APPLICATION FOR A

CERTIFICATE OF CONVENIENCE AND NECESSITY

FOR A PROPOSED TRANSMISSION LINE IN DALLAM AND SHERMAN COUNTIES, TEXAS

DOCKET NO. 37104

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

When the projects of the Texas North System Upgrades were developed, combinations of other transmission projects were studied to find the most effective group of projects that would achieve the capacity and reliability requirements. However, every combination of transmission projects included the construction of the 115 kV line from Dallam County Substation to Sherman County Substation, because this line offers the shortest connection between existing facilities that would create an alternate source to the Dalhart area. The following is the descriptions of alternative projects considered in this application.

Alternative Project 1: 115 kV to 230 kV Transmission Voltage Upgrade.

This project alternative proposes to upgrade the 115 kV transmission voltage to 230 kV on the transmission lines from Moore County to Etter-Rural to Hilmar Cheese to Dallam County to Dalhart to RBEC-Hogue and back to Moore County. The increase transmission voltage would increase the power capacity of the transmission, and would be less susceptible to low voltage during contingencies.

SPS evaluated the requirements for the voltage upgrade of this project and found that the existing structures would be inadequate for 230 kV spacing and would not support insulators and conductors of the new 230 kV line. Therefore, this project alternative would require the complete wreck out of the existing line, and then the rebuilding of a new 230 kV line in its place. The estimated cost to wreck out, and then rebuild approximately 90 miles of 230 kV line is $54,550,000. SPS did not pursue this project alternative due to its prohibitive capital cost relatLYH WR 636¶V SURSRVHG SURMHFW

Alternative Project 2: Re-conductor of Existing 115 kV Transmission.

With this project alternative, SPS would re-conductor the existing 115 kV transmission lines from Moore County to Etter-Rural to Hilmar Cheese to Dallam County to Dalhart to RBEC-Hogue and back to Moore County. This re-conductor project would increase the line ratings from 99 MVA to 271 MVA and thereby mitigate the contingency overloads. Furthermore, this project would reduce the impedance of the line, reducing the voltage drop on the line such that there would be sufficient service voltage during the critical contingencies listed in Table 13.3.

SPS studied this project alternative and found that the re-conductor of the existing 115 kV line would be insufficient to mitigate the contingency low voltage conditions, and would be prohibitively expensive. Table 14.1 illustrates how the low voltage conditions under the contingency loss of the 115 kV line from Moore County Substation to Etter-Rural Substation return by 2019 summer.

Table 14.1: Alternative Project 2 - Post Project Conditions

Contingency (Outaged Transmission Element)	Limiting Elements	Transmission Loading Above Emergency Rating, or Number of Low Voltage Services			
		2010	2011	2014	2019
115 kV line from Moore County Substation to Etter-Rural Substation	Number Services with Low Voltage	-	-	-	4
115 kV line from Moore County Substation to RBEC-Hogue Substation	NONE	-	-	-	-

Further evaluation of the existing 115 kV structures found the structures to be inadequate to support the new larger conductors. Therefore, this project alternative would require the complete wreck out of the existing line, and then the rebuilding of a new line in its place with the new larger conductors. The estimated cost to wreck out, and then rebuild approximately 90 miles of line is $31,580,000. SPS did not pursue this project alternative GXH WR LWV LQDGHTXDWH VXSSRUW RI WKH N9 YROWDJH DQG LW project.

Alternative Project 3: Construct a new natural gas generation plant near Dalhart, Texas

This project alternative proposes the construction of a natural gas generation plant near Dalhart, Texas. The SODQW¶V UDWLQJ ZRXOG PDWFK WKH cy loss of the 115 kV line from Moore WR EDFNXS County Substation to Etter-Rural Substation of at least 30 MW. This plant would provide the necessary power to meet the minimal growth in load (as projected in the study models), and would be available as an alternate source under contingency conditions for the Dalhart, Texas area.

The estimated installed cost[1] for a gas turbine generator with a 30 MW rating at $895 per kW is approximately $26,850,000. This cost does not include permitting, fuel supply interconnection or transmission LQWHUFRQQHFWLRQ 636 GLG QRW SXUVXH WKLV SURMHFW DOWHUQ proposed project and a long project schedule due to permitting.

Alternative Project 4: Distributed Generation

This project alternative would use 200 kW micro-turbine generators grouped together at appropriate locations to mitigate overloads and low voltage conditions. The primary difference of this alternative project is the size and cost of the individual generators.

[1] ³5LVLQJ 8WLOLW\ &RQVWUXFWLRQ &RVWV 6RXUFHV DQG ,PSDFWV´ SU and Gregory Basheda of The Brattle Group, September 2007.

The estimated cost[2] for a 200 kW gas turbine generator is $150,000. Therefore, the cost for enough 200 kW gas turbine generators is estimated as follows.

$$\text{Generator Cost} = \frac{\text{kW Required}}{\text{Unit Rating kW}} \times \text{Unit Cost} = \frac{30{,}000}{200} \times \$150{,}000 = \$22{,}500{,}000$$

This cost does not include fuel supply, sales tax, shipping or the costs to interconnect to the system. SPS UHMHFWHG WKLV SURMHFW DOWHUQDWLYH EHFDXVH RI LWV SURKLEL

Project Alternative 5: Implement a Distribution Solution

This project alternative sought to mitigate the contingency overloading and low voltage conditions through a distribution alternative.

The existing SPS and RBEC substations provide the distribution in the Dalhart, Texas area. The current loads in the Dalhart area are served by SPS and RBEC substations, which cannot be reliably served during critical contingencies on the existing transmission. Furthermore, the nearest distribution served by other transmission is more than 30 miles away from the Dalhart area. Therefore, there is no distribution alternative to the proposed project.

Project Alternative 6: Implement a Solution by Adding Transformers

At this time, SPS does not consider adding transformers to existing facilities as a viable solution to mitigate the critical conditions listed in Table 13.3. Since there is no other source voltage to transform to in the Dalhart area, adding transformers does not make sense. However, SPS plans to construct the Dallam County to Channing to Potter County transmission line designed for 230 kV, and operated initially at 115 kV. When this line is converted to 230 kV operation, SPS would then consider adding a 230/115 kV transformer at Dallam County Substation as an alternative source to the Dalhart area.

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)

[2] ³2YHUYLHZ RI 'LVWULEXWHG 5HVRXUFHV´ 'DQ 5 Electric Power Research $UHD 0DQDJHU Institute (EPRI) solutions.

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 this project, which was produced by PBS&J with input from SPS, is included as Attachment 1 to the Application. The objective of the EA and alternative routing analysis was to select and evaluate several alternative transmission line routes and ultimately recommend a preferred and several alternate routes for the proposed 115 kV transmission line that are feasible from economic, engineering, and environmental standpoints. SPS and PBS&J utilized comprehensive transmission line routing and evaluation methodologies to delineate and evaluate the alternative transmission OLQH URXWHV 0HWKRGV XVHG WR HYDOXDWH SRWHQWLDO URXWH processes and criteria and the Texas Public Utility Regulatory Act. The following sections provide a description of the process used in the selection and evaluation of alternate transmission line routes.

Data used by PBS&J in the delineation of alternative routes were drawn from a variety of sources, including published literature (documents, reports, maps, aerial photography, etc.) and information obtained from local, state, and federal agencies. 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 the refinement and evaluation of alternative routes. The data collection effort, although concentrated in the early stages of the project, was an ongoing process that continued up to the point of final route selections.

The first step in the selection of alternative routes was to select a study area. This area needed to encompass both project termination points (the existing Dallam County Substation and the existing Sherman County Substation) and include a large enough area within which an adequate number of alternative routes could be located. The study area is a roughly rectangular area located between Dallam County Substation on the southwest and Sherman County Substation on the northeast. The study area is approximately 20 miles long and 35 miles wide. Altogether, this study area covers approximately 700 square miles in Dallam and Sherman Counties.

Since a large number of potential routes could be drawn to connect the Dallam County Substation and the Sherman County Substation, a constraints mapping process was used in selecting/refining possible alternative routes. The geographic locations of environmentally sensitive and other restrictive areas within the study area were located and considered during transmission line route delineation. These constraints were mapped on a topographic base map, which was created using USGS 1:100,000 topographic maps. The overall impact of the alternative routes presented in this report has been greatly reduced by avoiding, to the greatest extent possible, such constraints as individual residences, rural subdivisions, community facilities, airstrips, traveling irrigation systems, cemeteries, historic sites, archaeological sites, wetlands, parks, churches, schools, and endangered or threatened species habitat, and by utilizing or paralleling existing compatible right-of-way (ROW) and property lines, where possible.

PBS&J identified numerous preliminary routes, which were presented to SPS for review and comment. These initial preliminary routes were examined in the field in spring 2008 by PBS&J staff. The project team made modifications to the preliminary routes, based on the results of the field evaluation and review of high-resolution aerial photography. These preliminary routes were presented to the public at an open-house meeting held in the study area on June 24, 2008.

Subsequent to the public meetings, PBS&J staff and/or SPS performed additional reviews to look at areas of concern discussed at the public meetings, met with individual landowners, evaluated the public comments, and considered revisions to the preliminary routes. In response to public and landowner concerns, some new links were added and others were dropped completely. The project team, utilizing this input, made final revisions to the preliminary routes and identified the primary alternative routes to be evaluated by PBS&J in this document.

Generally, the changes that were made to the preliminary routes after the June public meeting were made for the following reasons:

- To improve the paralleling of apparent property lines,
- To improve the paralleling of compatible ROW,
- To reduce other land use impacts to ranching and farming operations,

Ultimately, five primary alternative routes were selected that were then specifically studied and evaluated by the PBS&J staff. Each of the alternative routes was examined in detail in the field during summer 2008 and winter 2009. In evaluating the alternative routes, 33 environmental criteria were considered. The goal of this evaluation was to select a preferred and several alternate transmission line routes between the Dallam County Substation and the Sherman County Substation. The analysis of each route involved inventorying and tabulating the number or quantity of each environmental criterion located along the centerline of each route (e.g., number of habitable structures, the length across wooded areas, etc.). The number or amount of each factor was determined by reviewing various maps and recent color aerial photography, and by field verification, where possible. The environmental advantages and disadvantages of each alternative were then evaluated. After PBS&J made their preferred and alternate route recommendations, SPS undertook a further evaluation in ZKLFK 3%6 -¶V HQYLURQPHQWDO HRQMXQFWLRQ ZLWK 6RQ¶V FHUWGU FRQVWUXFWDELOLW\ PDLQWHQDQFH DQG RSHUDWLRQ 636¶V HYD alternate routes.

Following the evaluation by discipline, the group of PBS&J evaluators discussed the relative importance and sensitivity of the various criteria as they applied to the five primary alternative routes and the study area. It was the decision of the group that land use criteria should be the primary route selection factor. Following this decision, the group selected route 5 as the consensus preferred route and then agreed on a consensus ranking for the remaining alternatives, starting with the least-impacting alternate route. The decision to recommend the preferred route was based primarily on the following advantages for route 5 among the objective criteria.

- shortest alternative route
- least amount of mobile irrigation systems
- least amount of known habitat of endangered or threatened species
- least amount of high-probability areas crossed

And, like each of the primary alternative routes, route 5:

- crosses no open waters
- crosses no recorded cultural resource sites

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 conducted one public meeting, which took place on June 24, 2008 from 5:00 ±8:00 p.m. The meeting was held at the Allyn Finch Intermediate School Cafeteria located at 701 East 10th Street in Dalhart, Texas. The notices were mailed to the individual property owners. Refer to Appendix B of Attachment 1 (EA), for an example copy of the notice.

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 Siting and Land Rights, Transmission Engineering, Regulatory personnel, 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 and PBS&J staff encouraged more interaction from those citizens who might be hesitant to participate in a speaker-audience format.

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. Copies of the questionnaire are included in Appendix B. Completed questionnaires were received either at the meeting or later. Following is a description of the meeting and a summary of questionnaires received:

Of the 199 directly affected landowners (within 300 feet of the alternative routes) invited to the landowner meeting, a total of 28 people signed in as attending the public open-house meeting in Dalhart, Texas, on June 24, 2008. Eleven individuals returned questionnaires.

The most important considerations for most respondents who completed questionnaires included maintaining reliable electric service and for the proposed transmission to be along roads and railroads.

Refer to Section 5.2 and Appendix B of Attachment 1 (EA).

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 2-4 of Attachment 1 (EA) for the Primary Alternatives Route Map.
Refer to Figure 4-1 of Attachment 1 (EA) for the Land Use Constraints Map.
Refer to Attachment 5 for the System Map, which shows SPS's existing transmission system.
Refer to Attachment 6 for the Highway Map.
Refer to Figure 6-1 of Attachment 1 (EA) for the habitable structures.

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.

Permits will be obtained from the Texas Department of Transportation (TxDOT) for any crossing of a statemaintained roadway prior to construction. Crossing permits will be obtained from the Burlington Northern Santa Fe Railway and the Union Pacific Railroad 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 6-3, 6-4, 6-5, 6-6, and 6-7 and Figure 6- LQ 3%6 -¶V ($ UHSRUW SURYLGHV WKH Q habitable structures within 300 feet of the five primary alternative routes from the Dallam County Substation to the Sherman County Substation. There are five habitable structures located within 300 feet of the proposed centerline of Route 1, ten for Route 2, nine for Route 3, two for Route 4, and eight for Route 5. Habitable structures located within 300 feet of the primary alternative routes consist of single-family residences 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.

All five primary alternative routes are within 10,000 feet of one AM radio transmitter (KXIT). Additionally, Routes 2, 3, and 5 are within 2,000 feet of two communication towers while there are no towers within 2,000 feet of Route 4. See Figure 4-1 of Attachment 1 (EA) report for locations of electronic installations.

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 bcated 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.

Section 4.5.4 of Attachment 1 (EA) report discusses the details and data relative to the number and proximity of aviation facilities within the minimum distance of all five primary alternative routes. See Figure 4-1 of Attachment 1 (EA) report for locations of airstrips and airports.

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.

Each primary alternative route is heavily developed with center pivot irrigation sprinkler systems. The sprinklers range in radius from less than one-eighth of a mile to one-half mile in length. The routes selected will not interfere with any of the existing center pivot sprinkler systems. There are no rolling type irrigation systems in existence near this 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. See Figure 4-1 of Attachment 1 (EA) report for locations of irrigation systems.

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 7. (Figure 2-4 of the EA was included with the notice.)

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

Refer to Attachment 8. (Figure 2-4 of the EA was included with the notice.)

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

Refer to Attachment 9. (Figure 2-4 of the EA was included with the notice.)

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 10. (A map was included in the newspaper notice.)

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 items on a routing map.

A review of the Texas Outdoor Recreation Inventory (TORI), Texas Land and Water Conservation and Recreation Plan, Dalhart Area Chamber of Commerce, USFS National Grasslands Plan Revision, Office of the Governor Economic Development and Tourism, and federal, state, and local maps identified several park/recreational facilities within the study area.

The largest recreational area in the study area is the Rita Blanca National Grasslands, numerous small shortgrass prairie tracts managed by the United States Forest Service intermixed with private lands across 115,000 acres in New Mexico and the Texas Panhandle. The tracts are managed for wildlife, vegetation and soil conservation; grazing; and recreation (birdwatching, hunting, hiking, and riding). This feature is documented on the Texas Parks & Wildlife Departments Rita Blanca Loop map of the Panhandle Plains Wildlife Viewing Trail.

A portion of route 4 is located within 1,000 ft of the Rita Blanca National Grasslands. Because this route does QRW FURVV WKH 1DWLRQDO *UDVVODQG¶V ERXQGDU\ WKHUH ZRXO activities.

Refer to Figure 4-1 of Attachment 1 (EA).

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. PBS&J conducted historical /archeological fieldwork on the preferred route (Route 5) during February and March 2009. The interim report was sent to the Texas Historical Commission on $SULO %DVHG RQ 3%6-¶V LQYHVWLJDWLRQ QR KLstorical or archeological sites were found to be within 1,000 feet of the centerline of the proposed project.

Refer to Attachment 2.

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 $QDO\V kV Transmission Line Project 'DOODP DQG 6KHUPDQ &RXQWLHV 7H[DV´ ODEHOHG DV ³$WW

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 June 2009.

SEAL

____
Notary Public

My Commission Expires:___________________________