems including virtual operating systems and applications.
- Investigate and resolve customer network quality, reliability, and interference issues.
- Design and implement communication network connectivity for LAN and WAN connections, including documentation of network connections.
- Perform Head End (HE) and Central Office (CO) facility inspections; Ensure cabling, equipment installation, power and cooling is compliant with Company standards.
- Provide support to service representatives and other employees regarding customer network issues.
- Maintain required logs, records and other documentation compliant with Company, regulatory and legal requirements.
- Work with field design and home installation technicians to ensure timely, efficient, and proper installation and configuration of equipment and connection of customers to the network.

Significant Duties/Responsibilities:
- Function as a project team member as assigned, and occasionally as a project team lead.
- Support efforts to simplify and enhance the customer experience.

Working Conditions:
- Office environment with occasional field work
- Available for consultation at various times of the day and night

Required Skills:
- Ability to effectively read, write and speak the English language to communicate in a clear, straight-forward, and professional manner.
- Critical Thinking: using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Active Learning: understanding the implications of new information for both current and future problem-solving and decision-making.
- Complex Problem Solving: identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Coordination: adjusting actions in relation to others' actions.
- Service Orientation: actively looking for ways to help people.
- Monitoring: monitoring/assessing performance of oneself, other individuals, or organizations to make improvements or take corrective action.
- Judgment and Decision Making: considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Systems Analysis: determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Time Management: managing one's own time.
- Installation: installing equipment, machines, wiring, or programs to meet specifications.
- Troubleshooting: determining causes of operating errors and deciding what to do about it.
- Social Perceptiveness: being aware of others' reactions and understanding why they react as they do.
- Learning Strategies: selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

- Operation Monitoring: watching gauges, dials, or other indicators to make sure a machine is working properly.
- Quality Control Analysis: conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Systems Evaluation: identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- Operation and Control: controlling operations of equipment or systems.
- Equipment Maintenance: performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Equipment Selection: determining the kind of tools and equipment needed to do a job.
- Persuasion: persuading others to change their minds or behavior.
- Repairing: repairing machines or systems using the needed tools.
- Project Management: organizing and directing production of a limited scope plan or undertaking.
- Technology Design: generating or adapting equipment and technology to serve user needs.
- Operations Analysis: analyzing needs and product requirements to create a design.

Attributes:
- Oral Comprehension: able to listen to and understand information and ideas presented through spoken words and sentences.
- Speech Recognition: able to identify and understand the speech of another person.
- Spatial Orientation: able to know one's location in relation to the environment or to know where other objects are in relation to oneself.
- Near Vision: able to see details at close range (within a few feet of the observer).
- Visual Color Discrimination: able to match or detect differences between colors, including shades of color and brightness.
- Depth Perception: able to judge which of several objects is closer or farther away from oneself, or to judge the distance between oneself and an object.
- Peripheral Vision: able to see objects or movement of objects to one's side when the eyes are looking ahead.
- Glare Sensitivity: able to see objects in the presence of glare or bright lighting.
- Hearing Sensitivity: able to detect or tell the differences between sounds that vary in pitch and loudness.
- Sound Localization: able to tell the direction from which a sound originated.
- Auditory Attention: able to focus on a single source of sound in the presence of other distracting sounds.
- Time Sharing: able to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).
- Memorization: able to remember information such as words, numbers, pictures, and procedures.
- Selective Attention: able to concentrate on a task over a period of time without being distracted.
- Problem Sensitivity: able to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Deductive Reasoning: able to apply general rules to specific problems to produce answers that make sense.
- Inductive Reasoning: able to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
- Finger Dexterity: able to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.

- Manual Dexterity: able to quickly move hand, hand together with arm, or two hands to grasp, manipulate, or assemble objects.
- Multi-Limb Coordination: able to coordinate two or more limbs (i.e. arms, legs, one of each) while sitting, standing or lying down. Does not involve performing the activities while whole body is in motion.
- Wrist-Finger Speed: able to make fast, simple, repeated movements of the fingers, hands, and wrists.
- Gross Body Coordination: able to coordinate the movement of one's arms, legs, and torso together when the whole body is in motion.
- Arm-Hand Steadiness: able to keep hand and arm steady while moving arm or while holding arm and hand in one position.
- Mathematical Reasoning: able to choose the right mathematical methods or formulas to solve a problem.
- Number Facility: able to add, subtract, multiply, or divide quickly and correctly.
- Information Ordering: able to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- Category Flexibility: able to generate or use different sets of rules for combining or grouping things in different ways.
- Perceptual Speed: able to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.
- Flexibility of Closure: able to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.

Additional Preferences:
- Industry network certifications Cisco, Juniper, Extreme, Fortinet and Avaya hardware and software.

Problem Solving and Freedom to Act
Problems are complex and occasionally unique. Methods and procedures are loosely defined and may be unrelated to the work. Work is highly varied. Tasks may be unrelated.

Working Relationships/Communications:
Requires contacts for the purpose of negotiating agreements within defined limits, influencing others, resolving problems or gaining acceptance of information, programs, decisions, etc., which normally are of a non-controversial nature.

Internal: Peers, management
External: Peers, vendors, contractors, consultants, other electric cooperatives, other utilities, industry organizations