APPLICATION FOR A

CERTIFICATE OF CONVENIENCE AND NECESSITY

FOR A PROPOSED TRANSMISSION LINE IN

HANSFORD AND OCHILTREE COUNTIES, TEXAS

DOCKET NO. 38524

Submit seven (7) copies of the application and all attachments to:

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

southeasterly and crosses to the south side of FM 1267. The Link ends at the intersection of Links O, P, Q, and Z and the intersection of FM 1267 and CR 15.

LINK P

Link P begins at the intersection of CR 15 and FM 1267 and the intersection of Links O, P, Q, and Z. The Link heads due east parallel to the northern boundary of Section 18 along the south side of FM 1267 for approximately 4,040 feet. The Link terminates at the intersection of Links P, R, and S.

LINK Q

Link Q begins at the intersection of Links O, P, Z, and Q. The Link travels due south along the west side of CR 15 parallel to the eastern boundary of Sections 27 and 26 for approximately 7,200 feet crossing one unnamed street and one unnamed stream. At the southeast corner of Section 26, the Link turns due east parallel to the southern boundary of Section 19 and the north side of an existing SPS 115 kV transmission line (Circuit T02), for approximately 3,880 feet. The Link ends at the proposed Ochiltree County Substation, at the termination of Links Q, R, and S.

LINK R

Link R begins at the intersection of Links P, S, and R. The Link heads due south parallel to the western boundary of Sections 5 and 4 for approximately 7,360 feet. The Link terminates at the north side of the proposed Ochiltree County Substation at the termination of Links Q, R, and S.

LINK S

Link S begins at the intersection of Links P, R, and S. The Link travels due east along the south side of FM 1267 and the northern boundary of Section 5 for approximately 3,400 feet. The Link turns due south for approximately 7,560 feet along the eastern half of Sections 5 and 4. The Link turns to the west paralleling the north side of an existing SPS 69kV electric transmission line along the southern boundary of Section 4 for approximately 2,840 feet before terminating on the east side of the proposed Ochiltree County Substation at the termination of Links Q, R, and S.

LINK T

Link T begins at the intersection of Links J, G, I, and T. The Link travels due east for approximately 32,040 feet along the northern boundary of Sections 2, 6, 7, 8, 9, and 10 crossing a pipeline, several unnamed streets, Sand Draw, a tributary of Sand Draw, and Palo Duro Creek. The Link turns south for approximately 8,840 feet, paralleling the eastern boundary of Sections 10 and 11 crossing a tributary of Palo Duro Creek and an unnamed street. The Link travels due east paralleling the northern boundary of the H.C. Day and T.J. Sparks Surveys, for approximately 14,120 feet crossing one tributary of Palo Duro Creek, then along the south side of CR E on the northern boundary of the W.J. Mitchell Survey or approximately 4,760 feet, for a total of approximately 18,880 feet. The Link terminates at the intersection of Links N, T, and Y.

LINK U

Link U begins at the intersection of Links D, E, F, and U. The Link extends in a southwesterly direction parallel to the east side of CR 17 and an abandoned rail line for approximately 3,720 feet through the northwest corner of Section 49 crossing a pipeline. The Link then leaves the abandoned rail line and travels due south along the east side of CR 17 for approximately 7,100 feet along the western boundary of Sections 49 and 50 crossing a pipeline and one unnamed stream to its intersection with an unnamed east-west street at the southwest corner of Section 50. The Link ends at the intersection of Links H, V, and U.

LINK V

Link V begins at the intersection of Links U, H, and V at the southwest corner of Section 50. The Link extends due east for approximately 42,360 feet along the southern boundary of Sections 50, 45, 40, 35, 28, 23, 15, and 10. The Link crosses Hackberry Creek, CR 20, CR 22, FM 3214, and three pipelines. The Link terminates at the southwest corner of Section 3 at the intersection of Links I, V, and W.

LINK W

Link W begins at the intersection of Links W, V, and I at the southwest corner of Section 3. The Link travels due south along the western boundary of Section 4 and parallel to the east side of FM 3214 for a distance of approximately 5,280 feet to the southwest corner of Section 4 at CR F. The Link terminates at the intersection of Links H, M, and W.

LINK X

Link X begins at the intersection of Links Y, Z, and X and at the intersection of CR E and CR 5. The Link runs in a southerly direction parallel to the east side of CR 5 to the intersection of CR 5 and CR F for approximately 6,960 feet. It terminates at the intersection of Links M, O, and X.

LINK Y

Link Y begins at the intersection of Links T, Y, and N. The Link travels due east parallel to the south side of CR E to its intersection with CR 5 for approximately 2,000 feet. The Link terminates at the intersection of Links X, Y, and Z.

LINK Z

Link Z begins at the intersection of Links X, Y, and Z. The Link extends due east for approximately 7,482 feet parallel to the south side of CR E and the northern boundary of the GF Sage Survey, crossing two tributaries of Chiquita Creek and CR 6 . The Link then extends due north parallel to the east side CR 6A for approximately 3,280 feet. The Link then turns due east for approximately 9,360 feet, crossing one tributary of Chiquita Creek, Chiquita Creek, and two pipelines. The Link heads due north for approximately 2,560 feet parallel to the west side of CR 8 to the intersection of CR 8 and CR D, crossing another tributary of Chiquita Creek. The Link then travels due east for approximately 34,480 feet along the north side of CR D, crossing through Section 10, and along the southern boundary of Sections 120, 101, 98, 79, 76, 57, 54, 35, and 32, crossing four identified wetland features, one tributary to Chiquita Creek, CR 10, CR 13, one pipeline and an existing SPS 115 kV transmission line (Circuit T02) in Section 35. At CR 15, the Link turns due south parallel to the west side of CR 15 and the eastern boundary of Sections 31, 30, 29, and 28 for approximately 15,000 feet. The Link terminates at the northeast corner of Section 27 and the intersection of Links O, P, Q, and Z.

The alternative routes are reflected on Figure 6-1.

4. Conductor and Structures:

Conductor Size and Type

Conductor for the 230 kV circuit will be 795 kcmil, ACSR, 26/7 stranded, code name Drake. The static wire will E H ´ (+6 JDOY.DQL]HG VWHHO

Type of Structures

The line will be built using single-pole steel structures. The proposed transmission line structures will consist of a combination of direct burial for in-line structures and drilled pier foundations for corner and angle structures. Typical heights are shown on the attached drawings and are dependent on the clearance requirements to be determined. Highway crossings will utilize structures whose heights are 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 will be between 85 and 125 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 the line with single-pole steel structures and will use direct burial structures on tangent structures and drilled pier foundations on all angle and corner structures. SPS chose single-pole 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. A 38-mile transmission line constructed with wood poles has an estimated maintenance cost of $1,060,000 for the expected life of the line; whereas, there is no expected maintenance 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). In addition, less right-of-way (ROW) is required by single-pole steel structures (70 feet) versus wood H-frame structures (90 feet). The primarily agricultural land use of the area was an additional factor in selecting this type of structure since a single-pole steel line minimizes the impact to both farmers and landowners because it eliminates the space required by an H-frame structure and eliminates the Q H H G I R U J X \ Z L U H V R Q W K H O D Q G R Z Q H U ¶ V S U R S
footprint than a guyed structure. Also, since utilizing steel poles results in using fewer structures, this makes it easier to span existing irrigation systems. During the public meeting held for this project, landowners had no opposition to the single-pole steel design.

The estimated installed cost for a wood H-frame structure is approximately $17,000. The installed cost for a direct burial single-pole, single circuit steel structure is approximately $19,500. Estimated cost of the proposed single-pole, single circuit steel structures on drilled pier foundations is approximately $24,000. The estimated total cost for a line built using wood H-frame poles (with steel poles on foundations for the corner structures) is approximately $13.4 million which includes the cost for the extra ROW that would need to be purchased but does not include maintenance costs. In contrast, if the line were to be built using single-pole steel structures, the estimated cost is $13.9 million. Although Table 12.2 of this application indicates a lower estimated installed cost if the proposed line were to be constructed with wood H-frame poles, SPS opted to use steel poles for all of the benefits previously mentioned in the preceding paragraph.

Typical 230 kV single circuit tangent structure is shown on SPS drawing T-0-484.
Typical 230 kV single circuit angle structure is shown on SPS drawing T-10-458.
Typical 230 kV single circuit corner structure is shown on SPS drawing T-10-459.
Typical 115 kV double circuit tangent structure is shown on SPS drawing T-0-410.
Typical 115 kV double circuit corner structure is shown on SPS drawing T-0-412.

Refer to Attachment 2.

5. Right-of-way:

Miles of Right-of-Way: Approximately 38-50 miles depending on route approved.
Miles of Circuit: Approximately 39-51 miles of new 230 kV circuit depending on route approved.
Width of Right-of-Way: 70 feet
Percent of Right-of-Way Acquired:
No new or expanded ROW was acquired prior to filing this application.

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

The project area is located in Hansford and Ochiltree Counties of the northern Texas Panhandle and in Texas and Beaver Counties of the Oklahoma Panhandle. The termination points are from north central Hansford County at the Oklahoma border to north of Perryton, Texas. The land uses in the area ranges from dry land farming, irrigated farming, Conservation Reserve Program (CRP) grass, open rangeland, and natural gas and oil exploration and drilling. Near Perryton, the occurrence of commercial/industrial operations and residential home sites become more prevalent. The terrain can be characterized as flat to gently rolling plains with a high percentage of cropland.

6. Substations or Switching Stations:

List the name of all existing substations or switching stations that will be associated with the proposed new transmission line.

The following substations are directly connected to the proposed 230 kV line:

- Hitchland Substation
- Ochiltree County Substation (proposed)

The following substations will benefit from the proposed 230 kV line with improved reliability:

- Perryton Substation
- Cole Substation
- Spearman City Substation
- Texas Farms Substation
- Texas County Substation
- Wade Substation
- Booker Substation
- Texas County Substation
- Tri-County Electric Cooperative (TCEC) McMurray Substation
- TCEC-Anthony Substation
- TCEC-Beaver Substation

7. Estimated Schedule:

Estimated Date of:	Start	Completion
Right-of-way Acquisition	Following CCN approval	9 months following CCN approval
Construction of Facilities	Following right-of-way acquisition	6 months following right-of-way acquisition
Energize Facilities	-------------------------------	1 month following construction completion

8. Counties:

List all counties in which preferred or alternate routes are proposed to be constructed

- Hansford County, Texas
- Ochiltree County, Texas
- Texas County, Oklahoma

9. Municipalities:

List all municipalities in which preferred or alternate routes are proposed to be constructed.

None.

Attach a copy of the franchise, permit or other evidence of the city's consent held by the utility. If franchise, permit, or other evidence of the city's consent has been previously filed, provide the docket number of the application in which the consent was filed.

Not applicable.

10. Affected Utilities:

Identify any other electric utility served by or connected to facilities proposed in this application. Include any utilities sharing proposed facilities (double circuit structures, substation equipment) or right-of-way.

- North Plains Electric Cooperative, Inc. (NPEC)
- Golden Spread Electric Cooperative, Inc. (GSEC)
- TCEC

Describe how any other electric utility will be affected and the extent of the other utilities' involvement in the construction of this project.

The new line will cross areas that are certificated to NPEC and TCEC. As a result, construction coordination between SPS and these electric cooperatives may be required when SPS crosses their lines. However, all construction for this project will be completed by SPS and/or its contractors.

11. Financing:

Describe the method of financing this project. If the applicant is to be reimbursed for this project, or a portion of this project, identify the source and the amount of the contribution in aid of construction.

The proposed project will be financed through internally-generated funds.

12. Estimated Costs:

Table 12.1: Hitchland Substation to Ochiltree County Substation (using single pole steel structures, as proposed in this application)

	Route 1 (Preferred Route) Links: A, E, U, V, W, M, O, P, R ROW Length: 38 miles Circuit Length: 39.5 miles		Route 2 Links: A, E, U, H, M, O, Q ROW Length: 38 miles Circuit Length: 39.5 miles		Route 3 Links: A, E, F, G, T, Y, X, O, P, R ROW Length: 38 miles Circuit Length: 39.5 miles		Route 4 Links: A, E, F, G, T, Y, Z, Q ROW Length: 40 miles Circuit Length: 42 miles		Route 5 Links: A, B, C, G, J, L, N, Y, Z, Q ROW Length: 50 miles Circuit Length: 51.5 miles	
	Transmission Facilities	Substation Facilities	Transmission Facilities	Substation Facilities	Transmission Facilities	Substation Facilities	Transmission Facilities	Substation Facilities	Transmission Facilities	Substation Facilities
Right-of-Way (Easement & Fees)	$1,483,406	$70,000	$1,483,406	$70,000	$1,483,406	$70,000	$1,561,480	$70,000	$1,951,850	$70,000
Material & Supplies	$6,941,354	$5,412,391	$7,124,585	$5,412,391	$7,172,548	$5,412,391	$7,633,681	$5,412,391	$9,286,938	$5,412,391
Labor & Transportation (Utility)	$2,932,683	$1,148,617	$2,937,283	$1,148,617	$2,935,310	$1,148,617	$2,992,002	$1,148,617	$3,962,096	$1,148,617
Labor & Transportation (Contract)		$99,318		$99,318		$99,318		$99,318		$99,318
Stores	$1,364,154	$861,140	$1,400,801	$861,140	$1,417,177	$861,140	$1,531,779	$861,140	$1,823,584	$861,140
Engineering & Administration (Utility)	$966,961	$445,839	$960,767	$445,839	$968,035	$445,839	$981,785	$445,839	$1,205,596	$445,839
Engineering & Administration (Contract)	$220,400		$215,400		$217,900		$244,800		$305,500	
Estimated Total Cost	$13,908,958	$8,037,305	$14,122,242	$8,037,305	$14,194,376	$8,037,305	$14,945,527	$8,037,305	$18,535,564	$8,037,305
Total Cost	$21,946,263		$22,159,547		$22,231,681		$22,982,832		$26,572,869	
Cost/Mile (Transmission Facilities only)	$366,025		$371,638		$373,536		$373,638		$370,711	

Table 12.2: Hitchland Substation to Ochiltree County Substation (comparative estimate if built using wood H-frame structures)

	Route 1 (Preferred Route) Links: A, E, U, V, W, M, O, P, R ROW Length: 38 miles Circuit Length: 39.5 miles		Route 2 Links: A, E, U, H, M, O, Q ROW Length: 38 miles Circuit Length: 39.5 miles		Route 3 Links: A, E, F, G, T, Y, X, O, P, R ROW Length: 38 miles Circuit Length: 39.5 miles		Route 4 Links: A, E, F, G, T, Y, Z, Q ROW Length: 40 miles Circuit Length: 42 miles		Route 5 Links: A, B, C, G, J, L, N, Y, Z, Q ROW Length: 50 miles Circuit Length: 51.5 miles	
	Transmission Facilities	Substation Facilities	Transmission Facilities	Substation Facilities	Transmission Facilities	Substation Facilities	Transmission Facilities	Substation Facilities	Transmission Facilities	Substation Facilities
Right-of-Way (Easement & Fees)	$1,953,406	$70,000	$1,953,406	$70,000	$1,953,406	$70,000	$2,031,480	$70,000	$2,421,850	$70,000
Material & Supplies	$5,347,265	$5,412,391	$5,331,698	$5,412,391	$5,697,058	$5,412,391	$6,473,920	$5,412,391	$7,931,455	$5,412,391
Labor & Transportation (Utility)	$3,652,873	$1,148,617	$3,608,229	$1,148,617	$3,490,592	$1,148,617	$3,690,843	$1,148,617	$4,300,744	$1,148,617
Labor & Transportation (Contract)		$99,318		$99,318		$99,318		$99,318		$99,318
Stores	$1,023,373	$861,140	$1,015,568	$861,140	$1,107,107	$861,140	$1,271,634	$861,140	$1,541,239	$861,140
Engineering & Administration (Utility)	$1,233,726	$445,839	$1,221,129	$445,839	$1,224,328	$445,839	$1,262,867	$445,839	$1,469,776	$445,839
Engineering & Administration (Contract)	$220,400		$215,400		$217,900		$244,800		$297,500	
Estimated Total Cost	$13,431,043	$8,037,305	$13,345,430	$8,037,305	$13,690,391	$8,037,305	$14,975,544	$8,037,305	$17,962,564	$8,037,305
Total Cost		$21,468,348		$21,382,735		$21,727,696		$23,012,849		$25,999,869
Cost/Mile (Transmission Facilities only)	$353,449		$351,196		$360,273		$374,389		$359,251	

13. Need for the Proposed Project:

Describe the need for the proposed construction. Describe the existing transmission system and conditions addressed by this application. Provide historical load data and load projections for at least five years to justify projects planned to accommodate load growth. State how the proposed facilities will meet the projected demand and provide a written description of the steady state load flow analysis that justifies the project. Provide any documentation of the review and recommendation of a PURA §39.151 organization. Provide any documentation showing the proposed facilities are needed to provide service to a new transmission service customer.

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 PURA Section 39.151 as an independent system operator. The SPP as an RTO has determined that there is a need for the proposed transmission line, and has issued a notice for SPS to construct the proposed transmission line.

Refer to Attachment 3, page 5 for the SPP Notification to Construct (NTC) letter (SPP-NTC-20004, Project ID: 156, Upgrade ID: 10330).

The project name and project description referenced in the NTC letter indicate that the proposed 230 kV line from Hitchland Substation would terminate at Perryton Substation. Additionally, the NTC letter, under the upgrade ID 10331, calls for the installation of a 230/115 kV transformer at Perryton Substation. However, at the time the NTC letter was issued, SPP was not aware that there would be insufficient room for these new facilities at Perryton Substation. Therefore, another location suitable and convenient to the interconnection of the new 230 kV facilities with the existing 115 kV transmission was sought, and thus named Ochiltree County Substation.

Please refer to Attachment 4 for the SPP revised NTC letter (SPP-NTC-20111, Project ID: 156, Upgrade **ID: 10330) indicating SPP's acceptance of t**he endpoint change from the Perryton Substation (as originally proposed) to the proposed Ochiltree County Substation.

The proposed 230 kV transmission line from Hitchland Substation to Ochiltree County Substation is one of nine transmission system upgrade V JURXSHG WRJHWKHU DQG UHIHUUHG WR E\ 633 Multi - E\ 633 X Hitchland - Texas Co. 230 kV and 115 kV´ DQG UHIHUUHG WR E\ 636 DV WKH ³7H[DV 1RU of transmission system upgrades was developed by SPP and SPS through long-range planning processes to be the most effective group of transmission system upgrades that would compliment each other to achieve the capacity and reliability requirements necessary to improve the transmission reliability in the Texas Panhandle area, and to maintain the bulk electric transmission capacity from adjacent transmission systems north of Texas.

As part of the Texas North Upgrades, the proposed 230 kV transmission line from Hitchland Substation to Ochiltree County Substation will improve transmission reliability by providing a 230 kV source to the transmission in the Perryton, Texas area, and thereby mitigate overloads and low voltage conditions.

Existing Transmission System

The SPS transmission system north and east of Amarillo, Texas consists of approximately 220 miles of 345 kV line, 275 miles of 230 kV line, 887 miles of 115 kV line, and 225 miles of 69 kV line, serving approximately 845 MVA of load during the summer peak loading season. From this area, there are five transmission tie-lines connecting to adjacent transmission systems in Kansas and Oklahoma: one 345 kV tie-line and one 115 kV tie-line connecting SPS transmission north into Kansas, one 230 kV tie-line and two 115 kV tie-lines tying east into Oklahoma. The transmission system in this area has a total of approximately 931 MW of generation with approximately 600 MW from wind, 91 MW from gas, and 240 MW from cogeneration. There is a total of approximately 380 MVAR of reactive power support supplied to this area with approximately 175 MVAR from generation and 205 MVAR from switched capacitor banks. The area load is made up primarily of agricultural and oil and gas industry production and facilities.

The strong tie to transmission systems north of Texas is through the 345 kV line from Potter County Substation (North of Amarillo, Texas) to Hitchland Substation (located at the Texas/Oklahoma border) to Finney Breaker Station (located south of Garden City, Kansas). This transmission tie-line provides the SPS transmission system access tR JHQHUDWLRQ LQ .DQVDV DQG 1HEUDVND QHHGHG WR FRYH periods of peak load, or to cover the contingency (unplanned) loss of one of the Tolk Generating Units (540 MVA). This transmission tie-line has become an essential element to the SPS transmission system to reliably serve firm transmission service to wholesale and retail load. This transmission tie-line also provides the SPS system operators the needed flexibility to coordinate scheduled generation outages for maintenance.

Load History:

In the area north of Amarillo, Texas, SPS serves the communities of Borger, Boys Ranch, Canadian, Dalhart, Dumas, Groom, Miami, Pampa, Panhandle, Perryton, Shamrock, Spearman, Stratford, Wheeler, White Deer, and a number of smaller communities. This area has a mixture of customer classes including residential, commercial, agricultural, and industrial with the majority of the electrical demand attributed to agricultural and oil and gas related industries. SPS continues to experience increased electrical demand from the electrification of irrigation wells and the addition of industries related to agriculture. The growth in the oil and gas industry has also contributed to the increased electrical demand. Over the last eight years, the electrical load in this area has increased by 20.54%, with an average load growth rate of 2.78% per year. Table 13.1 below illustrates ten years of historical growth in the summer peak load served by SPS to the area north of Amarillo, Texas.

Table 131: Area Load History

Load Data (MW) July 2000 - July 2009		
Year	Load	%Change
2000	701	-
2001	681	-2.85%
2002	681	0.00%
2003	728	6.90%
2004	732	0.55%
2005	752	2.73%
2006	794	5.59%
2007	809	1.89%
2008	869	7.42%
2009	845	-2.76%
Average Growth Per Year (%)		2.78%
Total 9 Year Growth (%)		20.54%

Load Forecast:

The electrical load in this area is expected to continue to grow steadily, and the forecasted loads are included in the system planning models. Table 13.2 illustrates the forecasted loads for this area used in the transmission system planning models.

Table 13.2: Forecasted and Modeled Area Loads

Year	Summer Load (MW)
2010	872.4
2011	903.6
2014	948.6
2019	1039.4

<u>Project Development and Powerflow Studies</u>:

The Texas No UWK 8SJUDGHV LV D JURXS RI SURMHFWV GHYHORSHG WKU process. These projects were developed in 2007 to improve the transmission reliability in the Texas Panhandle area, and to maintain the bulk electric transmission capacity from adjacent transmission systems north of Texas. The current scope of projects that make up the Texas North Upgrades is summarized in the following list.

- Increase the 230/115 kV transformer capacity at Moore County Substation. SPS completed this project in 2008.
- Create a new transmission source north of Moore County Substation from the 345 kV line near the Texas/Oklahoma border called the Hitchland Substation. SPS has started construction on this project.
- Construct a new breaker station to coordinate the 115 kV between Hitchland Substation and Moore County Substation. SPS has started construction on this project.

- Construct a new 115 kV line from Dallam County Substation to Sherman County Substation. SPS has obtained a CCN to construct this line (PUC Docket No. 37104).
- Construct a new 230 kV line to from Dallam County Substation to Channing Substation to Potter County Substation. 7KLV OLQH ZDV RULJLQDOO\ SODQQHG WR WHUPLQDWH DW was subsequently changed to the Potter County Substation. This line will provide a much needed backup source to the communities of Channing, Tascosa, and Boys Ranch, and will initially be operated at 115 kV. SPS has filed an application to amend its CCN to include this line (PUC Docket No. 37771).
- Construct a new 230 kV line from Hitchland Substation to Moore County Substation to provide a backup 230 kV supply to Moore County Substation. SPS has filed an application to amend its CCN to include this line (PUC Docket No. 38283).
- Construct a new 230 kV line from Hitchland Substation to a new 230/115 kV Ochiltree County substation north of Perryton, Texas. This new line and substation will provide the much-needed backup transmission to the communities in the northern Texas Panhandle that are currently served by long 115 kV transmission lines. This project is the subject of this application.
- Construct a new 230 kV line from Hitchland Substation to Pringle Substation. This line will provide a necessary backup to the 230 kV line from Hitchland Substation to Moore County Substation. This project will be the subject of a future CCN application.

To provide a 230 kV source to the Perryton, Texas area and thereby improve transmission service reliability, SPS proposes in this application to construct between <u>38 and 50</u> miles of 230 kV transmission line from the Hitchland Substation to the Ochiltree County Substation.

Planning Criteria / Philosophy

As discussed above, SPS is a member of the SPP, which has issued a notification to construct (NTC) dated February 13, 2008 for SPS to construct this project. SPS does not operate in the Electric Reliability Council of 7H[DV (5&27 UHJLRQ DQG (5&27 WDNHV QR SRVLWLRQ RQ 636¶V W determined the need for this proposed project through internal system planning in conformance with SPP FULWHULD DQG 1(5&¶V 3ODQQLQJ 6WDQGDUGV VXPPDUL]HG DV IROOR

- Under system intact normal system operation, the loading on any transmission element will not exceed that HOHPHQW¶V QRUP al rating and service voltage levels will be maintained within normal acceptable levels.
- Under single-contingency conditions, the loading on any transmission element will not exceed its emergency rating, and service voltage levels will be maintained within emergency limits.

636¶V DVVHVVPHQWV RI LWV SRUWLRQ RI WKH LQWHUFRQQHFWHG transmission system can be operated to supply projected customer demands and projected firm (non-recallable reserved) transmission service under contingency conditions defined as:

- The loss of a single transmission element such as a generator, transmission line, or transformer,
- The loss of multiple transmission elements due to common failure such as a bus fault, breaker failure, multi-circuit transmission line (common structure or common corridor), or other combinations of transmission elements removed from operation by a single event.

SPS re-evaluated the need for the Texas North Upgrades by modeling the transmission system before and after the recommended projects using the latest SPP system models. The base case models were recreated by removing each of the projects in the Texas North Upgrades with the exception of the increased 230/115 kV transformer capacity at Moore County Substation. It was necessary to leave the increased capacity at Moore County Substation so that the system intact overload would not be reported in every single-contingency tested. Table 13.3 illustrates the single-contingency conditions without the Texas North Upgrades reporting the number of buses with low voltage and the percent of overload above the emergency ratings.

Table 13.3: Contingency Conditions without the Texas North Upgrades

Contingency (Outaged Transmission Element)	Limiting Elements	Transmission Loading Above Emergency Rating, or Number of Low Voltage Services		
		2010	2011	2014[1]
Texas Farms Substation to Ochiltree 115 kV line	Number of buses with low voltage	2	6	8
Texas Farms Substation to Spearman City Substation 115 kV line	Number of buses with low voltage	4	9	9
Spearman Substation to Spearman City Substation 115 kV line	Texas County Substation to TC-McMurry 115 kV line	-	107.2%	137.3%
	Number of buses with low voltage	9	11	25
Spearman Substation to Pringle Substation #1	Spearman Substation to Pringle Substation #2	111.3%	115.2%	119.7%
Spearman Substation to Pringle Substation #2	Spearman Substation to Pringle Substation #1	115.3%	119.3%	124.6%
Moore County Substation to RB-Hogue 115 kV line	Moore County to Etter Rural Substation 115 kV line	100.1%	-	-
	Number of buses with low voltage	2	-	2
Hilmar Cheese Plant to Etter Rural Substation 115 kV line	Number of buses with low voltage	4	4	4
Moore County Substation to Etter Rural Substation 115 kV line	Dalhart Substation to RB-Hogue 115 kV line	139.2%	139.4%	147.2%
	Moore County to RB-Hogue 115 kV line	152.0%	153.1%	153.3%
	Number of buses with low voltage	6	6	7
Pringle Substation 230/115 kV transformer	Pringle Substation to Riverview Station 115 kV line	-	-	101.5%
Pringle Substation to Harrington Station 230 kV line	Pringle Substation to Riverview Station 115 kV line	-	-	101.5%
	Number of buses with low voltage	-	-	1
Moore County Substation 230/115 kV transformer	Riverview Station to Herring Substation 115 kV line	-	109.4%	113.9%
	Number of buses with low voltage	10	10	15
Moore County Substation to Potter County 230 kV line	Riverview Station to Herring Substation 115 kV line	-	109.4%	113.9%
	Number of buses with low voltage	10	10	15

To further illustrate the magnitude of the single-contingency conditions, Table 13.4, below, illustrates the minimal level of post contingency load shed that would be required to mitigate the contingency overloading and low voltages to return conditions back to an acceptable emergency level.

[1] The 2019 cases were omitted because the powerflow base case models would not reach a solution without the Hitchland Substation.

Table 13.4: Minimal Load Shed to Satisfy Emergency Contingency Conditions

Contingency (Outaged Transmission Element)	Contingency Load Shed (MVA) to Return to Allowable Emergency Conditions		
	2010	2011	2014
Texas Farms Substation to Ochiltree 115 kV line	1.1	4.2	8.3
Texas Farms Substation to Spearman City Substation 115 kV line	2.1	5.2	10.4
Spearman Substation to Spearman City Substation 115 kV line	7.3	10.4	16.5
Spearman Substation to Pringle Substation #1	24.3	29.9	36.0
Spearman Substation to Pringle Substation #2	30.5	37.4	44.8
Moore County Substation to RB-Hogue 115 kV line	1.1	3.2	1.1
Hilmar Cheese Plant to Etter Rural Substation 115 kV line	8.3	9.3	9.3
Moore County Substation to Etter Rural Substation 115 kV line	10.4	12.4	13.5
Pringle Substation 230/115 kV transformer	0	0	2.7
Pringle Substation to Harrington Station 230 kV line	0	0	2.7
Moore County Substation 230/115 kV transformer	26.2	36.7	41.54
Moore County Substation to Potter County 230 kV line	26.2	36.7	41.54

The Texas North Upgrades create an essential new source to the 115 kV load serving transmission north of Moore County Substation, and the additional 230 kV transmission lines from Hitchland Substation to Moore County and Pringle substations maintain the bulk electric transmission capacity from adjacent transmission systems north of Texas.

SPS has already completed the first improvement project by increasing the 230/115 kV transformer capacity at Moore County Substation, and SPS has already started construction of the Hitchland Substation located at the Texas/Oklahoma border. SPS has also obtained a CCN to construct the 115 kV lines from Dallam County Substation to Sherman County Substation and has filed a CCN application to construct a 230 kV transmission line from Dallam County Substation to Channing Substation to Potter County Substation (originally planned to terminate at the Northwest Substation), and the 230 kV line from Hitchland Substation to Moore County Substation. With this progress, the following additional powerflow study was performed for this application.

Powerflow Studies Going Forward:

The proposed 230 kV transmission line from Hitchland Substation to Ochiltree County Substation will improve transmission reliability by providing a 230 kV source to the transmission in the Perryton, Texas area, and thereby mitigate overloads and low voltage conditions. To reflect the conditions that should be present by the end of 2010, new models were created that included the Hitchland 345/230/115 kV substation with all of the 345 kV and 115 kV connections completed, and the 230 kV line from Hitchland Substation to Moore County Substation, but without the 230 kV line from Hitchland Substation to Ochiltree County Substation. Table 13.5 illustrates the study results indicating the conditions before and after the 230 kV line from Hitchland Substation to Ochiltree County Substation.

Table 13.5: Contingency Conditions Before and After the Proposed 230 kV Line from Hitchland Substation to Ochiltree County Substation

Contingency (Outaged Transmission Element)	Limiting Elements	2011		2014		2019	
		BASE CASE % Loading	TEST CASE % Loading	BASE CASE % Loading	TEST CASE % Loading	BASE CASE % Loading	TEST CASE % Loading
Moore Co. 230/115 kV transformer	Hitchland 230/115 kV transformer	103.7	-	104.5	-	123.4	-
Hitchland 230/115 kV transformer	Moore Co. 230/115 kV transformer	-	-	100.1	-	108.9	-
Potter Co. 345/230 kV transformer[1]	Hitchland 230/115 kV transformer	-	-	-	-	102.2	-
Potter Co. to Hitchland Substation 345 kV line[2]	Hitchland 230/115 kV transformer	-	-	-	-	102.2	-
Hitchland to Moore Co. 230 kV line	Hitchland 230/115 kV transformer	-	-	-	-	120.8	-
Texas Farms to Ochiltree 115 kV line	Hitchland 230/115 kV transformer	-	-	-	-	103.8	-
Texas Farms to Spearman City Substation 115 kV line	Hitchland 230/115 kV transformer	-	-	-	-	104.4	-
Spearman Substation to Spearman City Substation 115 kV line	Hitchland 230/115 kV transformer	-	-	-	-	105.8	-
	Texas County to TC-McMurry 115 kV line	-	-	-	-	107.5	-
	Low voltage Services	-	-	-	-	7	-
Spearman Substation to Pringle 115 kV line (Circuit 1)	Hitchland 230/115 kV transformer	-	-	-	-	102.5	-
Spearman Substation to Pringle 115 kV line (Circuit 2)	Hitchland 230/115 kV transformer					100.5	
Pringle 230/115 kV transformer	Hitchland 230/115 kV transformer	-	-	-	-	103.1	-
Wheeler Co. to Elk City 230 kV line	Hitchland 230/115 kV transformer	-	-	-	-	101.1	-

Note ³-´ indicates no loading issues found in that contingency.
BASE CASE = Cases without the proposed 230 kV line from Hitchland Substation to Ochiltree County Substation.
TEST CASE = Cases with the proposed 230 kV line from Hitchland Substation to Ochiltree County Substation.

Routing Considerations

An evaluation was made to see if there would be any potential problems from routing the proposed 230 kV line from Hitchland Substation to Ochiltree County Substation along any of the existing or planned transmission lines that may be encountered between Hitchland Substation and Ochiltree County Substation. This study indicated that there were only three lines that should be avoided to preserve the reliability of the transmission system. Paralleling the following lines should be avoided for reliability reasons:

- The 345 kV line from Hitchland Substation to Potter County Substation
- The 230 kV line from Hitchland Substation to Moore County Substation
- The 115 kV line from Spearman Substation to Ochiltree County Substation

Table 13.6 illustrates the results of this double circuit contingency evaluation.

Table 13.6: Re-testing the Contingency Conditions for Multiple Circuit Outages

Contingency (Outaged Transmission Element with the loss of the Hitchland to Ochiltree 230 kV line)	Limiting Elements	2011	2014	2019
		% Loading	% Loading	% Loading
Potter Co. to Hitchland 345 kV line	Hitchland 230/115 kV transformer	103.1	100.9	126.7
Hitchland to Moore Co. 230 kV line	Hitchland 230/115 kV transformer	-	-	120.8
Texas Farms to Ochiltree 115 kV line	Hitchland 230/115 kV transformer	-	-	103.8
Texas Farms to Spearman City Substation 115 kV line	Hitchland 230/115 kV transformer	-	-	104.4
Spearman Substation to Spearman City Substation 115 kV line	Hitchland 230/115 kV transformer	-	-	105.8
	Texas County Substation to TC-McMurray 115 kV line.	-	-	107.5
	Low voltage Services			7
Hitchland to Hansford 115 kV line	None	-	-	-
Hitchland to Pringle 230 kV line	None	-	-	-

These results indicate that by 2019, the loss of the 230 kV line from Hitchland Substation to Ochiltree County Substation if out of service with above mentioned lines will cause the Hitchland 230/115 kV transformer to overload. Furthermore, if the proposed 230 kV line from Hitchland Substation to Ochiltree County Substation were out of service coincident with the 115 kV line from Spearman Substation to Spearman City Substation, then the 115 kV line from Texas County Substation to TC-McMurray Substation would overload and also cause low voltage conditions at seven transmission service locations.

14. Alternatives to Proposed Project:

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 alternatives to the proposed project. Explain how the proposed project overcomes the insufficiencies of the other options that were considered.

When the SPP was developing the projects included in the TXN Upgrades, combinations of other transmission projects were studied to find the most effective group of transmission projects that would compliment each other to achieve the capacity and reliability requirements necessary in the Texas Panhandle area, and to maintain the bulk electric transmission capacity from adjacent transmission systems north of Texas. There were no alternative options provided to SPS when SPP issued a notice for SPS to construct the proposed 230 kV line from Hitchland Substation to Ochiltree County Substation. Furthermore, all future transmission service has been based upon SPP studies that included all of the projects listed in the TXN Upgrades previously ordered to be built by the SPP including the Hitchland Substation to Ochiltree County Substation. As a member of the SPP, SPS does not have the authority to unilaterally substitute an alternative project in place of the project the SPP ordered to be built in its NTC.

The following alternatives are discussed to comply with the instructions of this application. These alternatives are not viable alternatives to this project, for both the reasons discussed above related to the SPP NTC and the reasons discussed under each alternative.

Alternative 1: Construct Approximately 40 miles of 115 kV Line from Hitchland Substation to Ochiltree County Substation

This alternative would have provided another 115 kV source to the transmission in the Perryton, Texas area, which would have mitigated the overloads and low voltage conditions for the contingency loss of the 115 kV line from Spearman Interchange to Spearman Substation and saved the project cost of the 230/115 kV transformer at Ochiltree County Substation.

When SPS analyzed this alternative for reliability, it was determined that the 230/115 kV transformer was just as important a system upgrade as the proposed 230 kV line. Table 14.1 illustrates how the 230/115 kV transformer of the proposed project also mitigates system intact and contingency overloads of the Hitchland and Moore County 230/115 kV transformers.

Table 14.1: Alternative 1 – System Intact and Contingency Transformer Overloads

Alternative 1		2011	2014	2019
Contingency (Outaged Transmission Element)	Limiting Elements	% Loading	% Loading	% Loading
System Intact (No Contingency)	Hitchland 230/115 kV transformer	-	-	100.8
Moore Co. 230/115 kV transformer	Hitchland 230/115 kV transformer	105.8	106.9	125.9
Hitchland 230/115 kV transformer	Moore Co. 230/115 kV transformer	-	100.1	109.2
Hitchland to Moore Co. 230 kV line	Hitchland 230/115 kV transformer	102.3	101.9	123.3

Although this alternative would provide another source to the transmission in the Perryton, Texas area, it would not provide additional reliability as the proposed project would. Therefore SPS would have rejected this project alternative.

Alternative 2: Re-conductor of Existing 115 kV Transmission

With this alternative, SPS would re-conductor the existing 115 kV transmission lines from Texas County to Cole to Perryton to Texas Farms to Spearman Substation. This re-conductor project would increase the line ratings from 99 MVA to 270 MVA and thereby mitigate the contingency overloads. Furthermore, this alternative would reduce the voltage drop on the line such that there would be sufficient service voltage during the critical contingencies loss of the Spearman to Spearman Substation 115 kV line.

SPS reviewed this alternative and found that the re-conductor of the existing 115 kV line would be sufficient to mitigate the contingency low voltage conditions, and overloads out of Texas County Substation. However, the review also indicated that this alternative would leave the area transmission short on the 230/115 kV transformer capacities at Hitchland Substation and Moore County Substation. Table 14.2 illustrates the overloads that would remain if this alternative were built instead of the proposed project.

Table 14.2: Alternative 2– Post Project Conditions

Alternative 2		2011	2014	2019
Contingency (Outaged Transmission Element)	Limiting Elements	% Loading	% Loading	% Loading
System Intact (No Contingency)	Hitchland 230/115 kV transformer	-	-	-
Moore Co. 230/115 kV transformer	Hitchland 230/115 kV transformer	103.8	104.9	123.1
Hitchland 230/115 kV transformer	Moore Co. 230/115 kV transformer	-	-	108.8
Hitchland to Moore Co. 230 kV line	Hitchland 230/115 kV transformer	-	-	121.0
Spearman to Spearman Substation 115 kV line	Hitchland 230/115 kV transformer	-	-	104.4
Spearman Substation to Texas Farms 115 kV line	Hitchland 230/115 kV transformer	-	-	103.2
Texas Farms to Perryton 115 kV line	Hitchland 230/115 kV transformer	-	-	103.2
Pringle to Spearman 115 kV line Circuit 1	Hitchland 230/115 kV transformer	-	-	102.5
Pringle to Spearman 115 kV line Circuit 2	Hitchland 230/115 kV transformer	-	-	100.5
Pringle 230/115 kV transformer	Hitchland 230/115 kV transformer	-	-	103.1

Evaluation of the existing 115 kV transmission line found the existing structures to be inadequate to support larger conductors. Therefore, this alternative would require the complete wreck out of the existing line, and the rebuilding of a new line in its place with the new larger conductors. The estimated cost to wreck out, and then rebuild approximately 80 miles of line is approximately $35,000,000. SPS would not have pursued this alternative due to its less reliable performance and L W V S U R K L E L W L Y H F D S L W D O F R V W U H O D W

Alternative 3: Add 230/115 kV Transformer Capacity at Hitchland Substation

This alternative sought to mitigate the contingency overloading and low voltage conditions through the addition of a second 230/115 kV transformer at Hitchland Substation. This alternative would mitigate the overloading of the Hitchland 230/115 kV transformer for those contingencies listed in Table 13.5 where the Hitchland 230/115 kV transformer overloads.

SPS reviewed this alternative and found that the additional 230/115 kV transformer at Hitchland Substation would mitigate the most of the contingency based overloads, but would leave area transmission in the Perryton, Texas area without another transmission source, and thereby result in the remaining contingency overloads and low voltage conditions reported in Table 14.3.

Table 14.3: Alternative 3– Remaining Overloads and Low Voltages

Alternative 3		2011	2014	2019
Contingency (Outaged Transmission Element)	Limiting Elements	% Loading	% Loading	% Loading
Spearman Substation to Spearman City Substation 115 kV line	Texas County to TC-McMurry 115 kV line	-	-	108.0
	Low voltage Services	-	-	5
Spearman City Substation to Texas Farms 115 kV line	Low voltage Services	-	-	1

Although this alternative would have mitigated the contingency based overloads of the Hitchland and Moore County 230/115 kV transformers, this alternative would not provide the additional reliability of another transmission source to the Perryton, Texas area that the proposed project would provide. Therefore SPS would have rejected this project alternative due to its reliability performance.

Alternative 4: Shunt or Series Reactive Power Compensation of Existing 115 kV Transmission

With this alternative, SPS would employ either series compensation of the existing 115 kV transmission line or the installation of shunt capacitor banks at Perryton Substation to mitigate the contingency-based low voltage conditions.

SPS did not consider either one of these measures as a viable alternative because compensating for only the low voltage conditions would not mitigate the line or transformer overloads. SPS would not have pursued project alternatives of this nature after considering the proposed project and how it would achieve all of the reliability objectives.

Alternative 5: Implement a Distribution Solution

This alternative would seek to mitigate the contingency overloading and low voltage conditions through a distribution alternative.

The existing Spearman, Texas Farms, Perryton, Wade, and Booker Substations supply power to the distribution in the Spearman, Perryton, and Booker Texas area. The current loads in these communities cannot be reliably served during critical contingencies on the existing transmission. Furthermore, the nearest distribution served by other transmission is more than 33 miles away from the Perryton area and another 19 miles further yet to the Booker area. Therefore, there is no distribution alternative to the proposed project.

Alternative 6: Adding Generation

This alternative would have proposed the construction of a natural gas generation plant at or near Perryton 6XEVWDWLRQ 7KH SODQW¶V UDWLQJ ZRXOG QHHG WR be sufficient to mitigate the line and transformer overloads as well as provide sufficient reactive power support to mitigate the low voltage conditions. This plant would provide the necessary power to meet the normal growth in load, and would be available as an alternate source under contingency conditions for the area served by Perryton Substation.

An evaluation of this alternative resulted in SPS concluding that a minimum of approximately 30 MW of generation would be needed to resolve the low voltage conditions and transmission line overloads. However, to mitigate the 230/115 kV transformer overloads, this alternative would need approximately 150 MW of generation. This would be problematic because the 115 kV transmission in the Perryton area has the capacity for approximately 96 MVA under single contingency conditions. Therefore, the construction of any more generation would still require the construction of another transmission line.

Considering only the minimal 30 MW of generation needed to mitigate the line overloads and low voltage conditions, the estimated installed cost for a gas turbine generator at $900 per kW is approximately $27,000,000. This cost does not include permitting, fuel supply interconnection, or transmission interconnection. SPS would have rejected this project alternative due to its prohibitive capital cost and less than GHVLUDEOH SHUIRUPDQFH UHODWLYH WR 636¶V SURSRVHG SURMHFW

The proposed project to construct a 230 kV line from Hitchland Substation to Ochiltree County Substation as part of the TXN Upgrades ordered by the SPP surpasses the alternatives discussed above in terms of both cost and performance.

15. Schematic or Diagram:

Provide a schematic or diagram of the applicant's transmission system in the proximate area of the proposed project. Show the location and voltage of existing transmission lines and substations, and the location of the proposed construction. Locate any taps, ties, meter points, or other facilities involving other utilities on the system schematic.

Refer to Attachment 5. (SPS System Map)

16. 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 preferred and alternate routes. Provide a copy of the complete routing study conducted by the utility or consultant.

The environmental assessment (EA) and alternative routing analysis for these projects were produced by PBS&J with input from SPS Siting and Land Rights personnel and is included as Attachment 1 to the Application.

The first step in the selection of alternative routes was to select a study area. This area needed to encompass both project termination points, which are the existing Hitchland Substation and the proposed Ochiltree County Substation. It also needed to include a large enough area within which an adequate number of alternative routes could be located. The study area for the proposed 230 kV transmission line is approximately 36 miles west to east and 18.5 miles north to south located in Hansford and Ochiltree Counties, Texas and Beaver and Texas Counties, Oklahoma.

The data used by PBS&J and SPS in the delineation of alternative routes included published literature (documents, reports, maps, aerial photography, etc.) and information obtained from local, state, and federal agencies including information obtained from county appraisal district maps and records. Aerial photography acquired from the National Agriculture Imagery Program dated 2008; U.S. Geological Survey (USGS) topographic maps, TxDOT county maps, and ground reconnaissance surveys were used throughout the selection and evaluation of alternative routes. Ground reconnaissance of the study area and computer-based evaluation of digital aerial imagery were utilized for both refinement and evaluation of alternative routes.

The next step in the process was to identify routing constraints within the study area. These consisted of habitable structures, out buildings and barns, irrigation wells, irrigation systems, cemeteries, historic sites, archaeological sites, wetlands, parks, churches, schools, and endangered or threatened species habitat, electrical distribution lines, as well as underground utilities and above ground communication towers. Additionally, where possible, existing compatible ROW, property lines, and roadways were utilized or paralleled.

After preliminary routes were identified, modifications were made based on the results of field evaluation and review of high-resolution aerial photography. In order to solicit public opinion about the project, these preliminary routes were presented at two public open-house meetings at the Museum of the Plains in Perryton, Texas on May 20, 2009 and March 30, 2010 between the hours of 5:00 p.m. and 8:00 p.m. Based on landowner comments/input some new alternative routes were added for the second public open-house meeting.

After careful consideration and study of all possible routes within the approximate 666 square mile area, along with possible constraints and landowner input, PBS&J and SPS Siting and Land Rights personnel selected a preferred route and four alternate routes for this project. Each route includes secondary links that may be considered. The potential routes were evaluated comparing all routes from a strictly environmental viewpoint, based upon the measurement of 34 VHSDUDWH HQYLURQPHQWDO FULWHULD DQG WKH of evaluators.

3%6 -¶V JURXS RI HYDOXDWRUV VHOHFWHG Alternative Route 1 as the preferred route. Alternative Route 1 would have the least amount of impact to habitable structures within 300 feet of the route centerline. The preferred route would have the least amount of impact on the visual foreground of parks and recreational areas within ½ mile. From an ecological perspective, Alternative Route 1 would have the least amount of impact on streams, open water, emergent wetlands and length of route parallel to streams within 100 feet.

SPS selected Alternative Route 1 as the preferred route based on a review of potential environmental impacts, land use, community values, estimated costs, and landowner input. SPS did not find any engineering FRQVWUDLQWV PDLQWHQDQFH RU FRQVWUXFWLRQ FRQFHUQV RU D selection of Route 1 as the preferred route. Additionally, if SPS were to construct along any of the proposed routes, the post construction transmission system reliability would not be compromised.

Refer to Attachment 1 (EA), Table 6-1.

17. 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 Procedural Rule §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. 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, along with Manning Land, LLC, conducted two public open-house meetings in conjunction with the proposed project. Manning Land, LLC provides contract Siting and Land Rights support on SPS projects:

- The first meeting was held on May 20, 2009 at the Museum of the Plains located at 1200 N. Main in Perryton, Texas from 5:00 p.m. to 8:00 p.m. Of the 280 directly affected landowners invited, 27 attended.
- The second meeting was held on March 30, 2010 at the Museum of the Plains located at 1200 N. Main in Perryton, Texas from 5:00 p.m. to 8:00 p.m. Of the 280 directly affected landowners invited, 20 attended.

At the meetings, rather than a formal presentation in speaker-audience format, SPS and Manning Land, LLC staff set up several information stations. Each station was devoted to a particular aspect of the routing study and was manned by SPS and/or Manning Land, LLC staff. Each station had maps, illustrations, photographs, and/or text explaining each particular topic. Interested citizens and property owners were encouraged to visit each station in order, so that the entire process could be explained in the general sequence of project development. The information station format is advantageous because it allows attendees to process information in a more relaxed manner and allows them to focus on their particular area of interest and ask specific questions. More importantly, the one-on-one discussions with SPS and Manning Land, LLC staff encouraged more interaction from those citizens who might be hesitant to participate in a speaker-audience format.

At the first station, visitors signed in and were handed a questionnaire, which solicited comments on citizen concerns as well as an evaluation of the information presented at the open house. At the end of the meetings, landowner attendees were asked to complete a routing questionnaire. A total of 12 questionnaires were completed by those attending the first meeting. There were no questionnaires completed at the second meeting.

Refer to Attachment 1, Appendix B for copies of the letters inviting landowners to the meetings and a copy of the questionnaire.

18. Routing Maps:

Base maps should be a full scale (one inch = one mile) highway map of the county or counties involved, or a U.S.G.S. 7-minute topographical map, or other map of comparable scale with sufficient cultural and natural features to permit location of the proposed route in the field. Provide a map (or maps) that shows the study area, routing constraints, and all routes or line segments that were considered prior to the selection of the preferred and alternate routes. Identify the preferred and alternate routes and any existing facilities to be interconnected or coordinated with the proposed project. Locate 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 location of the habitable structures, radio transmitters and other electronic installations, airstrips, irrigated pasture or cropland, parks and recreational areas, historical and archeological sites, and any environmentally sensitive areas.

Refer to Figure 6-1 of Attachment 1 for the Route Map.

19. Permits:

List any permits or approvals required by other governmental agencies for the construction of the proposed project. Indicate whether or not permits have been obtained.

All routes would require highway-crossing permits for State Highways. Depending on which route is selected, SPS will need to obtain six to ten permits from TxDOT for any crossing of a state maintained roadway prior to construction. No railroads are crossed by any of the alternative routes. The appropriate permits will be obtained after the CCN is approved and prior to construction.

20. Habitable structures:

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 of a transmission project of 230kV or less, or within 500 feet of the centerline of a transmission project greater than 230kV. Provide a general description of each habitable structure and its distance from the centerline of the proposed project. 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 to the closest habitable structure in the group. Locate all listed habitable structures or groups of structures on the routing map.

Tables 4-1, 4-2, 4-3, 4-4, and 4- L Q 3 % 6 A-report (Attachment 1) provide the number and location of habitable structures within 300 feet of the five primary alternative routes. There are two habitable structures located within 300 feet of the proposed centerline of Alternative Route 1. Habitable structures located within 300 feet of the primary alternative routes consist of houses, barns, mobile homes, and businesses.

21. Electronic Installations:

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

There are no AM radio transmitters within 10,000 feet of any of the routes.

The proposed transmission line project should have a minimal effect on communication operations in the study area. There are five communications towers that fall within 2,000 feet of the center line of the proposed project, and each of the alternative routes are affected by one or more towers. Approximate distances for each link within 2,000 feet of a communication tower are as follows:

- Tower A is an unnamed communication tower within 2,000 feet of Link G ±approximately 96 feet.
- Tower B, KTA61 (Panhandle Eastern Pipeline) tower, is within 2,000 feet of Link G ±approximately 719 feet.
- Tower C is an unnamed communication tower within 2,000 feet of Link O ±approximately 924 feet.
- Tower D is an unnamed communication tower within 2,000 feet of:
    - Link P ±approximately 753 feet
    - Link R ±approximately 753 feet

    - Link S* ±approximately 603 feet
- Tower E, North Plains Electric Cooperative, Inc. communication tower is within 2,000 feet of Link S* ±approximately 327 feet.

* Link S is not used in any of the five alternative routes.

Refer to Attachment 1, Figure 6-1.

22. Airstrips:

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 the proposed project. 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 the proposed project. 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 the proposed project. 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 private airstrip, registered airport, and registered heliport; and state the distance of each from the center line of the proposed transmission line. Locate all airstrips, airports, and heliports on a routing map.

None of the alternative routes fall within 20,000 feet of an FAA-registered airport.

Private airstrips were identified utilizing USGS topographic quadrangles and recent aerial photography. All of the Alternative Routes fall within 10,000 feet of a private airstrip. None of the private airstrips identified within the study area were registered with the FAA nor did the runway appear to exceed 3,200 feet in length. It appeared from field investigations that all of the private airstrips identified were being used for farming and ranching purposes. Based on photo interpretation of available aerial photography, none of the airstrips had improved runways and are all likely to have turf-surfaced runways. Approximate distances for each link within 10,000 feet of the private airstrip(s) are as follows:

- Landing Strip 2 an unnamed private airstrip that the landowner says has been abandon for years, is (approximately 2,724 feet in length) within 10,000 feet of:
    - and parallel to Link C ±approximately 7,477 feet to the southeast. The transmission structures may exceed a 50:1 horizontal slope from the closest point of the closest runway based on aerial photo interpretation.
    - and perpendicular to Link F ± approximately 7,477 feet to the southeast. The transmission structures may exceed a 50:1 horizontal slope from the closest point of the closest runway based on aerial photo interpretation.
    - and perpendicular to Link G ±approximately 7,323 feet to the south. The transmission structures may exceed a 50:1 horizontal slope from the closest point of the closest runway based on aerial photo interpretation.

- ƒ and perpendicular to Link H ±approximately 6,286 feet to the north. The transmission structures may exceed a 50:1 horizontal slope from the closest point of the closest runway based on aerial photo interpretation.
- ƒ and perpendicular to Link V ±approximately 913 feet to the north.

- Landing Strip 3 is an unnamed, private airstrip (approximately 2,724 feet in length) within 10,000 feet of and slightly perpendicular (in a southwest to northeast orientation) to Link G ±approximately 974 feet to the north.

- Landing Strip 7 is an unnamed, private airstrip (approximate length could not be estimated) within 10,000 feet of Link J ±approximately 5,441 feet to the south.

There are no known heliports within 5,000 feet of any of the routes.

Refer to Attachment 1, Figure 6-1.

23. Irrigation Systems:

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

A portion of each primary alternative route crosses cropland irrigated by circle-pivot or other above-ground mechanical means. The sprinklers range in radius from less than one-eighth mile to one-half mile in length. The routes selected will not interfere with any of the existing center pivot sprinkler systems and no rolling type irrigation systems exist near the project. Where the sprinklers overlap the potential easement location, transmission lines will be designed in such a manner as to span the length of the sprinkler overlap area.

Refer to Attachment 1, Figure 6-1.

24. Notice:

Notice is to be provided in accordance with Procedural Rule §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 6 for a sample copy of the letter, link descriptions document, and list of landowners. Also, refer to Attachment 1, Figure 6-1, for the map that was included with each notice letter.)

B. Provide a copy of the written notice to utilities that are located within five miles of the proposed transmission line.

Refer to Attachment 7 for the notice letters and a sample copy of the link descriptions document, which was included with each letter. Also, refer to Attachment 1, Figure 6-1, for the map that was included with each notice letter.

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

Refer to Attachment 8 for the notice letters and a sample copy of the link descriptions document, which was included with each letter Also, refer to Attachment 1, Figure 6-1, for the map that was included with each notice letter.

D. Provide a copy of the notice that is to be published in newspapers of general circulation in the counties in which the proposed 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 9.

*A copy of the application, including the EA, was sent to Texas Parks & Wildlife Department on the day of the filing of this application.

25. Parks and Recreation Areas:
List all parks and recreational areas owned by a governmental body or an organized group, club, or church located within 1,000 feet of the center line of the project. 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 or club). List the sources used to identify the parks and recreational areas. Locate the listed sites on a routing map.

There are no parks within 1,000 feet of the proposed centerline of any of the alternative routes. (There is a park within 1,000 feet of Link S; however, Link S is not used in any of the alternative routes.)

26. Historical and Archeological Sites:
List all historical and archeological sites known to be within 1,000 feet of the center line of the proposed project. Include a description of the site and its distance to the center line of the project. 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.

SPS contracted with PBS&J to identify any possible historical or archeological sites within 1,000 feet of the centerline of the proposed project. %DVHG RQ 3%6 -¶V LQYHVWLJDWLRQ XWLOL]LQJ W Laboratory and USGS topographical quadrangles, Alternative Route 1 crosses one recorded archeological site, Site 41HF55. This route has approximately 59,000 feet of High Probability Areas (HPA). Alternative Route 2 also crosses one recorded archeological site, Site 41HF55. This route contains approximately 61,248 feet of HPA. Alternative Routes 3 and 4 do not cross any previously recorded sites, but one known site, Site 41HF77, is located within 1,000 feet of each of these routes. Alternative Route 3 contains about 24,816 feet of HPA and Alternative Route 4 contains about 8,184 feet of HPA. The last route, Alternative Route 5 is located within 1,000 feet of two previously recorded sites, Site 34TX537 and Site 34TX538, but it contains the least amount of HPA, approximately 2,640 feet. $ SHGHVWULDQ FXOWXUDO UHVRXUFH VXUYH\ LV F Preferred Alternative Route. The results of the survey will be forwarded to the Texas Historical Commission for their review and concurrence. SPS¶V SUHIHUUHG IRUP RI PLWLJDWLRQ IRU FXOWX proposed ROW will be avoidance.

27. Coastal Management Program:

Indicate whether the proposed project is located, either in whole or in part, within the coastal management program boundary as defined in 31 T.A.C. §503.1. If the project is, either in whole or in part, in the coastal management program, indicate whether if any part of the proposed facilities are seaward of the Coastal Facilities Designation Line as defined in 31 T.A.C. §19.2(a)(21). Identify the type(s) of Coastal Natural Resource Area(s) using the designations in 31 T.A.C. §501.3(b) impacted by any part of the proposed facilities.

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

28. Environmental Impact:

Provide copies of any environmental impact studies 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 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 insure preservation of the areas or species.

6HH ³(QYLURQPHQWDO $VVHVVPHQW DQG $OWHUQDWH 5RXWH $QDO\ for the Hitchland to Ochiltree County 230-kV Transmission Line Project labeled DV ³$WWDFKPHQW ´ WR WKH $SSOLFDWLRQ

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 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 ______________________________
(Applicant's Authorized Representative)

SUBSCRIBED AND SWORN TO BEFORE ME, a Notary Public in and for the state of Texas, this ______ day of August 2010.

SEAL

____
Notary Public

My Commission Expires: ______________________________