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SOAH DOCKET NO. 473-11-5978  
DOCKET NO. 38877

APPLICATION OF SOUTHWESTERN §  
PUBLIC SERVICE COMPANY TO §  
AMEND A CERTIFICATE OF §  
CONVENIENCE AND NECESSITY §  
FOR A PROPOSED TRANSMISSION §  
LINE WITHIN HALE, FLOYD, §  
MOTLEY, COTTLE, BRISCOE, §  
HALL, CHILDRESS, DONLEY, §  
COLLINGSWORTH AND WHEELER §  
COUNTIES, TEXAS §

STATE OFFICE  
OF

ADMINISTRATIVE HEARINGS

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DIRECT TESTIMONY

*of*

JOHN S. FULTON

*on behalf of*

SOUTHWESTERN PUBLIC SERVICE COMPANY

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## **GLOSSARY OF ACRONYMS AND DEFINED TERMS**

<b><u>Acronym/Defined Term</u></b>	<b><u>Meaning</u></b>
AEP	American Electric Power
Application	Application filed in this docket
B/C Ratio	Benefit to cost ratio
CCN	Certificate of Convenience and Necessity
Commission	Public Utility Commission of Texas
CTT	Cross Texas Transmission, LLC
FERC	Federal Energy Regulatory Commission
kV	Kilovolt
NTC	Notification to Construct
OG&E	Oklahoma Gas & Electric Company
Proposed Project	SPS's proposed 345 kV transmission line from the TUCO Substation to the Texas-Oklahoma Interconnection
PSCo	Public Service Company of Colorado
PURA	Public Utility Regulatory Act
RTO	Regional Transmission Organization
SPP	Southwest Power Pool
SPP OATT	SPP's Open Access Transmission Tariff
SPS	Southwestern Public Service Company
Xcel Energy	Xcel Energy Inc.

**DIRECT TESTIMONY OF  
JOHN S. FULTON**

1           **I.     WITNESS IDENTIFICATION AND QUALIFICATIONS**

2     **Q.     Please state your name and business address.**

3     A.     My name is John S. Fulton. My business address is 600 S. Tyler Street, Amarillo,  
4           Texas.

5     **Q.     On whose behalf are you testifying in this proceeding?**

6     A.     I am filing testimony on behalf of Southwestern Public Service Company ("SPS"), an  
7           electric utility operating company that is a wholly owned subsidiary of Xcel Energy  
8           Inc. ("Xcel Energy"). Xcel Energy is a registered holding company that owns several  
9           electric and natural gas utility operating companies.<sup>1</sup>

10    **Q.     By whom are you employed and in what position?**

11    A.     I am employed by SPS as Manager, Transmission Asset Management.

12    **Q.     Please briefly outline your responsibilities as Manager, Transmission Asset**  
13       **Management.**

14    A.     I provide overall management direction for the transmission planning staff in  
15           Amarillo. Their duties include planning new transmission facilities required for  
16           generation and customer additions. I also direct SPS's involvement with the  
17           Southwest Power Pool's ("SPP") transmission planning activities. In addition, I  
18           direct the preparation of the SPS transmission capital budget. Finally, I interact with

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<sup>1</sup> Xcel Energy is the parent company of the following four wholly owned utility operating companies: Northern States Power Company, a Minnesota corporation; Northern States Power Company, a Wisconsin corporation; Public Service Company of Colorado, a Colorado corporation ("PSCo"); and SPS. Xcel Energy also owns a regulated natural gas pipeline company.

1 retail and wholesale customers seeking new service, as well as wind developers  
2 working on interconnection with the SPS transmission system.

3 **Q. Please describe your educational background.**

4 A. I received my Bachelor of Science in Electric Engineering degree in 1974 from New  
5 Mexico State University. In 1977, I received a Master of Science in Electrical  
6 Engineering degree from New Mexico State University.

7 **Q. Please describe your professional experience.**

8 A. From 1974 to 1977, I was employed as an electrical distribution engineer with  
9 International Minerals and Chemical Corporation. In 1977, I joined West Texas  
10 Utilities Company as a planning engineer. I joined SPS as Supervisory Engineer,  
11 Electrical Operations, in 1979, and served in that capacity until 1982, when I became  
12 System Operations Supervisor, Electrical Operations. In 1992, I became Principal  
13 Engineer, System Planning, and in 1997, I assumed my current position, supervising  
14 the transmission planning staffs for SPS and PSCo. In 2001, transmission planning  
15 for PSCo required a local manager and my position was changed to focus only on the  
16 SPS operating company.

17 **Q. Do you hold a professional license?**

18 A. Yes. I am a Registered Professional Engineer in New Mexico.

19 **Q. Are you a member of any professional organizations?**

20 A. Yes. I am a member of the Institute of Electrical and Electronic Engineers.

21 **Q. Have you testified before any regulatory authorities?**

22 A. Yes. I have testified before the Public Utility Commission of Texas ("Commission"),

1 the New Mexico Public Regulation Commission, and the Federal Energy Regulatory  
2 Commission ("FERC").



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A. The Proposed Project is part of a proposed 345 kV transmission line that extends from the TUCO Substation, located in Hale County, Texas to the Woodward Substation in Woodward, Oklahoma. SPS will construct the portion of the line from the TUCO Substation to an interconnection point that is approximately three miles east of the Texas/Oklahoma state line and approximately three miles southeast of Texola in Beckham County, Oklahoma. Oklahoma Gas & Electric Company (“OG&E”) will construct the remainder of the line from the interconnection point to the Woodward Substation. SPS’s portion of the proposed line will be approximately 180 to 200 miles long, depending on the route selected.

A. Yes. SPP has determined that the Proposed Project is needed to reduce congestion on the SPP transmission system, which will result in economic benefits for SPP wholesale customers and the retail customers served by them. Based on that analysis, SPP issued an NTC to SPS in 2009, which is pages 1-3 of Attachment 6 to the Application. SPS accepted the NTC on September 15, 2009. Please refer to pages 4-5 of Attachment 6 to the Application for a copy of the acceptance letter.

A. The SPP is an independent transmission organization within the meaning of section 39.101 of the Public Utility Regulatory Act (“PURA”). SPP is a FERC-approved Regional Transmission Organization (“RTO”) and administers open-access



1 transmission services across the SPP region under the terms of SPP's Open Access  
2 Transmission Tariff ("SPP OATT"). As an RTO, SPP plans for and functionally  
3 controls the transmission infrastructure committed to it and administers a competitive  
4 real-time wholesale electricity marketplace. The transmission facilities used to  
5 provide service under the SPP OATT are comprised of the transmission facilities  
6 owned by public utility and non-public utility members of SPP. SPS is a member of  
7 SPP, and its entire service area lies within the SPP boundaries.

8 **Q. How did SPP go about deciding that the Proposed Project is necessary?**

9 A. The Proposed Project grew out of the Balanced Portfolio Report, which is  
10 Attachment 5 to the Application, an initiative by SPP stakeholders to develop  
11 transmission upgrades that benefit the entire SPP region. During the Balanced  
12 Portfolio study process, SPP evaluated several potential 345 kV transmission projects  
13 within the SPP region to reduce transmission congestion. SPP determined that the  
14 reduction of transmission congestion has the potential to produce numerous benefits,  
15 including lower generation production costs, greater reliability, lower required  
16 reserve requirements, and fewer environmental impacts due to more efficient use of  
17 its generation resources. The report also concluded that the projects analyzed will  
18 provide customers with potential savings that exceed project costs. Accordingly, the  
19 Balanced Portfolio Report endorsed a project group called "Portfolio 3E, Adjusted"  
20 that is expected to provide significant benefits to SPP customers.

21 As a result of the SPP Balanced Portfolio Report, SPP determined that there  
22 is a need for a transmission line from TUCO to Woodward. As a result, it issued two

1 NTC letters -- one to SPS and one to OG&E. The SPP NTC letter sent to SPS is  
2 under Project ID 704 and Network Upgrade ID numbers 10936 and 10937. Under  
3 Network Upgrade ID 10936, SPS is directed to build a 345 kV line from the TUCO  
4 Substation to the OG&E interception point. Under the upgrade ID 10937, SPS is  
5 directed to expand its TUCO Substation to include a 560 MVA, 345/230 kV  
6 autotransformer with a 345 kV ring bus configuration and to build a mid-point  
7 reactor station along the TUCO-Woodward District EHV 345 kV line. The OG&E  
8 NTC requires line construction from Woodward District EHV Substation to or near  
9 the Texas-Oklahoma state line.

10 **Q. Please describe the existing transmission system in the vicinity of the Proposed**  
11 **Project.**

12 A. The Proposed Project will connect to the SPS transmission system at the TUCO  
13 Substation, which is the terminus of the 345 kV tieline from American Electric  
14 Power's ("AEP") Oklaunion Substation, approximately 150 miles east of the TUCO  
15 Substation. The TUCO Substation also contains two 230/115 kV autotransformers  
16 that connect to the 115 kV TUCO Substation bus and system. From the TUCO  
17 Substation, 230 kV lines extend to the Jones Generating Station, near Lubbock,  
18 Texas; to the Tolk Generation Station, near Muleshoe, Texas; to the Swisher County  
19 Substation, north of TUCO; and to the Carlisle Substation on the west side of  
20 Lubbock, Texas. In addition, there are numerous 115 kV and 69 kV transmission  
21 lines that connect to the TUCO Substation and to various substations around the  
22 TUCO area. Those lines also provide transmission service to areas east of TUCO

1 into Crosby and Floyd Counties. Two electric cooperatives operate in the vicinity of  
2 the TUCO Substation – Lighthouse Electric Cooperative, Inc. and South Plains  
3 Electric Cooperative, Inc. Finally, along the proposed routes of the transmission  
4 lines towards the northeast, the Proposed Project will cross transmission systems  
5 owned by AEP and by two Competitive Renewable Energy Zone (“CREZ”)  
6 providers, Cross-Texas Transmission, LLC (“CTT”) and Sharyland Utilities, L.P.

7 **Q. How will the Proposed Project benefit the SPS area?**

8 A. SPP has determined that the Proposed Project should reduce congestion and provide  
9 an economic benefit for the SPP region as a whole. It is also expected to provide an  
10 economic benefit for the SPS area by allowing lower energy production costs,  
11 potentially lowering reserve margins, and providing environmental benefits due to  
12 more efficient operation of assets across the SPP footprint and greater utilization of  
13 renewable resources.

14 **Q. How will the Proposed Project support the reliability of the interconnected**  
15 **transmission system?**

16 A. The Proposed Project will provide an additional 345 kV interconnection from the  
17 SPS area to other portions of the SPP and the Eastern Interconnect. Each  
18 interconnection that SPS has with its neighbors should increase its ability to import  
19 and export additional energy, thus increasing the reliability of the network. SPS  
20 currently has two 345 kV synchronous interconnections with other utilities – one  
21 with Sunflower Electric Power Corporation in Kansas and one with AEP (the TUCO-  
22 Oklaunion 345 kV line) in Oklahoma. The Proposed Project will provide a third 345

1 kV interconnection. This enhances reliability by allowing the import of other power  
2 when the generation facilities within the SPS footprint are inadequate to satisfy load  
3 and required reserve requirements.

4 **Q. Does the Proposed Project facilitate robust wholesale competition?**

5 A. Yes. The project will reduce congestion on the SPS system and by doing so is  
6 expected to allow the import of additional energy to benefit the SPS area. In the SPP  
7 Balanced Portfolio Report, SPP's studies indicated an annualized net benefit to SPS  
8 of \$41.5 million, the highest net benefit for any of the SPP member systems. The  
9 additional tieline to the eastern grid is expected to allow additional transmission  
10 export capacity that may encourage construction of additional renewable energy  
11 facilities. Lastly, SPS's anticipated power sales to some wholesale customers will be  
12 terminating, and the increased import capacity may allow these entities to gain access  
13 to other alternatives as they seek replacement power.

14 **Q. Does the Proposed Project have any effect on other electric utilities serving in**  
15 **the area?**

16 A. Yes. The Proposed Project will cross the 138 kV and 69 kV transmission systems of  
17 AEP. No negative effects are expected from those crossings. The Proposed Project  
18 will also cross the 345 kV CREZ line owed by CTT between Gray and Tesla and  
19 between Tesla and Silverton. In addition, it will cross the 345 kV CREZ lines owned  
20 by Sharyland between Nazareth and Silverton, Silverton and Cottonwood, and White  
21 Deer and Silverton. SPS does not anticipate any problems with those crossings. If  
22 the Proposed Project parallels any of the CREZ lines, a mutual coupling study will

1        need to be done to see if modifications will need to be made to the closely coupled  
2        transmission lines. As discussed above, the Proposed Project is expected to provide  
3        expanded import capacity that may allow access by other utilities to additional  
4        wholesale power resources.

1                                    **IV.    ALTERNATIVES CONSIDERED**

2    **Q.    Did SPS consider alternatives to the Proposed Project?**

3    A.    There were no alternative options provided to SPS when SPP issued an NTC to SPS  
4           to construct the proposed 345 kV line from the TUCO Substation to the OG&E  
5           interconnection point. As a member of SPP, SPS relies upon SPP to perform  
6           regional economic analysis studies such as the Balanced Portfolio Study, where the  
7           Proposed Project was studied. In this instance, SPP analyzed the needs of its system  
8           and determined that the Proposed Project is required to best serve those needs.

9    **Q.    Did SPP consider alternatives to the Proposed Project?**

10   A.    Yes. The SPP Staff initially screened more than fifty candidates for transmission  
11           upgrades. After identifying the viable projects, SPP analyzed them using the  
12           summer months and spring fall months, starting with March 1, 2012 and ranked them  
13           from highest to lowest according to their annualized benefits to project cost ratio  
14           (“B/C Ratio”). In the SPS area, the other alternatives considered were the Tolk  
15           Generating Station – TUCO Substation 345 kV line; the TUCO Substation – Tolk  
16           Generating Station – Potter County Substation 345 kV line; and a combination of the  
17           Spearville – Mooreland 345 kV line and the TUCO-Woodward 345 kV line.

18           Based on its preliminary analysis, SPP staff developed four initial portfolios,  
19           which were labeled as Portfolios 1, 2, 3, and 4. Portfolio 1 was a collection of every  
20           345 kV project that had a B/C Ratio greater than 1.0. In Portfolio 2, which is a subset  
21           of Portfolio 1, SPP staff narrowed the list of projects by removing upgrades that  
22           would not provide additional benefits. In Portfolio 3, SPP ensured that each zone in

1 the SPP region received a project, with the most beneficial project chosen in that  
2 zone. For Portfolio 4, SPP staff included projects that are considered mutually  
3 beneficial, thereby raising the overall benefit of the entire portfolio.

4 **Q. Which Portfolio did SPP staff select?**

5 A. SPP staff selected Portfolio 3 and further refined the studies to achieve the best  
6 possible benefit to cost ratio by setting forth a number of variations of Portfolio 3,  
7 including Portfolios 3, 3-A, 3-B, 3-C, 3-D, and 3-E. A complete discussion of the  
8 different variations of Portfolio 3 appears in the Balanced Portfolio Study.

9 **Q. Which Portfolio 3 option did SPP choose?**

10 A. SPP ultimately decided to adopt Portfolio 3-E, although that option was adjusted to  
11 exclude certain upgrades in Kansas. Portfolio 3-E "Adjusted," which includes the  
12 upgrades at issue in this CCN docket, had an overall SPP B/C Ratio of 1.87, and the  
13 portion included in the SPS area had a B/C Ratio of 3.9.

1 V. CONCLUSION

2 Q. Please summarize your testimony.

3 A. The Proposed Project is needed to provide economic benefits and congestion relief  
4 opportunities for all customers in the areas served by the SPS system and SPP region.  
5 The construction of the Proposed Project will also increase reliability by providing an  
6 additional 345 kV interconnection with the SPP region. The Proposed Project is  
7 expected to provide greater import capability to the SPS system at a time when SPS  
8 is projecting a capacity shortage and greater export capability for export of renewable  
9 energy. SPP studied a number of alternatives and concluded that the Proposed  
10 Project was the most beneficial solution. SPP instructed SPS to construct the  
11 Proposed Project, based on SPP's analysis. For all the reasons discussed above, this  
12 transmission line is therefore in the public interest.

13 Q. Does the Proposed Project satisfy the requirements of PURA § 37.056(a) taking  
14 into account the factors set out in PURA § 37.056(c)?

15 A. Yes. The factor that I address is PURA § 37.056(c)4(E) which refers to the probable  
16 improvement of service or the lowering of costs to consumers in the area if the  
17 certificate is granted. As I testified earlier, the addition of another 345 kV line will  
18 improve service. In addition, SPP has determined that the Proposed Project will  
19 create economic benefits for the SPS area in excess of the costs of the Proposed  
20 Project.

21 Q. Does this conclude your pre-filed direct testimony?

22 A. Yes.



**AFFIDAVIT**

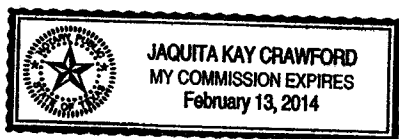
STATE OF TEXAS           )  
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JOHN S. FULTON, first being sworn on his oath, states:

I am the witness identified in the preceding testimony. I have read the testimony and the sections of the application and accompanying attachments that I sponsor, and I am familiar with their contents. Based upon my personal knowledge, the facts stated in the testimony are true. In addition, in my judgment and based upon my professional experience, the opinions and conclusions stated in the testimony are true, valid, and accurate.

  
\_\_\_\_\_  
JOHN S. FULTON

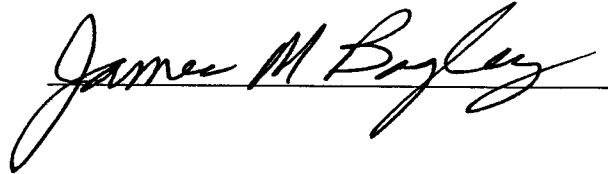
Subscribed and sworn to before me this 6<sup>th</sup> day of July 2011 by JOHN S. FULTON.



  
\_\_\_\_\_  
Notary Public, State of Texas  
My Commission Expires: February 13, 2014

### CERTIFICATE OF SERVICE

I certify that on the 8<sup>th</sup> day of July 2011, a true and correct copy of the foregoing instrument was served on all parties of record by hand delivery, Federal Express, regular first class mail, certified mail, electronic mail, or facsimile transmission.

A handwritten signature in cursive script, reading "James M. Bayley", is written over a horizontal line.