

**APPLICATION TO AMEND A CERTIFICATE OF
CONVENIENCE AND NECESSITY FOR A PROPOSED
345-KV TRANSMISSION LINE WITHIN YOAKUM AND
GAINES COUNTIES
(YOAKUM TO TEXAS STATE LINE)**

2015 JUN 25 PM 12:06
RECEIVED
PUBLIC UTILITY COMMISSION
FILING CLERK

DOCKET NO. 44726

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**

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

-
1. **Applicant:** Southwestern Public Service Company
Certificate Number: 30153
Street Address: 600 South Tyler Street
Mailing Address: Amarillo, TX 79105-1261
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: P.O. Box 1261
 Amarillo, TX 79105-1261
Email Address: James.Bagley@xcelenergy.com
- Alternate Contact:** Donnie TeBeest
Title/Position: Project Manager, Transmission
Phone Number: 806-378-2321
Mailing Address: P.O. Box 1261
 Amarillo, TX 79105-2321
Email Address: Donald.R.TeBeest@xcelenergy.com
- Legal Counsel:** Matthew P. Loftus
Phone Number: 512-478-1327
Mailing Address: 816 Congress Avenue, Suite 1650
 Austin, TX 78701
Email Address: Matthew.P.Loftus@xcelenergy.com
- Legal Counsel:** Lauren Damen
 Graves Dougherty Hearon & Moody, PC
Phone Number: 512-480-5739
Mailing Address: 401 Congress Avenue, Suite 2200
 Austin, TX 78701
Email Address: ldamen@gdhm.com

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

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 345-kV TRANSMISSION LINE WITHIN YOAKUM AND GAINES COUNTIES, TEXAS. THE PROJECT NAME IS YOAKUM TO TEXAS STATE LINE.

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, 345-kilovolt ("kV") electric transmission line between the existing Yoakum Substation, located in Yoakum County, Texas and the Texas State Line ("Proposed Project"). The line will be located in Yoakum County, Texas and potentially in Gaines County, Texas, depending on which route is selected. This application for the Proposed Project will hereinafter be referred to as the "Application."

The Proposed Project will involve the construction of a new transmission line that will begin at the existing Yoakum County Substation located in Yoakum County, approximately six miles southeast of the city of Plains, and will extend generally southwest until it reaches the Texas State Line in either Yoakum County or Gaines County, depending on the route selected. The Yoakum County Substation will be expanded and will require upgrades including the addition of a 345/230-kV 560 MVA transformer, and a 345-kV bus which will accommodate the connection of the 345-kV transmission line. This Proposed Project represents the Texas portion of the Yoakum to Hobbs Project, which is part of a larger TUCO to Yoakum to Hobbs Project ("Proposed TYH Project"). The Yoakum to Hobbs Project and the larger Proposed TYH Project were recommended by the High Priority Incremental Load Study ("HPILS"). The HPILS was undertaken by the Southwest Power Pool ("SPP") to develop a transmission plan addressing the needs associated with increased network loads in the SPP footprint.

Based on the HPILS, SPP issued a Notification to Construct ("NTC") to SPS. SPS is seeking an amendment for the Proposed Project prior to seeking an amendment for the TUCO to Yoakum portion of the Proposed TYH Project due to the need to have the end point at the Texas State Line determined before proceeding with obtaining approval for the New Mexico portion of the line.

SPS is proposing 13 different routes for this portion of the Proposed Project. The links that comprise each route are as follows:

Route	Links	Route Length
A	1-3-11-15-16-20-21-22-35-37-39	28.67
B	1-3-11-15-16-20-34	20.48
C	1-3-4-12-16-20-34	20.28
D	1-3-11-15-16-20-21-22-23-38-39	28.67

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

E	1-2-10-15-16-20-21-22-35-36	25.46
F	1-5-7-8-9-13-26-27-30-31-41	47.59
G	1-5-7-8-9-13-25-28-32-40	43.94
H	1-3-4-6-8-9-13-26-29-31-41	47.73
I	1-3-11-14-19-20-34	20.46
J	1-3-11-15-17-22-35-37-39	28.66
K	1-3-4-12-16-20-21-22-23-24-40	32.61
L	1-3-4-12-16-20-21-22-35-36	23.44
M	1-2-10-14-18-34	22.30

Refer to Figures 3-2, 3-3 and 5-1 of the Environmental Assessment and Alternative Route Analysis for the Proposed Yoakum to Texas State Line 345-kV Transmission Line Project, Yoakum County, Texas ("EA"), Attachment 1, for the route maps which show the 40 primary links that comprise the 13 routes.

Refer to Attachment 10 for the link descriptions.

The proposed 345-kV single-circuit transmission line will be constructed using primarily two-pole H-frame steel structures for tangents and light angles. High angle structures and dead-end structures will be three-pole steel structures. The proposed transmission line will be constructed entirely on new right-of-way ("ROW") with a proposed easement width of 150 feet. In some circumstances, a wider easement may be necessary, but these locations and easement widths cannot be determined until the selected route is surveyed.

Design Voltage Rating (kV): 345 kV

Operating Voltage Rating (kV): 345 kV

Normal Peak Operating Current Rating (A): 3000 amps

If the project will be owned by more than one party, briefly explain the 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 percent 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:

Conductor will be 795 kCMIL, ACSS, 26/7 stranded, code name DRAKE/ACSS. Static wire will be one 3/8" EHS galvanized steel and one Optical Ground Wire.

Number of conductors per phase: 2 (two)

Continuous Summer Static Current Rating (A): 3000 Amps

Continuous Summer Static Line Capacity at Operating Voltage (MVA): 1793 MVA

Continuous Summer Static Line Capacity at Design Voltage (MVA): 1793 MVA

Type and composition of Structures:

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

This line will be built using primarily two-pole H-frame steel structures for tangents and light angles. Three-pole steel structures will be used for high angle structures and dead-end structures. Typical heights are shown on the attached drawings and are dependent upon the clearance requirements to be determined. Structure heights will be identified that will meet or exceed the minimum clearances required by the Texas Department of Transportation ("TxDOT") and the National Electrical Safety Code ("NESC").

Height of Typical Structures:

The typical heights for these structures are between 90 and 180 feet.

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 plans to construct this line with two-pole tubular H-frame steel structures at tangent and light angle locations and three-pole tubular steel structures at high angle and dead-end locations. The H-frames will be direct burial structures and the three-pole structures will utilize drilled pier foundations. SPS chose tubular steel structures over wood structures, in part, because of the low maintenance cost, strength of the line during adverse conditions, resistance to fire damage, and increased span lengths. Additionally, wood poles are not readily available in heights greater than 100 feet; whereas, steel poles are. A transmission line constructed with wood poles has an estimated maintenance cost of \$55,000 per mile for the expected life of the line; whereas, there are minimal maintenance and repairs associated with a transmission line built with steel structures. The estimated life of a typical steel structure is approximately 20 years longer than a comparable wood structure. (SPS expects a wood structure to last for 50 years and a steel structure to last for 70+ years.) Since the additional strength of steel pole construction allows for the use of longer spans, the impact to existing irrigation systems, including pivot irrigation, and current farming and ranching operations will be minimized. Also, using self-supporting tubular steel structures eliminates the need for guy wires on the landowner's property, which results in a smaller footprint compared to guyed structures.

The estimated installed cost for a wood H-frame tangent structure is approximately \$43,000. The installed cost for a direct burial H-frame, single circuit tubular steel tangent structure is approximately \$69,000. The estimated cost for a line built using wood H-frame poles (with steel poles on foundations for the angle and corner structures) is approximately \$1,010,000 per mile, which includes the cost for the extra wood tangent structures required but does not include maintenance costs. In contrast, if the line were to be built using H-frame tubular steel structures, the estimated cost is \$1,100,000 per mile. Although the estimated installed cost if the proposed line were to be constructed with wood H-frame poles is lower, SPS has opted to use steel poles for all of the benefits previously mentioned in the preceding paragraph.

SPS is proposing H-frame structures over monopole structures as the standard structure type for this line for several reasons. The installed cost for H-frame construction is less than that of the installed cost for monopoles. H-frame structures also offer the advantage that, in the event of poor soil conditions, it is still likely that the structure could be directly embedded into the ground, whereas a monopole would likely require a drilled shaft foundation. A drilled shaft foundation would increase the cost of the monopole, which would further increase the cost savings of H-frame construction. H-frame structures are also shorter in height than a comparable monopole due to the fact that the phase conductors are configured horizontally across the structure instead of

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

vertically. For 345-kV construction, the typical tangent H-frame structure can be 20 feet shorter than a comparable monopole structure.

Refer to Attachment 2 for the following structure drawings:

- A typical 345-kV single-circuit steel monopole 75°-100° corner structure is shown on SPS drawing SD-T40-708.
- A typical 345-kV single-circuit steel three-pole 75°-100° corner structure is shown on SPS drawing SD-T40-709.
- A typical 345-kV single-circuit steel H-frame tangent structure is shown on SPS drawing SD-T40-710.
- A typical 345-kV single-circuit steel three-pole 10°-18° running angle structure is shown on SPS drawing SD-T40-711.
- A typical 345-kV single-circuit steel monopole tangent structure is shown on SPS drawing SD-T40-715.
- A typical 345-kV single-circuit steel monopole 6°-16° running angle structure is shown on SPS drawing SD-T40-716.

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:

Miles of Right-of-Way: Approximately 20 to 48 miles.

Miles of Circuit: Approximately 20 to 48 miles.

Width of Right-of-Way: 150 feet.

Percent of Right-of-Way Acquired: 0%

In addition to the typical 150-foot easement, SPS will purchase a 50-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 50 feet of temporary work space will be released after construction is complete. Additionally, where possible, SPS will purchase an additional 300 ft. x 300 ft. temporary easement for each angle that is 45 degrees or more on a temporary basis 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 between 3,000 and 3,800 feet amsl with elevations increasing to the north and west (BEG 1974, 1976). The land use is predominantly rural, with a mixture of rangeland/pastureland and irrigated cropland. Most of the habitable structures are associated with scattered rural properties.

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)

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

of the existing HVDC converter stations, substations and/or switching stations have agreed to the installation of the required project facilities.

- Yoakum Substation.

This substation is owned by SPS.

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.

All proposed routes are located in Yoakum County, Texas. Some of the proposed routes are also located in Gaines County, Texas.

10. Municipalities:

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

None of the proposed routes 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.

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

11. Affected Utilities:

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

- Lyntegar Electric Cooperative (“LEC”);
- Golden Spread Electric Cooperative (“GSEC”); and
- Lea County Electric Cooperative (“LCEC”).

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 system reliability and capacity and will benefit LEC, LCEC and GSEC because they will be able to serve additional load in their service area. Since SPS owns the substation affected by the Proposed Project, LEC, LCEC and GSEC will not be directly involved in the construction of facilities proposed under this Application.

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 3 for the estimated cost table.

The Lesser Prairie-Chicken (“LPC”) Interstate Working Group drafted a LPC Range-Wide Conservation Plan (“RWP”) as a voluntary measure implemented by the Western Association of Fish and Wildlife Agencies (“WAFWA”) and the Foundation for Western Fish and Wildlife (Van Pelt et al. 2013). SPS is a member of the program and is required to evaluate potential project impacts and pay mitigation costs for potential impacts to LPC habitat. SPS has included these potential mitigation costs for each of its proposed routes in the estimated cost table.

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

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

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.

SPS is a member of, and its entire transmission system is located within, the SPP. The SPP is an organization that meets the requirements of Public Utility Regulatory Act ("PURA") § 39.151 as an independent system operator. SPS does not operate in the Electric Reliability Council of Texas ("ERCOT") region, and ERCOT takes no position on SPS's transmission projects.

The Proposed Project will connect the existing Yoakum County Substation in Yoakum County, Texas to the existing Hobbs Generating Plant Substation in Lea County, New Mexico, as part of the larger Proposed TYH Project. This Application covers only the Texas portion of the transmission line from the Yoakum County Substation to the Texas-New Mexico State Line in Yoakum County or Gaines County, Texas, depending on the route selected. The Proposed Project was identified by the SPP's HPILS as needed for reliability to alleviate loading violations on the underlying network and voltage violations due to insufficient power supply to network load additions.

In April 2013, the SPP board of directors ("BOD") directed their staff to conduct the HPILS to develop a transmission plan to address the needs associated with network load additions in the SPP footprint that had not been accounted for in previous planning efforts or in models being used in planning efforts underway at the time. The SPP BOD recognized the need to timely and cost-effectively address system needs that could not otherwise be accomplished by waiting for completion of SPP's next scheduled planning efforts to incorporate these load growth assumptions. The HPILS was conducted in accordance with the high priority study provisions outlined in the SPP Open Access Transmission Tariff and the HPILS scope document, which was approved by the SPP Transmission Working Group and the Markets and Operations Policy Committee in June and July of 2013, respectively. In accordance with the HPILS scope, a cost-effective transmission plan was developed to address reliability needs over a 10-year period.

The HPILS focused on the reliability needs in the SPP footprint to satisfy SPP reliability criteria and member utility planning criteria. Individual projects were targeted to meet the various reliability needs that include six states: Kansas, Louisiana, Nebraska, New Mexico, Oklahoma, and Texas, all of which are in the SPP region. Three model years – 2015, 2018, and 2023 -- were used in the study, which employed two different models with different forecasting methodologies.

The HPILS identified reliability solutions in the study years in the West Texas/New Mexico area that would alleviate loading violations on the underlying network and the voltage violations due to insufficient power supply to the network load in the service area. As detailed in Attachment 4 to this Application, the HPILS analyzed the potential solutions using both reliability and economic analyses and identified the Proposed TYH Project as the best solution for the area.

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

Based on the need analysis in the HPILS, SPP issued a NTC letter to SPS. The SPP NTC letter sent to SPS under Project ID 30376 and Network Upgrade ID number 50457, directs SPS to build a 345-kV transmission line from the Hobbs Substation in Lea County, New Mexico to the Yoakum Substation in Yoakum County, Texas. The Proposed Project represents the Texas portion of the line under this NTC. Other projects within the NTC include Network Upgrade 50447, i.e., the Yoakum-TUCO 345-kV segment of the Proposed TYH Project, which will be the subject of another CCN filing. The need date specified by the NTC is June 1, 2020. SPS is seeking an amendment for the Proposed Project prior to seeking an amendment for the TUCO to Yoakum portion of the Proposed TYH Project due to the need to have the end point at the Texas State Line determined before proceeding with obtaining approval for the New Mexico portion of the line.

Attached to this Application is the 9-year Summer Load Forecast from 2015 to 2023 for the transmission system within the Texas Central plains, Yoakum and Gaines Counties and the New Mexico Hobbs and Pecos Valley service areas. This load forecast shows the total combined loads submitted by SPS and rural electric cooperatives to SPP to develop and build the HPILS power flow models for the study. The forecast indicates there is increasing load growth in the area for the next nine years and supports the need for the additional transmission capacity that the proposed transmission line will provide.

Please refer to Attachment 4 for a copy of the High Priority Incremental Load Study Report.

Please refer to Attachment 5 for a copy of the SPP NTC Letter.

Please refer to Attachment 6 for a copy of SPS's letter accepting the SPP NTC Letter.

Please refer to Attachment 7 for a graph depicting the 5-Year Historical Load.

Please refer to Attachment 8 for the Summer Load Forecast from 2015 to 2023 for the transmission system within the Texas Central plains, Yoakum and Gaines Counties and the New Mexico Hobbs and Pecos Valley service areas.

Existing Transmission System

SPS's existing transmission system in Yoakum and Gaines Counties, Texas and Lea County, New Mexico, consists of 36 miles of 345-kV transmission line, 229 miles of 230-kV transmission line, 560 miles of 115-kV transmission line, and 152 miles of 69-kV transmission line.

The Yoakum and Gaines County service area is fed from the North by the SPS Tolk Plant at 230-kV level, from the south by the GSEC-Mustang Plant at 230-kV level, and from Eastern New Mexico by the gas-fired Lea Power Partners-Hobbs Plant at 230-kV level. The Hobbs Plant is connected to the SPS-Cunningham Plant by a 230-kV transmission line and two 115-kV transmission lines. It is also connected to the SPS-Maddox Plant at 115-kV level. The total nameplate generating capacity of the Tolk, Cunningham and Maddox Plants is approximately 1706 MW, while the total nameplate generating capacity of the Mustang and Hobbs Plants is approximately 1464 MW. The Cunningham and Hobbs Plants are interconnected by two 115-kV transmission lines and a 230-kV transmission line, while the Cunningham and Maddox Plants are interconnected by a 115-kV transmission line.

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

Most of the customers in the service area are served by the 115-kV loop between Yoakum County, Denver City, Mustang Plant, and Seagraves Substations. The Yoakum County Substation serves some large customers at the 230-kV level.

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.

Because an in-depth analysis was conducted by SPP in the HPILS, no additional analysis was conducted by SPS to provide additional alternatives.

The focus of the HPILS was to identify transmission-based solutions to address reliability needs. The HPILS did not study distribution as a possible solution because the problem of providing power to the network loads in the service area and the associated reliability issues existed on the transmission side. Additionally, because the projected load increase through 2023 is so large, it could not be serviced with solely distribution solutions. None of the alternatives listed in the question would satisfy the reliability needs to alleviate loading violations on the underlying network and the voltage violations due to insufficient power supply to the network load in the service area.

The HPILS discusses additional transmission reinforcements that are required and the evaluation of alternatives to the Proposed TYH Project. The Proposed TYH Project itself is a product of SPP's in-depth analysis to develop cost-effective solutions. The Proposed TYH Project is a variation of the TUCO-Amoco-Hobbs Project for which a conditional NTC was previously issued, but was identified for re-evaluation under the HPILS. Thus, the HPILS includes an evaluation of alternatives to a previously-identified project. Based on the analysis conducted in the HPILS, the Proposed TYH Project was determined to be a more cost-effective solution and the best solution for this area.

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 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.

Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV Transmission Line

The Environmental Assessment and Alternative Route Analysis (“EA”) for this Proposed Project was prepared by POWER Engineers, Inc. (“POWER”) with input from SPS. The objective of the routing study was to develop and evaluate an adequate number of geographically diverse alternative transmission line routes to allow the Public Utility Commission (“Commission” or “PUC”) to conduct a proper evaluation for the proposed transmission line. SPS and POWER used a comprehensive transmission line routing and evaluation methodology to delineate and evaluate alternative transmission line routes in compliance with PURA § 37.056(c)(4)(A)-(D), 16 TAC § 22.52(a)(4), and 16 TAC § 25.101(b)(3)(B), including the PUC’s policy of prudent avoidance.

The first step in the development of alternative routes was to select a study area. This area needed to encompass the endpoints of the Proposed Project (Yoakum Substation and the Texas State Line) and include a sufficiently large area within which feasible, geographically diverse, forward progressing alternative routes could be located. The width of the study area from north to south is approximately 47 miles, depending on the location of measurement, and the length of the study area from west to east is approximately 40 miles, encompassing a total area of approximately 1,109 square miles. The study area is shown in Figures 2-1 and 3-3 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 possible alternative routes. The geographic locations of environmentally sensitive and other restrictive areas within the study area were identified and considered during alternative route development. These constraints were mapped on topographic base maps. Environmental and land use data used by POWER in the delineation and evaluation of alternative routes 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; meetings with stakeholders; and reconnaissance surveys of the study area.

POWER and SPS used the composite constraints map, in conjunction with existing aerial photography, to identify preliminary alternative links to connect the Proposed Project’s endpoints. The 41 preliminary alternative links are shown in Figure 3-1 of the EA, Attachment 1.

The preliminary alternative links were presented at four public open-house meetings, over a two-week timeframe. Following the public open-house meetings, SPS and POWER performed an analysis of the input, comments, and information received at the open-house meetings, and from follow-up meetings and communications with landowners, interested public stakeholders, and governmental agencies and offices. The purpose of this analysis was to determine any issues warranting modification to the preliminary alternative links and identify potential new links not presented at the meeting. Several preliminary alternative links were modified to improve roadway crossings, to minimize potential tree clearing and to reduce potential impacts to pivot irrigation systems. Modifications to the 41 preliminary alternative links resulted in development of 40 primary alternative links. The primary alternative links are shown in Figures 3-2, 3-3 and 5-1 of the EA, Attachment 1.

POWER and SPS identified primary alternative routes using each of the 40 primary alternative links in at least one route. The 40 primary alternative links produce 61 possible forward progressing route combinations. While all of the links and potential route combinations are viable and constructible, 13 primary alternative routes were selected that, when combined, form an adequate number of reasonable and geographically diverse primary alternative routes that reflect all of the previously discussed routing considerations.

POWER evaluated all of the alternative routes based on its evaluation criteria as discussed in Sections 4 and 5 of the EA, including the factors set forth in PURA and PUC Substantive Rules,

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

and considering the environmental conditions present along each route comments received from the public, and local, state, and federal agencies; and field reconnaissance of the study area. POWER determined that Alternative Route I best balances the PUC routing criteria related to land use, aesthetics, ecology, and cultural resources and best meets the requirements of PURA and the PUC Substantive Rules. POWER's assessment of Alternative Route I is supported by the following criteria. Alternative Route I:

- has the second shortest overall length;
- runs parallel to existing compatible corridors and apparent property boundaries (excluding pipelines) for 96% of its length;
- has the shortest length crossing areas of high archaeological site potential;
- has the least potential impact to LPC habitat;
- has no length of ROW across known habitat of federally listed endangered or threatened species;
- crosses only one stream;
- crosses no parks/recreational areas;
- has no length of ROW through upland woodlands;
- has no length of ROW through bottomland/riparian woodlands;
- has no length of ROW across open water (lakes, ponds);
- 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;
- 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.

Following POWER's review of the 13 primary alternative routes, SPS undertook a further evaluation to consider the reliability, constructability, operation, maintenance, and the cost to construct each alternative. The final evaluation by the SPS project team resulted in the identification of Alternative Route I as the route that SPS believes best addresses the requirements of PURA and PUC Substantive Rules for reasons including those identified above by POWER, and because it is the 3rd least expensive route based on estimated costs, has the least LPC mitigation cost, and has no recorded water wells or oil and gas wells within 200 feet of the ROW centerline. While all proposed alternative routes and combinations of links comprising those routes are viable and constructible,

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

both SPS and POWER believe that Alternative Route I best addresses the requirements of PURA and PUC Substantive Rules.

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.

SPS hosted four public open-house meetings within the affected communities to solicit comments from landowners, public officials, and other interested residents and persons regarding the preliminary alternative links. The meetings were held over a two week timeframe.

Tuesday January 6, 2015	Thursday January 8, 2015	Tuesday January 13, 2015	Thursday January 15, 2015
5:30 – 7:30 p.m. MST 6:30 – 8:30 p.m. CST	5:30 – 7:30 p.m.	5:30 – 7:30 p.m.	5:30 – 7:30 p.m.
Hobbs Event Center 5101 N. Lovington Hwy Hobbs, NM 88240	Denver City High School Auditorium 601 Mustang Drive Denver City, TX 79323	Brownfield Middle School Auditorium 1001 E. Broadway St. Brownfield, TX 79316	Legacy Event Center 1500 14th Street Lubbock, TX 79401

A public open-house meeting notice was submitted to 3,059 landowners who own property located within 500 feet of the preliminary alternative link centerlines. This notice included maps of the combined three project study areas and depicting the preliminary alternative links for each of the three projects, a questionnaire, a copy of the landowner bill of rights, a copy of *Landowners and Transmission Line Cases at the PUC*, and a survey permission form. A copy of the notice is included in Appendix B of the EA, Attachment 1.

A total of 271 individuals attended the meetings according to the sign-in sheet, with 62 submitting questionnaire responses at the meetings and another 100 landowners submitting comments by email/mail. A copy of the questionnaire is included in Appendix B of the EA, Attachment 1.

Meeting Location	Number of Open House Attendees	Number of Questionnaires Submitted
Hobbs, NM	14	2
Denver City, TX	26	5
Brownfield, TX	101	18
Lubbock, TX	130	37
N/A	N/A	100 (sent by email or mail)
TOTALS	271	162

Refer to Appendix A of the EA, Attachment 1, for a list of federal, state, and local agencies and officials that received notice of the project, and Appendix B for a sample copy of the notice letters sent to landowners regarding the open house meeting.

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

Refer to Appendix B of the EA, Attachment 1, for a copy of the questionnaire.

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 No. 3-2 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 estimated according to best available information if required) of all properties directly affected by any route.

Please refer to Figure Nos. 3-3 and 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 5-1 of the EA, Attachment 1, for the Alternative Route Maps depicting the 13 alternative routes for the Proposed Project. Refer to Tables 5-2 through 5-14 in Appendix D of the EA, Attachment 1 for the habitable structures list (by route and distance) and Attachment 10, 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.

Below is a list of permits that may be required for construction of the Proposed Project depending on which route is selected:

- Consultation with the U.S. Army Corps of Engineers will occur following the Commission's approval of this Application to determine appropriate requirements under Section 404/Section 10 Permit criteria (not yet obtained).

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

- 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 Construction form with the FAA (not yet obtained).
- Depending on the location of structures, and road crossing permits might be required by the counties 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 at least 48 hours prior to the beginning of construction to the Texas Commission on Environmental Quality under the Texas Pollutant Discharge Elimination System General Permit (not yet obtained).
- Cultural resources clearance will be obtained from the Texas Historical Commission ("THC") 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 project (not yet obtained).

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.

Table 4-1 in the EA, Attachment 1 identifies, by route, the number of all habitable structures located within 500 feet of the centerline of the proposed routes. Tables 5-2 through 5-14 of the EA, Attachment 1, provide 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.

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

No commercial AM radio towers were identified within 10,000 feet of any of the alternative route centerlines. Alternative Routes F and H have one FM radio transmitter, microwave tower and/or other electronic installation within 2,000 feet of their centerline. The remaining alternative routes do not have any FM radio transmitters, microwave towers, and other electronic installations located within 2,000 feet of their centerlines. Tables 5-7 and 5-9 in the EA, Attachment 1, provide a general description of the electronic installation and its distance from the centerline of Alternative Routes F and H. The location of the listed electronic installation is 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 each of the alternative routes. Table 4-2 of the EA, Attachment 1 identifies each airport, airstrip, and heliport and indicates which routes will likely exceed horizontal slope for each FAA-registered airport. Tables 5-2 through 5-14 of the EA, Attachment 1 provide the distance each airport, airstrip, or heliport from the centerline of each route.

After the PUC approves a 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.

Table 4-1 in the EA, Attachment 1 identifies, by route, the length of ROW through land irrigated by traveling systems (rolling or pivot type). Figure 3-2 in the EA, Attachment 1 shows land irrigated by traveling systems (rolling or pivot type).

25. Notice:

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

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

- 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 10 for: (1) a sample copy of the notice letter; (2) the link descriptions with attached maps; PUCT Landowner Brochure, Comments Form, and Intervenor Form, and Landowner Bill of Rights, all of which were included with each notice packet; and (3) the list of landowners to whom notice was sent.

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

Refer to Attachment 11 for a copy of the notice letters. Also, refer to Attachment 10, for the link descriptions and maps included with each notice.

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

Refer to Attachment 12 for a copy of the notice letters sent to county and municipal authorities. Also, refer to Attachment 10, for the link descriptions and maps 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 13 for a copy of the newspaper notice, link descriptions, and newspaper that will publish the notice. Also, refer to Attachment 10, for a copy of the maps used for the newspaper notice.

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. There are no parks and recreation areas within 1,000 feet of any route.

27. Historical and Archeological Sites:

For each route, list all historical and archeological sites known to be within 1,000 feet of the

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

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 THC 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 alternative routes. There are no known historical sites within 1,000 feet of the center line of the route. There is one known archeological site (Site 41GA1) within 1,000 feet of the center line of Alternative Route K. Site 41GA1 is a prehistoric campsite from which two arrow points, a pestle, metate fragments, manos, pot sherds and debitage are reported. The site was recorded in 1965, at which time it was in a cultivated field that had recently been deep-plowed. Site 41GA1 has not been formally evaluated for listing on the NRHP.

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.

None of the routes are located within the coastal management program boundary as defined in 31 TAC § 503.1.

29. Environmental Impact:

Provide copies of any and all environmental impact studies and/or assessments of the project. If 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 Environmental Assessment and Alternative Route Analysis for the Proposed Yoakum to Texas State Line 345-kV Transmission Line Project in 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, Attachment 1, was sent to TPWD on the day of the filing of this Application. Refer to Attachment 14 for a copy of the transmittal letter.

**Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line**

At the request of the Office of Public Utility Counsel ("OPUC"), only copies of the link descriptions and maps were sent to OPUC on the day of the filing of this Application. Refer to Attachment 15 for a copy of the transmittal letter.

Application to Amend a Certificate of Convenience and Necessity for a Proposed 345-kV
Transmission Line

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. 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
James M. Bagley

SUBSCRIBED AND SWORN TO BEFORE ME, a Notary Public in and for the state of Texas, this 23
day of June 2015.



Donna M. Anderson
Notary Public

My Commission Expires: 6/17/2016