APPLICATION FOR A

CERTIFICATE OF CONVENIENCE AND NECESSITY

FOR A PROPOSED TRANSMISSION LINE

WITHIN DALLAM, HARTLEY, OLDHAM, AND

POTTER COUNTIES, TEXAS

DOCKET NO. 37771

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

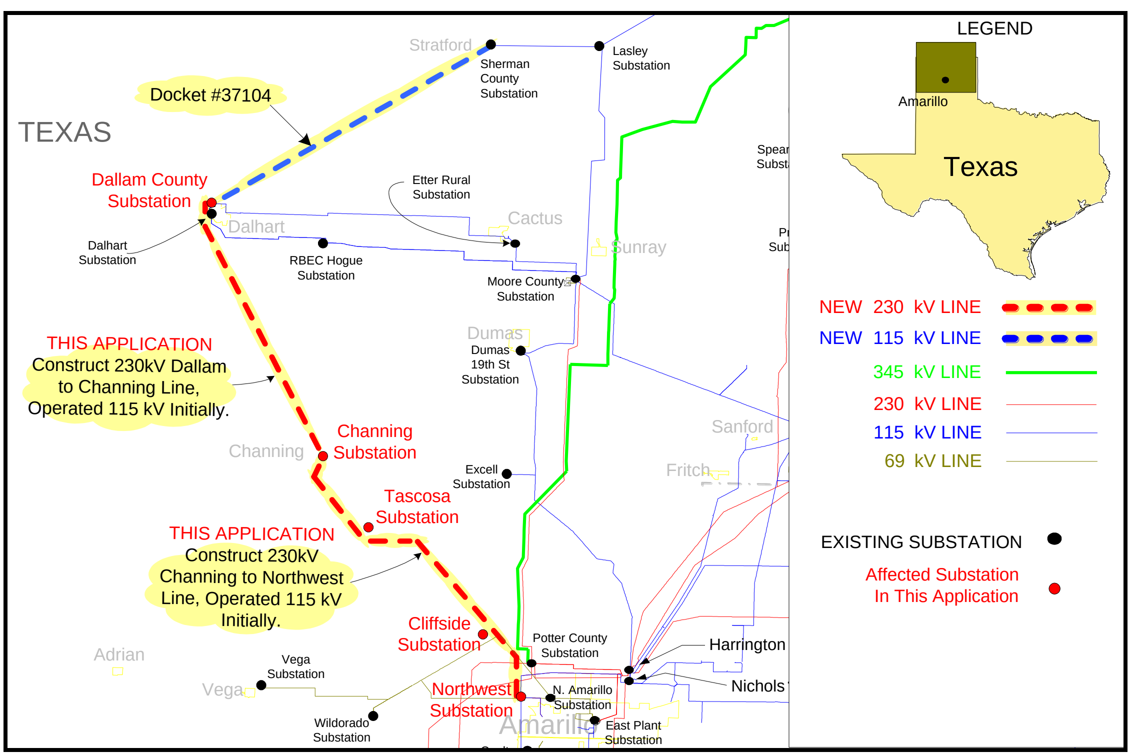
Public Utilit y Commission of Texas
Attn: Filing Clerk
1701 N. Congress Ave.
Austin, Texas 78711-3326

Project Description

As part of the project to improve reliability and sustain acceptable electric service on the entire load presently served out of the Dalhart, Channing, Tascosa, Cliffside, and Dumas 19th Street substations, the following transmission system improvements are needed. This consists of upgrading the existing radial 69 kV transmission line presently serving the Channing and Tascosa substations, with a new 230 kV transmission line (initially operated at 115 kV) beginning at the Channing Substation and ending at the Northwest Substation in Amarillo, Texas. This will require upgrading both the Tascosa and Channing substations for 115 kV service since the new line and substations will initially be operated at 115 kV. This will remove the limitation placed on the Channing Substation and allow for a better redistribution of load served between the Channing and Dalhart substations, thus reducing the exposure presently added to the load-base out of the Dalhart Substation.

Second, in order to provide a much needed backup source to eliminate the potential for extended outages to these substations, it is required that a second 230 kV transmission line (initially operated at 115 kV) be built from the Dallam County Substation to the Channing Substation. This will provide for a new 115 kV source to the Channing Substation in the event the 115 kV circuit originating at the Northwest Substation is unavailable. Figure 13.3 below shows the two 230 kV transmission lines (initially operated at 115 kV) originating at Channing Substation and leading to the Dallam and Northwest substations.

Figure 13.3: Project Area with Proposed Transmission System Improvements



Planning Criteria / Philosophy

SPS is a member of the SPP, which has recommended this project. SPS does not operate in the Electric Reliability Council of Texas (ERCOT) region and (5&27 WDNHV QR SRVLWLRQ RQ 636¶ projects. SPS determined the need for this proposed project through internal system planning in FRQIRUPDQFH ZLWK 633¶V 3ODQQLQJ &ULWHULD VXPPDUL]HG DV I

- Under system intact normal system operation, the loading on any transmission element will not exceed that HOHPHQW¶V QRUPDO UDWLQJ DQG VHUYLFH YROWDJH 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.

Refer to Attachment 5, page 2.

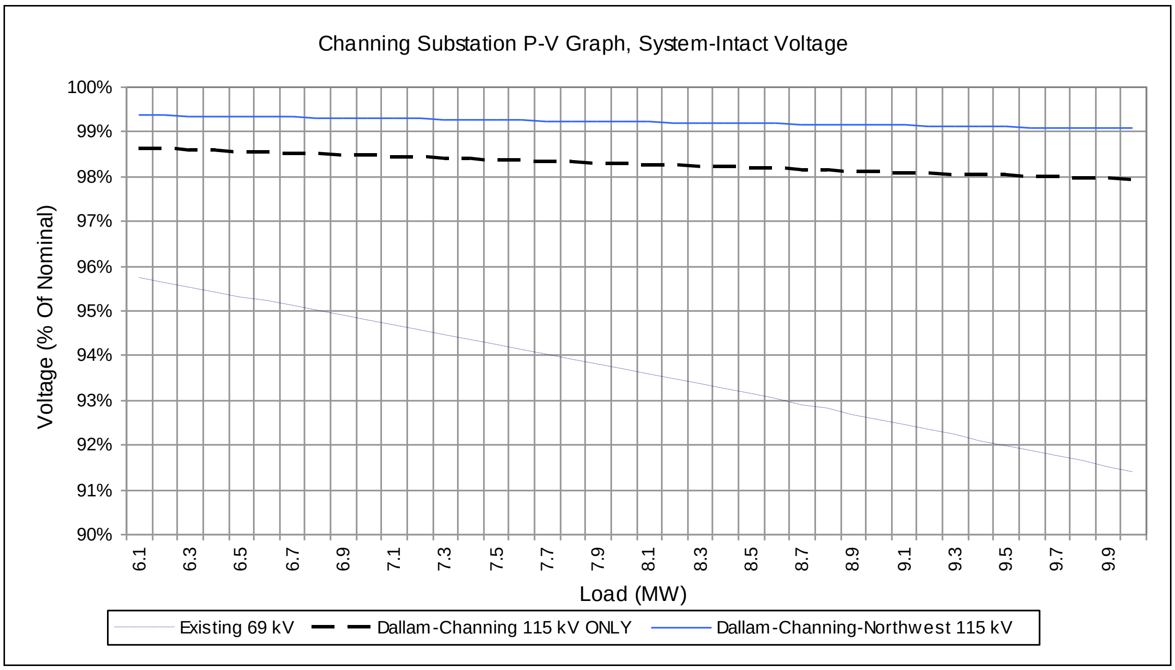
Powerflow Studies

Power flow studies to determine a suitable solution that would encompass both the load-serving obligations to the SPS customers served from the Channing, Tascosa, and Cliffside substations and improve the reliability of the electrical service were performed. The study considered options that would improve the present load-serving capability of the existing transmission system during system-intact conditions, during D ³/ts-J2KXW´ FRQGLWLRQ DQG SURYLGH DGGLWLRQDO WUDQVPLVVLR Panhandle.

The first issue addressed in the study was the system-intact voltage problems experienced at the Channing Substation during peak loading periods. SPP-adopted planning criteria states that during system intact conditions bus voltages must be maintained at or above 95% of the nominal voltage. Loading conditions on the 69 kV transmission bus during peak load resulted in voltage values falling below the 95% requirement needed for acceptable voltage. During the onset of this voltage problem, a determination was made to shift load from the Channing Substation, via the distribution system, to the Dalhart Substation. This provided an immediate temporary solution, which resulted in the operation of the distribution system in a manner that was abnormal and placed additional load-serving burden on the Dalhart Substation. Moving of the normal open point on the distribution system shifted load from one substation to another; however, the system-intact violation that triggered the load shift was only temporarily corrected to allow time to determine a more permanent solution.

Using the latest SPP planning models, a P-V (Power vs. Voltage) analysis was performed to determine the maximum power that could be served at the Channing Substation and still sustain the 95% voltage on the 69 kV bus required to meet SPP criteria. Figure 13.4 shows a P-V graph indicating how the system-intact voltage will improve when the upgrade to the existing 69 kV transmission line is completed. The first line (Existing 69 kV) illustrates the present voltage condition on the 69 kV and how increases in load deteriorate the voltage at the Channing Substation and shows that when the voltage reaches 95% of nominal, only 6.8 MW can be served. Once the load exceeds the 6.8 MW value, the voltage at the Channing Substation falls below acceptable SPP planning criteria. The remaining two lines illustrate how the system-intact bus voltage significantly improves as the proposed 230 kV constructed transmission line initially operated at115 kV line from Dallam County Substation to Channing Substation (Dallam-Channing 115 kV ONLY) is placed in operation and how it further improves once all the proposed upgrades (Dallam-Channing-Northwest 115 kV) are completed.

Figure 13.4: Channing Substation P-V Graph



During contingency analysis, for the loss of a single transmission element, only one contingency presently exists on the transmission circuit serving the Channing, Tascosa, and Cliffside substations. Since the electrical service to these substations is provided via a single radial 69 kV transmission circuit, the outage of this circuit yields the loss of the entire load at all three substations. Table 13.2 below is provided to illustrate the total load that is without electric service when an outage occurs on the existing 69 kV transmission circuit serving these three substations, if the proposed lines are not built.

Table 13.2: Load Loss Pre-Project

Loss of Load (MVA)				
Contingency (Outaged Transmission Element)	2010	2011	2014	2019
69 kV line from North Amarillo Substation to Channing Substation	11.8	12.5	13.6	15.9

Re-evaluation using the same planning models with the new 115 kV transmission lines (230 kV constructed) from Dallam County Substation to Channing Substation and from Channing Substation to Northwest Substation ILQGV WKDW WKH SURSRVHG WUDQVPLVVLRQ OLQHV 2XW´ FRQGLWLRQV 7DEOH VKRZV W hat there is no loss of load following the construction of the proposed lines.

Table 13.3: Load Loss Post-Project

Loss of Load (MVA)			
115 kV Contingency (Outaged Transmission Element)	2011	2014	2019
Northwest Substation – Tascosa Substation 115 kV Line	–	–	–
Tascosa Substation – Channing Substation 115 kV Line	–	–	–
Channing Substation – Dallam County Substation 115 kV Line	–	–	–

7KH ³/L2XW´V FRQGLWLRQ WKDW H[LVWHG SULRU WR WKH FRQVWU removed and the entire load at both the Channing and Tascosa substations is served during single contingency analysis.

Additionally, all previous low bus voltage conditions are corrected and voltage levels are sustained well above the SPP criteria for both system-intact conditions and during single contingency events. The SPP criterion states that for a single contingency, bus voltages must be maintained above 90% of nominal value. Following the post-project construction of the proposed lines, the nominal voltage will be 115 kV. Table 13.4 and Table 13.5 illustrate the post-project bus voltage values at both the Channing and Tascosa substations for the noted contingencies in each table.

Table 13.4: Post Project, Channing Substation Bus Voltage

Channing Substation Voltage (%)			
115 kV Contingency (Outaged Transmission Element)	2011	2014	2019
Northwest Substation – Tascosa Substation Line	98.5%	100.3%	97.8%
Tascosa Substation – Channing Substation Line	98.7%	100.7%	98.2%
Channing Substation – Dallam County Substation Line	99.5%	99.0%	98.0%

Table 13.5: Post Project, Tascosa Substation Bus Voltage

Tascosa Substation Voltage (%)			
115 kV Contingency (Outaged Transmission Element)	2011	2014	2019
Northwest Substation – Tascosa Substation Line	98.4%	100.2%	97.7%
Tascosa Substation – Channing Substation Line	99.8%	99.3%	98.5%
Channing Substation – Dallam County Substation Line	99.6%	99.1%	98.1%

Finally, the study performed by SPS to determine the problems with the present 69 kV transmission system serving Channing and Tascosa substations were also identified by the SPP through their internal planning processes. As such, the SPP has approved and directed Network Upgrades to be constructed by issuing a Notification to Construct for the construction of the transmission lines applied for in this application.

Refer to Attachment 5, page 2.

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

The following projects are the alternatives considered for service to the Channing and Tascosa substations and the determination of why none of these alternatives were considered as viable projects to resolve the transmission issue SPS was trying to correct.

Project Alternative 1: Re-conductor Existing 69 kV Circuit Y66

This project alternative proposes that the existing 69 kV Circuit Y66 be re-conductored with larger size conductor (397.5 kcMIL ACSR). This re-conductoring of the existing 69 kV line would reduce the reactance of the line by 17% and increase the rating of this new line from 41 MVA to 103 MVA. However, the existing transmission structures were never designed to withstand the weight and wind loading with the larger size conductor. Additionally, it is not possible to change out the conductor on the line while it is energized since the line cannot be taken out of service because the line is radial and is the only source to the Channing and Tascosa substations. SPS did not pursue this option since this is not a viable alternative and GRHV QRW VRO2YHWKH³XLDJKLWRQ WKDW H[LVWV GXULQJ WKH ORVV circuit.

Project Alternative 2: 69 kV to 115 kV Transmission Voltage Upgrade

This alternative would only upgrade the existing 69 kV Circuit Y66 from 69 kV to 115 kV with 397.5 kcMIL ACSR conductor. However, other than the voltage increase, this alternative is similar to Alternative 1 in that structural restrictions prevent the upgrade of this existing 69 kV circuit to 115 kV. Similarly, the work cannot be done while the circuit is energized and the new higher-voltage circuit alone does not UHVROYH WKH ³/LJKW´ VLWXDWLRQ

Project Alternative 3: Distributed Generation

This project alternative would use 200 kW micro-turbine generators grouped together at appropriate locations to mitigate low-YROWDJH FRQGLWLRQV DW &KDQQLQ substations. This alternative would also require sufficient resources to provide the necessary backup service to Dalhart and Dumas 19th Street substations. The Channing Substation serves as the backup electrical distribution source to the entire load between Channing and the Dalhart and Dumas 19th Street substations served along the distribution feeder ties; therefore, the installation of these micro-turbines would require that sufficient units be installed to serve the entire Channing Substation load and the load between the Dalhart and Dumas 19th Street substations.

The estimated cost[1] for a 200 kW gas turbine generator is $150,000. Therefore, the cost for enough 200 kW gas turbine generators to serve the present load requirements is estimated as follows.

$$Generator\ Cost = \frac{kW\ Required}{Unit\ Rating\ kW} \times Unit\ Cost = \frac{10,000}{200} \times \$150,000 = \$7,500,000$$

This cost does not include the fuel supply system to each turbine group, sales tax, shipping, maintenance, or the costs to interconnect to the system. Additionally, the cost does not take into account the large amounts of load that could be added if the economic downturn currently being experienced in the United States

[1] ³2YHUYLHZ RI 'LVWULEXWHG 5HVRXUFHV´ 'DQ 5DVWOHU $UHD 0DQDJHU
Institute (EPRI) solutions.

improves, and the additional distribution generation (additional micro-turbine units) that will be required. As a result, this project alternative was rejected by SPS because of its poor adaptability to large increments in load relati Y H W R 6 3 6 ¶ V S U R S R V H G S U R M H F W

Project Alternative 4: Distribution

No distribution alternative exists for the distribution system to serve additional load. All possible remedial measures have been taken. The maximum load is already being served from the Dalhart Substation 25 miles away and customers in the area have been discouraged from adding additional load until a solution is found. The distribution system would be unable to serve all Channing Substation and Tascosa Substation loads from such a distance because of low voltage, undesirable operating characteristics, and degradation of reliability.

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 6.

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 are included as Attachment 1 and Attachment 2 to the Application.

Segment I (Dallam County Substation to Channing Substation)

The study area was delineated to encompass the project termination points, which are the existing Dallam County Substation and the existing Channing Substation. The study area for the proposed 230 kV transmission line for Segment I (Dallam County Substation ±Channing Substation) is approximately 36 miles east to west and 39 miles north to south located in Dallam and Hartley Counties of the Texas Panhandle.

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, traveling 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 right-of-ways (ROW) and property lines where identified.

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 highway 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.

After careful consideration and study of all possible routes within the approximate 1,404 square mile area, along with possible constraints and landowner input, PBS&J and SPS Siting and Land Rights personnel selected a preferred route and two (2) 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 separate environmental criteria and the FRQVHQVXV RSLQLRQ RI 3%6 -¶V JURXS RI HYDOXDWRUV

3%6 -¶V JURXS RI HYDOXDWRUV VHOHFWHG 5RXWH DV WKH SUHIH the most existing transmission line corridors, is parallel and adjacent to the second most existing public road/highways, and has 15 habitable structures (one more than the route with the least) with 300 feet of the proposed centerline.

Refer to Attachment 1, Table 62.

Segment II (Channing Substation to Northwest Substation)

The study area was delineated to encompass the project termination points which are the existing Channing Substation and the existing Northwest Substation. The study area for the proposed 230 kV transmission line for Segment II (Channing Substation ±Northwest Substation) is approximately 41 miles east to west and 40 miles north to south located in Hartley, Oldham, and Potter Counties of the Texas Panhandle.

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, traveling 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 right-of-ways (ROW) and property lines where identified.

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After careful consideration and study of all possible routes within the approximate 1,640 square mile area, along with possible constraints and landowner input, PBS&J and SPS Siting and Land Rights personnel selected a preferred route and eleven 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 separate environmental criteria and the FRQVHQVXV RSLQLRQ RI 3%6 -¶V JURXS RI HYDOXDWRUV

3%6 -¶V JURXS RI HYDOXDWRUV VHOHFWHG 5RXWH 1 as the preferred route. Route 1 parallels and/or is adjacent to existing corridors (transmission lines, roads/highways, and apparent property lines) for its entire length, has 61 habitable structures but no newly affected habitable structures within 300 feet of the proposed centerline, has the least amount of riparian woodlands, and the least amount of recorded cultural resource sites within 1,000 ft of the proposed centerline.

Refer to Attachment 2, Table 6-2.

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.

PBS&J and SPS conducted two public open-house meetings in conjunction with the proposed line. The first meeting dealt with the Segment I Dallam County Substation to Channing Substation portion of the proposed line and was held on June 23, 2008 at the Hartley School located at 9th Street and Johnson in Hartley, Texas from 5:00 to 8:00 pm. The second meeting dealt with the Segment II Channing Substation to Northwest Substation portion of the proposed line and was held on July 10, 2008 at Boys Ranch in the Dobkins Fine Arts/Ned O. Miller Auditorium located at 11 Julian Bivins in Boys Ranch, Texas from 4:30 to 7:00 pm.

Segment I Dallam County Substation to Channing Substation

Of the 222 directly affected landowners invited to the landowner meeting, 55 attended. At the meeting, rather than a formal presentation in speaker-audience format, SPS and PBS&J staff used space by setting up several information stations. Each station was devoted to a particular aspect of the routing study and was manned by SPS and/or PBS&J 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/PBS&J staff encouraged more interaction from those citizens who might be hesitant to participate in a speaker-audience format.

SPS and PBS&J staff at the first station signed visitors in and handed out a questionnaire. The questionnaire solicited comments on citizen concerns as well as an evaluation of the information presented at the open house. At the completion of the meeting, landowner attendees were asked to complete a routing questionnaire. SPS received 25 completed questionnaires at the meeting.

Refer to Attachment 1, Appendix B.

Segment II - Channing Substation to Northwest Substation

Of the 230 directly affected landowners invited to the landowner meeting, 18 attended. At the meeting, rather than a formal presentation in speaker-audience format, SPS and PBS&J staff used space by setting up several information stations. Each station was devoted to a particular aspect of the routing study and was manned by SPS and/or PBS&J 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/PBS&J staff encouraged more interaction from those citizens who might be hesitant to participate in a speaker-audience format.

SPS and PBS&J staff at the first station signed visitors in and handed out a questionnaire. The questionnaire solicited comments on citizen concerns as well as an evaluation of the information presented at the open house. At the completion of the meeting, landowner attendees were asked to complete a routing questionnaire. SPS received 5 completed questionnaires at the meeting.

Refer to Attachment 2, Appendix B.

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 Figures 2-2 and 6-1 from Attachment 1 and Figures 2-2 and 6-1 from Attachment 2 for the Route Maps.

Refer to Attachment 7 for the Highway Maps. Pages 1-4 detail the Segment I Dallam County Substation to Channing Substation portion while pages 5-7 detail the Segment II Channing Substation to Northwest Substation portion.

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.

For Segments I and II, permits will be obtained from the Texas Department of Transportation (TxDOT) for any crossing of a state maintained roadway prior to construction. Crossing permits will be obtained from the BNSF and Union Pacific railroads prior to construction. 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.

Segment I Dallam County Substation to Channing Substation

Tables 6-1, 6-3, 6-4, and 6- LQ 3%6 -¶V ($ UHSRUW (Attachment 1) provides the number and location of habitable structures within 300 feet of the three primary alternative routes from Dallam County Substation to Channing Substation. There are 14 habitable structures located within 300 feet of the proposed centerline of alternate Route 1, 33 for Route 2, and 15 for Route 3. Habitable structures located within 300 feet of the primary alternative routes consist of homes, shops, barns, mobile homes, and businesses.

Segment II Channing Substation to Northwest Substation

Tables 6-1, 6-3, 6-4, 6-5, 6-6, and 6- LQ 3%6 -¶V ($ UHSRUW (Attachment 2) provides the number and location of habitable structures within 300 feet of the five primary alternative routes from Channing Substation to Northwest Substation. There are 61 habitable structures within 300 feet of the proposed centerline of Route 1, 62 for Route 2, 34 for Route 3, 17 for Route 4, and 42 for Route 5. None of the 61 habitable structures within 300 feet of the proposed centerline of Route 1 are newly affected. Habitable structures located within 300 feet of the primary alternative routes consist of Single-Family Dwellings, Mobile Homes, Businesses, Church Buildings, Post Office, and Fire House.

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.

Segment I Dallam County Substation to Channing Substation

All three primary alternative routes are within 10,000 feet of one AM radio transmitter (KXIT). Route 2 is within 2,000 feet of two communication towers while there are three towers located within 2,000 feet of Route 1 and Route 3.

Refer to Attachment 1, Figure-6-1.

Segment II Channing Substation to Northwest Substation

There are no AM radio transmitters within 10,000 feet of any of the five alternative routes and one communication tower within 2,000 feet of Routes 1, 2, and 5. Routes 3and 4 are within 2,000 feet of two communication towers.

Refer to Attachment 2, 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.

Segment I – Dallam County Substation to Channing Substation

There is one FAA registered airport, Dalhart Municipal Airport, located within 20,000 feet of the existing Dallam County Substation and all three routes. The closest link to the runway is Link QQ at a distance of approximately 4,744 feet. Link QQ would not exceed a 100:1 horizontal slope from the closest point of the closest runway.

There are no known heliports within 5,000 feet of any of the routes and no known private airstrips within 10,000 feet of any of the routes.

Refer to Attachment 1, Figure 6-1.

Segment II – Channing Substation to Northwest Substation

There are no known FAA registered airports within 20,000 feet of any of the primary alternative routes.

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

One private landing strip is shown on U.S. Geological Survey (USGS) topographic maps, but appears to no longer be in use. The centerline of Link O is approximately 1,114 feet from what appears on aerial photography to be the remnants of a runway.

Refer to Attachment 2, 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.

Segment I – Dallam County Substation to Channing Substation

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.

Segment II – Channing Substation to Northwest Substation

No cropland irrigated by circle-pivot or other above-ground mechanical means will be crossed by any of the alternative routes.

Refer to Attachment 2, 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 8.

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

Refer to Attachment 9.

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

Refer to Attachment 10.

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 11.

A copy of the EA was sent to TPWD on the date the application was filed.

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.

Segment I – Dallam County Substation to Channing Substation
Route 2 crosses Rita Blanca Lake State Park. According to Texas Parks and Wildlife Department, Lake Rita Blanca and its associated public land, formerly managed by Texas Parks and Wildlife Department as WKH VWDWH¶V QRUWKHUQPRVW VWDWH SDUN LV QRZ RZQHG E\ WK This site provides more than 2,000 acres of public land for hiking, riding, fishing, and birding with trails, picnic areas, playgrounds, rock-climbing walls, and barn facilities.

Refer to Attachment 1, Figure 6-1.

Segment II – Channing Substation to Northwest Substation
There are no parks or recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the project.

Refer to Attachment 2, Figure 6-1.

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 commissions 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.

Segment I – Dallam County Substation to Channing Substation

SPS contracted with PBS&J to identify any possible historical or archeological sites within 1,000 feet of the centerline of the proposed SURMHFW %DVHG RQ 3%6 -¶V LQYHVWLJDWLR archeological sites and Route 2 is within 1,000 feet of one previously recorded archeological site.

PBS&J conducted a survey on the preferred route, Route 3. The survey revealed two newly recorded sites within 1,000 feet of the centerline of the proposed project. It is the opinion of PBS&J archeologists that these sites do not meet the criteria for National Register of Historic Places listing or State Archaeological Landmark designation. The Texas Historic Commission has not had the opportunity to review the survey report so the eligibility status of the sites has not been determined.

Refer to Attachment 1, Appendix C.

Segment II – Channing Substation to Northwest Substation

PBS&J conducted a survey on the preferred route, Route 1. The total of KLJK SUREDEHPA LOLW\ DUHD identified along Route 1 is approximately 43 miles. This route crosses two previously recorded sites (41PT487 and 41PT488) and is within 1,000 feet of five additional cultural resources, two archeological sites (41PT190 and 41OL317, the Muncy Cemetery), one OTHM (Oldham County), and two NRHP listed properties (XIT Ranch Headquarters and the Hartley County Courthouse and Jail) both located in the town of Channing.

Route 2 has about 42 miles of HPA and crosses the same two sites as Route 1 (41PT487 and 41PT488) plus site 41OL260, the Boot Hill Cemetery. Seven previously recorded cultural resources are located within 1,000 feet of this alternative, including both of the above-mentioned NRHP listed properties, the Oldham County OTHM and the Boot Hill Cemetery OTHM, 41OL317 (the Muncy Cemetery), and archeological sites 41PT190 and 41OL248.

Route 3 contains approximately 42.5 miles of HPA and crosses sites 41PT487, 41PT488, and 41OL260. Five previously recorded cultural resources sites are located within 1,000 feet of the alignment, 41PT190, 41OL317, 41OL248 and the two NRHP eligible OTHMs.

HPAs within Route 4 total about 46 miles. Sites 41PT138, 41PT284, 41PT487, 41PT488, and 41OL260 have been located within the ROW. A total of eight additional recorded archeological sites and historic resources appear within 1,000 feet of the ROW; these include archeological sites 41PT137, 41PT139, 41PT190, 41PT286, 41OL317, and 41OL248 and the two NRHP eligible OTHMs.

Route 5 has approximately 45.2 of HPA. Sites 41PT401 and 41PT488 have been located within 1,000 feet of the centerline. Two additional archeological sites, 41PT487 and 41OL317 are recorded within 1,000 feet of the centerline, as are the two NRHP listed properties and the Oldham County OTHM.

Refer to Attachment 2, Appendix C.

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 route 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.

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³(QYLURQPHQWDO $VVHVVPHQW DQG $OWHUQDWLYH 5RXWH $QDO
Substation 230-kV (initially operated at 115 kV) Transmission Line Project Hartley, Oldham, and Potter &RXQWLHV 7H[DV´ ODEHOHG DV ³$WWDFKPHQWV DQG ´, respectively, to the Application.

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 December 2009.

SEAL

____
Notary Public

My Commission Expires: ______________________