

## SUNFLOWER ELECTRIC POWER CORPORATION RESPONSIBILITY OUTLINE

Position Title	<b>Planning and Distribution Engineer I</b>	Date	<b>June 2015</b>
Department	<b>Transmission Engineering</b>	Pay Status	<b>Salaried</b>
Reports To	<b>Distribution Engineering Supervisor or VP Transmission Planning and Policy</b>	FLSA Category	<b>Exempt</b>
Function	<b>Transmission Planning &amp; Policy</b>	EEO Category	<b>2</b>
Location	<b>Great Bend</b>		

### **SUMMARY**

Perform professional engineering work, under the direction of the supervisor, to evaluate the transmission and distribution planning practices and procedures for Sunflower Electric Power Corporation and its Members. Provide appropriate support to achieve the lowest cost and most reliable and environmentally sound electric transmission and distribution possible.

### **ESSENTIAL RESPONSIBILITIES**

*Depending upon work assigned, incumbents will be required to perform some or all of the following responsibilities.*

#### **Planning**

Under direct supervision of senior engineers and supervisor:

Assist with performing required studies as assigned by the planning engineering supervisor to determine the optimum size, configuration, and timing of new transmission or distribution facilities or upgrades to existing facilities.

Assist with performing power-flow, short-circuit, reliability, and facility addition studies of Sunflower's and the Member's transmission and distribution system and interconnected transmission systems.

Assist with executing short-term and long-term work plans for Members systems and Sunflower transmission system.

Assist with performing distribution circuit analysis for loading, voltage, reactive power, reliability, balancing, and coordination.

Use computer modeling to assess system adequacy and to identify future needs for system improvements.

Assist with completing economic analyses to evaluate transmission or distribution upgrade and expansion alternatives. Work with others inside and outside of Sunflower to reach consensus on transmission upgrades, additions, and new interconnections. Issue engineering documents to communicate planning studies and conclusions.

Ensure compliance with North American Electric Reliability Corporation (NERC) Reliability Standards and Sunflower transmission planning criteria when completing studies. Participate in NERC and regional standards development and compliance activities. Assist with the representation of Sunflower's interest in committees or working groups associated with Southwest Power Pool, Inc. (SPP), NERC, Federal Energy Regulatory Commission (FERC), Cooperative Research Network (CRN), and other entities as applicable. Contribute to the activities related to development of SPP transmission expansion plans.

Assist with the coordination of joint activities and studies with other departments, functions, and companies; and participate in public workshops for future facilities.

### **Distribution**

Under direct supervision of senior engineers and supervisor:

Assist with preparing specifications, performing engineering analyses, preparing construction standards, evaluating materials, and determining solutions affecting the electric distribution system to properly serve new loads.

Assist with ensuring efficient, reliable, and safe operation of the transmission and distribution systems and resolve technical issues affecting the Members' distribution and Sunflower's transmission systems.

Assist with performing distribution circuit analysis for loading, voltage, reactive power, reliability, balancing, and coordination.

Assist with performing economic analyses to evaluate transmission or distribution upgrade and expansion alternatives.

Assist with the designing of various electrical systems of moderate size and complexity and applying code standards to ensure compliance with regulatory requirements.

Assist with providing energy auditing services and energy efficiency efforts as directed by the Member systems.

Assist Members with distribution project designs, system planning studies, coordination studies, voltage studies, power quality investigations, project evaluations, estimates, staking, acquiring easements, project recordkeeping, and contractor oversight.

Assist with maintaining electric system simulation distribution models with up-to-date topologies and loads.

Assist with developing system distribution load and generation forecast for the near-term and the long-term.

Begin to maintain, develop, and understand distribution and substation technical design, construction, and operating standards per National Electric Safety Code (NESC), American National Standards Institute (ANSI), Rural Utilities Service (RUS), etc.

## **Transmission Engineering Support**

Assist with collecting, organizing, and analyzing information and coordinate with other departments to decide the scope of work for approved projects, programs, modifications, and upgrades. Assist with providing technical support for design modification and installation of electrical distribution.

Assist with obtaining and maintaining system data and computer programs necessary to provide required information for relay, fuses, recloser, and breaker coordination on the transmission and Members' distribution systems.

Assist with providing technical support for distribution operations as well as maintenance practices and procedures. Assist with technical analysis, consultation, and project management for distribution projects.

## **Safety**

With a positive attitude toward personal and coworker safety, Sunflower employees will maintain the highest level of responsibility and accountability in compliance with all safety policies, practices and procedures to ensure a safe working environment. This includes properly maintaining and caring for applicable safety gear and equipment; identifying, correcting or assisting in resolving safety concerns, including communicating all hazardous conditions; reporting all injuries and near misses immediately to appropriate personnel; and understanding and complying with the Clearance Procedure as applicable.

## **Culture**

Demonstrate a commitment to Sunflower's culture and core values of technical competency, respect and dignity, accountability, integrity, trustworthiness, and servant leadership to empower or otherwise enable others to optimally perform their job responsibilities. Demonstrate and promote ethics and behaviors consistent with Sunflower's culture, Board policies, and business practices. Understand and fulfill the role and responsibility for all compliance programs within the company.

## **Other Responsibilities**

Assist with the preparation and review of job cost estimates and the tracking of financial progress of projects.

Assist with providing support for contract development.

Assist in managing outage or storm restoration efforts on Members' distribution systems or Sunflower's transmission system.

Assist with overseeing complex projects through completion.

As assigned or required to support Sunflower's mission and operations.

## **QUALIFICATIONS**

### **Certifications and Licenses**

Passing grade on the Fundamental Engineering Exam preferred.

## **Education and Experience**

Bachelor degree in electrical engineering from an ABET accredited institution, preferably with an emphasis in power system courses and/or related engineering internship or co-op work.

## **Knowledge, Skills, Abilities**

Understand the practical application of electrical engineering and technology including applying systems, principles, techniques, and procedures to transmission and distribution planning studies.

Able to assist in preparing budgets and estimates as well as maintaining financial tracking.

Able to acquire strong project management skills.

Able to develop and maintain current knowledge base of transmission or distribution planning techniques and requirements and the proper application in preparing and delivering transmission or distribution planning studies.

Basic knowledge of design techniques and equipment requirements relative to proper design, operation, and maintenance of transmission or distribution lines, substations, and switching stations.

Become proficient in understanding distribution and transmission system criteria and assist the team with ideas to improve and maintain distribution or transmission system reliability.

Able to learn to use current software like PSS/E, PSLF, WindMil, SynerGEE, etc.as it relates to the assigned task.

Able to develop and maintain current understanding of the regulatory environmental requirements pertaining to operation and maintenance of Sunflower's transmission or as it applies to Member distribution systems.

Basic knowledge of one-line diagrams; control schematics; as-built documents; vendor drawings; contracts; specifications; service agreements; and other records or documents pertaining to systems, projects and programs, system modifications or upgrades, and such other areas as assigned.

Able to acquire leadership, and coaching skills and abilities.

Sound organizational and time management skills.

Written, verbal, and interpersonal communication skills at the level required to successfully perform the essential responsibilities of the position.

Able to operate computers and associated programs, including AutoCAD, at the level required to successfully perform the essential responsibilities of the position.

Knowledge of design and construction techniques and practices is preferred.

## **Other**

Must possess and maintain a valid driver's license.

Able to travel to all Sunflower sites and attend training and meetings in state and out of state as needed.

**Physical and Mental Demands**

See Physical and Mental requirements section below.

This outline is not all inclusive but rather serves as a general overview of the current business needs. Experience guidelines are not the sole basis for awarding this position and substitutions may be made as they relate to the essential functions, duties, and responsibilities of this position.

## PHYSICAL AND MENTAL REQUIREMENTS

**Position:** Planning and Distribution Engineer I

**Date:** June 2015

### Physical Tasks and Exposure

For the following, indicate if the task or exposure during a typical shift is:

**O** = Occasional (<10% of time); **S** = Sometimes (26-50%); **F** = Frequently (51-75%); **R** = Regularly (>75%)

O	S	F	R	Task/Exposure	O	S	F	R	Task/Exposure
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standing					Lifting/Lowing:
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Walking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10 pounds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Climbing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11-30 pounds
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bending	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31-50 pounds
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crouching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	51-75 pounds
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Twisting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	>75 pounds
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reaching above					Carrying:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Heights					<10 pounds
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Confined spaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11-30 pounds
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Variable Weather	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31-50 pounds
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	51-75 pounds
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Heat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	>75 pounds
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dampness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pushing/Pulling:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Noise					<10 pounds
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dust/Dirt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11-30 pounds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ionizing radiation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31-50 pounds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chemicals—skin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	51-75 pounds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chemicals—lungs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	>75 pounds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Repetitive—wrist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Repetitive—elbow					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: _____					

Comments:

### Audio-Visual

For the following, check if essential to the position

- Hearing: Must be able to hear others when in the field.
- Vision: Read prints, computer screens, specifications, testing procedures, etc.
- Color discrimination:
- Depth perception: To avoid contact with energized equipment.
- Other:

### Mental Requirements

For the following, check if essential to the position

- Sense of urgency
- Works alone
- Concentration
- Repetition
- Other:
- Multiple tasks
- Independent judgement
- Proper reasoning

**Other**

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For the following, check if essential to the position

\*NOTE "Physical Capacity Profile or Physical"

**Physical Capacity Profile**

Level 1

Level 2

Level 3

Level 4

Level 5

Chest X-Ray

Spirometry

Color

Audiogram

Physical (Non-DOT)

Physical (DOT)