DOCKET NO. _____

APPLICATION OF SOUTHWESTERN PUBLIC SERVICE COMPANY FOR AUTHORITY TO CHANGE RATES	**§**	**PUBLIC UTILITY COMMISSION OF TEXAS**

DIRECT TESTIMONY
of
RICHARD D. STARKWEATHER

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

(Filename: StarkweatherRRDirect.docx)

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GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term	Meaning
A&G	Administrative and General
Commission	Public Utility Commission of Texas
ERCOT	Electric Reliability Council of Texas
FERC	Federal Energy Regulatory Commission
kWh	kilowatt-hour
MWh	megawatt-hour
O&M	Operation and Maintenance
PNM	Public Service Company of New Mexico
ScottMadden	ScottMadden, Inc.
S&P	S&P Global, Inc.
SPS	Southwestern Public Service Company, a New Mexico corporation
Test Year	April 1, 2018 through March 31, 2019
Update Period	April 1, 2019 through June 30, 2019
Updated Test Year	July 1, 2018 through June 30, 2019
Xcel Energy	Xcel Energy Inc.
XES	Xcel Energy Services Inc.

LIST OF ATTACHMENTS

Attachment	Description
RDS-RR-1	Resume of Richard D. Starkweather (*Filename:* Attachment RDS-RR-1.docx)
RDS-RR-2	Listing of National Peer Group Companies (*Filename:* Attachment RDS-RR-2.xlsx)
RDS-RR-3(CD)	Retail Pricing and O&M Benchmarking Analysis (Provided in Native Format on CD Only) (*Filename:* Attachment RDS-RR-3(CD).xlsx)
RDS-RR-4(CD)	Capital Additions Benchmarking Analysis (Provided in Native Format on CD Only) (*Filename:* Attachment RDS-RR-4(CD).xlsx)
RDS-RR-5	Summary of Analysis of Aviation Operations – Test Year (*Non-native format*)
RDS-RR-6	Summary of Analysis of Aviation Operations – Updated Test Year (*Non-native format*)
RDS-RR-7(CD)	ScottMadden Analysis of Aviation Operations (Provided in Native Format on CD Only) (*Filename:* Attachment RDS-RR-7(CD).xlsx)

DIRECT TESTIMONY
of
RICHARD D. STARKWEATHER

I. WITNESS IDENTIFICATION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Richard D. Starkweather. My business address is 2626 Glenwood Avenue, Suite 480, Raleigh, North Carolina 27608.

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

A. I am filing testimony on behalf of Southwestern Public Service Company, a New Mexico corporation ("SPS"), and wholly-owned electric utility subsidiary of Xcel Energy Inc. ("Xcel Energy").

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

A. I am a Partner with ScottMadden, Inc. ("ScottMadden") and a leader in the firm's Rates, Regulation, and Planning practice.

Q. Please briefly outline your responsibilities as a Partner.

A. As a Partner with ScottMadden, I provide direction for all work conducted by ScottMadden consultants, and I am accountable for the overall quality of analyses and deliverables developed on behalf of clients such as SPS.

Q. Please describe ScottMadden's consulting practice and the services it provides.

A. Founded in 1983, ScottMadden is a management consulting firm with five practice areas: Energy; Clean Tech and Sustainability; Grid Transformation; Rates, Regulation, and Planning; and Corporate and Shared Services. Since 1983, we have been energy consultants and have served hundreds of clients, including

20 of the top 20 energy utilities. We have performed projects across every energy utility business unit and every function.

Q. Please summarize your educational background.

A. I graduated from Northwestern University with a Bachelor of Science degree in Mechanical Engineering in 1978, and then earned my Master of Business Administration degree from the University of Chicago Booth School of Business in 1980.

Q. Please summarize your professional experience.

A. I began my career with Exxon Chemical Americas as a Forecast Coordinator for the Bayway Chemical Plant in Linden, New Jersey. My responsibilities there included the coordination of the annual operating budget for all of the departments at the plant. I began my consulting career in 1982, and other than three years in the managed healthcare industry and three years working for Edison International, I have been a management consultant for my entire professional career. I started working for Touche Ross & Co. in 1982, which then became Deloitte & Touche after the merger with Deloitte, Haskins & Sells in 1989, and joined ScottMadden in 1999.

Since the early 1990s, I have specialized in the public utility industry and have completed numerous consulting engagements for electric and gas utilities. My areas of expertise include strategic and business planning, benchmarking, regulatory strategy and rate case support, program management, and organizational and operations improvement. Additional details regarding my educational background and professional experience can be found in Attachment RDS-RR-1.

Q. Do you have prior experience in performing benchmarking comparisons of utility operations and costs?

A. Yes. I have performed numerous benchmarking comparisons of financial and operational performance metrics, capital additions, and Operation and Maintenance ("O&M") expense for both electric and gas utilities.

Q. Have you testified before any regulatory authorities?

A. Yes. I testified before the Public Utility Commission of Texas ("Commission") in Docket No. 43695, and filed testimony in Docket Nos. 40824, 42004, 45524, and 47527, on topics similar to those I address in this testimony. I filed testimony at the North Dakota Public Service Commission in Case Nos. PU-12-813, PU-13-706, PU-13-707, PU-13-708, PU-13-742, PU-13-743, PU-13-194, and PU-13-195, on behalf of Northern States Power Company, a Minnesota corporation, regarding its proposed Resource Treatment Framework. I also testified before the New Mexico Public Regulation Commission, on behalf of Public Service Company of New Mexico ("PNM"), in Case No. 18-00261-UT, regarding the estimated costs and benefits of PNM's participation in the Western Energy Imbalance Market and filed testimony in Case No. 10-00086-UT regarding PNM's capital and O&M budgeting processes.

II. ASSIGNMENT AND SUMMARY OF TESTIMONY AND CONCLUSIONS

Q. What is your assignment in this proceeding?

A. I provide benchmark data that demonstrates the reasonableness of SPS's affiliate costs. It has been SPS's practice to supply affiliate information and benchmark data in past base rate cases, similar to the practice of other Electric Reliability Council of Texas ("ERCOT") transmission and distribution utilities. Because of the difficulty in gathering detailed benchmark data for each category of affiliate expense, the benchmark data typically provided by SPS in the past has been based on total SPS costs, which include affiliate costs.

Xcel Energy's service company subsidiary, Xcel Energy Services Inc. ("XES"), provides a variety of services to the various company subsidiaries, including SPS. In general, any services that are provided to more than one subsidiary are provided through XES. These services include, for example, corporate communications, human resources, accounting and financial reporting, information technology, property services, environmental, safety, and security. The affiliate costs incurred in providing these services are directly assigned or allocated to Xcel Energy's subsidiaries on a cost-causative basis, i.e., allocation factors that closely track the drivers of the service company costs incurred are used to allocate the costs to subsidiaries. For example, for billing, payment, and reporting services, XES uses an allocation method that is based on the number of invoices. When billing overall corporate governance services (such as accounting and financial reporting), XES uses an allocation method that is based on a three-factor formula of total revenues, total assets, and number of employees.

More details regarding the company's cost allocation bases are provided in the direct testimony of Melissa L. Schmidt.

The purpose of my testimony is to describe the benchmarking analysis completed by ScottMadden on behalf of SPS. Based on this analysis, I also provide my perspectives on SPS's relative performance compared to other utilities in Texas and across the United States on a variety of retail pricing, O&M expense, and capital additions metrics for different areas of utility operations. My analysis uses publicly available data taken from Form 1 reports filed by individual utilities with the Federal Energy Regulatory Commission ("FERC"), with two exceptions that I discuss later in my testimony.

In addition, ScottMadden completed an analysis of commercial airfares for trips flown between Amarillo, Denver, and Minneapolis/St. Paul during the period April 1, 2018 through March 31, 2019 ("Test Year"), as well as the Updated Test Year (July 1, 2018 through June 30, 2019). XES uses two leased aircraft for business travel purposes, and the costs incurred in operating the aircraft are allocated to the Xcel Energy subsidiaries, including SPS. I prepared an analysis of the costs that would have been incurred during the Test Year and Updated Test Year had commercial airline service been utilized for business travel rather than the XES corporate aircraft. Section VII of my testimony describes this analysis.

Q. Will your testimony be updated for costs incurred during the period April 1, 2019 through June 30, 2019 ("Update Period")?

A. No. Estimated commercial airfares for the Update Period are already included in my testimony.

Q. Please summarize the conclusions you reach as a result of your analyses.

A. Based on my benchmarking analysis, I conclude that during the period 2014 through 2018[1] SPS's O&M expense and capital additions metrics have generally been consistent with, and better in many areas, when compared to the national and Texas peer group company averages. In particular:

a. SPS's overall average retail prices, and average prices for the residential, commercial, and industrial customer classes, were consistently at or below the top quartile for the national peer group throughout the 2014 to 2018 period. SPS was consistently below the Texas peer group's top quartile for overall average retail prices and average industrial retail prices over the same period. Average prices for the commercial customer class were at or near the Texas peer group's top quartile, and average prices for the residential customer class were at or above the median of the Texas peer group from 2014 through 2018.

b. On nearly every O&M expense measure, SPS's O&M costs were at or below the median for both the national and Texas peer groups and in some cases the top quartile during the 2014 to 2018 period. There were four exceptions in comparison to the Texas peer group for: (1) Customer Accounts, Customer Service and Informational Expense, and Sales Expense O&M $ per Retail Customer; (2) A&G O&M $ per Retail Customer; (3) A&G O&M $ per Retail MWh Sold; and (4) A&G O&M (net of FERC Account 926) $ per Retail MWh Sold. The Customer Accounts, Customer Service and Informational Expense, and Sales Expense and A&G O&M $ per Retail Customer results are primarily due to differences in SPS's customer class energy usage and that of its peers as explained further later in my testimony. The A&G O&M $ per Retail MWh Sold result is due to the relative mix of SPS's retail sales to total sales versus that of the other Texas utilities. On a total MWh sold basis, SPS A&G costs have been at the Texas peer group median throughout the 2014 to 2018 period. On a total revenue basis (A&G O&M as a percent of total revenues), SPS A&G costs have been only slightly above the Texas peer group top quartile throughout the 2014 to 2017 period, and slightly higher than the Texas peer group median in 2018. Excluding pension and benefits expense (FERC Account 926), SPS's A&G O&M $ per Retail MWh Sold have generally been between the Texas peer group median and the third quartile throughout the 2014 to 2018 period. On a total MWh

[1] FERC Form 1s for the previous calendar year must be filed on or before April 18th of the following year. For example, the FERC Form 1s for 2018 were filed on or before April 18, 2019. Thus, 2018 data was the most recent FERC Form 1 data available for the purposes of this analysis.

sold basis, SPS A&G costs, excluding pension and benefits expense, have been at the Texas peer group top quartile throughout the 2014 to 2018 period.

c. There were two exceptions in comparison to the national peer group for: (1) Transmission O&M $ per MWh Transmitted; and (2) A&G O&M $ per Retail Customer. The transmission result is due to the high wheeling costs for SPS. Excluding wheeling expense (FERC Account 565), SPS is below the median of the national peer group on this measure. The A&G result is primarily due to differences between SPS's customer class energy usage.

d. SPS O&M costs per dollar of plant investment have been trending downwards over the 2014 to 2018 period. SPS production and transmission O&M costs versus total plant investment levels fall between the median and the third quartile of the national peer group, and the median and the top quartile of the Texas peer group. SPS distribution O&M costs versus total plant investments fall between the median and the top quartile of the national peer group, and the median and the third quartile of the Texas peer group. SPS A&G O&M costs versus total plant investments fall between the median and the top quartile of both the national and the Texas peer groups.

e. The level of SPS production plant capital additions has generally been below the national and Texas peer group medians since 2014.

f. SPS's transmission capital additions have been fairly constant over the 2015 to 2018 time period (representing about 10% to 15% of total transmission plant), after declining significantly from the 2014 level. On a rolling-three-year average basis, investment levels have generally been decreasing steadily. The level of SPS's transmission plant capital additions has been above the national per group median since 2014, and at or near the Texas peer group median between 2016 and 2018. The investments in transmission plant additions primarily reflect transmission and substation capital additions for the expansion, upgrading, and refurbishment of transmission system infrastructure to: (1) interconnect new generation resources; (2) maintain reliability; and (3) improve load-serving capability. SPS's transmission plant additions have significantly exceeded annual depreciation expense every year since 2014. The national peer group median levels have been between 200% and 300% of depreciation, consistent with the continued industry focus on transmission expansion. In Texas, the peer group median has been about 400% to 500% of depreciation over the 2014 to 2018 time period, reflecting the active transmission expansion in the state.

g. SPS's distribution capital additions have also stabilized in recent years, although they were above the national and Texas peer group medians from 2014 through 2018. In comparison to the Texas peer group, distribution capital additions were at the median in 2014, but significantly higher in 2015, before returning to near the median in 2016. The peak in 2015 was due to: (1) an increase in storm damage-related restoration; (2) capacity work related to, among other items, the completion of new substations; and (3) meter and transformer purchases to serve new customers.

h. SPS's general plant additions increased from 2014 levels in 2015, decreased in 2016, increased again in 2017, and then decreased to about 20% of general plant balances in 2018. SPS additions during the 2014 to 2018 period have generally been higher than the national and Texas peer group medians. The increase in 2015 was primarily due to: (1) the consolidation of the customer office and service center into one building at the existing Borger service center; (2) the replacement of several dated camera systems to ensure the safety of work environments and reduce repairs; (3) projects required due to the failure of mechanical equipment and replacement of equipment that reached the end of its useful lifespan; and (4) purchasing of new and replacement of used office furniture and equipment to satisfy interior facility needs. The increase in 2017 was primarily due to the new SAP work and asset management system. On a three-year rolling average basis, SPS general plant additions as a percent of total general plant were above the national and Texas peer group medians from 2014 through 2018.

i. If the flights that occurred on the XES corporate aircraft during the Updated Test Year had instead been made on commercial airlines, the airline ticket costs would have been approximately $812,748. Equivalent commercial airline ticket costs for the Test Year would have been approximately $801,501.

Q. What can you conclude about SPS's affiliate costs as a result of your O&M benchmark analysis?

A. Affiliate costs are one component of SPS's overall O&M costs. As described earlier in my testimony, Xcel Energy chooses to provide certain services to its subsidiaries through XES. By providing these services to multiple subsidiaries on a centralized basis through a service company, corporate oversight and governance can be improved and overall costs can be reduced. Comparing SPS's

O&M costs to those of other utilities, either on a national basis, or to other Texas utilities, can help assess SPS's ability to manage O&M costs in general, and affiliate costs specifically. As shown in the benchmarking analysis in my testimony below, SPS's total O&M expense per retail MWh sold has performed at or near the national median since 2014. Relative to other Texas utilities, SPS's total O&M expense per retail MWh sold has been between the median and the top quartile.

A large portion of affiliate costs for many utilities are allocated to FERC Administrative and General ("A&G") accounts. Evaluating SPS's A&G cost performance relative to other utilities provides additional insights regarding affiliate costs. On a national basis, SPS's A&G O&M per retail MWh sold has performed well, with results close to the first quartile of the national peer group since 2014. Compared with the Texas peer group, SPS's A&G O&M expenses were between the median and the third quartile between 2014 and 2017, and slightly above the third quartile in 2018. However, on a total MWh sold basis, which captures the full scope of SPS's utility operations, A&G O&M per total MWh Sold has been below the national peer group first quartile, and at the peer group median for Texas utilities, throughout the 2014 to 2018 period. Excluding employee pension and benefits expense, SPS's A&G costs have been well below the national peer group first quartile, and at or very near the Texas peer group first quartile throughout the 2014 to 2018 period.

Q. Were Attachments RDS-RR-1 through RDS-RR-7(CD) prepared by you or under your direct supervision and control?

A. Yes.

III. ANALYTICAL APPROACH FOR THE BENCHMARKING STUDY

Q. Please describe the nature of the analysis that you performed in your benchmarking study.

A. I evaluated a number of retail pricing, O&M expense, and capital additions metrics for different areas of SPS's operations to assess the efficiency of SPS's operations and quality of management. For each metric, I benchmarked SPS's relative performance to other utilities in Texas and the United States.

Q. Please describe what you mean by "benchmarking."

A. Benchmarking is a commonly used methodology for comparing a utility's performance in a specific area (e.g., costs or reliability) to that of other similar utilities or peers. Process benchmarking is often used by companies to evaluate various aspects of their operational or management processes in relation to best practices, usually within their own industry sector. Performance benchmarking is used to quantitatively compare a company's results for a particular financial or operational measure against the results for a group of peers.

Q. How should the results of this benchmarking study be interpreted?

A. Favorable benchmarking results for a utility, particularly over time, can be an indicator that the utility's underlying management processes and actions regarding the area being analyzed have been effective. Where benchmarking results indicate that performance levels are unfavorable, additional analysis can also be conducted to help determine the causes of the performance gap.

Q. What are the typical sources of benchmarking data?

A. Data used for benchmarking usually comes from publicly available data sources or through proprietary surveys and research. For utilities, publicly available data can be obtained through required regulatory filings with the FERC (e.g., FERC

Form 1 reports), or with the U.S. Energy Information Administration (e.g., Form EIA-861). This data can be gathered individually or through service providers that compile and sell this information in a variety of formats. The benefit of FERC Form 1 and EIA-861 data is that the information can be traced back to a specific filing and company. This provides for a consistent, objective, and independent data source that allows for the inclusion of specific companies in a peer group by compiling the associated data from each company.

Factors that can impact the validity of a benchmarking analysis include the comparability of the data inputs used in the benchmark calculations and the comparability of the companies used in the peer groups. It is not uncommon for different utilities to track and report operating statistics and/or costs in different ways—or to interpret reporting requirements differently—even when complying with standardized reporting formats such as those required by the FERC Uniform System of Accounts. As a result, care must be exercised when selecting data sources for benchmarking analyses and when interpreting the results of those analyses.

Q. What was the source for the data used in this benchmarking analysis?

A. The operational and financial data used in my benchmarking analysis was obtained from publicly available FERC Form 1 filings made by regulated energy and utility companies for the period 2014 through 2018 (although data back to 2012 was compiled), company websites[2], and EIA-861 filings.[3] FERC Form 1

[2] AEP Texas Inc. customer data was not available for 2017 and 2018. As a proxy, ScottMadden used the total number of meters for 2017. This information was included in a fact sheet on the company's web site.

reports are among the most complete data sources on financial and operating statistics available to the public concerning individual electric utilities.

The data source utilized for both the FERC Form 1 and EIA-861 data is S&P Global, Inc. ("S&P"), a well-respected industry information and research firm covering a number of business sectors including electric utilities. S&P collects, standardizes, and disseminates a wide variety of electric utility operating and financial statistics including FERC Form 1 and EIA-861 data. S&P replicates all of the major schedules of the FERC Form 1 and EIA-861 for every filer, and provides query tools to easily pull the information into spreadsheets for analysis, comparison, and benchmarking purposes.

Q. Did you have to correct or adjust any of the S&P data to complete your analysis?

A. The S&P FERC Form 1 data was adjusted in one area. SPS utilizes distribution business area personnel to perform: (1) "shut offs" and "turn ons" of electric service (also referred to as "credit work") due to non-payment of bills; and (2) meter readings when customers move in or out of residences. In conversations with SPS personnel, it was discovered that the work orders charged by the distribution personnel for these activities were assigned to distribution operation expense and not customer operations FERC accounts during the 2014-2015 time period. The costs associated with these activities (approximately $3 million per year in total) were transferred from the distribution FERC accounts to the customer operations accounts for the purposes of this benchmarking analysis.

[3] While Maine Public Service Company had FERC Form 1 capital additions and O&M data available, the number of Total Retail Electric Customers was not reported. In this case, ScottMadden utilized the EIA-861 values.

Q. What criteria did you utilize to select the companies making up the national and Texas peer groups?

A. As described earlier, the quality, or relevance, of any particular benchmarking study is dependent on the characteristics, or similarities, of the companies populating the peer groups. When conducting a benchmarking analysis, one wants the peer groups populated with companies with similar characteristics to ensure reliable results. Restructuring of the industry has resulted in a variety of operating models (e.g., generation-only companies, transmission-only companies, etc.), ownership models (e.g., municipals, cooperatives, investor-owned utilities, etc.), and corporate structures (e.g., holding companies, service company affiliates, etc.). SPS is a vertically integrated, investor-owned utility with generation, transmission, and distribution assets serving a predominantly retail end-use customer base. Given these challenges, ScottMadden employed the following process in the selection of peer group companies to help ensure similarities in characteristics of the national and Texas peer groups to SPS:

1. A list of all companies filing FERC Form 1 reports over the period 2012 through 2018 was obtained by querying the current S&P FERC Form 1 Regulated Energy Companies dataset.
2. This list formed the basis for the FERC Form 1 data query from S&P. Electric plant, operating data, O&M expense, and system peak and transmission line data were compiled for each company for each of the years 2012 through 2018.
3. Peer group selection criteria were defined for the national and Texas peer groups. Criteria for inclusion in the SPS national and Texas peer groups included:
    a. The company must be of sufficient size to warrant comparison. For the purposes of this effort, companies with less than 10,000 customers were eliminated.
    b. The company must be regulated and provide electric service (directly or indirectly) to retail end-use customers. This

criterion eliminated generation-only companies, transmission-only companies, and generation and transmission-only companies; however, distribution-only and transmission and distribution companies are included in the peer groups.

c. The company must have comparative FERC Form 1 data to enable the development of the metrics used in the benchmarking analysis.

Q. What Texas peer group and national peer group companies were identified as a result of your analysis?

A. The Texas peer group companies are as follows:

- AEP Texas Inc. (including AEP Texas Central Company and AEP Texas North Company);
- CenterPoint Energy Houston Electric, LLC;
- El Paso Electric Company;
- Entergy Texas, Inc.;
- Oncor Electric Delivery Company, LLC;
- Sharyland Utilities, L.P.;
- Southwestern Electric Power Company;
- Southwestern Public Service Company; and
- Texas-New Mexico Power Company.

There were 135 utility companies included in the national peer group (*see* Attachment RDS-RR-2 for a list of these companies).

Q. What performance metrics were evaluated in your analysis?

A. SPS performance was benchmarked from four perspectives: average retail electricity prices, O&M expense, asset performance, and capital additions. Industry standard benchmarks were utilized within each of these categories.[4]

[4] The native format of my Retail Pricing and O&M Benchmarking Analysis is provided on a CD as Attachment RDS-RR-3(CD). The native format of my Capital Additions Benchmarking Analysis is provided on a CD as Attachment RDS-RR-4(CD).

Average Retail Electricity Prices

Retail pricing benchmarks (overall and by customer class for industrial, commercial, and residential customers) show the average price received by a utility for every kilowatt-hour ("kWh") sold. Over time, such measures are good indicators of revenue stability and can also highlight year-to-year changes in customer mix and energy usage patterns. The specific pricing benchmarks included in my analysis are as follows:

- Total Retail Revenues Cents per kWh Sold;
- Residential Revenues Cents per kWh Sold;
- Commercial Revenues Cents per kWh Sold; and
- Industrial Revenues Cents per kWh Sold.

O&M Expense

O&M expense benchmarks are good indicators of relative process and cost efficiencies between peer group companies, including labor productivity. The specific O&M expense benchmarks included in my analysis are as follows:

- Total O&M $ per Retail MWh Sold;
- Total Non-Fuel O&M $ per Retail MWh Sold;
- Non-Fuel Production O&M $ per MWh Generated;
- Transmission O&M $ per MWh Transmitted (with and without FERC Account 565 costs);
- Transmission O&M $ per Line Mile (with and without FERC Account 565 costs);
- Distribution O&M $ per Retail MWh Sold;
- Distribution O&M $ per Customer;
- Customer Accounts, Customer Service and Informational Expense, and Sales Expense O&M $ per Retail MWh Sold;
- Customer Accounts, Customer Service and Informational Expense, and Sales Expense O&M $ per Customer;

- A&G O&M $ per Retail MWh Sold (with and without FERC Account 926 costs);
- A&G O&M $ per Total MWh Sold (with and without FERC Account 926 costs);
- A&G O&M $ per Customer; and
- A&G O&M $ as a Percent of Total Revenues.

O&M Expense per Total Plant

To evaluate how SPS and the other peer group utilities are managing their functional O&M expense versus the total invested capital in their utility operations, four additional benchmarks were analyzed on an annual basis, as follows:

- Non-fuel Production O&M expense per Total Production Plant;
- Transmission O&M expense per Total Transmission Plant (with and without FERC Account 565 costs);
- Distribution O&M expense per Total Distribution Plant; and
- A&G O&M expense per Total Electric Plant.

Capital Additions

Capital additions benchmarks for each peer group were analyzed on an annual and three-year rolling average basis to moderate the effects of individual years where extraordinary capital additions may have occurred. The specific capital benchmarks included in my analysis are as follows:

- Total Plant Additions as a Percent of Total Plant;
- Total Plant Additions as a Percent of Annual Depreciation Expense;
- Production Plant Additions as a Percent of Total Production Plant;
- Production Plant Additions as a Percent of Production Depreciation Expense;
- Transmission Plant Additions as a Percent of Total Transmission Plant;
- Transmission Plant Additions as a Percent of Transmission Depreciation Expense;

- Distribution Plant Additions as a Percent of Total Distribution Plant;
- Distribution Plant Additions as a Percent of Distribution Depreciation Expense;
- General Plant Additions as a Percent of Total General Plant; and
- General Plant Additions as a Percent of General Plant Depreciation Expense.

Q. Are these generally the same metrics included in the previous benchmarking analyses you conducted for SPS?

A. Yes.

Q. Above you stated that retail pricing benchmarks by customer class were some of the metrics you used in your analysis. Can you explain the reference to customer classes further?

A. As I noted above, the operational and financial data used in my benchmarking analysis was obtained from publicly available FERC Form 1 filings made by regulated energy and utility companies. The sales data provided in the FERC Form 1 filings is grouped by customer type or class. I am not, however, using the term "customer class" in the sense that this term is used by other witnesses in this proceeding for the purposes of cost allocation, revenue distribution, and rate design. Thus, my use of the term "customer class" should not be viewed as SPS's position or the position of any other SPS witness regarding any cost allocation, revenue distribution, or rate design issue in this case.

Q. Before you provide the results of your benchmarking analysis, can you provide general guidance as to how the results should be interpreted?

A. Yes. When conducting this type of benchmarking analysis, I will typically compare the relative performance of the company under review (in this case SPS) with the peer group quartiles of the various benchmark metrics (i.e., top quartile,

median, third quartile, and bottom quartile). For revenue and O&M expense measures, lower is generally better, meaning lower rates for customers or lower costs to provide electric service.

However, for capital additions, being above or below a particular quartile is not necessarily a good or bad thing. It may simply indicate that a particular utility is making investments in facilities at a particular point in time, when other members of the peer group are planning such investments at another point in time. I discuss the results in greater detail later in my testimony, but having this framework in mind should allow the reader to more easily understand the relevance of the benchmarking results for SPS.

As a final note, and as I noted above, this benchmarking analysis can help assess SPS's management of O&M costs and capital investments and thus generally support the proposed revenue requirement of SPS in this rate case. This analysis is a piece of evidence the Commission should consider, along with the other testimony and evidence SPS provides in this proceeding, to determine the reasonableness of SPS's retail pricing, O&M expense levels, and capital additions.

IV. RETAIL PRICING BENCHMARK RESULTS

Q. Why did you benchmark SPS's average annual retail price per kWh to the national and Texas peer groups?

A. The average price paid (or received) per kWh for electric service is an often-used benchmarking metric and reflects three primary factors: (1) actual fixed and variable prices; (2) customer energy usage patterns; and (3) customer mix. The average price paid per kWh is therefore a good measure of the overall cost effectiveness of a company in delivering electric service.

Q. What pricing metrics did you evaluate in your analysis?

A. I compared the average prices paid by residential, commercial, and industrial customers with the median value of the Texas and national peer groups. For purposes of this analysis, the average price paid per kWh equals annual retail revenues (from sales to ultimate consumers) divided by kWh sales, both in total and for each customer class. The pricing comparisons are reflected in Figures RDS-RR-1 through RDS-RR-6 described in the paragraphs that follow.

Q. What overall conclusions do you draw from your analysis of SPS's average pricing?

A. SPS's overall average retail prices, and average prices for the residential, commercial, and industrial customer classes, were consistently at or below the top quartile for the national peer group throughout the 2014 to 2018 period. SPS was consistently below the Texas peer group's top quartile for overall average retail prices and average industrial retail prices over the same period. Average prices

for the commercial customer class were at or near the Texas peer group's top quartile, and average prices for the residential customer class were at or above the median of the Texas peer group from 2014 through 2018.

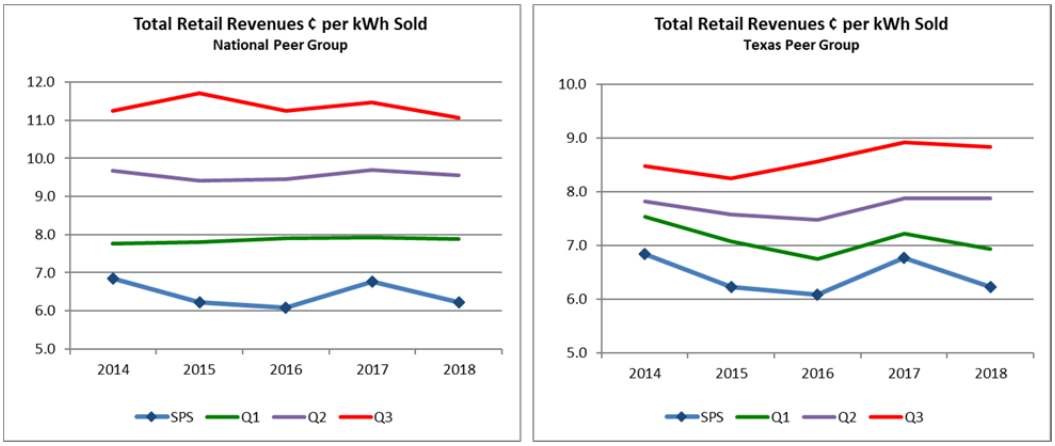
Q. Please describe the results of your pricing analysis.

A. It should first be noted that the transmission and distribution utilities in Texas have transmission and distribution assets only and provide "wires" service directly to end-use retail customers of deregulated retail companies operating in Texas. As a result, the average retail prices paid for electricity for these transmission and distribution utilities do not fully reflect the cost of providing retail electric services to customers. These companies[5] were therefore excluded from the Texas and national peer groups for the purposes of the retail pricing benchmarking analysis.

As shown in Figures RDS-RR-1 and RDS-RR-2 (next page), in 2018, SPS's total average price for electricity sold to retail customers was 6.23 cents per kWh. This is 34.8% below the national median (9.56 cents per kWh) and 20.8% below the Texas median (7.87 cents per kWh). SPS's total average price for retail electricity has remained consistently in the top quartile for the national and Texas peer groups throughout the 2014 to 2018 time period.

[5] AEP Texas Inc., CenterPoint Energy Houston Electric, LLC, Oncor Electric Delivery Company, LLC, Sharyland Utilities, L.P., and Texas-New Mexico Power Company.

Figure RDS-RR-1: Total Retail Revenues ¢ per kWh Sold



I also compared SPS's 2018 average price per kWh for each major customer class relative to the total average retail price. Figure RDS-RR-2 depicts the results of this analysis.

Figure RDS-RR-2: Average Price per kWh by Customer Class

	SPS	Texas Median	National Median
2018 Average Price per kWh (cents per kWh)			
Total Retail Sales	6.23	7.87	9.56
Residential Sales	10.33	10.27	12.01
Commercial Sales	7.50	8.04	9.41
Industrial Sales	4.23	4.87	6.46

As shown in Figure RDS-RR-3 (next page), the residential class was the largest of SPS's customer groups in 2018 in terms of customers (79%) but represented only 18% of SPS's retail energy sales in 2018. Industrial and commercial energy usage, with their associated lower prices, represented about 80% of SPS's retail energy sales in 2018, causing the relatively low total average retail price for SPS.

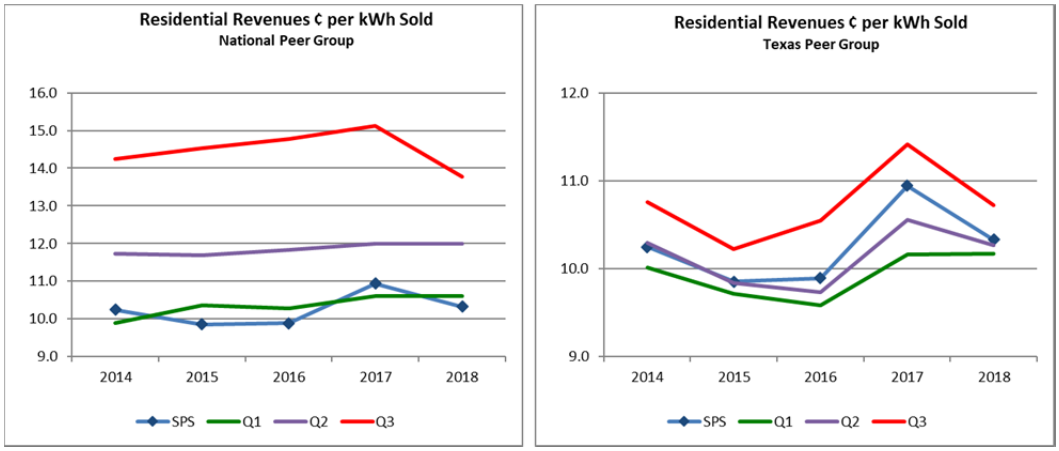
Figure RDS-RR-3: SPS Customer Class Characteristics

	2018	Percent of Total
Annual Operating Revenues – $000		
Residential	376,525	30%
Commercial	377,999	30%
Industrial	474,205	37%
Total Other Sales	46,145	4%
Total Retail Revenues	1,274,874	100%
Annual Usage – MWh Sold		
Residential	3,645,138	18%
Commercial	5,040,877	25%
Industrial	11,214,454	55%
Total Other Sales	550,031	3%
Total Retail MWh Sales	20,450,500	100%
Average Customers Per Month		
Residential	307,894	79%
Commercial	77,275	20%
Industrial	227	0%
Total Other Sales	6,318	2%
Total Number of Customers	391,714	100%

Q. Please describe the results of your pricing analysis for Residential customers.

A. As shown in Figure RDS-RR-2, in 2018, SPS's total average residential retail rate was 10.33 cents per kWh. As shown in Figure RDS-RR-4 (next page), SPS's average residential retail prices have consistently performed near the first quartile for the national peer group and at or above the median for the Texas peer group over the 2014 through 2018 time period. This means that SPS continues to perform on par with some of the least expensive utilities providing residential electric service in the country.

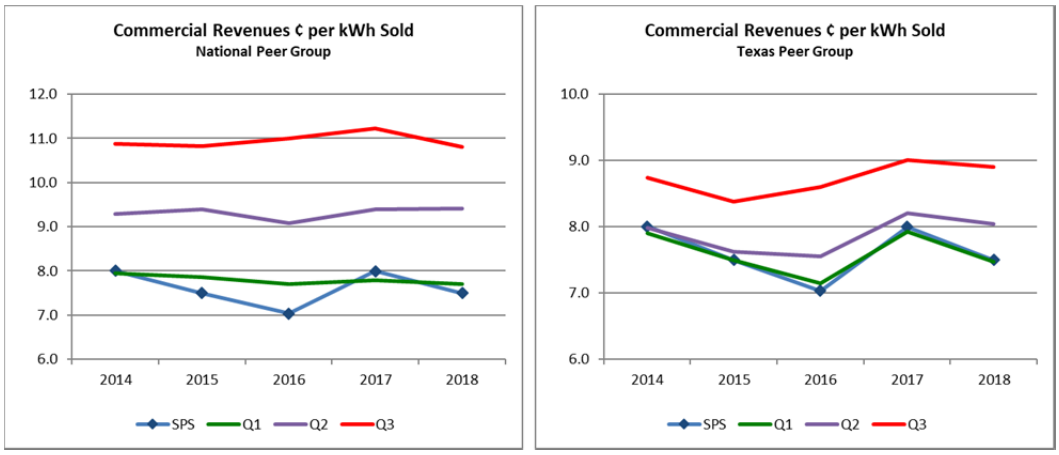
Figure RDS-RR-4: Total Residential Revenues ¢ per kWh Sold



Q. Please describe the results of your pricing analysis for Commercial customers.

A. As shown in Figure RDS-RR-2, in 2018, SPS's total average commercial retail rate, on a cents per kWh basis, was 7.50 cents per kWh. As shown in Figure RDS-RR-5, SPS's average commercial electricity prices have essentially performed below the first quartile for the national peer group, and at or near the first quartile for the Texas peer group, since 2014.

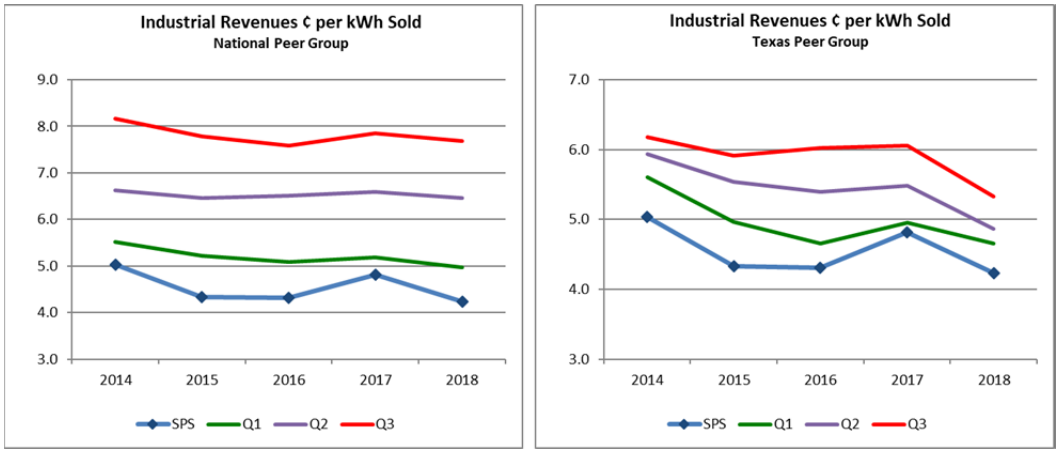
Figure RDS-RR-5: Total Commercial Revenues ¢ per kWh Sold



Q. Please describe the results of your pricing analysis for Industrial customers.

A. As shown in Figure RDS-RR-2, in 2018, SPS's total average industrial rate, on a cents per kWh basis, was 4.23 cents per kWh. As shown in Figure RDS-RR-6, SPS's industrial rates have been well below the first quartile for the national peer group and the Texas peer group since 2014.

Figure RDS-RR-6: Total Industrial Revenues ¢ per kWh Sold



V. O&M BENCHMARK RESULTS

Q. Please describe the analysis and metrics you used to benchmark SPS's O&M expenses against those of its Texas and national peers.

A. I analyzed the following key measures of O&M expenses across both national and Texas peer groups:

- Total O&M Expense ($ per Retail MWh Sold);
- Total Non-Fuel O&M ($ per Retail MWh Sold); and
- Total Non-Fuel Production O&M ($ per MWh Generated).

Production, transmission, distribution, customer accounts, customer service and information, sales, and A&G expenses, when compared to generation output, transmission throughput, transmission line miles, sales volume, average number of customers, or total plant balances provide measures commonly used to evaluate the performance of different utilities.

I selected FERC Uniform System of Accounts-defined functional categories of costs representative of the broad areas of utility operations being evaluated as the numerator for each metric (for example, total distribution O&M expenses), then matched the cost category being evaluated with an appropriate cost driver or drivers in the denominator (for example, total retail sales or the average number of customers), to provide a perspective on SPS's relative efficiency in each area of operations when compared to relevant industry peer groups.

The investor-owned utilities that operate in ERCOT have divested their generating assets and retail operations (specifically, AEP Texas Inc., CenterPoint

Energy Houston Electric, LLC, Oncor Electric Delivery Company, LLC, Sharyland Utilities, L.P., and Texas-New Mexico Power Company). As a result, only certain O&M metrics apply for these companies in the national and Texas peer group comparisons.

Q. Can you provide examples of where these companies were excluded from the analysis?

A. Yes. For the customer operations metrics, only SPS, El Paso Electric Company, Entergy Texas, Inc., and Southwestern Electric Power Company were included in the analysis. AEP Texas Inc., CenterPoint Energy Houston Electric, LLC, Oncor Electric Delivery Company, LLC, Sharyland Utilities, L.P., and Texas-New Mexico Power Company were excluded from the customer operations measures.

Q. Why were only four utilities included in the customer operations benchmarking analysis?

A. As I stated earlier in my testimony, the other five investor-owned utilities that operate in ERCOT are "wires only" utilities and have divested their generating assets and retail operations. As a result, some of the activities associated with customer operations, for example billing, are performed by the retail electric providers, not the utilities. Therefore, the scope of customer operations for these five utilities is not consistent with that of the four companies included in the benchmarking analysis (SPS, El Paso Electric Company, Entergy Texas, Inc., and Southwestern Electric Power Company). Including these wires-only companies in the analysis would skew the benchmarking results.

Q. Can you still draw reliable conclusions from the benchmarking analysis of customer operations when only four utilities are included in the Texas peer group?

A. Yes. There were 135 utilities included in the national peer group for the customer operations benchmarks. So even though the conclusions that can be drawn in comparison to the Texas utilities are more limited, one can still determine the cost efficiency of SPS relative to many other utilities around the country.

Q. What overall conclusions did you draw from your analysis of SPS's O&M expenses?

A. On nearly every O&M expense measure, SPS's O&M costs were at or below the median for both the national and Texas peer groups and in some cases the top quartile during the 2014 to 2018 period. There were four exceptions in comparison to the Texas peer group for: (1) Customer Accounts, Customer Service and Informational Expense, and Sales Expense O&M $ per Retail Customer; (2) A&G O&M $ per Retail Customer; (3) A&G O&M $ per Retail MWh Sold; and (4) A&G O&M (net of FERC Account 926) $ per Retail MWh Sold. The Customer Accounts, Customer Service and Informational Expense, and Sales Expense and A&G O&M $ per Retail Customer results are primarily due to differences in SPS's customer class energy usage and that of its peers as explained further later in my testimony. The A&G O&M $ per Retail MWh Sold result is due to the relative mix of SPS's retail sales to total sales versus that of the other Texas utilities. On a total MWh sold basis, SPS A&G costs have been at the Texas peer group median throughout the 2014 to 2018 period. On a total revenue

basis (A&G O&M as a percent of total revenues), SPS A&G costs have been only slightly above the Texas peer group top quartile throughout the 2014 to 2017 period, and slightly higher than the Texas peer group median in 2018. Excluding pension and benefits expense (FERC Account 926), SPS's A&G O&M $ per Retail MWh Sold have generally been between the Texas peer group median and the third quartile throughout the 2014 to 2018 period. On a total MWh sold basis, SPS A&G costs, excluding pension and benefits expense, have been at the Texas peer group top quartile throughout the 2014 to 2018 period.

There were two exceptions in comparison to the national peer group for: (1) Transmission O&M $ per MWh Transmitted; and (2) A&G O&M $ per Retail Customer. The transmission result is due to the high wheeling costs for SPS. Excluding wheeling expense (FERC Account 565), SPS is below the median of the national peer group on this measure. The A&G result is primarily due to differences between SPS's customer class energy usage.

Below I provide further results of my analysis of SPS's O&M expenses.

A. Total Company and Production Benchmarks

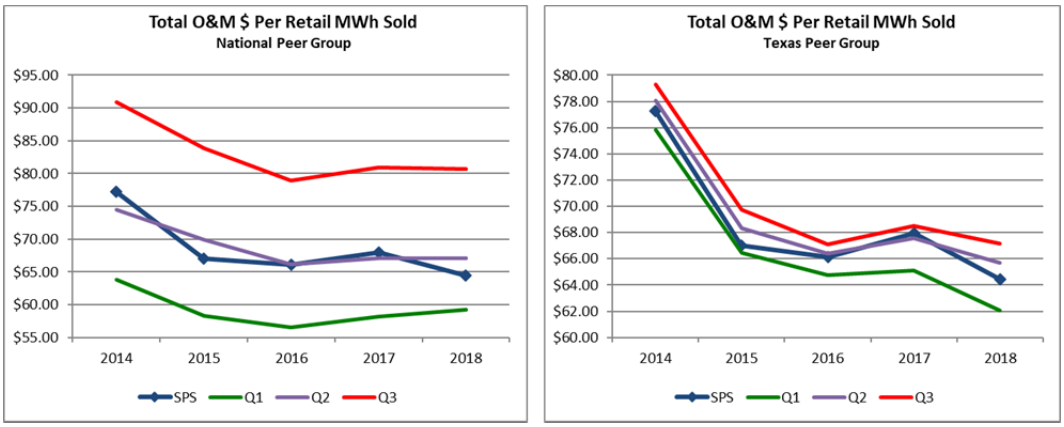
Q. Please describe your analysis of SPS's total company O&M and production O&M expense.

A. I developed three charts depicting total O&M costs: (1) total O&M per Retail MWh sold; (2) total non-fuel O&M per Retail MWh sold; and (3) non-fuel production O&M per MWh generated. These are depicted in Figures RDS-RR-7 through RDS-RR-9.

Q. Please describe the results of your analysis of SPS's total O&M costs per MWh sold with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-7 below, SPS's total O&M expense per Retail MWh sold has performed at or near the national median since 2014. Relative to other Texas utilities, SPS's total O&M costs have been between the median and the top quartile since 2014.

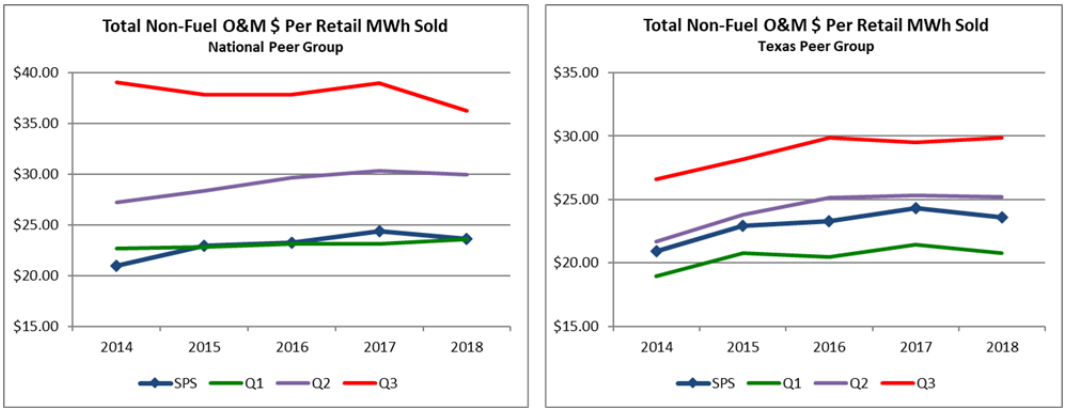
Figure RDS-RR-7: Total O&M $ per Retail MWh Sold



Q. Please describe the results of your analysis of SPS's total O&M less fuel and purchased power costs with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-8 (next page), SPS's total non-fuel O&M expenses per Retail MWh sold have been at or near the national peer group top quartile since 2014 and below the Texas peer group median during the 2014 to 2018 period. Total non-fuel O&M costs are a good representation of how efficiently a utility operates and maintains its assets on a daily basis.

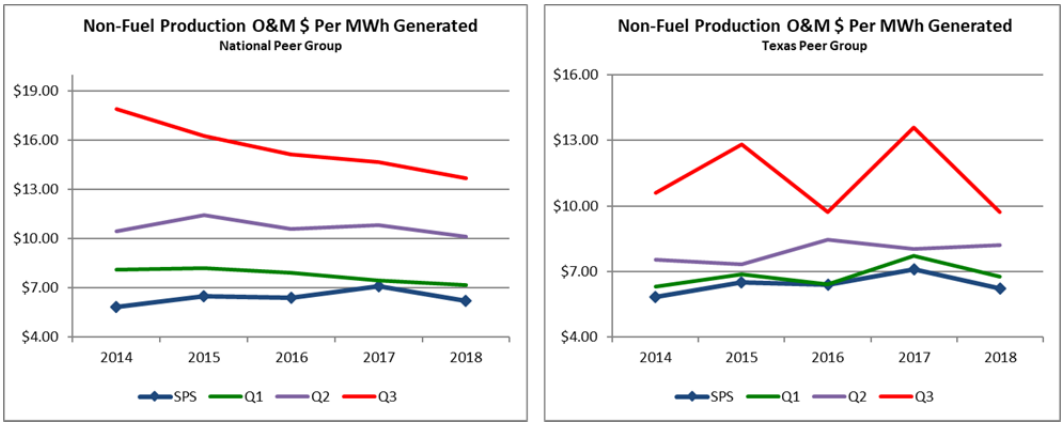
Figure RDS-RR-8: Total Non-Fuel O&M $ per Retail MWh Sold



Q. Please describe the results of your analysis of SPS's non-fuel production O&M expense with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-9, SPS's non-fuel production costs have performed better than the first quartiles for the national peer group and the Texas peer group. Like total non-fuel O&M costs, non-fuel production O&M costs are a good representation of how efficiently a utility operates and maintains its generation assets on a daily basis.

Figure RDS-RR-9: Non-Fuel Production O&M $ per MWh Generated



B. Transmission O&M Expense Benchmarks

Q. Please describe your overall analysis of SPS's transmission O&M expense.

A. I developed four charts depicting the benchmarking of transmission O&M expenses: (1) total transmission expense per MWh transmitted, with and without the inclusion of FERC Account 565 and (2) total transmission expense per line mile, with and without the inclusion of FERC Account 565. The results are depicted in Figures RDS-RR-10 through RDS-RR-13 below.

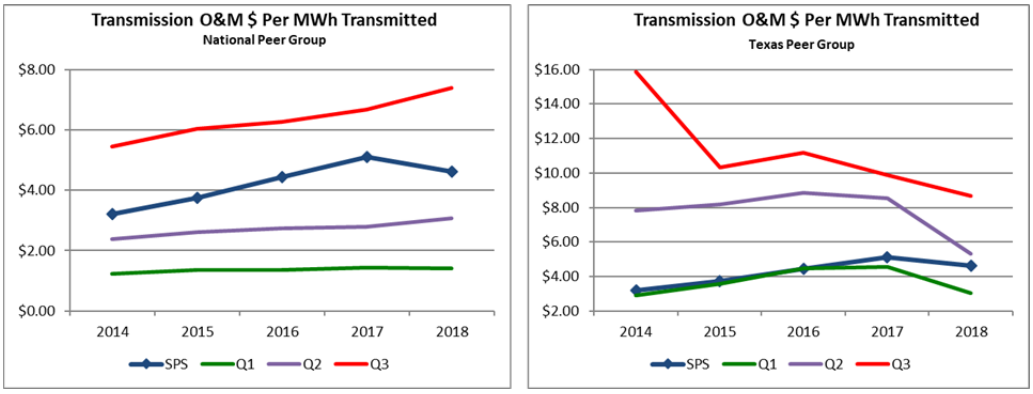
Q. Why did you consider transmission O&M expenses with and without the inclusion of FERC Account 565?

A. FERC Account 565 is titled "Transmission of electricity by others (Major only)". This account includes amounts payable to others for the transmission of electricity over transmission facilities owned by others. The costs – also referred to as "wheeling expenses"– included in FERC Account 565 can vary widely by utility depending on the amount of wholesale purchases and sales of electricity by that utility. When benchmarking transmission O&M expenses, I often exclude FERC Account 565 from my analysis, as elimination of this account from total transmission O&M expense provides a better measure of the utilities' internal transmission-related costs.

Q. Please describe the results of your analysis of SPS's transmission expense on a MWh transmitted basis.

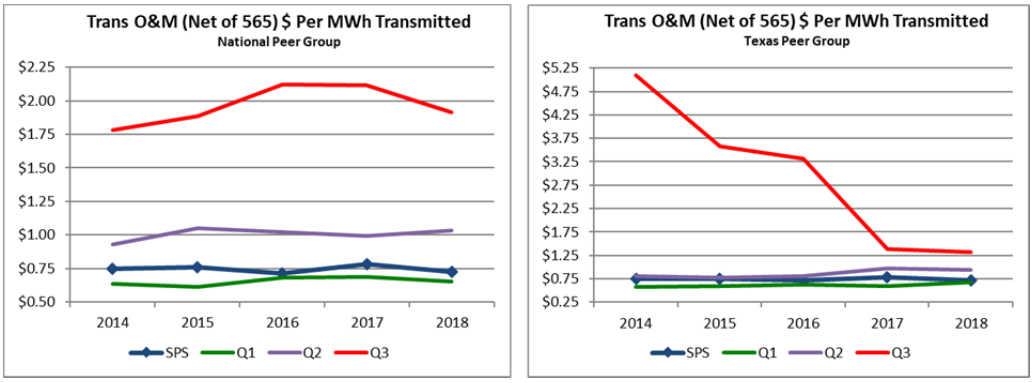
A. As shown in Figure RDS-RR-10 below, SPS's transmission O&M per MWh transmitted has been above the national group median since 2014, and above the Texas peer group's first quartile over the same time period.

Figure RDS-RR-10: Transmission O&M $ per MWh Transmitted



As shown in Figure RDS-RR-11 below, net of FERC Account 565, SPS's transmission O&M per MWh transmitted has been between the median and the top quartile for the national and Texas peer groups throughout the 2014 through 2018 period.

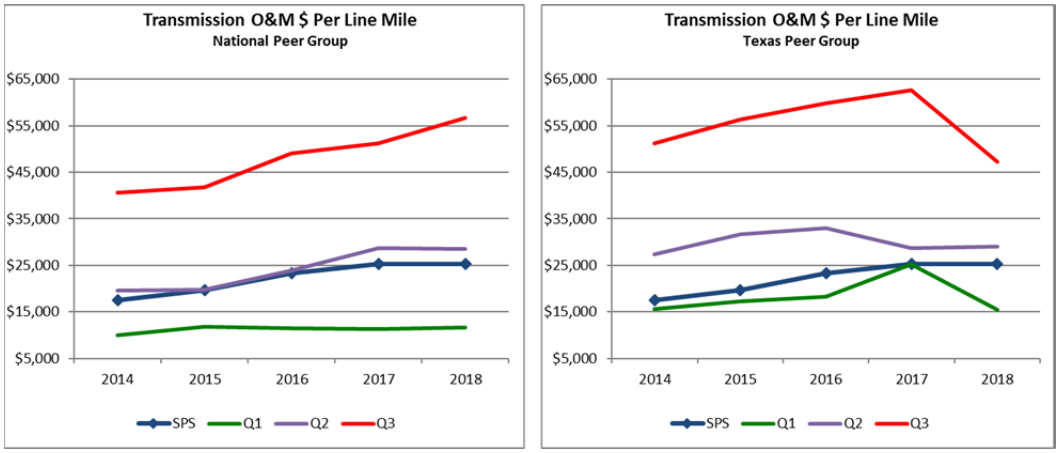
Figure RDS-RR-11: Transmission O&M (Net of 565) $ per MWh Transmitted



Q. Please describe the results of your analysis of SPS's transmission O&M expense on a per line mile basis.

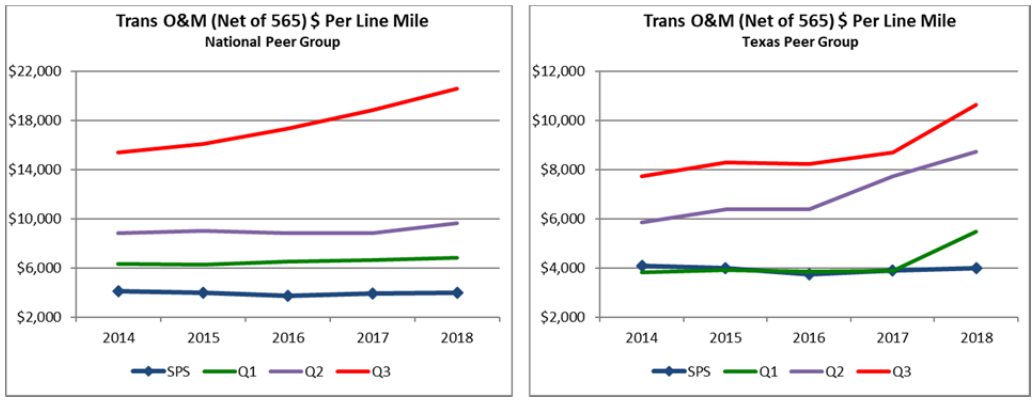
A. As shown in Figure RDS-RR-12 (next page), SPS's transmission O&M expense per line mile has performed at or near the median for the national peer group, and between the median and the top quartile for the Texas peer group, between 2014 and 2018.

Figure RDS-RR-12: Transmission O&M $ per Line Mile



As shown in Figure RDS-RR-13, net of FERC Account 565, SPS's transmission O&M per line mile has been below the top quartile of the national peer group throughout the 2014 to 2018 period, and at or below the top quartile of the Texas peer group for the same period.

Figure RDS-RR-13: Transmission O&M (Net of 565) $ per Line Mile



C. Distribution O&M Expense Benchmarks

Q. Please describe your analysis of SPS's distribution O&M expense.

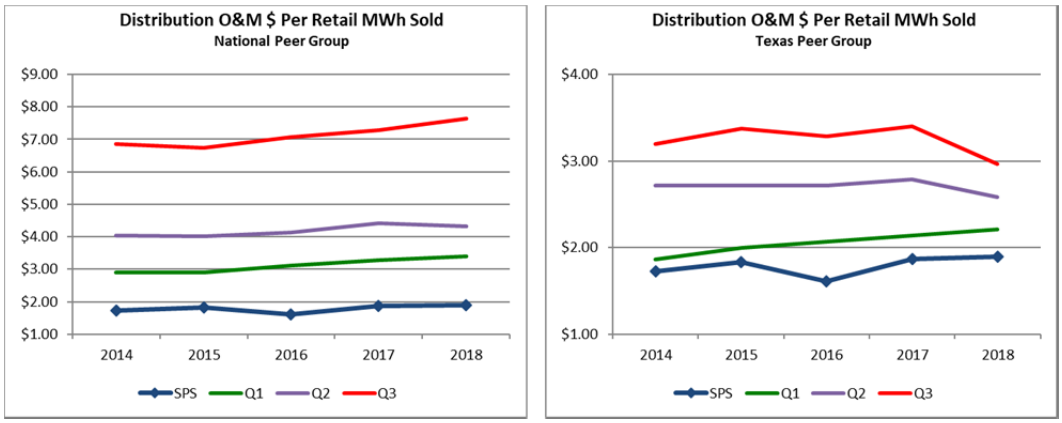
A. I developed two charts depicting the benchmarking of distribution O&M expenses: (1) total distribution O&M expense per MWh sold; and (2) total

distribution O&M expense per customer. These are depicted in Figures RDS-RR-14 below and RDS-RR-15 (on the next page).

Q. Please describe the results of your analysis of SPS's distribution O&M expense on the basis of MWh sales.

A. As shown in Figure RDS-RR-14, SPS's distribution O&M has performed below the first quartile of both the national and Texas peer groups during the 2014 to 2018 period.

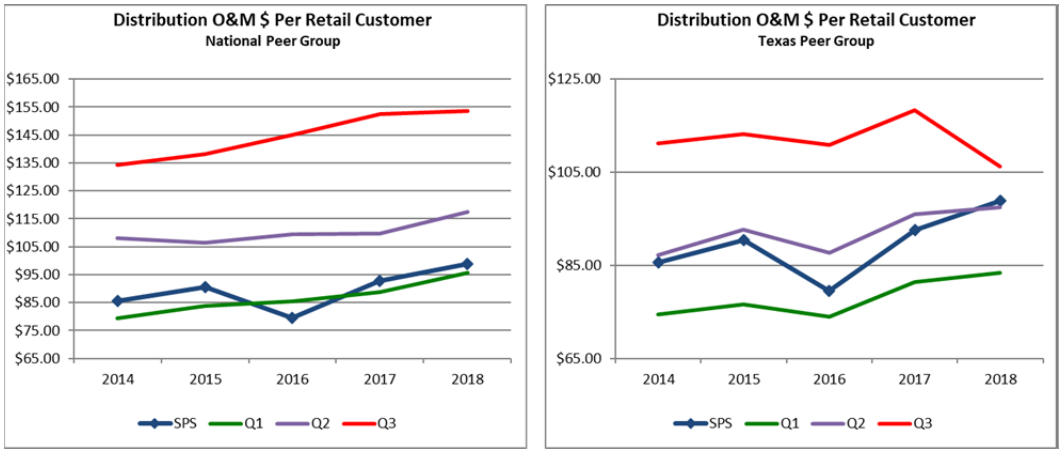
Figure RDS-RR-14: Distribution O&M $ per Retail MWh Sold



Q. Please describe the results of your analysis of SPS's distribution O&M expense on the basis of number of customers.

A. As shown in Figure RDS-RR-15, SPS's distribution O&M expense per customer has consistently performed at or near the national peer group top quartile, and between the first quartile and the median of the Texas peer group, during the 2014 through 2018 time period.

Figure RDS-RR-15: Distribution O&M $ per Customer



Q. Why are SPS's Distribution O&M Expense per Retail MWh Sold benchmark results versus the Texas peer group so different from the Distribution O&M Expense per Retail Customer results?

A. The average energy consumption of SPS's customers differs substantially from the average energy consumption of customers of the other utilities in the Texas peer group. As shown in Figure RDS-RR-16 (next page), SPS's industrial customers as a class, on average, consume more electricity than the industrial classes of the other utilities in Texas included in this analysis. In contrast, with the exception of El Paso Electric Company, SPS's residential customers as a class consume less electricity than the residential class of the other Texas utilities included in this analysis.

Figure RDS-RR-16: 2018 Average Energy Consumption by Class

Utility	Residential Sales per Customer (MWh)	Commercial Sales per Customer (MWh)	Industrial Sales per Customer (MWh)
AEP Texas Inc.	N/A	N/A	N/A
CenterPoint Energy Houston Electric, LLC	13.9	89.5	16,242.2
El Paso Electric Company	8.0	57.4	21,892.4
Entergy Texas, Inc.	15.5	96.7	1,389.5
Oncor Electric Delivery Company, LLC	15.2	102.6	3,346.6
Sharyland Utilities, L.P.[6]	14.9	109.4	N/A
Southwestern Electric Power Company	14.4	81.1	790.1
Southwestern Public Service Company	11.8	65.2	49,402.9
Texas-New Mexico Power Company[7]	14.2	70.3	39,537.4

These differences in customer class usage result in the costs per customer benchmarks being skewed for SPS when compared to the Texas peer group.

Q. Were any costs adjusted in the Distribution O&M analysis you addressed above?

A. Yes. As described earlier in my testimony, the costs for "credit work" due to non-payment of bills and the move-in and move-out meter reading activities were removed, as the costs should be recorded to FERC Account 903. This is how these costs are recorded for the other Xcel Energy operating companies.

For SPS, these costs were recorded to FERC Account 586. FERC Account 586 is used for recording costs associated with new service, or relocating, inspecting, and testing meters. The application of these costs by SPS to FERC Account 586 was an error that was discovered while preparing my

[6] 2017 data. 2018 information not available.

[7] Ibid.

testimony for Docket No. 45524. The costs were removed from the distribution analyses but included in the Customer Operations benchmarking analyses. It should be noted that SPS implemented work order changes at the end of 2015 so that effective January 1, 2016 these costs are correctly being charged to FERC Account 903.

D. Customer Operations O&M Expense Benchmarks

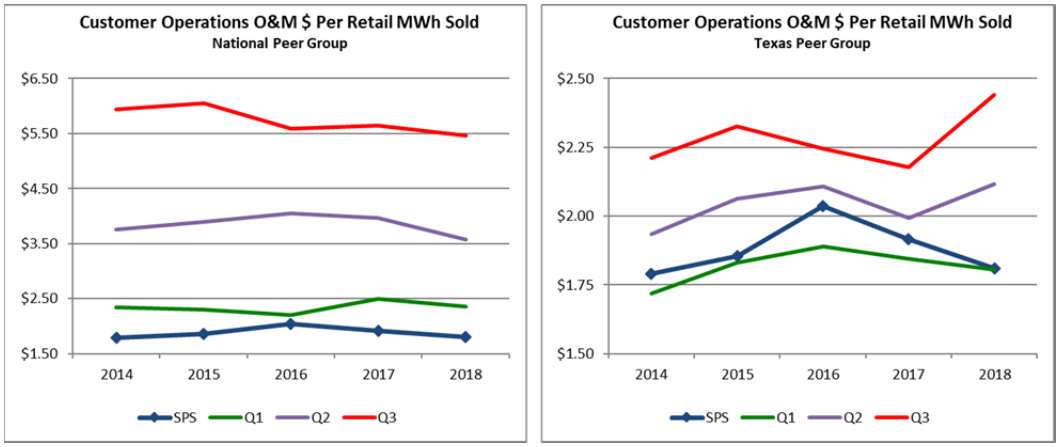
Q. Please describe your analysis of SPS's customer operations O&M expense.

A. In my analysis, I defined "customer operations" expenses to include: Customer Accounts; Customer Service and Informational Expense; and Sales Expense, as defined by the FERC Uniform System of Accounts. I developed two charts depicting the benchmarking of customer operations O&M expenses: (1) total customer operations O&M expense per MWh sold; and (2) total customer operations expense per customer. These are depicted in Figures RDS-RR-17 and RDS-RR-18.

Q. Please describe the results of your analysis of SPS's customer operations O&M expense on the basis of MWh sales.

A. As shown in Figure RDS-RR-17 (next page), SPS performed below the national peer group's first quartile between 2014 and 2018. Compared against the Texas peer group, SPS costs per MWh sold were between the first quartile and the median from 2014 through 2018.

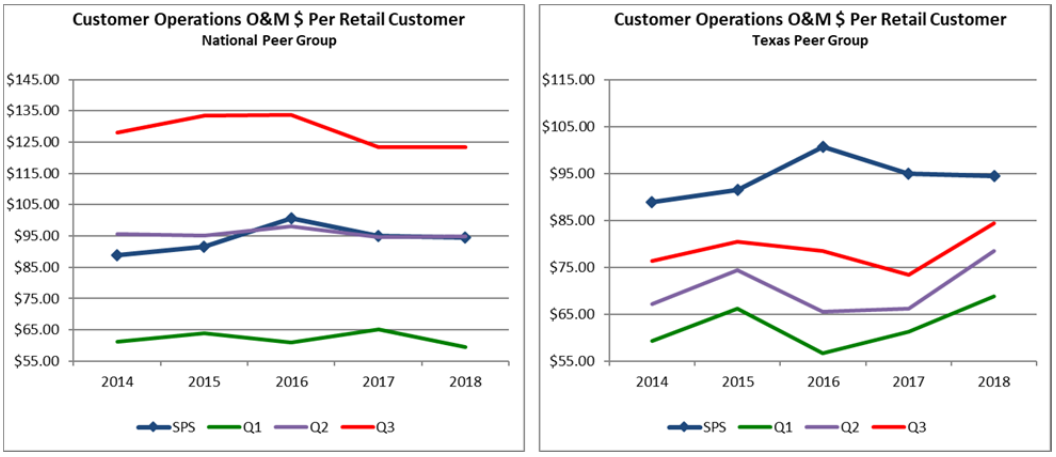
Figure RDS-RR-17: Customer Operations O&M $ per Retail MWh Sold



Q. Please describe the results of your analysis of SPS's customer operations O&M expense on a per customer basis.

A. As shown in Figure RDS-RR-18 below, SPS's customer operations O&M expense per customer was at or near the national peer group median between 2014 and 2018. Relative to the Texas peer group, SPS has been above the third quartile over the 2014 through 2018 time period.

Figure RDS-RR-18: Customer Operations O&M $ per Customer



Q. Why are SPS's Customer Operations O&M Expense per MWh Sold benchmark results versus the Texas peer group so different from the Customers Operations O&M Expense per Customer results?

A. As described earlier in my testimony, the average energy consumption of SPS's customers differs substantially from the average energy consumption of customers of the other utilities in the Texas peer group (see Figure RDS-RR-16). These differences in customer class usage result in the costs per customer benchmarks being skewed when compared to the Texas peer group.

E. A&G O&M Expense Benchmarks

Q. Please describe your analysis of SPS's A&G O&M expense.

A. I developed six charts depicting the benchmarking of A&G O&M expenses: (1) A&G O&M expense per retail MWh sold, with and without the inclusion of FERC Account 926; (2) A&G O&M expense per customer; (3) A&G O&M expense as a percent of revenues; and (4) A&G O&M expense per total MWh sold, with and without the inclusion of FERC Account 926. These are depicted in Figures RDS-RR-19 through RDS-RR-24.

Q. What are some of the factors driving the A&G costs for SPS?

A. A large portion of SPS's A&G costs are driven by: (1) pension costs, whose costs are determined under Financial Accounting Standards Board Statement No. 87, Employers' Accounting for Pensions, and by actuarial or other similar studies in accordance with generally accepted accounting principles; and (2) active health care expenses.

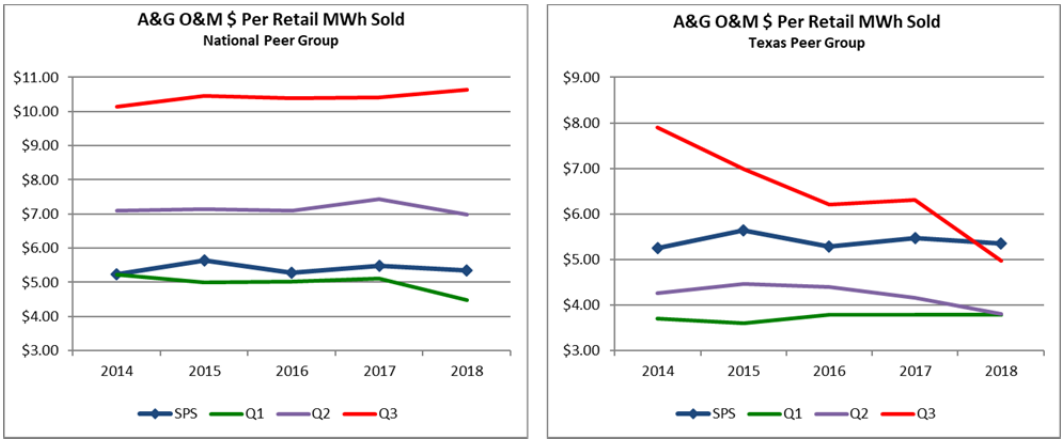
Q. Why did you consider A&G O&M expenses with and without the inclusion of FERC Account 926?

A. FERC Account 926 is titled "Employee pensions and benefits". This account includes amounts for: (1) pensions paid to or on behalf of retired employees; (2) payments for employee accident, sickness, hospital, and death benefits, including insurance plans; (3) expenses incurred in medical, educational or recreational activities for the benefit of employees; and (4) administrative expenses in connection with employee pensions and benefits. When benchmarking A&G O&M expenses, I sometimes exclude FERC Account 926 from my analysis, as elimination of this account from total A&G O&M expense can provide additional insights regarding the utilities' relative A&G costs.

Q. Please describe the results of your analysis of SPS's A&G O&M expense per retail MWh sold.

A. As shown in Figure RDS-RR-19 (next page), SPS's A&G O&M per retail MWh sold was between the median and the first quartile of the national peer group from 2014 through 2018. Compared with the Texas peer group, the expenses were between the median and the third quartile between 2014 and 2017, and slightly above the third quartile in 2018.

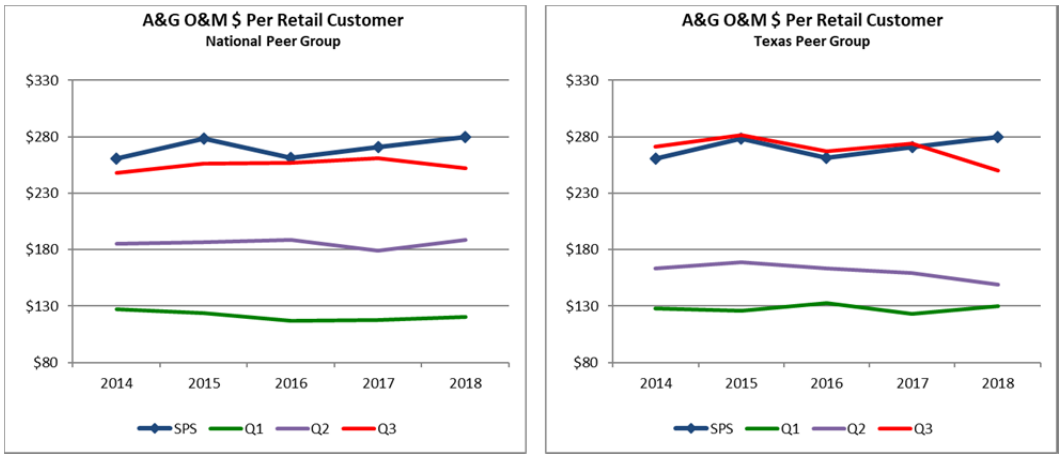
Figure RDS-RR-19: A&G O&M $ per Retail MWh Sold



Q. Please describe the results of your analysis of SPS's A&G O&M expense on the basis of customers.

A. As shown in Figure RDS-RR-20, SPS has consistently performed at or near the third quartile of the Texas peer group, and above the third quartile of the national peer group, between 2014 and 2018.

Figure RDS-RR-20: A&G O&M $ per Customer



Q. Why are SPS's A&G costs performances so different between its costs per MWh sold and its costs per customer?

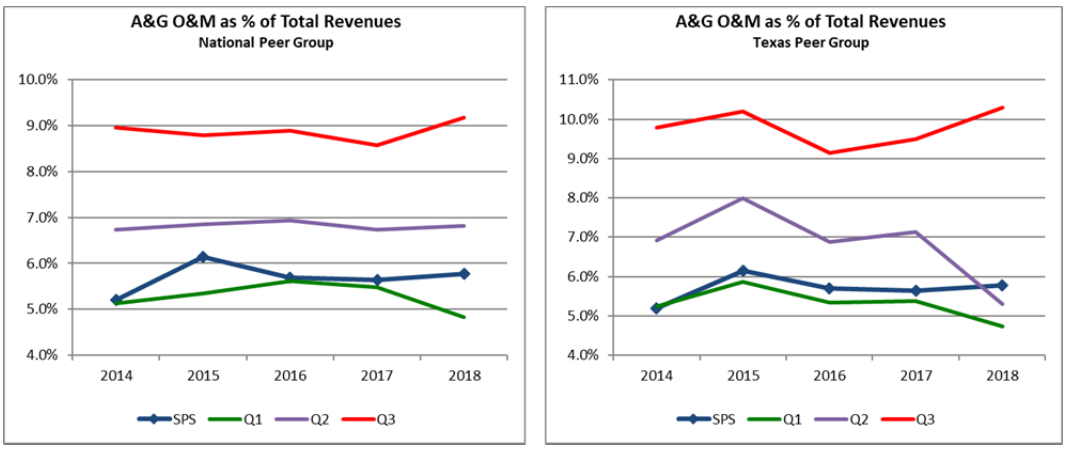
The reasons for the difference between the costs per MWh sold results versus the costs per customer results relate to: (1) the relatively low usage of electricity by

SPS's largest customer group (i.e., the Residential class); and (2) the substantial difference in average energy consumption of SPS's customers versus the average consumption of customers of the other Texas utilities included in this analysis (see Figure RDS-RR-16).

Q. Please describe the results of your analysis of SPS's A&G O&M expense as a percent of revenues.

A. As shown in Figure RDS-RR-21, in general SPS's A&G costs as a percent of revenues were between the median and the top quartile for both peer groups over the 2014 through 2018 period. In 2018, SPS's A&G costs as a percent of revenues were slightly above the Texas peer group median.

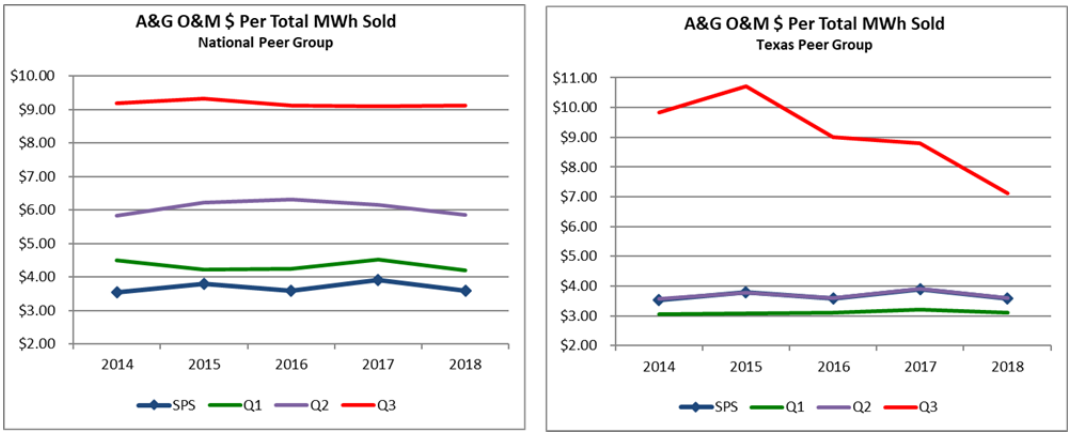
Figure RDS-RR-21: A&G O&M as a Percent of Revenues



Q. Please describe the results of your analysis of SPS's A&G O&M costs per total MWh sold with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-22 (next page), SPS's A&G O&M per total MWh Sold has performed below the national peer group first quartile since 2014. Relative to other Texas utilities, SPS's total A&G O&M costs per total MWh sold have been at the peer group median throughout the 2014 to 2018 period.

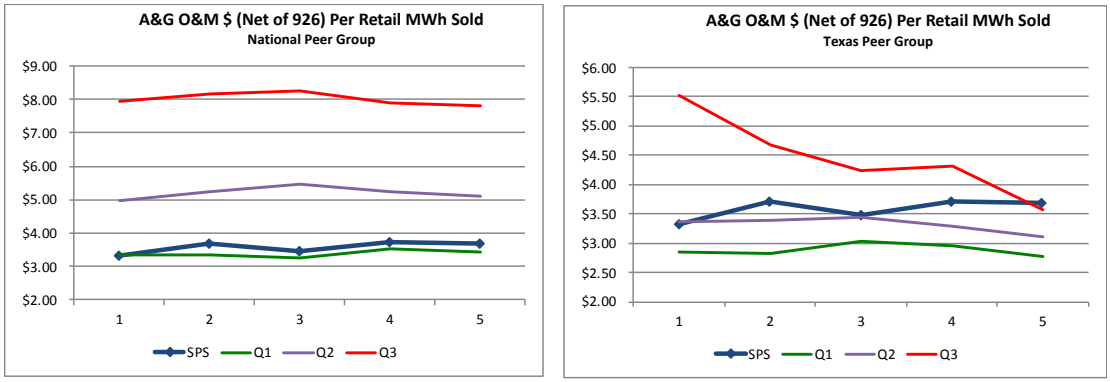
Figure RDS-RR-22: A&G O&M $ per Total MWh Sold



Q. Please describe the results of your analysis of SPS's A&G O&M costs per retail MWh sold, excluding pension and benefits expense, with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-23, net of FERC Account 926, SPS's A&G costs per retail MWh sold have been at or near the national peer group top quartile, and between the Texas peer group median and third quartile over the 2014 to 2018 period.

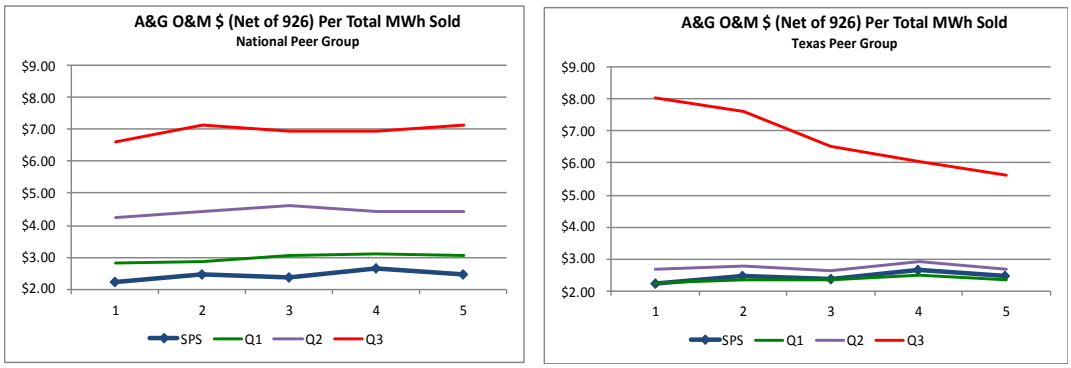
Figure RDS-RR-23: A&G O&M $ (Net of 926) per Retail MWh Sold



On a total MWh sold basis, SPS's A&G costs, net of FERC Account 926, have been well below the national peer group top quartile, and at or very near the Texas

peer group top quartile throughout the 2014 to 2018 period (see RDS-RR-24 below).

Figure RDS-RR-24: A&G O&M $ (Net of 926) per Total MWh Sold



F. O&M versus Total Plant Benchmarks

Q. Please describe your analysis of SPS's functional O&M expense levels versus total plant balances.

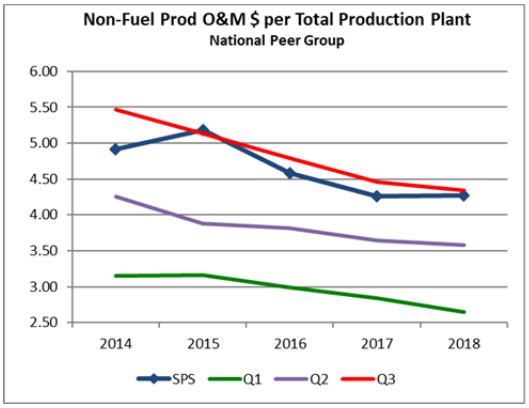
A. I developed five charts depicting O&M expense per total plant on a cents per dollar basis: (1) non-fuel production O&M expense per total production plant; (2) transmission O&M expense per total transmission plant; (3) transmission O&M expense excluding FERC Account 565 per total transmission plant; (4) distribution O&M expense per total distribution plant; and (5) A&G O&M expense per total electric plant. These are depicted in Figures RDS-RR-25 through RDS-RR-29.

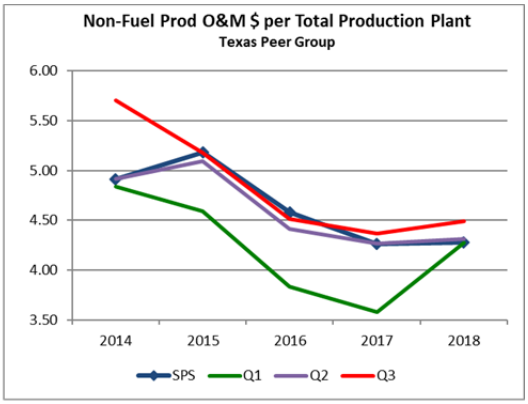
Q. Please describe the results of your analysis of SPS's Non-Fuel Production O&M Expense per Total Production Plant with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-25 below, SPS's non-fuel production O&M expense per total production plant was at or below the national peer group's third quartile

from 2014 through 2018. On a Texas peer group basis, SPS results were at or near the median from 2014 to 2018.

Figure RDS-RR-25: Non-Fuel Production O&M $ per Total Production Plant

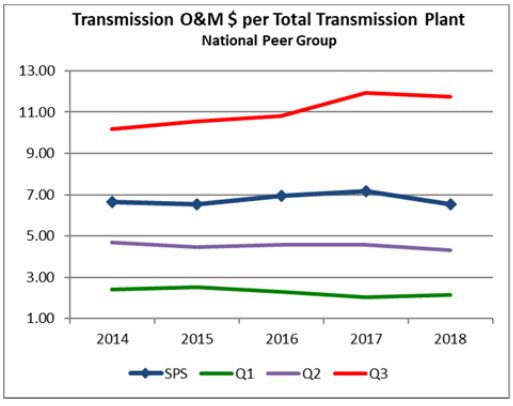


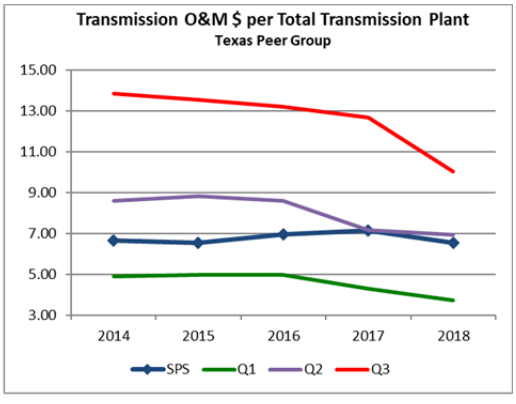


Q. Please describe the results of your analysis of SPS's Transmission O&M Expense per Total Transmission Plant with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-26, SPS's transmission O&M expense per total transmission plant has performed between the national peer group's median and third quartile from 2014 through 2018. In comparison with the Texas peer group, SPS results have generally been between the first quartile and the median during the same period.

Figure RDS-RR-26: Transmission O&M $ per Total Transmission Plant

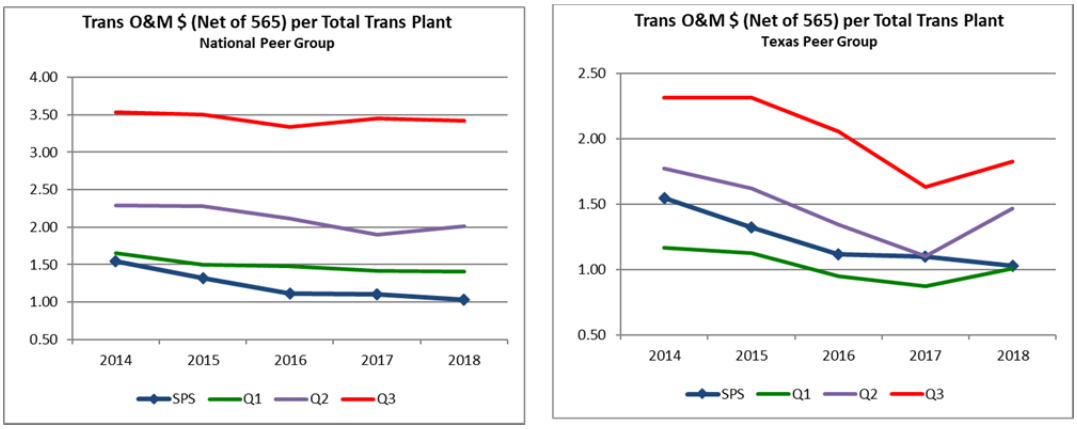




Q. Please describe the results of your analysis of SPS's Transmission O&M Expense Less FERC Account 565 per Total Transmission Plant with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-27 below, SPS's transmission O&M expense less account 565 per total transmission plant was below the first quartile of the national peer group from 2014 to 2018. On a Texas peer group basis, SPS costs have been between the top quartile and the median between 2014 and 2018.

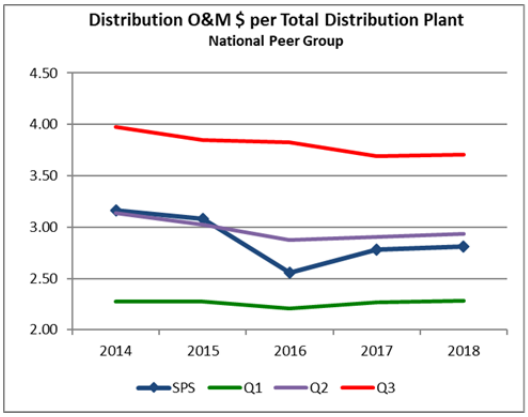
Figure RDS-RR-27:
Transmission O&M $ (Net of 565) per Total Transmission Plant

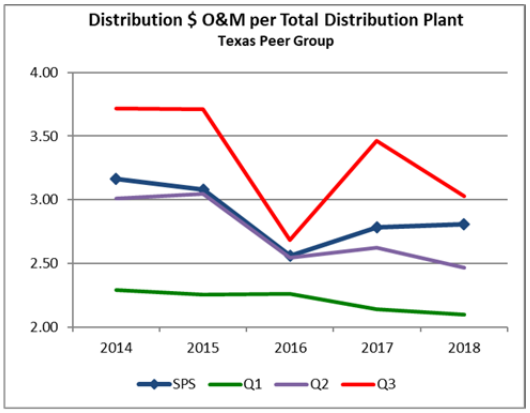


Q. Please describe the results of your analysis of SPS's Distribution O&M Expense per Total Distribution Plant with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-28 (next page), SPS's distribution O&M expense per total distribution plant has performed between the median and the top quartile of the national peer group between 2014 and 2018, and between the median and the third quartile of the Texas peer group over the same time period.

Figure RDS-RR-28: Distribution O&M Expense per Total Distribution Plant

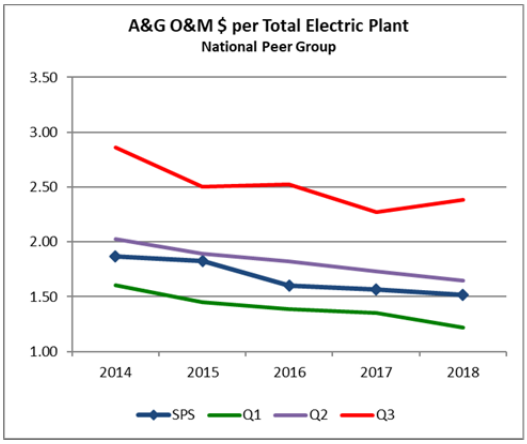


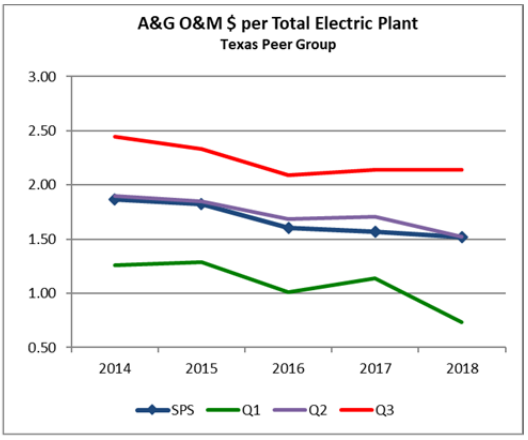


Q. Please describe the results of your analysis of SPS's A&G O&M Expense per Total Electric Plant with those of its Texas and national peer groups.

A. As shown in Figure RDS-RR-29, SPS's A&G O&M expense per total electric plant has been at or below the national and Texas peer group medians since 2014. Overall, this metric has been trending downward for both SPS and the Texas and national peer groups from 2014 through 2018.

Figure RDS-RR-29: A&G O&M Expense per Total Electric Plant





Q. Please summarize your conclusions regarding the O&M versus total plant benchmarking analysis.

A. SPS O&M costs per dollar of plant investment have been trending downwards over the 2014 to 2018 period. SPS production and transmission O&M costs versus total plant investment levels fall between the median and the third quartile of the national peer group, and the median and the top quartile of the Texas peer group. SPS distribution O&M costs versus total plant investments fall between the median and the top quartile of the national peer group, and the median and the third quartile of the Texas peer group. SPS A&G O&M costs versus total plant investments fall between the median and the top quartile of both the national and the Texas peer groups.

VI. CAPITAL INVESTMENT BENCHMARK RESULTS

Q. Please describe the analysis and metrics you used to benchmark SPS's capital additions against those of its Texas and national peers.

A. For total plant and each major plant category (production, transmission, distribution, and general plant), I analyzed annual plant additions as a percentage of total plant and as a percentage of annual depreciation expense. The capital additions analysis as a percentage of total plant provides insights into a utility's investment levels in plant replacements and system expansion over time. The analysis of capital additions as a percentage of depreciation expense highlights areas where companies may or may not be replacing assets at a level that "keeps up" with annual wear and tear—though it should be noted that for most utilities, annual capital additions will fluctuate year to year due to the timing of new additions as well as changes in the mix of capital projects between functional areas.

I also analyzed plant additions as a percentage of total plant, averaged over a three-year period of time. When analyzing capital additions, particularly for a single utility, it is normal to see significant changes in capital additions year to year. To "smooth" these annual fluctuations, and to help identify investment trends, I typically analyze capital additions by looking at a rolling three-year average of capital additions by functional area. The three-year average effectively smooths out the normal fluctuations in plant additions from year to year.

Q. Why did you compare SPS's capital additions to the median levels for the national and Texas peer groups?

A. As I noted earlier in my testimony, when conducting benchmarking analyses, for revenue and O&M expense measures, lower is generally better, meaning lower rates for customers or lower costs to provide electric service. However, for capital additions, being above or below a particular quartile is not necessarily a good or bad thing. It may simply indicate that a particular utility is making investments in facilities at a particular point in time, where other members of the peer group are planning to pursue similar investments at another point in time. Therefore, for the purposes of this capital addition benchmarking analysis, I simply compared SPS to the median peer group benchmark results.

Q. What overall conclusions do you draw from your analysis of SPS's capital additions?

A. The level of SPS production plant capital additions has generally been below the national and Texas peer group medians since 2014.

SPS's transmission capital additions have been fairly constant over the 2015 to 2018 time period (representing about 10% to 15% of total transmission plant), after declining significantly from the 2014 level. On a rolling-three-year average basis, investment levels have generally been decreasing steadily. The level of SPS's transmission plant capital additions has been above the national per group median since 2014, and at or near the Texas peer group median between 2016 and 2018. The investments in transmission plant additions primarily reflect transmission and substation capital additions for the expansion, upgrading, and

refurbishment of transmission system infrastructure to: (1) interconnect new generation resources; (2) maintain reliability; and (3) improve load-serving capability. SPS's transmission plant additions have significantly exceeded annual depreciation expense every year since 2014. The national peer group median levels have been between 200% and 300% of depreciation, consistent with the continued industry focus on transmission expansion. In Texas, the peer group median has been about 400% to 500% of depreciation over the 2014 to 2018 time period, reflecting the active transmission expansion in the state.

SPS's distribution capital additions have also stabilized in recent years, although they were above the national and Texas peer group medians from 2014 through 2018. In comparison to the Texas peer group, distribution capital additions were at the median in 2014, but significantly higher in 2015, before returning to near the median in 2016. The peak in 2015 is due to: (1) an increase in storm damage-related restoration; (2) capacity work related to, among other items, the completion of new substations; and (3) meter and transformer purchases to serve new customers.

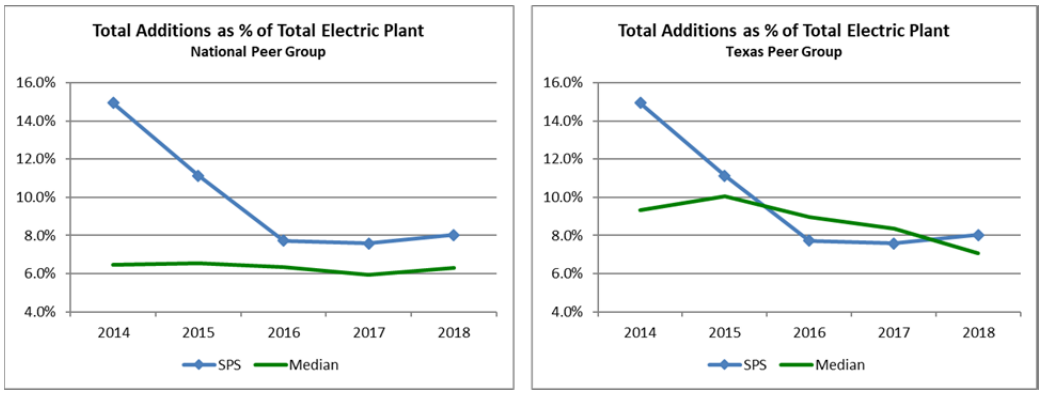
SPS's general plant additions increased from 2014 levels in 2015, decreased in 2016, increased again in 2017, and then decreased to about 20% of general plant balances in 2018. SPS additions during the 2014 to 2018 period have generally been higher than the national and Texas peer group medians. The increase in 2015 was primarily due to: (1) the consolidation of the customer office and service center into one building at the existing Borger service center; (2) the replacement of several dated camera systems to ensure the safety of work environments and reduce repairs; (3) projects required due to the failure of

mechanical equipment and replacement of equipment that reached the end of its useful lifespan; and (4) purchasing of new and replacement of used office furniture and equipment to satisfy interior facility needs. The increase in 2017 was primarily due to the new SAP work and asset management system. On a three-year rolling average basis, SPS general plant additions as a percent of total general plant were above the national and Texas peer group medians from 2014 through 2018.

Q. Please describe the results of your analysis of SPS's annual plant additions for the period 2014–2018 as compared to those of its Texas and national peers.

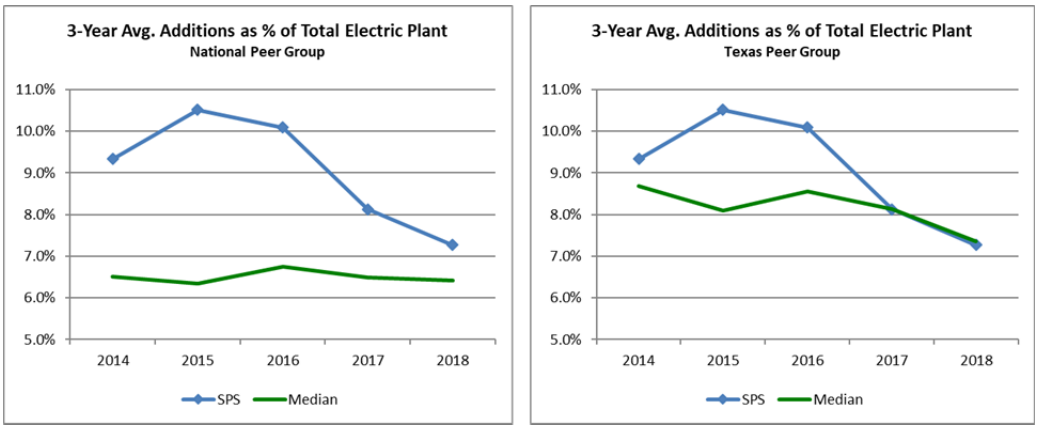
A. As shown in Figure RDS-RR-30, SPS's total capital additions as a percent of total plant investment decreased between 2014 and 2016, and have held steady since that time period. This indicates that SPS has reduced investments in various major plant categories over the last few years. Overall investment levels from 2016 to 2018 have been in line with the Texas peer group median and slightly higher than the national peer group median.

Figure RDS-RR-30 Total Additions as a Percent of Total Plant



To help identify overall investment trends, I employed a three-year rolling average analysis as I described earlier in my testimony. Figure RDS-RR-31 shows that SPS's three-year average total capital additions as a percent of total plant investment increased from 2014 to 2015, but have trended downwards since that time. While the Texas peer group investment levels have also been trending downward in recent years, the national peer group trend remained essentially flat over the 2014 through 2018 period.

Figure RDS-RR-31: 3-Year Average Additions as a Percent of Total Plant

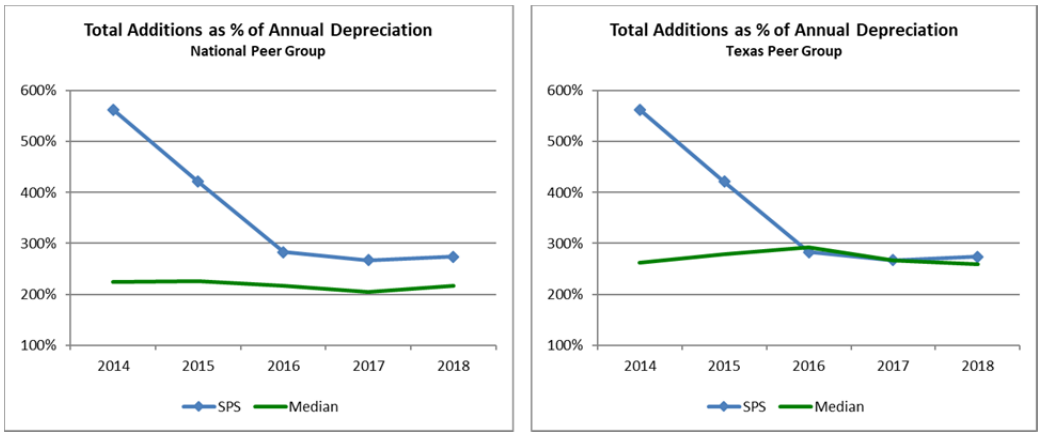


Q. Please describe the results of your analysis of SPS's annual plant additions relative to total depreciation expense.

A. As shown in Figure RDS-RR-32 (on the next page), SPS decreased the rate of capital spending on plant additions from 2014 to 2016, with steady investment levels since that time. The level of annual capital additions for the national peer group (approximately 200 percent of annual depreciation) and Texas peer group (approximately 250 to 300 percent of annual depreciation) indicates that utility companies in general are adding to their infrastructure at a rate faster than would be required to simply replace aging assets. Historically, SPS's capital additions levels have generally been higher than national and Texas peer group trends.

However, since 2016, SPS investment levels have been at the Texas peer group median, and slightly higher than the national peer group median.

Figure RDS-RR-32: Total Additions as a Percent of Depreciation



Q. Please describe your analysis of SPS's production investment additions relative to those of the Texas and national peer groups.

A. I developed three charts depicting my analysis of SPS's annual production plant investments: (1) production plant additions as a percentage of total production plant; (2) annual plant additions averaged over three years as percentage of production plant; and (3) production plant additions as a percentage of depreciation expense. These are depicted in Figures RDS-RR-33 through RDS-RR-35.

Q. Please describe the results of your analysis of SPS's production plant additions for the period 2012–2016 as compared to those of its Texas and national peers.

A. As shown in Figures RDS-RR-33 and RDS-RR-34 (next page), the level of SPS production plant capital additions has generally been below the national and Texas peer group medians since 2014.

Figure RDS-RR-33: Production Plant Additions as a Percent of Total Plant

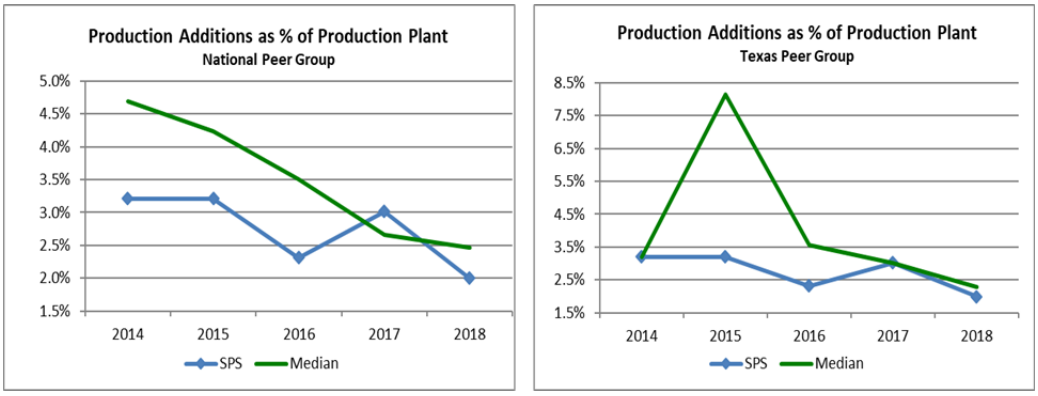
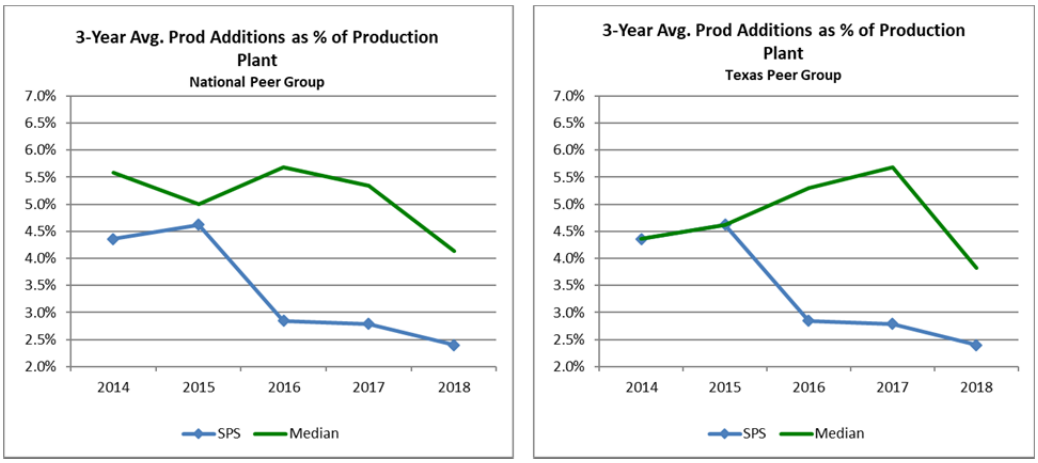


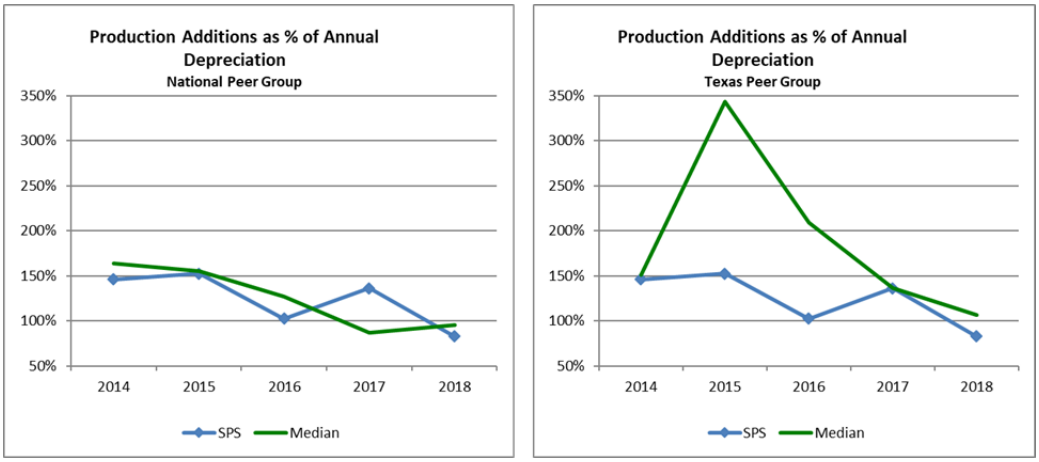
Figure RDS-RR-34:
3-Year Average Production Plant Additions as a Percent of Total Plant



Q. Please describe the results of your analysis of SPS's production plant additions relative to total production depreciation expense.

A. As shown in Figure RDS-RR-35 (next page), the level of SPS's production plant additions has been approximately 100 to 150 percent of annual depreciation expense since 2014. This seems to indicate a stable asset replacement strategy—in other words, the investment of sufficient capital to cover annual depreciation expense every year. This level of investment is consistent with the national peer group median, and less than the Texas peer group median, over the 2014 to 2018 time period.

Figure RDS-RR-35:
Production Plant Additions as a Percent of Depreciation Expense



Q. Please describe your analysis of SPS's transmission plant investment additions relative to those of the Texas and national peer groups.

A. I developed three charts depicting my analysis of SPS's annual transmission plant investments: (1) transmission plant additions as a percentage of total transmission plant; (2) annual plant additions averaged over three years as a percentage of transmission plant; and (3) transmission plant additions as a percentage of depreciation expense. These are depicted in Figures RDS-RR-36 through RDS-RR-38 below.

Q. Please describe the results of your analysis of SPS's transmission plant additions for the period 2014–2018 as compared to those of the Texas and national peers.

A. As shown in Figure RDS-RR-36 (next page), SPS's transmission capital additions have been fairly constant over the 2015 to 2018 time period (representing about 10% to 15% of total transmission plant), after declining significantly from the 2014 level. On a rolling-three-year average basis (see Figure RDS-RR-37 on next

page), investment levels have generally been decreasing steadily. The level of SPS's transmission plant capital additions has been above the national per group median since 2014, and at or near the Texas peer group median between 2016 and 2018. The investments in transmission plant additions primarily reflect transmission and substation capital additions for the expansion, upgrading, and refurbishment of transmission system infrastructure to: (1) interconnect new generation resources; (2) maintain reliability; and (3) improve load-serving capability.

Figure RDS-RR-36: Transmission Plant Additions as a Percent of Total Plant

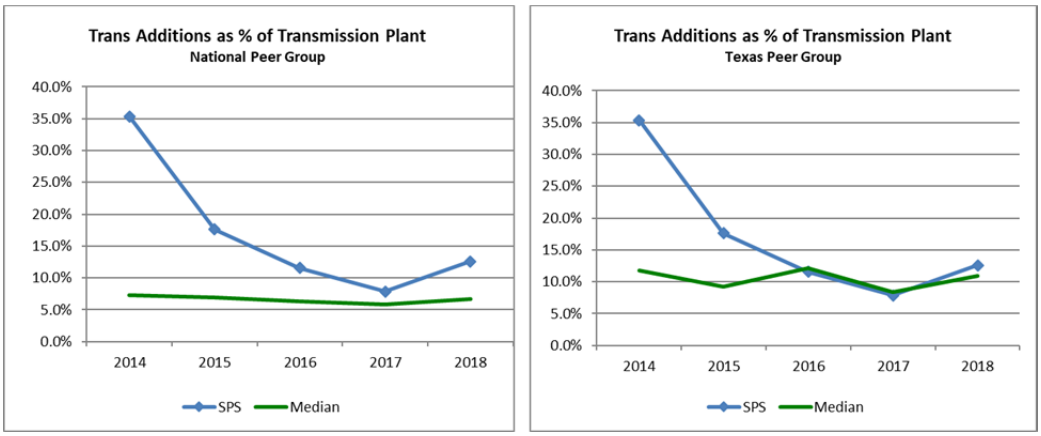
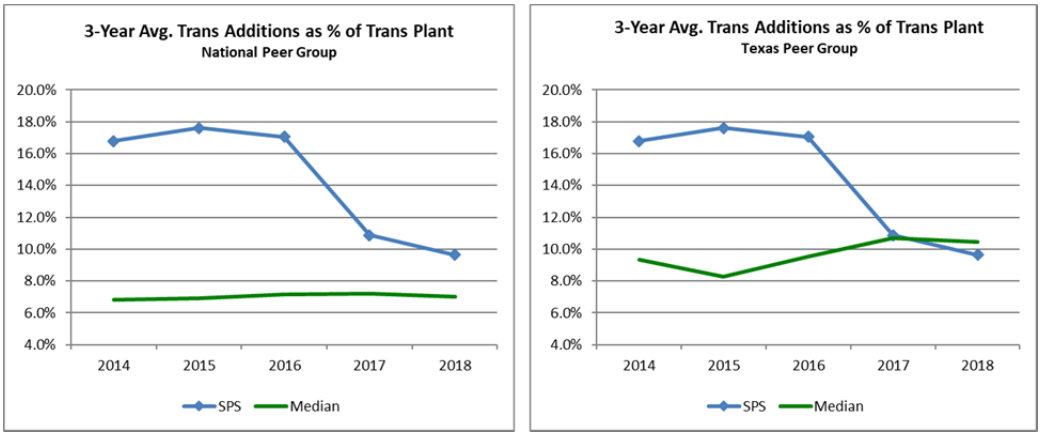


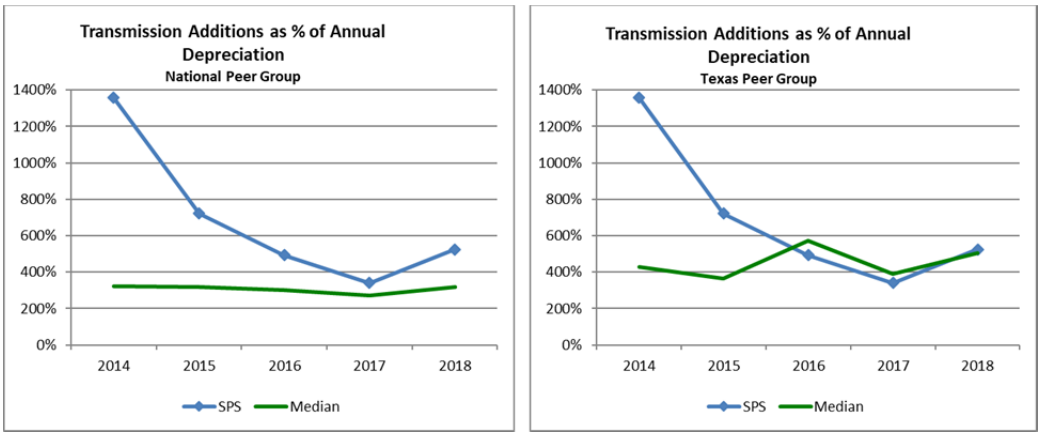
Figure RDS-RR-37:
3-Year Average Transmission Plant Additions as a Percent of Total Plant



Q. Please describe the results of your analysis of SPS's transmission plant additions relative to transmission depreciation expense.

A. As shown in Figure RDS-RR-38, the level of SPS's transmission plant additions has significantly exceeded annual depreciation expense every year since 2014. The national peer group median levels have been between 200% and 300% of depreciation, consistent with the continued industry focus on transmission expansion. In Texas, the peer group median has been about 400% to 500% of depreciation over the 2014 to 2018 time period, reflecting the active transmission expansion in the state.

Figure RDS-RR-38:
Transmission Plant Additions as a Percent of Depreciation Expense



Q. Please describe your analysis of SPS's distribution plant investment additions relative to those of the Texas and national peer groups.

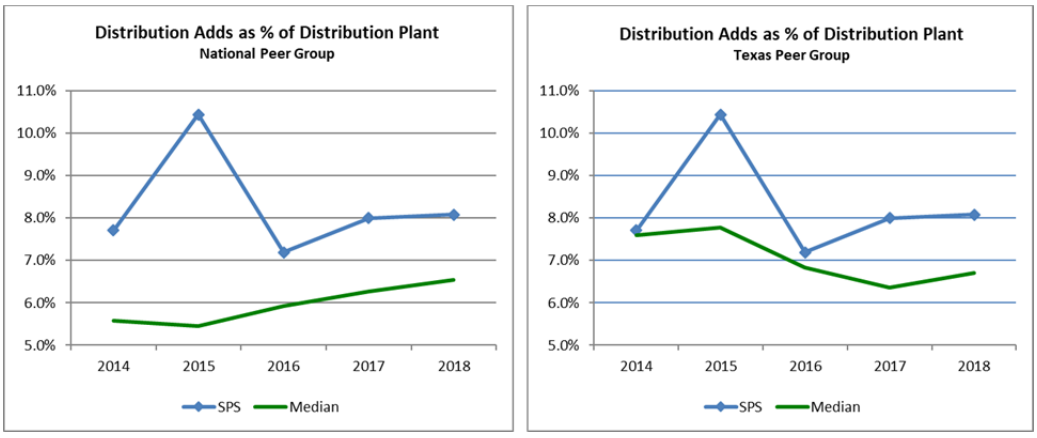
A. I developed three charts depicting my analysis of SPS's annual distribution plant investments: (1) distribution plant additions as a percentage of total distribution plant; (2) annual plant additions averaged over three years as a percentage of distribution plant; and (3) distribution plant additions as a percentage of

depreciation expense. These are depicted in Figures RDS-RR-39 through RDS-RR-41 below.

Q. Please describe the results of your analysis of SPS's distribution plant additions for the period 2014–2018 as compared to those of its Texas and national peers.

A. As shown in Figure RDS-RR-39, SPS's distribution capital additions have also stabilized in recent years, although they were above the national and Texas peer group medians from 2014 through 2018. In comparison to the Texas peer group, distribution capital additions were at the median in 2014, but significantly higher in 2015, before returning to near the median in 2016. The peak in 2015 was due to: (1) an increase in storm damage-related restoration; (2) capacity work related to, among other items, the completion of new substations; and (3) meter and transformer purchases to serve new customers.

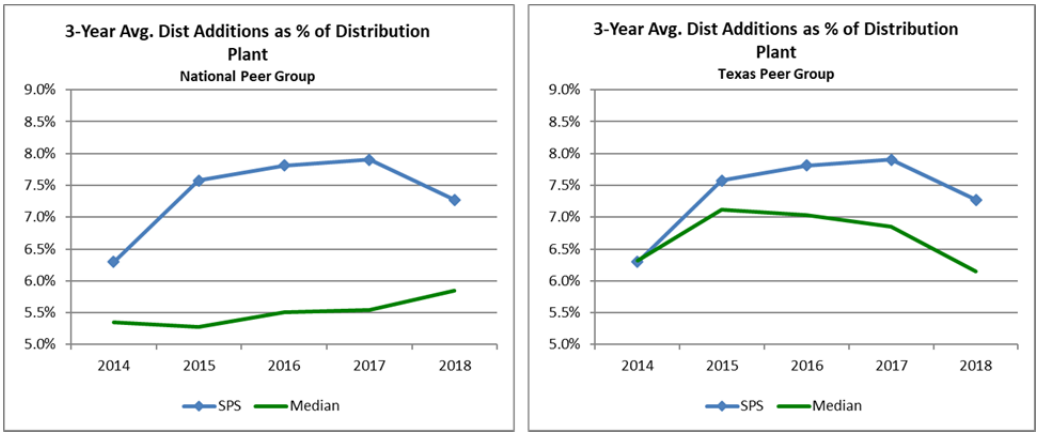
Figure RDS-RR-39: Distribution Plant Additions as a Percent of Total Plant



As shown in Figure RDS-RR-40, on a three-year rolling average basis, SPS's distribution capital additions as a percent of total distribution plant have been above the national peer group median and above the Texas peer group

median since 2014. This is primarily due to upgrades to SPS's electric distribution system to connect new customers, maintain reliability, increase feeder and substation capacity, and improve load serving capability.

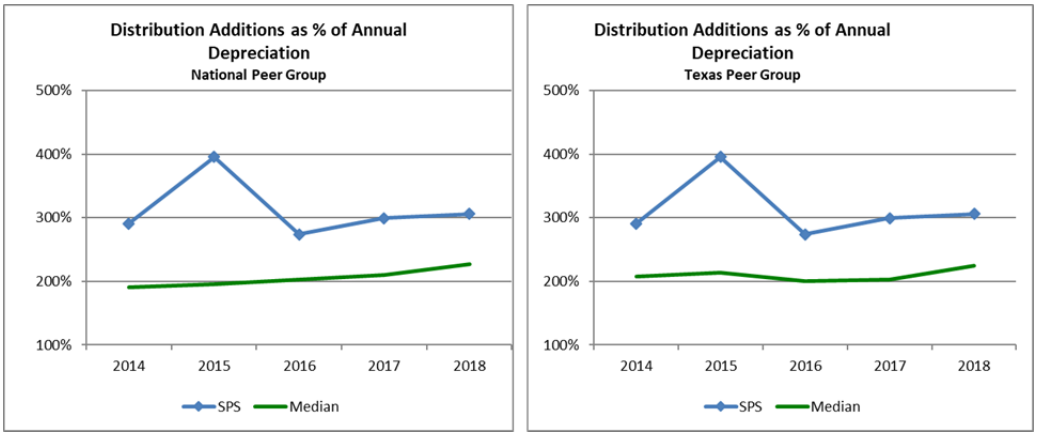
Figure RDS-RR-40:
3-Year Average Distribution Plant Additions as a Percent of Total Plant



Q. Please describe the results of your analysis of SPS's distribution plant additions relative to distribution depreciation expense.

A. As shown in Figure RDS-RR-41 (next page), SPS increased its rate of capital spending on distribution plant additions from 2014 to 2015, before returning to more consistent levels in 2016. The level of annual capital additions for the peer groups (about 200% of annual depreciation) again indicates that utility companies in general are adding to their infrastructure at a rate faster than would be required to simply replace aging assets. SPS's distribution capital additions levels have been generally higher than the national and Texas peer group trends during the 2014 through 2018 time period. As I noted earlier, the increase in 2015 was due to: (1) an increase in storm damage-related restoration; (2) capacity work related to, among other items, the completion of new substations; and (3) meter and transformer purchases to serve new customers.

Figure RDS-RR-41:
Distribution Plant Additions as a Percent of Depreciation Expense



Q. Please describe your analysis of SPS's general plant investment additions relative to those of the Texas and national peer groups.

A. I developed three charts depicting my analysis of SPS's annual general plant investments: (1) general plant additions as a percentage of total general plant; (2) annual plant additions averaged over three years as percentage of general plant; and (3) general plant additions as percentage of depreciation expense. These are depicted in Figures RDS-RR-42 through RDS-RR-44 below.

Q. Please describe the results of your analysis of SPS's general plant additions for the period 2014–2018 as a percentage of total general plant as compared to those of its Texas and national peers.

A. As shown in Figures RDS-RR-42 and RDS-RR-43 (next page), SPS's general plant additions increased from 2014 levels in 2015, decreased in 2016, increased again in 2017, and then decreased to about 10% of general plant balances in 2018. SPS additions during the 2014 to 2018 period have generally been higher than the national and Texas peer group medians. The increase in 2015 was primarily due to: (1) the consolidation of the customer office and service center into one

building at the existing Borger service center; (2) the replacement of several dated camera systems to ensure the safety of work environments and reduce repairs; (3) projects required due to the failure of mechanical equipment and replacement of equipment that reached the end of its useful lifespan; and (4) purchasing of new and replacement of used office furniture and equipment to satisfy interior facility needs. The increase in 2017 was primarily due to the new SAP work and asset management system. On a three-year rolling average basis, SPS general plant additions as a percent of total general plant were above the national and Texas peer group medians from 2014 through 2018.

Figure RDS-RR-42:
General Plant Additions as a Percent of Total General Plant

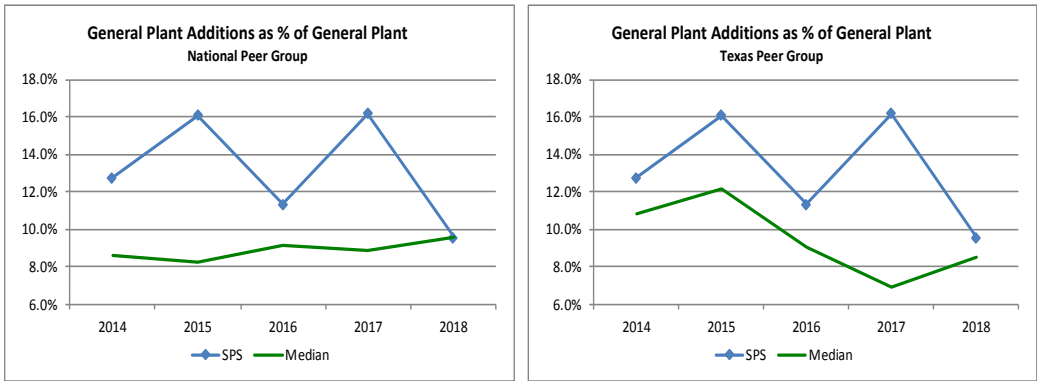
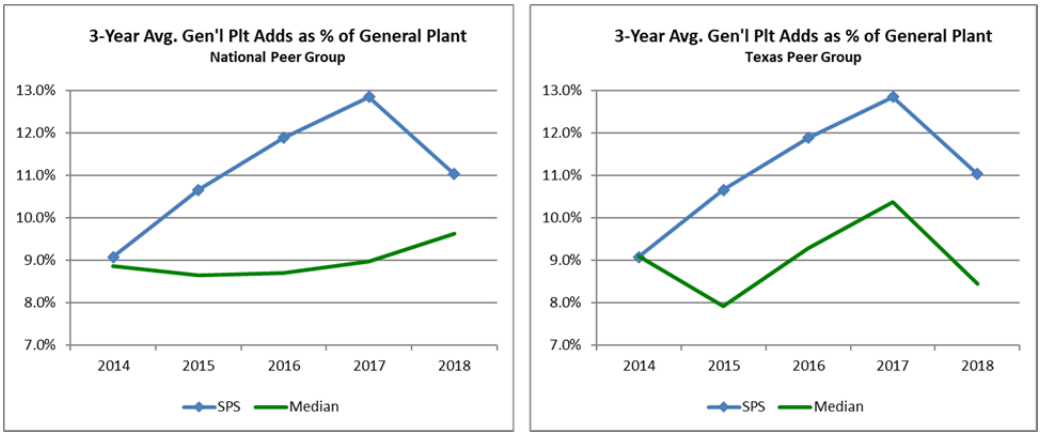


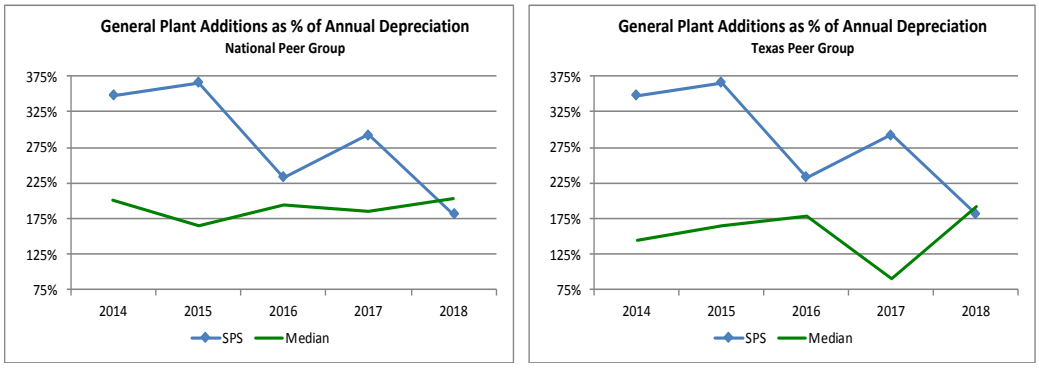
Figure RDS-RR-43:
3-Year Average General Plant Additions as a Percent of General Plant



Q. Please describe the results of your analysis of SPS's general plant additions relative to general plant depreciation expense.

A. As shown in Figure RDS-RR-44, the level of annual capital additions for the peer groups (generally between 150% and 200% of annual depreciation between 2014 and 2018) shows utility general plant investment levels greater than would be required to simply replace aging assets. SPS's general plant additions have been higher than the national and Texas peer group median trends, except in 2018.

Figure RDS-RR-44:
General Plant Additions as a Percent of Depreciation Expense



VII. AVIATION STUDY SHOWING COMMERCIAL AIRLINE COSTS

Q. Please describe your analysis of commercial airline costs.

A. XES leases and operates two jet aircraft for business travel by Xcel Energy[8] executives and employees. The costs that are incurred in leasing, operating, and maintaining the aircraft are shared among the affiliates, including SPS. For my analysis, I estimated the costs that would have been incurred in purchasing commercial airline tickets had the business trips made on the corporate aircraft been made on commercial airlines instead. I then provided those costs to SPS witness Lawrence A. Bick so that the Test Year and Updated Test Year revenue requirements for SPS could be adjusted.

Q. How did you complete your analysis?

A. XES's Aviation Services department provided the flight log information that allowed us to compile the number of passenger trips taken by Xcel Energy personnel on the corporate aircraft during the Test Year. Carlson Wagonlit Travel, Xcel Energy's travel agent that handles commercial air travel booking and ticketing, provided XES with a summary of the average airfare paid for all commercial air travel by Xcel Energy employees between various city pairs on a quarterly basis. For each quarterly period during April 1, 2018 through March 31, 2019, I applied the average ticket prices from Carlson Wagonlit Travel to the number of passengers that flew between Amarillo, Denver, and Minneapolis/St. Paul on the corporate aircraft during that same time period to compute the

[8] In this section of my testimony, my references to Xcel Energy encompass both Xcel Energy and its subsidiaries.

equivalent commercial airfare costs. A summary of the results of my aviation study for the Test Year is provided as Attachment RDS-RR-5.

Q. Why is it important to conduct this type of analysis on a quarterly basis?

A. Commercial airfares fluctuate considerably month to month, due to changes in market demand, changes in carrier schedules, etc. Thus, conducting the analysis on a quarterly basis provides a more accurate picture of the equivalent commercial airfare costs.

Q. Why is your assessment limited to the commercial airfare costs for the trips made on the corporate aircraft between Amarillo, Denver, and Minneapolis/St. Paul?

A. Over 87% of the business trips flown on the corporate aircraft during the period April 1, 2018 through March 31, 2019 were between the two-city combinations of Amarillo, Denver, and Minneapolis/St. Paul. To simplify the analysis, only those trips between these city pairs were included in the analysis. Thus, my assessment of the costs that would have been incurred in purchasing commercial airline tickets can be viewed as conservative as almost 13% of the overall corporate aircraft travel has not been included.

Q. Why do you say that assessing the costs for flights to and between Amarillo, Denver, and Minneapolis/St. Paul was a conservative approach?

A. The corporate aircraft were used for other trips in addition to these three city pairs. If the analysis had considered the commercial airfare costs of all trips taken during the Test Year, then the total equivalent commercial airfare costs would have been greater.

Q. Did you exclude any other flights in your analysis?

A. Yes. Trips for personal travel, legislative meetings, and for corporate aircraft maintenance were also excluded.

Q. Does your analysis take into account all costs related to commercial air travel?

A. No. Our analysis took into account only airfares and related taxes and fees. I have not made any adjustments to account for any additional expenses that likely would have been incurred if commercial travel had been undertaken, such as expenses for hotels, taxis, parking, meals, etc. For example, while it is possible to fly back and forth between Minneapolis and Amarillo in one day on the corporate aircraft, it is generally not feasible to fly commercial aviation to Amarillo, attend meetings or conduct other business, and then fly back to Minneapolis on the same day. As a result, additional costs for hotel stays, meals, parking, etc. would likely be incurred by using commercial travel. In this way, my analysis continues to be conservative.

Q. Please describe the results of your analysis.

A. There were 3,893 flights between Amarillo, Denver, and Minneapolis/St. Paul on corporate aircraft during the relevant time period. Based on the Carlson Wagonlit Travel average fares, if the flights taken on the corporate aircraft during the period during April 1, 2018 through March 31, 2019 had instead been taken on commercial airlines, the airline ticket costs would have been $801,501.11. A summary of the results of my aviation study for this period is provided as Attachment RDS-RR-5. A fully executable version of the Microsoft Excel spreadsheet model is provided as Attachment RDS-RR-7(CD).

Q. Did you update your analysis for the Updated Test Year?

A. Yes. There were 3,864 flights between Amarillo, Denver, and Minneapolis/St. Paul on corporate aircraft during the Updated Test Year. Based on the Carlson Wagonlit Travel average fares, if the flights taken on the corporate aircraft during the period during July 1, 2018 through June 30, 2019 had instead been taken on commercial airlines, the airline ticket costs would have been $812,748.28. A summary of the results of my aviation study for this period is provided as Attachment RDS-RR-6.

Q. Please summarize the conclusions you reached as a result of your analysis of commercial airline costs.

A. I conclude that if the flights that had occurred on the corporate aircraft during the Updated Test Year had instead been taken on commercial airlines, the airline ticket costs would have been approximately $812,748. Equivalent commercial airline ticket costs for the Test Year would have been approximately $801,501.

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

A. Yes.

AFFIDAVIT

STATE OF NORTH CAROLINA)
)
COUNTY OF WAKE)

RICHARD D. STARKWEATHER, first being sworn on his oath, states:

I am the witness identified in the preceding testimony. I have read the testimony and the accompanying attachment(s) and am familiar with the 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.

Richard D Starkweather

RICHARD D. STARKWEATHER

Subscribed and sworn to before me this 5th day of August, 2019 by RICHARD D. STARKWEATHER.

NOTARY PUBLIC WAKE COUNTY, NC SUSAN K HORTON

Susan K. Horton

Notary Public, State of North Carolina

My Commission Expires: 3/25/2024

Resume of:

Richard D. Starkweather
Partner

Summary

Rick Starkweather has been a management consultant for over 30 years and is a leader in ScottMadden's regulatory practice. His areas of expertise include strategic and business planning, budgeting and forecasting, regulatory compliance and rate case support, and organizational and operations improvement. Prior to joining ScottMadden, Rick was a consultant with Deloitte Consulting. He also has experience in the healthcare and chemical industries and helped lead the start-up of two companies. Rick received a B.S. in mechanical engineering from Northwestern University and an M.B.A. from the University of Chicago Graduate School of Business.

Areas of Specialization

Regulatory strategy and rate case support
Strategic and business planning
Process improvement
Benchmarking
Program design/implementation
Organizational design and staffing

Representative Assignments

- Directed a project for a southeastern utility to improve the speed and accuracy of the rate making process by identifying improvements to the development of revenues and billing determinants for rate filings, by enhancing information reporting and analytics, and automating the process through potential technology solutions
- Conducted a review of a utility's transmission cost recovery, mercury emissions reduction, environmental, and conservation improvement rate riders. Scope of review included the processes for budgeting and forecasting cash flows for eligible projects and the tracking of projected cash flows for each project through the company's budgeting and fixed asset accounting systems, and the revenue requirements calculations supporting the riders
- Developed statistical sampling methodologies to test gas main extension and new service capital projects for a Midwestern gas utility. Defined the population of all projects, identified sample projects, compiled necessary documentation to assess tariff compliance for these projects, and developed rate base adjustments to address uncollected contributions in aid of construction based on sample results
- Directed several projects providing project management and technical support for retail electric and gas rate cases for regional utilities, including the completion of various analyses to support anticipated intervener data requests, as well as the development of direct and rebuttal testimony. Also developed several capital and O&M filing and work paper templates as part of the filings to improve transparency
- Completed an assessment of a new general ledger system for a regional electric and gas utility in light of a pending rate case. Analyses included historical O&M trends and a detailed year-to-year FERC account variance analysis to support pre-filed testimony
- Conducted an assessment of the capital budgeting and reporting processes of a combination gas/electric utility that was migrating to a future test year in several jurisdictions. Developed recommendations and process improvement initiatives to improve accuracy of in-service dates and overall forecast accuracy, resulting in better rate case assumptions, improved budget and forecast data, and more accurate accounting data
- Assessed a utility's supporting documentation for a transmission and distribution loss study. Work included a review of previous studies, analysis of intervener issues/concerns and an evaluation of company assumptions and analyses. Results of this study were used in the development of retail billing determinants
- Analyzed the affiliate costs assigned and allocated to operating company capital projects for a southwestern electric utility to support the development of rebuttal testimony for a retail rate case
- Validated the achievement of annual merger synergies targets for a combination utility to support its retail rate case filings. Quantified savings levels by line item consistent with original multi-year savings model and drafted supporting direct testimony

Representative Assignments (Cont'd)

- Assessed business transactions between the regulated and non-regulated affiliates of a Western electric and gas utility to ensure compliance with state regulatory requirements
- Developed enhancements to capital and O&M budgeting processes for an electric utility to support a potential future test year rate case filing. Additional documentation templates were also developed to support the required financial schedules
- Directed an assessment of a southwestern utility's capital and O&M budgeting processes to support a future test year filing. Additional capital and O&M documentation templates were developed to support the filing
- Completed a risk assessment of various components of an electric utility's rate case filing, including capital additions and capital estimating standards. Also analyzed year-to-year O&M variances to identify significant test period revenue drivers
- Assisted a utility in the Midwest in its response to commission inquiries about affiliate interest issues, cost separation methodologies, and the rationale for proposed increases in the company's cost of service filing. Developed detailed documentation and supporting work paper templates for capital and O&M budgets, facilitated template completion by the business units, sample-tested capital budget items to ensure adequate separation of regulated and non-regulated projects, and assisted in submitting the new filing
- Developed an audit plan and project management protocols for a Midwestern combination electric and gas utility to guide the development of all regulatory filings in the Company's various jurisdictions. Scope included the development of detailed process maps for each rate filing process, the identification of data input, consistency, and reliability risks, and the identification of appropriate preventive and detective audit controls

Professional History

- SCOTTMADDEN, INC., Raleigh, North Carolina
  Partner (2004–Present)
  Director (1999–2004)

- DELOITTE CONSULTING, Los Angeles, California
  Senior Manager (1997–1999)

- EDISON EV, Los Angeles, California, a Subsidiary of EDISON INTERNATIONAL
  Senior Manager/Director, Finance and Administration (1996–1997)

- EDISON INTERNATIONAL (formerly SCEcorp), Rosemead, California
  Strategic Projects Manager, Corporate Development (1994–1995)

- DELOITTE & TOUCHE, Dallas, Texas
  Senior Manager (1990–1994)
  Manager (1989–1990)

- HEALTH ECONOMICS CORPORATION, Dallas, Texas, a Subsidiary of HALLIBURTON COMPANY
  Vice President (1986–1989)

- TOUCHE ROSS & CO., Detroit, Michigan
  Senior Consultant (1985–1986)
  Associate Consultant (1982–1985)

- EXXON CHEMICAL AMERICAS, Linden, New Jersey
  Plant Analyst (1982–1982)
  Forecast Coordinator (1980–1982)

List of National Peer Group Companies

No.	Company ID	Company Name
1	4056979	AEP Texas Central Company
2	4056935	AEP Texas Inc.
3	4057034	AEP Texas North Company
4	4014956	Alabama Power Company
5	4058371	Alaska Electric Light and Power Company
6	4061513	ALLETE (Minnesota Power)
7	4272394	Ameren Illinois Company
8	4056972	Appalachian Power Company
9	4056974	Arizona Public Service Company
10	4056975	Atlantic City Electric Company
11	4057075	Avista Corporation
12	4007784	Baltimore Gas and Electric Company
13	4215172	Black Hills Colorado Electric, Inc.
14	4065694	Black Hills Power, Inc.
15	4057059	CenterPoint Energy Houston Electric, LLC
16	4057076	Central Hudson Gas & Electric Corporation
17	4056978	Central Maine Power Company
18	4059189	Cheyenne Light, Fuel and Power Company
19	4056982	Cleco Power LLC
20	4056983	Cleveland Electric Illuminating Company
21	4000672	Commonwealth Edison Company
22	4056992	Connecticut Light and Power Company
23	4057080	Consolidated Edison Company of New York, Inc.
24	4057081	Consumers Energy Company
25	4017451	Dayton Power and Light Company
26	4057082	Delmarva Power & Light Company
27	4057099	Dominion Energy South Carolina, Inc.
28	4057083	DTE Electric Company
29	4004320	Duke Energy Carolinas, LLC
30	4056998	Duke Energy Florida, LLC
31	4062444	Duke Energy Indiana, LLC
32	4057103	Duke Energy Kentucky, Inc.
33	4057079	Duke Energy Ohio, Inc.
34	4004192	Duke Energy Progress, LLC
35	4004307	Duquesne Light Company
36	4056994	El Paso Electric Company
37	3001167	Emera Maine
38	3005475	Empire District Electric Company
39	4056995	Entergy Arkansas, LLC
40	4057084	Entergy Gulf States Louisiana, L.L.C.

List of National Peer Group Companies

No.	Company ID	Company Name
41	4112564	Entergy Louisiana, LLC
42	4008616	Entergy Mississippi, LLC
43	4057085	Entergy New Orleans, LLC
44	4199135	Entergy Texas, Inc.
45	4060026	Fitchburg Gas and Electric Light Company
46	4056997	Florida Power & Light Company
47	4057086	Florida Public Utilities Company
48	4004152	Georgia Power Company
49	4063057	Golden State Water Company
50	4056999	Green Mountain Power Corporation
51	4057000	Gulf Power Company
52	4060446	Hawaii Electric Light Company, Inc.
53	4057001	Hawaiian Electric Company, Inc.
54	4057002	Idaho Power Company
55	4057003	Indiana Michigan Power Company
56	4024697	Indianapolis Power & Light Company
57	4057087	Interstate Power and Light Company
58	4057004	Jersey Central Power & Light Company
59	4072456	Kansas City Power & Light Company
60	4057089	Kansas Gas and Electric Company
61	4000843	KCP&L Greater Missouri Operations Company
62	4057006	Kentucky Power Company
63	4042397	Kentucky Utilities Company
64	4060895	Kingsport Power Company
65	4060294	Liberty Utilities (Granite State Electric) Corp.
66	4057090	Louisville Gas and Electric Company
67	4008754	Madison Gas and Electric Company
68	4057007	Maine Public Service Company
69	4057008	Massachusetts Electric Company
70	4061329	Maui Electric Company, Limited
71	4010692	MDU Resources Group, Inc.
72	4057009	Metropolitan Edison Company
73	4057091	MidAmerican Energy Company
74	4057010	Mississippi Power Company
75	4057011	Monongahela Power Company
76	4057012	Narragansett Electric Company
77	4008408	National Grid USA
78	4061726	Nevada Power Company
79	4004389	New York State Electric & Gas Corporation
80	4057014	Niagara Mohawk Power Corporation
81	4012860	Northern Indiana Public Service Company
82	4057754	Northern States Power Company - MN

List of National Peer Group Companies

No.	Company ID	Company Name
83	4061925	Northern States Power Company - WI
84	4057053	NorthWestern Corporation
85	4061951	Northwestern Wisconsin Electric Company
86	4008369	NSTAR Electric Company
87	4014480	Ohio Edison Company
88	4057015	Ohio Power Company
89	4057016	Oklahoma Gas and Electric Company
90	4080589	Oncor Electric Delivery Company LLC
91	4057093	Orange and Rockland Utilities, Inc.
92	4147257	Otter Tail Power Company
93	4004218	Pacific Gas and Electric Company
94	4001587	PacifiCorp
95	4062222	PECO Energy Company
96	4057018	Pennsylvania Electric Company
97	4018463	Pennsylvania Power Company
98	4057019	Portland General Electric Company
99	4057020	Potomac Edison Company
100	4044391	Potomac Electric Power Company
101	4057021	PPL Electric Utilities Corporation
102	4057094	Public Service Company of Colorado
103	4057022	Public Service Company of New Hampshire
104	4073320	Public Service Company of New Mexico
105	4057023	Public Service Company of Oklahoma
106	4057095	Public Service Electric and Gas Company
107	4062485	Puget Sound Energy, Inc.
108	4057096	Rochester Gas and Electric Corporation
109	4062660	Rockland Electric Company
110	4057097	San Diego Gas & Electric Company
111	4082747	Sharyland Utilities, L.P.
112	4057098	Sierra Pacific Power Company
113	4009083	Southern California Edison Company
114	4057100	Southern Indiana Gas and Electric Company
115	4057026	Southwestern Electric Power Company
116	4057027	Southwestern Public Service Company
117	4063281	Superior Water, Light and Power Company
118	3010781	Tampa Electric Company
119	4057028	Texas-New Mexico Power Company
120	4057029	Toledo Edison Company
121	4057030	Tucson Electric Power Company
122	4057538	UGI Utilities, Inc.
123	4057102	Union Electric Company
124	3004222	United Illuminating Company

List of National Peer Group Companies

No.	Company ID	Company Name
125	4059391	Unitil Energy Systems, Inc.
126	4092733	UNS Electric, Inc.
127	4081463	Upper Peninsula Power Company
128	4057032	Virginia Electric and Power Company
129	4057033	West Penn Power Company
130	4082573	Westar Energy (KPL)
131	4057035	Western Massachusetts Electric Company
132	4063994	Wheeling Power Company
133	4057105	Wisconsin Electric Power Company
134	4008669	Wisconsin Power and Light Company
135	4057106	Wisconsin Public Service Corporation

Southwestern Public Service Company

Retail Pricing and O&M Benchmarking Analysis

Richard D. Starkweather

2019 TX Rate Case

APPLICATION OF
SOUTHWESTERN PUBLIC SERVICE COMPANY
FOR AUTHORITY TO CHANGE RATES

RDS-RR-3(CD)

Southwestern Public Service Company

Capital Additions Benchmarking Analysis

Richard D. Starkweather

2019 TX Rate Case

APPLICATION OF
SOUTHWESTERN PUBLIC SERVICE COMPANY
FOR AUTHORITY TO CHANGE RATES

RDS-RR-4(CD)

Equivalent Commercial Airfare Costs
April 1, 2018 Through March 31, 2019 (Test Year)

Calculation of Equivalent Commercial Airfare Costs

	Number of Passengers				
Leg	2Q2018	3Q2018	4Q2018	1Q2019	Total
MSP > Denver	439	462	404	389	1,694
Denver > MSP	433	436	380	369	1,618
MSP > Amarillo	53	40	36	31	160
Amarillo > MSP	56	28	36	45	165
Denver > Amarillo	39	23	24	37	123
Amarillo > Denver	38	36	24	35	133
Totals	**1,058**	**1,025**	**904**	**906**	**3,893**

	One-Way Average Fare				
	Xcel Energy Actuals				
Leg	2018 (Apr - Jun)	2018 (Jul - Sep)	2018 (Oct - Dec)	2019 (Jan - Mar)	Ticketing Fee*
MSP > Denver	$ 177.72	$ 195.60	$ 177.80	$ 194.61	$ 5.50
Denver > MSP	$ 177.72	$ 195.60	$ 177.80	$ 194.61	$ 5.50
MSP > Amarillo	$ 269.86	$ 337.32	$ 292.68	$ 279.28	$ 5.50
Amarillo > MSP	$ 269.86	$ 337.32	$ 292.68	$ 279.28	$ 5.50
Denver > Amarillo	$ 265.01	$ 274.73	$ 241.62	$ 273.58	$ 5.50
Amarillo > Denver	$ 265.01	$ 274.73	$ 241.62	$ 273.58	$ 5.50

* Ticketing service fee from Carlson Wagonlit Travel of $11.00 for online ticketing and $31.74 for travel agent support – based on roundtrip fares. For conservatism, assumed $5.50 online ticketing fee for each trip.

	Total Costs				
Leg	2018 (Apr - Jun)	2018 (Jul - Sep)	2018 (Oct - Dec)	2019 (Jan - Mar)	Total
MSP > Denver	$80,431.85	$92,909.00	$74,054.82	$77,841.34	$325,237.02
Denver > MSP	$79,332.55	$87,680.36	$69,655.53	$73,839.22	$310,507.65
MSP > Amarillo	$14,594.33	$13,712.86	$10,734.36	$8,828.03	$47,869.58
Amarillo > MSP	$15,420.43	$9,599.00	$10,734.36	$12,814.89	$48,568.67
Denver > Amarillo	$10,549.98	$6,445.27	$5,930.85	$10,325.83	$33,251.93
Amarillo > Denver	$10,279.47	$10,088.25	$5,930.85	$9,767.68	$36,066.25
Totals	**$210,608.62**	**$220,434.75**	**$177,040.76**	**$193,416.99**	**$801,501.11**

= Inputs

Equivalent Commercial Airfare Costs
July 1, 2018 Through June 30, 2019 (Updated Test Year)

Calculation of Equivalent Commercial Airfare Costs

	Number of Passengers				
Leg	3Q2018	4Q2018	1Q2019	2Q2019	Total
MSP > Denver	462	404	389	439	1,694
Denver > MSP	436	380	369	420	1,605
MSP > Amarillo	40	36	31	56	163
Amarillo > MSP	28	36	45	52	161
Denver > Amarillo	23	24	37	29	113
Amarillo > Denver	36	24	35	33	128
Totals	**1,025**	**904**	**906**	**1,029**	**3,864**

	One-Way Average Fare				
	Xcel Energy Actuals				
Leg	2018 (Jul - Sep)	2018 (Oct - Dec)	2019 (Jan - Mar)	2019 (Apr - Jun)	Ticketing Fee*
MSP > Denver	$ 195.60	$ 177.80	$ 194.61	$ 193.20	$ 5.50
Denver > MSP	$ 195.60	$ 177.80	$ 194.61	$ 193.20	$ 5.50
MSP > Amarillo	$ 337.32	$ 292.68	$ 279.28	$ 314.63	$ 5.50
Amarillo > MSP	$ 337.32	$ 292.68	$ 279.28	$ 314.63	$ 5.50
Denver > Amarillo	$ 274.73	$ 241.62	$ 273.58	$ 262.16	$ 5.50
Amarillo > Denver	$ 274.73	$ 241.62	$ 273.58	$ 262.16	$ 5.50

* Ticketing service fee from Carlson Wagonlit Travel of $11.00 for online ticketing and $31.74 for travel agent support – based on roundtrip fares. For conservatism, assumed $5.50 online ticketing fee for each trip.

	Total Costs				
Leg	2018 (Jul - Sep)	2018 (Oct - Dec)	2019 (Jan - Mar)	2019 (Apr - Jun)	Total
MSP > Denver	$92,909.00	$74,054.82	$77,841.34	$87,231.32	$332,036.49
Denver > MSP	$87,680.36	$69,655.53	$73,839.22	$83,455.93	$314,631.03
MSP > Amarillo	$13,712.86	$10,734.36	$8,828.03	$17,927.07	$51,202.32
Amarillo > MSP	$9,599.00	$10,734.36	$12,814.89	$16,646.56	$49,794.81
Denver > Amarillo	$6,445.27	$5,930.85	$10,325.83	$7,762.13	$30,464.08
Amarillo > Denver	$10,088.25	$5,930.85	$9,767.68	$8,832.77	$34,619.55
Totals	**$220,434.75**	**$177,040.76**	**$193,416.99**	**$221,855.78**	**$812,748.28**

= Inputs

Southwestern Public Service Company

ScottMadden Analysis of Aviation Operations

Richard D. Starkweather

2019 TX Rate Case

APPLICATION OF
SOUTHWESTERN PUBLIC SERVICE COMPANY
FOR AUTHORITY TO CHANGE RATES

RDS-RR-7(CD)