

**APPLICATION OF SOUTHWESTERN PUBLIC SERVICE  
COMPANY TO AMEND A CERTIFICATE OF  
CONVENIENCE AND NECESSITY FOR A PROPOSED 115-  
KV TRANSMISSION LINE WITHIN YOAKUM COUNTY  
(MUSTANG TO SHELL CO2)**

**DOCKET NO. 47585**

*Submit seven (7) copies of the application and all attachments supporting the application. If the application is being filed pursuant to P.U.C. SUBST. R. 25.101(b)(3)(D) or P.U.C. Subst. R. 25.174, include in the application all direct testimony. The application and other necessary documents shall be submitted to:*

**Public Utility Commission of Texas  
Attn: Filing Clerk  
1701 N. Congress Ave.  
Austin, Texas 78711-3326**

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Transmission Line**

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- 1. Applicant:** Southwestern Public Service Company  
Certificate Number: 30153  
Street Address: 790 South Buchanan Street  
Mailing Address: Amarillo, TX 79101
  
- 2. Please identify all entities that will hold an ownership interest or an investment interest in the proposed project but which are not subject to the Commission's jurisdiction.**  
N/A
  
- 3. Person to Contact:** James M. Bagley  
Title/Position: Manager, Regulatory Administration  
Phone Number: 806-378-2868  
Mailing Address: 790 South Buchanan Street  
Amarillo, TX 79101  
Email Address: [James.Bagley@xcelenergy.com](mailto:James.Bagley@xcelenergy.com)

**Alternate Contact:** Tiffany Graves  
Title/Position: Associate Project Manager  
Phone Number: 806-378-2749  
Mailing Address: 790 South Buchanan Street  
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[Tiffany.A.Graves@xcelenergy.com](mailto:Tiffany.A.Graves@xcelenergy.com)

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**4. Project Description:**

*Name or Designation of Project:*

SOUTHWESTERN PUBLIC SERVICE COMPANY'S APPLICATION TO AMEND A CERTIFICATE OF CONVENIENCE AND NECESSITY FOR A PROPOSED 115-kV TRANSMISSION LINE WITHIN YOAKUM COUNTY (MUSTANG TO SHELL CO2).

*Provide a general description of the project, including the design voltage rating (kV), the operating voltage (kV), the CREZ Zone(s) (if any) where the project is located (all or in part), any substations and/or substation reactive compensation constructed as part of the project, and any series elements such as sectionalizing switching devices, series line compensation, etc. For HVDC transmission lines, the converter stations should be considered to be project components and should be addressed in the project description.*

Southwestern Public Service Company ("SPS"), a subsidiary of Xcel Energy Inc., is proposing to construct and operate a single circuit, 115-kilovolt ("kV") electric transmission line between the existing Mustang Substation and the existing Shell CO2 Substation, both located in Yoakum County, Texas ("Proposed Project"). This application for the Proposed Project will hereinafter be referred to as the "Application."

The Proposed Project will involve the construction of a new 115-kV transmission line, which will originate at the existing Mustang Substation, located approximately 0.68 mile northeast of the intersection of County Road ("CR") 390 and CR 355, approximately five miles east of Denver City, Texas. The Proposed Project will terminate at the existing Shell CO2 Substation, located approximately 0.28 mile north-northeast of the intersection of FM 1939 and State Highway 214 and 2.5 miles north of Denver City, Texas in Yoakum County.

The Mustang Substation will have a fifth 115-kV breaker and a half bay added to the south of the 115-kV bus for the new 115-kV line. The existing Shell CO2 Substation will be reconfigured to a ring bus configuration with transformers tapped off of the main 115-kV bus. The Southwest Power Pool ("SPP") issued a Notification to Construct ("NTC") for this project, which included specific endpoints of the existing Mustang Substation and the existing Shell CO2 Substation.

SPS is proposing one route for the Proposed Project. All directly affected landowners whose land will be crossed by the proposed transmission line have provided written agreement to the proposed route. All but one of the directly affected landowners whose land is not crossed by the proposed route, but have habitable structures within 300 feet of the proposed route have provided written agreement, as evidenced by the written affidavits and easement provided as Attachment 2 to this Application. One landowner with a habitable structure within 292.6 feet of the proposed transmission line is unwilling to sign an affidavit agreeing to the route without payment, which is inappropriate in this instance. This landowner is being sent notice of this Application, along with all of the directly affected landowners, on the date of this filing of this Application.

**Refer to Figure Nos. 3-2 and 5-1 of the Mustang Substation to Shell CO2 Substation 115-kV Transmission Line Proposed Project Environmental Assessment and Route Analysis, Yoakum and Gaines Counties, Texas ("EA/Routing Study"), Attachment 1, for the route maps, which show the proposed route.**

**Refer to Attachment 9 for the proposed route description.**

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The proposed 115-kV transmission line will be constructed utilizing primarily single-circuit, single-pole steel structures, which require a smaller surface area than H-frame structures and eliminate the need for guy wires for corner structures. The proposed 115-kV transmission line will be constructed with double circuit capability for the first approximately 3300 feet, west and south of the Mustang Substation, in preparation for future development. The proposed transmission line will be constructed entirely on new right-of-way ("ROW") with a proposed easement width of 70 feet. In some circumstances, a wider easement may be necessary, but these locations and easement widths cannot be determined until the route is approved by the Public Utility Commission of Texas ("Commission") and surveyed.

*Design Voltage Rating (kV):* 115 kV

*Operating Voltage Rating (kV):* 115 kV

*Normal Peak Operating Current Rating (A):* 1385 amps

*If the project will be owned by more than one party, briefly we ownership arrangements between the parties and provide a description of the portion(s) that will be owned by each party. Provide a description of the responsibilities of each party for implementing the project (design, Right-Of-Way acquisition, material procurement, construction, etc.).*

SPS will own 100% of the Proposed Project.

*If applicable, identify and explain any deviation in transmission project components from the original transmission specifications as previously approved by the Commission or recommended by a PURA §39.151 organization.*

- Not applicable.

### 5. Conductor and Structures:

*Conductor Size and Type:*

The conductor will be 477 kCMIL, aluminum conductor steel supported ("ACSS"), 26/7 stranded, code name HAWK. One AFL Optical Ground Wire will provide the static protection.

*Number of conductors per phase:* 1 (one)

*Continuous Summer Static Current Rating (A):* 1385 Amps

*Continuous Summer Static Line Capacity at Operating Voltage (MVA):* 276 MVA

*Continuous Summer Static Line Capacity at Design Voltage (MVA):* 276 MVA

*Type and composition of Structures:*

SPS proposes to construct the 115-kV transmission line using single-circuit, self-supporting steel single pole structures within new ROW. SPS also proposes to use structures that are double circuit capable for the first approximately 3300 feet of the line, west and south of the Mustang Substation. SPS proposes to use direct embedment for tangent structures and drilled pier foundations for structures at dead-end and high angle locations. Typical heights are shown on the structure drawings (Attachment 3) and actual heights are dependent on the clearance requirements to be determined. Highway crossings will utilize structures with heights greater than the minimum heights required by the Texas Department of Transportation ("TxDOT") and/or the National Electric Safety Code ("NESC").

*Height of Typical Structures:*

The typical heights for these structures are between 80 and 140 feet.

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*Explain why these structures were selected; include such factors as landowner preference, engineering considerations, and costs comparisons to alternate structures that were considered. Provide dimensional drawings of the typical structures to be used in the project.*

SPS proposes the use of single-pole steel structures as the standard structure type for the Proposed Project rather than H-frame structures for reasons including: the amount of oil and gas development and associated infrastructure in the area; existing water wells; existing electric distribution lines; existing steel surface lines; and existing electric transmission lines. Benefits of utilizing single-pole steel structures are that the structures require less space than H-frame structures and typically do not require guy wires, both of which result in smaller physical and visual footprints as well as reduce complications in routing through existing development.

**Refer to Attachment 3 for the following structure drawings:**

- A typical 115-kV single-circuit steel Delta Davit Arms Tangent Structure is shown on SPS drawing SD-T60-1283.
- A typical 115-kV double-circuit steel Tangent is shown on SPS drawing SD-T0-190.
- A typical 115-kV single-circuit steel Delta Running Angle Structure on is shown on SPS drawing SD-T60-1286.
- A typical 115-kV single-circuit steel In-line Non-Terminal Deadend Structure is shown on SPS drawing SD-T60-1294.
- A typical 115-kV single-circuit steel Deadend Structure is shown on SPS drawing SD-T60-1298.

*For joint applications, provide and separately identify the above-required information regarding structures for the portion(s) of the project owned by each applicant.*

- Not applicable.

**6. Right-of-way:**

<i>Miles of Right-of-Way:</i>	Approximately 9 miles
<i>Miles of Circuit:</i>	Approximately 9 miles
<i>Width of Right-of-Way:</i>	70 feet; wider in some circumstances
<i>Percent of Right-of-Way Acquired:</i>	47% (GSEC Easement)

In addition to the typical 70 foot easement, SPS will purchase a 30 foot easement for temporary work space adjacent to the permanent easement that will be used during construction to allow for a larger work area during construction. The 30 feet of temporary work space will be released after construction is complete. Additionally, where possible, SPS will purchase, on a temporary basis, an additional 100 ft. x 300 ft. temporary easement for each angle that is 45 degrees or more to ensure enough room for construction.

*Provide a brief description of the area traversed by the transmission line. Include a description of the general land uses in the area and the type of terrain crossed by the line.*

The study area is located within the Southern High Plains Physiographic Province. This province is located west of the North-Central Plains Province and is bounded to the south by the Edwards Plateau and Basin and Range provinces. This region is described as flat with playa lakes and local dune fields. Elevations within the Southern High Plains region range from 2,200 feet to 3,800 feet above mean sea level (“amsl”) (BEG 1996). Within the study area, elevations typically range

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between 3,480 and 3,600 feet amsl with elevations increasing to the north and west (BEG 1974, 1976). The land use is predominantly rural, with numerous oil and gas fields, agricultural cropland with prominent pivot irrigation, extensive oil and gas developments and some residential and commercial/industrial developments.

**7. Substations or Switching Stations:**

*List the name of all existing HVDC converter stations, substations or switching stations that will be associated with the new transmission line. Provide documentation showing that the owner(s) of the existing HVDC converter stations, substations and/or switching stations have agreed to the installation of the required project facilities.*

- Mustang Substation.

This substation is owned by SPS.

- Shell CO2 Substation.

This substation is co-owned by SPS and Occidental Permian Ltd. SPS owns the transmission facilities within the substation. Occidental Permian Ltd. owns the distribution facilities within the substation.

*For joint applications, provide and separately identify the above-required information for each route for the portion(s) of the project owned by each applicant.*

- Not applicable.

*List the name of all new HVDC converter stations, substations or switching stations that will be associated with the new transmission line. Provide documentation showing that the owner(s) of the new HVDC converter stations, substations and/or switching stations have agreed to the installation of the required project facilities.*

- Not applicable.

**8. Estimated Schedule:**

<u>Estimated Dates of:</u>	<u>Start</u>	<u>Completion</u>
Right-of-way and Land Acquisition	Following CCN approval	12 months following CCN approval
Engineering and Design	Ongoing	8 weeks before construction
Material and Equipment Procurement	Following CCN approval	6 weeks before construction
Construction of Facilities	As ROW is acquired	9 months following ROW acquisition
Energize Facilities	Following completion of construction	Within 30 days of completion of construction

**9. Counties:**

*For each route, list all counties in which the route is to be constructed.*

The proposed route is located in Yoakum County, Texas.

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**10. Municipalities:**

*For each route, list all municipalities in which the route is to be constructed.*

The proposed route does not cross through any Texas municipality.

*For each applicant, attach a copy of the franchise, permit or other evidence of the city's consent held by the utility, if necessary or applicable. If franchise, permit, or other evidence of the city's consent has been previously filed, provide only the docket number of the application in which the consent was filed. Each applicant should provide this information only for the portion(s) of the project which will be owned by the applicant.*

**11. Affected Utilities:**

*Identify any other electric utility served by or connected to facilities in this application.*

- Golden Spread Electric Cooperative, Inc. ("GSEC").

*Describe how any other electric utility will be affected and the extent of the other utilities' involvement in the construction of this project. Include any other electric utilities whose existing facilities will be utilized for the project (vacant circuit positions, ROW, substation sites and/or equipment, etc.) and provide documentation showing that the owner(s) of the existing facilities have agreed to the installation of the required project facilities.*

The addition of the proposed line will increase SPS's system reliability and capacity, which will in turn benefit GSEC because they will be able to serve additional load in their service area from their own generation resources. Because SPS owns the substation affected by the Proposed Project that is located adjacent to GSEC's property, GSEC will not be directly involved in the construction of facilities proposed under this Application. SPS will coordinate with GSEC as necessary during construction to minimize any impacts to the GSEC Mustang Plant adjacent to the Mustang Substation.

**12. Financing:**

*Describe the method of financing this project. For each applicant that is to be reimbursed for all or a portion of this project, identify the source and amount of the reimbursement (actual amount if known, estimated amount otherwise) and the portion(s) of the project for which the reimbursement will be made.*

The Proposed Project will be financed through internally generated funds.

**13. Estimated Costs:**

*Provide cost estimates for each route of the proposed project using the following table. Provide a breakdown of "Other" costs by major cost category and amount. Provide the information for each route in an attachment to this application.*

Refer to Attachment 4 for the estimated cost table, which details the costs for this project. The estimated total cost is \$20,249,351, consisting of \$9,277,316 for transmission facilities and \$10,972,035 for substation facilities.

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*For joint applications, provide and separately identify the above-required information for the portion(s) of the project owned by each applicant.*

- Not applicable.

**14. Need for the Proposed Project:**

*For a standard application, describe the need for the construction and state how the proposed project will address the need. Describe the existing transmission system and conditions addressed by this application. For projects that are planned to accommodate load growth, provide historical load data and load projections for at least five years. For projects to accommodate load growth or to address reliability issues, provide a description of the steady state load flow analysis that justifies the project. For interconnection projects, provide any documentation from a transmission service customer, generator, transmission service provider, or other entity to establish that the proposed facilities are needed. For projects related to a Competitive Renewable Energy Zone, the foregoing requirements are not necessary; the applicant need only provide a specific reference to the pertinent portion(s) of an appropriate commission order specifying that the facilities are needed. For all projects, provide any documentation of the review and recommendation of a PURA §39.151 organization.*

The Proposed Project will connect the existing Mustang Substation to the existing Shell CO2 Substation, both in Yoakum County, Texas. The Mustang Substation connects to GSEC's Mustang Plant and to the Denver City 115-kV Substation and Seagraves 115-kV Substation along with the Amoco Wasson, Seminole, and Yoakum 230-kV Substations. The Shell CO2 115-kV Substation connects to the Denver City 115-kV Substation and the Yoakum 115-kV Substation. The proposed transmission line was identified as a reliability project by the SPP's Aggregate Facility Study Report ("AFS") SPP-2011-AG3-AFS-11 dated December 18, 2013. This AFS studied a total of 745 MW of long-term transmission service requests, and in particular identified potential system problems and potential modifications necessary to facilitate these transmission service requests while maintaining or improving system reliability. Of the 745 MW of long term service requests, 175 MW was requested by GSEC for transmission service from their Mustang Plant. The Proposed Project was identified as needed for reliability to address the overload issues of the Denver City-Mustang Substation 115-kV Circuit #1 transmission line, which could occur during the outage of the Denver City-Mustang Substation 115-kV line Circuit #2 transmission line.

SPP issued an NTC letter to SPS based on the results of the AFS report. The NTC letter identifies Project ID number 30510 and Network Upgrade ID number 50637, which directs SPS to build a 115-kV transmission line from the Mustang Substation to the Shell CO2 Substation, and install necessary terminal equipment at both Mustang Substation and Shell CO2 Substation. Please refer to Attachment 6 for a copy of the NTC letter.

Please refer to Attachment 5 for a copy of the SPP-2011-AG3-AFS-11 Aggregate Study Report.

Please refer to Attachment 6 for a copy of the SPP NTC Letter.

Please refer to Attachment 7 for a copy of SPS's letter accepting the SPP NTC Letter.

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### Existing Transmission System

The existing transmission system in the SPS Yoakum-Gaines Co. Service Area consists of 116 miles of 230-kV transmission lines, 240 miles of 115-kV transmission lines, and 151 miles of 69-kV transmission lines. The SPS Yoakum-Gaines Co. Service Area is connected to the generating system, which in material part includes the gas-fired Hobbs Plant to the west (owned by Lea Power Partners), the gas-fired Mustang Plant to the south within Yoakum County (owned by GSEC), the gas-fired Plant X to the north, and the gas-fired Jones Plant to the east. The total 2016 Summer Capacity of the Hobbs, Plant-X and the Jones Plants is approximately 1768 MW.

The Mustang, Seminole, Sundown and Yoakum Substations are interconnected by 230-kV transmission lines. The Mustang, Denver City, Gaines, Seminole, Legacy, Yoakum, Seagraves, Shell CO2, and Doss Substations are interconnected by looped 115-kV lines, which serve the customers in the Yoakum-Gaines Co. service area at both the 115- and 69-kV levels.

### 15. Alternatives to Project:

*For a standard application, describe alternatives to the construction of this project (not routing options). Include an analysis of distribution alternatives, upgrading voltage or bundling of conductors of existing facilities, adding transformers, and for utilities that have not unbundled, distributed generation as alternatives to the project. Explain how the project overcomes the insufficiencies of the other options that were considered.*

The NTC for the Proposed Project is a request for transmission service. Therefore, no lower voltage solutions would be capable of meeting the requirements of the NTC.

SPP conducts studies to determine whether reliability issues exist within the transmission system and whether or not additional transmission lines or upgrades to existing transmission lines are needed. SPS also conducts studies to determine if firm transmission service can be sold on the system and if any reliability upgrades are needed to provide that service while maintaining or improving system reliability. In the process of conducting its analysis, SPP determines what projects will be included in NTCs issued to utilities. SPS and other Load Serving Entities provided SPP with load forecasts for use in the SPP-2011-AG3-AFS-11 study.

A result of SPP's analysis was that the Proposed Project was needed for reliability purposes to mitigate overload issues of the Denver City-Mustang Substation 115-kV Circuit #1 transmission line, which could occur during the outage of the Denver City-Mustang Substation 115-kV line Circuit #2 transmission line. The study methodology is discussed in the study methodology section of the AFS Report (Attachment 5) and the results are discussed in the study results section and Table 4: Upgrade Requirements and Solutions Needed to Provide Transmission Service for the Aggregate Study in Appendix A. Table 4 of Attachment 5 lists the projects identified in the AFS Report.

Distribution alternatives were not considered because the Proposed Project is a transmission solution to a transmission service request. Moreover, no other alternatives such as higher voltage projects, bundling of conductors of existing facilities, or adding transformers were selected by SPP as meeting their requirements for the requested transmission service.

### 16. Schematic or Diagram:

*For a standard application, provide a schematic or diagram of the applicant's transmission system in the proximate area of the project. Show the location and voltage of existing*

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*transmission lines and substations, and the location of the construction. Locate any taps, ties, meter points, or other facilities involving other utilities on the system schematic.*

**Refer to Attachment 9.**

**17. Routing Study:**

*Provide a brief summary of the routing study that includes a description of the process of selecting the study area, identifying routing constraints, selecting potential line segments, and the selection of the routes. Provide a copy of the complete routing study conducted by the utility or consultant. State which route the applicant believes best addresses the requirements of PURA and P.U.C. Substantive Rules.*

The EA for this Proposed Project was prepared by POWER Engineers, Inc. (“POWER”) with input from SPS. SPS and POWER used a comprehensive transmission line routing and evaluation methodology to delineate and evaluate the proposed transmission line route in compliance with PURA § 37.056(c)(4)(A)-(D), 16 Tex. Administration Code (“TAC”) § 22.52(a)(4), and 16 TAC § 25.101(b)(3)(B), including the Commission’s policy of prudent avoidance.

The first step in the routing study was to select a study area. This area needed to encompass the endpoints of the Proposed Project as set forth in SPP’s NTC (Mustang Substation and the Shell CO2 Substation) and include a sufficiently large area in which feasible, geographically diverse, forward progressing alternative routes could be sought. The width of the study area from north to south is approximately 5.6 miles, depending on the location of measurement, and the length of the study area from west to east is approximately 6.1 miles, encompassing a total area of approximately 33.6 square miles. The study area is shown in Figure Nos. 2-1, 3-2 and 5-1 of the EA, Attachment 1.

In an effort to minimize potential impacts to sensitive environmental and land-use features, a constraints mapping process was used to develop and refine potential routing options. The geographic locations of environmentally sensitive and other restrictive areas within the study area were identified and considered during route development. These constraints were mapped on topographic base maps. Environmental and land use data used by POWER were drawn from a variety of sources, including readily available Geographic Information System (“GIS”) coverage with associated metadata; maps and published literature; information files and records from numerous federal, state, and local regulatory agencies; and reconnaissance surveys of the study area.

As further discussed in the Direct Testimony of Jason Lytal, filed simultaneously with this Application, it was apparent in the beginning of this routing phase that the ability to route a transmission line between the two substations would be extremely limited. Factors that contributed to the difficulty in routing included one or a combination of the following: extensive oil and gas development in the area and around the Shell CO2 Substation; SPS- and non-SPS-owned distribution facilities throughout the study area; numerous existing transmission lines; habitable structures; the existing and planned facilities in and around the Mustang Substation; and the combination of all of these constraints within the short distance between the existing substations. While initially SPS and POWER individually worked to identify numerous possible routing options, after reviewing the constraints it was determined that SPS and POWER should work with the landowners to determine a single workable route. The SPS project team identified a viable preliminary route based upon initial discussions with landowners in the study area along with analysis and study of the constraints. POWER and SPS then used the composite constraints map, in conjunction with existing aerial photography, to make minor adjustments to the proposed route. SPS engaged in further discussions with certain landowners, which resulted in additional

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adjustments to the proposed route. The proposed route is shown in Figures No. 3-2 and 5-1 of the EA, Attachment 1.

POWER evaluated the proposed alternative route based on its evaluation criteria as discussed in Sections 4 and 5 of the EA, including the factors set forth in PURA and Commission Substantive Rules, and considering the environmental conditions present along the route, comments received from the public, and local, state, and federal agencies, and field reconnaissance of the study area. POWER determined that the proposed route balances the Commission's routing criteria related to land use, aesthetics, ecology, and cultural resources and meets the requirements of PURA and the Commission Substantive Rules. POWER's assessment of the proposed route is supported by the following criteria. The proposed route:

- runs parallel to existing compatible corridors and apparent property boundaries (excluding pipelines) for 69.5% of its length;
- has no length of ROW through land irrigated by traveling systems (rolling or pivot type);
- crosses a U.S. or State Highway twice;
- has no cemeteries within 1,000 feet of the ROW centerline;
- has no private airstrips within 10,000 feet of the ROW centerline;
- has no heliports within 5,000 feet of the ROW centerline;
- has no commercial AM radio transmitters within 10,000 feet of the ROW centerline;
- has no length of ROW through bottomland/riparian woodlands;
- has no length of ROW across mapped National Wetlands Inventory wetlands and playa lakes;
- has no length of ROW across known habitat of federally listed endangered or threatened species;
- has no length of ROW across open water (lakes, ponds);
- crosses only one stream;
- crosses no parks/recreational areas;
- crosses no rivers;
- has no length of ROW parallel (within 100 feet) to streams or rivers;
- crosses no archeological or historical sites;
- has no archeological or historical sites within 1,000 feet of ROW centerline;

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- crosses no National Register of Historic Places listed properties; and
- has no National Register of Historic Places listed properties within 1,000 feet of ROW centerline.

**18. Public Meeting or Public Open House:**

*Provide the date and location for each public meeting or public open house that was held in accordance with P.U.C. Proc. R. 22.52. Provide a summary of each public meeting or public open house including the approximate number of attendants, and a copy of any survey provided to attendants and a summary of the responses received. For each public meeting or public open house provide a description of the method of notice, a copy of any notices, and the number of notices that were mailed and/or published.*

Because this Proposed Project would directly affect fewer than 25 landowners, the requirement to hold a public meeting under 16 Tex. Admin. Code § 22.52 was not triggered. Accordingly, a public meeting was not held.

As described in Attachment 1 to this Application, while no public meeting was required, the landowners who will be directly affected by this transmission line have had the opportunity to give input on the routing of the line, and have had their preferences considered. SPS directly communicated with all of the landowners who would receive direct notice of the Application in this case. As discussed in Section 1, all five of the directly affected landowners whose land will be crossed by the proposed transmission line have provided written agreement to the proposed route. All but one of the directly affected landowners who are not crossed by the proposed route, but have habitable structures within 300 feet of the proposed route have provided written agreement. The written affidavits and easement evidencing these agreements are provided as Attachment 2 to this Application.

**19. Routing Maps:**

*Base maps should be a full scale (one inch = not more than one mile ) highway map of the county or counties involved, or other maps of comparable scale denoting sufficient cultural and natural features to permit location of all routes in the field. Provide a map (or maps) showing the study area, routing constraints, and all routes or line segments that were considered prior to the selection of the routes. Identify the routes and any existing facilities to be interconnected or coordinated with the project. Identify any taps, ties, meter points, or other facilities involving other utilities on the routing map. Show all existing transmission facilities located in the study area. Include the locations of radio transmitters and other electronic installations, airstrips, irrigated pasture or cropland, parks and recreational areas, historical and archeological sites (subject to the instructions in Question 27), and any environmentally sensitive areas (subject to the instructions in Question 29).*

Please refer to Figure Nos. 3-2 and 5-1 in the EA/Routing Study, included as Attachment 1 to this Application.

*Provide aerial photographs of the study area displaying the date that the photographs were taken or maps that show (1) the location of each route with each route segment identified, (2) the locations of all major public roads including, as a minimum, all federal and state roadways, (3) the locations of all known habitable structures or groups of habitable structures (see Question 19 below) on properties directly affected by any route, and (4) the boundaries (approximate or*

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*estimated according to best available information if required) of all properties directly affected by any route.*

Please refer to Figure No. 5-1 in the EA/ Routing Study, included as Attachment 1 to this Application.

*For each route, cross-reference each habitable structure (or group of habitable structures) and directly affected property identified on the maps or photographs with a list of corresponding landowner names and addresses and indicate which route segment affects each structure/group or property.*

Please refer to Figure No. 5-1 of the EA, Attachment 1, for the Alternative Route Map depicting the proposed route. Refer to Table 5-1 of the EA, Attachment 1 for the habitable structures list (by distance) and Attachment 9, for a list of the landowner names and addresses cross-referenced to the transmission line route that affects each structure and property.

**20. Permits:**

*List any and all permits and/or approvals required by other governmental agencies for the construction of the proposed project. Indicate whether each permit has been obtained.*

Once the route has been approved by the Commission, SPS will coordinate with permitting agencies to determine permits required for the approved route. Below is a list of permits that may be required for construction of the Proposed Project:

- Consultation with the U.S. Fish and Wildlife Service will occur following the Commission's approval of this Application to determine appropriate requirements under the Endangered Species Act (not yet obtained).
- If the approved route triggers Federal Aviation Administration ("FAA") criteria regarding proximity to airports, SPS will file a Notice of Proposed Construction or Alteration, FAA Form 7460-1 with the FAA (not yet obtained).
- Depending on the location of structures, road crossing permits might be required by Yoakum County, the county in which the approved route is located (not yet obtained).
- A Storm Water Pollution Prevention Plan will be prepared and a Notice of Intent will be submitted to the Texas Commission on Environmental Quality under the Texas Pollutant Discharge Elimination System General Permit at least 48 hours prior to the beginning of construction (not yet obtained).
- Cultural resources clearance will be obtained from the Texas Historical Commission for the Proposed Project if necessary. Clearance will be obtained after the Commission has approved a route.
- Texas Department of Transportation ("TxDOT") permit(s) will be required for crossing state-maintained roadways or using TxDOT ROW to access the Proposed Project (not yet obtained).
- Consultation with the U.S. Army Corps of Engineers to determine appropriate requirements under Section 404/Section 10 Permit criteria will occur following the Commission's approval of this Application (not yet obtained).

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**21. Habitable structures:**

*For each route list all single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline if the proposed project will be constructed for operation at 230-kV or less, or within 500 feet of the centerline if the proposed project will be constructed for operation at greater than 230-kV. Provide a general description of each habitable structure and its distance from the centerline of the route. In cities, towns or rural subdivisions, houses can be identified in groups. Provide the number of habitable structures in each group and list the distance from the centerline of the route to the closest and the farthest habitable structure in the group. Locate all listed habitable structures or groups of structures on the routing map.*

As shown on Table 4-1 in the EA, there are 15 habitable structures located within 300 feet of the centerline of the proposed route. Table 5-1 in the EA, Attachment 1, provides a general description of each habitable structure and its distance from the centerline of the route. The habitable structures are shown on Figure 5-1 of the EA, Attachment 1.

**22. Electronic Installations:**

*For each route, list all commercial AM radio transmitters located within 10,000 feet of the center line of the route, and all FM radio transmitters, microwave relay stations, or other similar electronic installations located within 2,000 of the center line of the route. Provide a general description of each installation and its distance from the center line of the route. Locate all listed installations on a routing map.*

As shown in Table 4-1 in the EA, Attachment 1, there are no commercial AM radio transmitters located within 10,000 feet of the centerline of the route, and four FM radio transmitters, microwave relay stations, or other similar electronic installations located within 2,000 of the centerline of the route. Table 5-1 in the EA, Attachment 1, provides a general description of the electronic installations and their distances from the centerline of the proposed route. The locations of the listed electronic installations are shown on Figure 5-1 of the EA, Attachment 1.

**23. Airstrips:**

*For each route, list all known private airstrips within 10,000 feet of the center line of the project. List all airports registered with the Federal Aviation Administration (FAA) with at least one runway more than 3,200 feet in length that are located within 20,000 feet of the center line of any route. For each such airport, indicate whether any transmission structures will exceed a 100:1 horizontal slope (one foot in height for each 100 feet in distance) from the closest point of the closest runway. List all listed airports registered with the FAA having no runway more than 3,200 feet in length that are located within 10,000 feet of the center line of any route. For each such airport, indicate whether any transmission structures will exceed a 50:1 horizontal slope from the closest point of the closest runway. List all heliports located within 5,000 feet of the center line of any route. For each such heliport, indicate whether any transmission structures will exceed a 25:1 horizontal slope from the closest point of the closest landing and takeoff area of the heliport. Provide a general description of each listed private airstrip, registered airport, and heliport; and state the distance of each from the center line of each route. Locate and identify all listed airstrips, airports, and heliports on a routing map.*

Table 4-1 of the EA, Attachment 1 identifies the number of airports, airstrips, and heliports for the proposed route. Table 4-2 of the EA, Attachment 1 identifies each airport, airstrip, and heliport

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and indicates which routes will likely exceed horizontal slope for each FAA-registered airport. Table 5-1 in the EA, Attachment 1 provides the distance each airport, airstrip, or heliport from the centerline of the proposed route. There is one FAA registered airport within 20,000 feet of the proposed route as detailed on this table.

After the Commission approves the route for the Proposed Project, and engineering and pole placement along the route is finalized, SPS will provide the FAA Notice of Proposed Construction or Alteration (FAA Form 7560-1) for all transmission structures proposed to be located within the specified distances of the airport listed in Table 4-2 of the EA, Attachment 1. The result of this notification and subsequent coordination with the FAA could include changes in the line design and/or potential requirements to add markers.

**24. Irrigation Systems:**

*For each route identify any pasture or cropland irrigated by traveling irrigation systems (rolling or pivot type) that will be traversed by the route. Provide a description of the irrigated land and state how it will be affected by each route (number and type of structures etc.). Locate any such irrigated pasture or cropland on a routing map.*

The proposed route does not cross agricultural lands with known irrigation systems (rolling or pivot).

**25. Notice:**

Notice is to be provided in accordance with P.U.C. PROC. R. 22.52.

- A. *Provide a copy of the written direct notice to owners of directly affected land. Attach a list of the names and addresses of the owners of directly affected land receiving notice.*

Refer to Attachment 9 for: a sample copy of the notice letter; the route description; Commission Landowner Brochure; Intervener Form, Comments Form; Landowner Bill of Rights, all of which were included with each notice packet; the list of landowners to whom notice was sent; and an 11 x 17 Map.

- B. *Provide a copy of the written notice to utilities that are located within five miles of the routes.*

Refer to Attachment 10 for a copy of the notice letters. Also, refer to Attachment 9 for the route description and map included with each notice.

- C. *Provide a copy of the written notice to county and municipal authorities.*

Refer to Attachment 11 for a copy of the notice letters sent to county and municipal authorities. Also, refer to Attachment 9 for the route description and map included with each notice.

- D. *Provide a copy of the notice that is to be published in newspapers of general circulation in the counties in which the facilities are to be constructed. Attach a list of the newspapers that will publish the notice for this application. After the notice is published, provide the publisher's affidavits and tear sheets.*

Refer to Attachment 12 for a copy of the newspaper notice, route description, and newspaper that will publish the notice. Also, refer to Attachment 9, for a copy of the map used for the newspaper notice.

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*For a CREZ application, in addition to the requirements of P.U.C. Proc. R. 22.52 the applicant shall, not less than twenty-one (21) days before the filing of the application, submit to the Commission staff a “generic” copy of each type of alternative published and written notice for review. Staff’s comments, if any, regarding the alternative notices will be provided to the applicant not later than seven days after receipt by Staff of the alternative notice. Applicant may take into consideration any comments made by Commission staff before the notices are published or sent by mail.*

- Not applicable.

**26. Parks and Recreation Areas:**

*For each route, list all parks and recreational areas owned by a governmental body or an organized group, club, or church and located within 1,000 feet of the center line of the route. Provide a general description of each area and its distance from the center line. Identify the owner of the park or recreational area (public agency, church, club, etc.). List the sources used to identify the parks and recreational areas. Locate the listed sites on a routing map.*

POWER reviewed federal and state databases and county/local maps to identify any parks and/or recreational areas within the study area. The route does not cross (or abut) a park or recreational area. There are no parks and recreation areas within 1,000 feet of the proposed route.

**27. Historical and Archeological Sites:**

*For each route, list all historical and archeological sites known to be within 1,000 feet of the center line of the route. Include a description of each site and its distance from the center line. List the sources (national, state or local commission or societies) used to identify the sites. Locate all historical sites on a routing map. For the protection of the sites, archeological sites need not be shown on maps.*

POWER conducted a literature review and records search at the Texas Historical Commission and The Texas Archeological Research Laboratory at the University of Texas at Austin to identify known historical and archeological sites located within 1,000 feet of the proposed route. No archeological sites are recorded within the ROW of the proposed route, and no archeological sites are recorded within 1,000 feet of the proposed route centerline. No National Register of Historic Places (“NRHP”) properties, NRHP-listed or eligible bridges, or State Antiquities Landmark (“SALs”) are recorded within the proposed route ROW, or within 1,000 feet of the proposed route centerline.

**28. Coastal Management Program:**

*For each route, indicate whether the route is located, either in whole or in part, within the coastal management program boundary as defined in 31 T.A.C. §503.1. If any route is, either in whole or in part, within the coastal management program boundary, indicate whether any part of the route is seaward of the Coastal Facilities Designation Line as defined in 31 T.A.C. §19.2(a)(21). Using the designations in 31 T.A.C. §501.3(b), identify the type(s) of Coastal Natural Resource Area(s) impacted by any part of the route and/or facilities.*

The proposed route is not located within the coastal management program boundary as defined in 31 T.A.C. § 503.1.

**29. Environmental Impact:**

*Provide copies of any and all environmental impact studies and/or assessments of the project. If*

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*no formal study was conducted for this project, explain how the routing and construction of this project will impact the environment. List the sources used to identify the existence or absence of sensitive environmental areas. Locate any environmentally sensitive areas on a routing map. In some instances, the location of the environmentally sensitive areas or the location of protected or endangered species should not be included on maps to ensure preservation of the areas or species.*

Refer to the Mustang Substation to Shell CO2 Substation 115-kV Transmission Line Proposed Project Environmental Assessment and Route Analysis, Yoakum and Gaines Counties, Texas.

*Within seven days after filing the application for the project, provide a copy of each environmental impact study and/or assessment to the Texas Parks and Wildlife Department (“TPWD”) for its review at the address below. Include with this application a copy of the letter of transmittal with which the studies/assessments were or will be sent to the TPWD.*

*Wildlife Habitat Assessment Program  
Wildlife Division  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, Texas 78744*

*The applicant shall file an affidavit confirming that the letter of transmittal and studies/assessments were sent to TPWD.*

A copy of the application, including the EA/ Routing Study, Attachment 1, was sent to TPWD on the day of the filing of this application. Refer to Attachment 13 for a copy of the transmittal letter.

At the request of the Office of Public Utility Counsel (“OPUC”), only copies of the route description and map were sent to OPUC on the day of the filing of this application. Refer to Attachment 14 for a copy of the transmittal letter.

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**AFFIDAVIT**

STATE OF TEXAS

COUNTY OF POTTER

I, James M. Bagley, after first being duly sworn state the following: I am filing this application as Manager, Regulatory Administration for Southwestern Public Service Company. I am qualified and authorized to file and verify this application, and am personally familiar with the information supplied in this application; and to the best of my knowledge, all information provided, statements made, and matters set forth in this application and attachments are true and correct; and all requirements for the filing of this application have been satisfied. I further state that this application is made in good faith and that this application does not duplicate any filing presently before the commission.

**AFFIANT**

\_\_\_\_\_  
James M. Bagley

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**SUBSCRIBED AND SWORN TO BEFORE ME**, a Notary Public in and for the state of Texas, this 19th day of September 2017.

SEAL

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_