Southwest Power Pool

FINANCE COMMITTEE MEETING

October 30, 2018

Little Rock, AR

• M I N U T E S •

Administrative Items

Chair Bruce Scherr called the meeting to order at 2:00 p.m. The following individuals participated in the meeting.

Bruce Scherr	SPP Director
Larry Altenbaumer	SPP Director
Jerry Peace	Oklahoma Gas & Electric
Laura Kapustka	Lincoln Electric
Mike Wise	Golden Spread Electric Cooperative
Sandra Bennett	American Electric Power
Tom Dunn	SPP

Others attending included:

Denise Buffington	Evergy
Jim Jacoby	American Electric Power
Richard Ross	American Electric Power
Dennis Reed	Midwest Regulatory Consulting, LLC
Heather Starnes (phone)	MO Joint Municipal Electric Utility Comm
Cindy Ireland	Arkansas Public Service Commission
Jason Chaplin	Oklahoma Corporation Commission
Mark Crisson	SPP Director
Phyllis Bernard	SPP Director
Graham Edwards	SPP Director
Nick Brown	SPP
Carl Monroe	SPP
Barbara Sugg	SPP
Lanny Nickell	SPP
Sheri Dunn	SPP
Zeynep Vural	SPP
Dianne Branch	SPP
Carson Hampson	SPP
Chad Moore	BKD, LLC

Minutes from the September 25, 2018 meeting were reviewed. Jerry Peace motioned to approve the minutes. The motion was seconded by Mike Wise and approved by unanimous voice vote.

2018 Financial Audit

Chad Moore of BKD, LLC presented the 2018 financial audit plan identifying significant focus areas for the audit and seeking input from the Committee on other areas which the Committee would like audited.

The Committee dismissed SPP staff and convened a brief executive session with BKD, LLC.

SPP 2019 Budget and Administrative Fee

SPP staff presented highlights from the 2019 budget starting with a reconciliation of SPP's net revenue requirement from the 2018 budget through the 2018 forecast then to the 2019 budget. Next, staff presented a closer view into major budget categories including salary and benefit expenses, outside services expenses, capital expenditures, debt service requirements, and outstanding debt. Additionally, where available, staff provided comparisons of SPP results to the U.S. based ISO/RTO peers.

Following additional dialogue on individual aspects of the budget, Mike Wise made a motion to accept the budget as submitted. The motion was seconded by Sandra Bennett and approved by unanimous voice vote. Jerry Peace mad a motion to establish an assessment and schedule 1A rate of 39.4¢/MWh effective January 1, 2019. The motion was seconded by Laura Kapustka and approved by unanimous voice vote.

Administrative Committee Report

SPP staff presented highlights of the Administrative Committee's work during 2018, focusing primarily on the performance of the investment managers for the SPP Retirement Plan assets and the SPP 401(k) plan investment options. The Administrative Committee has been pleased with the performance of the managers.

Future Meetings

The next meeting of the Finance Committee is scheduled for Monday January 28, 2019 in New Orleans, LA beginning at 8:00 a.m. and ending at 11:30 a.m.

There being no further business, Bruce Scherr adjourned the meeting at 4:30 p.m..

Respectfully Submitted,

Thomas P. Dunn
Secretary

Southwest Power Pool, Inc.

FINANCE COMMITTEE MEETING

October 30-31, 2018

SPP Corporate Office – Little Rock, AR

• A G E N D A •

October 30 – 2:00 p.m. – 5:00 p.m.
October 31 – 8:00 a.m. – Noon

1. Administrative Items (*15 minutes*) ..... Bruce Scherr
    a. September 25, 2018 Meeting Minutes ****ACTION****
2. Pre-audit Meeting w/BKD, LLC (*30 minutes*) ..... Chad Moore
3. 2019 Operating and Capital Budget (*240 minutes*) ****ACTION**** ..... Tom Dunn
4. 2019 Administrative Fee (*45 minutes*) ****ACTION**** ..... Tom Dunn
5. Administrative Committee Report – Investment Manager Performance (*30 minutes*)..... Tom Dunn
6. Written Reports.....
    a. September 2018 Financials
    b. Financial, Settlements, and Credit Metrics
    c. SPP Portfolio Report
    d. Credit Practices Working Group Report
7. Future Meetings.....

Southwest Power Pool

FINANCE COMMITTEE MEETING

September 25, 2018

Dallas, TX

• M I N U T E S •

Administrative Items

Chair Bruce Scherr called the meeting to order at 8:30 a.m. The following individuals participated in the meeting.

Bruce Scherr	SPP Director
Larry Altenbaumer	SPP Director
Sandra Bennett	AEP
Jerry Peace	Oklahoma Gas & Electric
Mike Wise	Golden Spread Electric Cooperative
Laura Kapustka	Lincoln Electric
Tom Dunn	SPP

Others attending included:

Traci Bender (SPC member)	NPPD
Mike Risan (SPC member)	Basin Electric
John Olsen (SPC member)	Evergy
Jim Eckelberger (SPC member)	SPP Director
Bill Grant (SPC member)	SPS-Xcel
Dennis Florom (SPC member)	Lincoln Electric
Graham Edwards (SPC member)	SPP Director
Mark Crisson (SPC member)	SPP Director
Richard Ross (SPC member)	AEP-SWEPCO
Rob Janssen (SPC member) (phone)	Dogwood Energy
Michael Desselle (SPC secty)	SPP
Ray Bergmeier	Sunflower Electric
Jason Chaplin	Oklahoma Corporation Commission
Nick Brown	SPP
Denise Buffington (phone)	Evergy
Bruce Rew	SPP
Dennis Reed	Consultant
Scott Smith	SPP
Joshua Phillips	SPP
Lanny Nickell	SPP
Harry Skilton	SPP Director
Heather Starnes (phone)	Missouri Joint Municipal Electric Utility Commission

Minutes from the July 16, 2018 meeting were reviewed. Larry Altenbaumer motioned to approve the minutes. The motion was seconded by Jerry Peace and approved by unanimous voice vote.

Schedule 1A Task Force

John Olsen, chair of the Schedule 1A Task Force, discussed the progress made over several meetings of the task force since its formation in mid July 2018. The task force has agreed the basis for recovering SPP's net revenue requirement should follow FERC's allocations from FERC Order 668. The next hurdle the task force will address is determining the appropriate billing determinants for each allocation bucket. The task force is planning to make a report to the MOPC in mid-October and plans a full recommendation be presented to the MOPC and the SPP Board of Directors in January 2019.

Organizational Group Scope Review and Annual Self-Assessment

The Committee members reviewed the documented organizational scope and self-assessment. Brief discussion occurred around tasks that are currently approved by the SPP Board that may be ripe to be approved by this committee, including benefit plan funding and engagement of auditors. No changes to the scope document were proposed at this time.

2019 Meeting Schedule

The Committee reviewed a proposed meeting schedule for 2019 and agreed on the following meeting dates, times, and locations:

January 28, 2019	8:00 – 11:30	New Orleans
April 29, 2019	8:00 – 11:30	Tulsa

Western Interconnection RC Budget

Bruce Rew and Scott Smith of SPP's staff outlined the expected revenues and expenditures to develop and provide reliability coordination services for 15 utilities in the western United States. The concerns voiced by some of those attending the meeting related primarily to funding of existing overhead and indemnification provisions. Nick Brown explained staff's focus on the competitive nature of bidding on RC services in the west (specifically against the California ISO) and balancing that with ensuring some benefit to existing members. He assured participants of the strength of the indemnification provisions of the contract being better than those used in prior contractual services SPP has undertaken which were endorsed and approved by the SPP Finance Committee at that time.

Larry Altenbaumer made a motion to approve the project and authorize 2018 expenditures, utilize the 2019 budget process to address development expenditures in 2019 and annually approve resources to support the contract work thereafter. The motion was seconded by Jerry Peace and approve by unanimous voice vote.

2019 SPP Operating Plan

The rest of the meeting was dedicated to discussion of the 2019 operating plan with members of the Finance Committee and SPP's Strategic Planning Committee. The goal is to determine if the operating plan is in alignment with the 2014 SPP Strategic Plan.

After significant discussion it was determined the plan documentation needed to be adjusted to eliminate confusion and ensure new initiatives were categorized appropriately. Additionally, the language around several initiatives would benefit from clarification that inclusion in the operating plan did not equate to approval to continue the initiative through implementation. Several initiatives are still in the research phase and a decision on moving forward would be made after the results of the research is known.

Following discussion, the members of the Strategic Planning Committee were able to attain consensus that the items discussed within the operating plan document were generally in alignment with the 2014 Strategic Plan.

The Finance Committee deferred action on the operating plan until the document is reorganized. The Committee intends to conduct an email vote when staff completes the changes to the document.

UPDATE: The reorganized Operating Plan was distributed to the Committee members on October 5, 2018. An email vote was solicited with responses due by October 9, 2018. The email vote resulted in 5 yes votes, 0 no votes, 0 abstentions, and 1 no response. The reorganized Operating Plan passed as drafted.

Future Meetings

The next meeting of the Finance Committee is scheduled for October 30-31, 2018 in Little Rock, AR. This meeting will begin at 2pm on October 30 and reconvene at 8am on October 31.

There being no further business, Bruce Scherr adjourned the meeting at 1:30pm.

Respectfully Submitted,

Thomas P. Dunn
Secretary

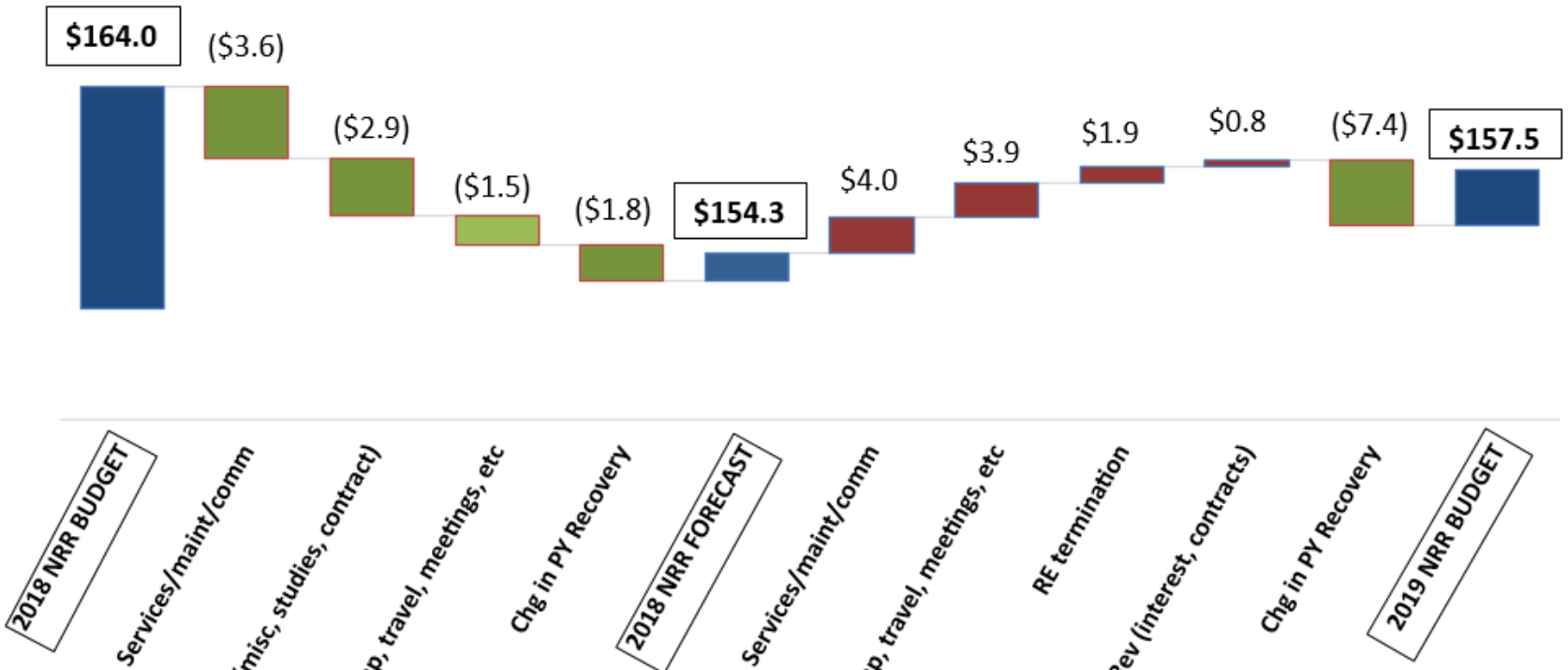
SPP Southwest Power Pool

2019 BUDGET REVIEW

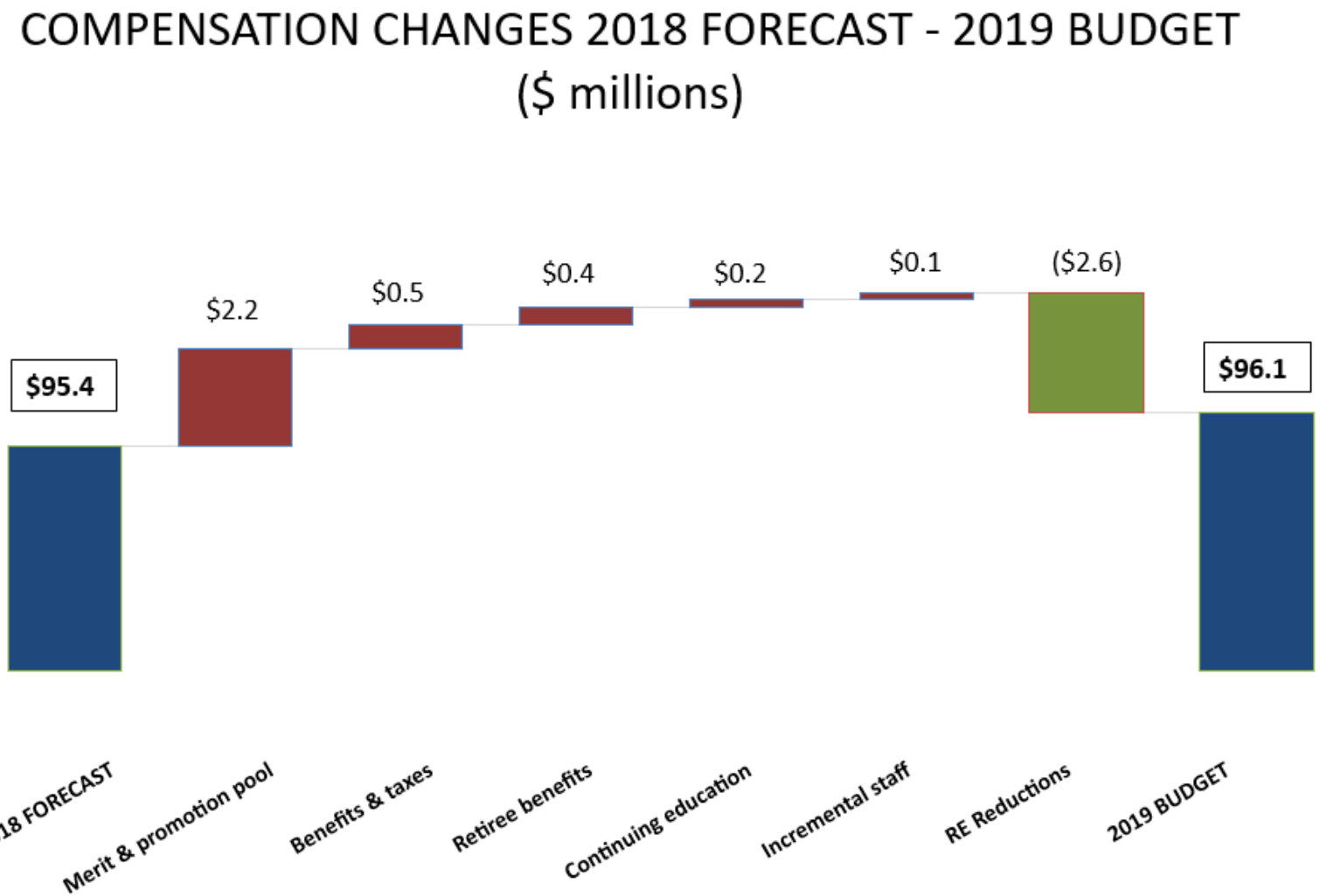
October 31, 2018

Net Revenue Requirement

NRR Changes
2018 Budget - 2018 Forecast - 2019 Budget
($ millions)



Salaries and Benefits



SPP Headcount

2018 SPP, Inc.
Approved Headcount:
605

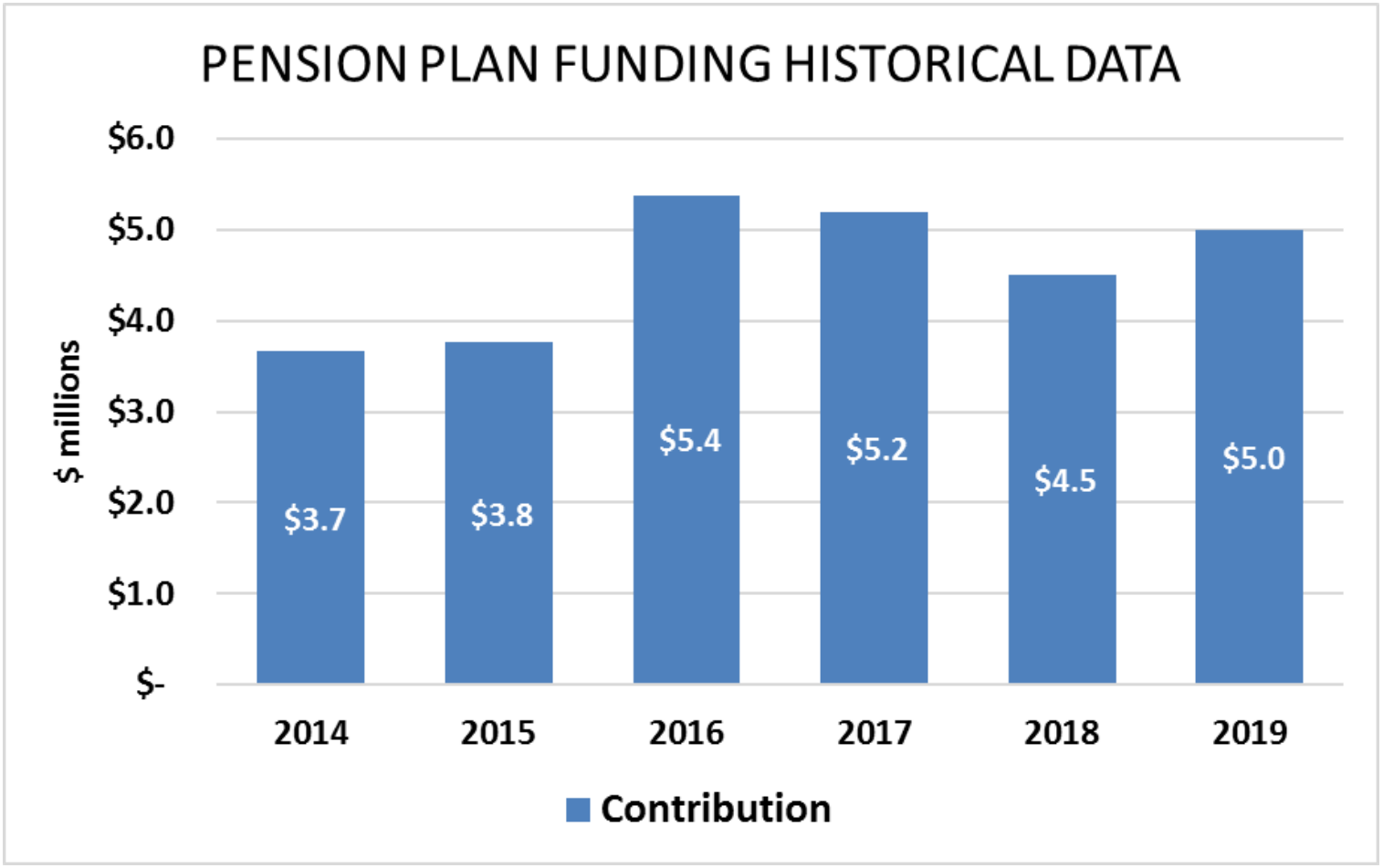
Incremental Positions:

- Business Continuity Specialist
- IT Supply Chain Analyst

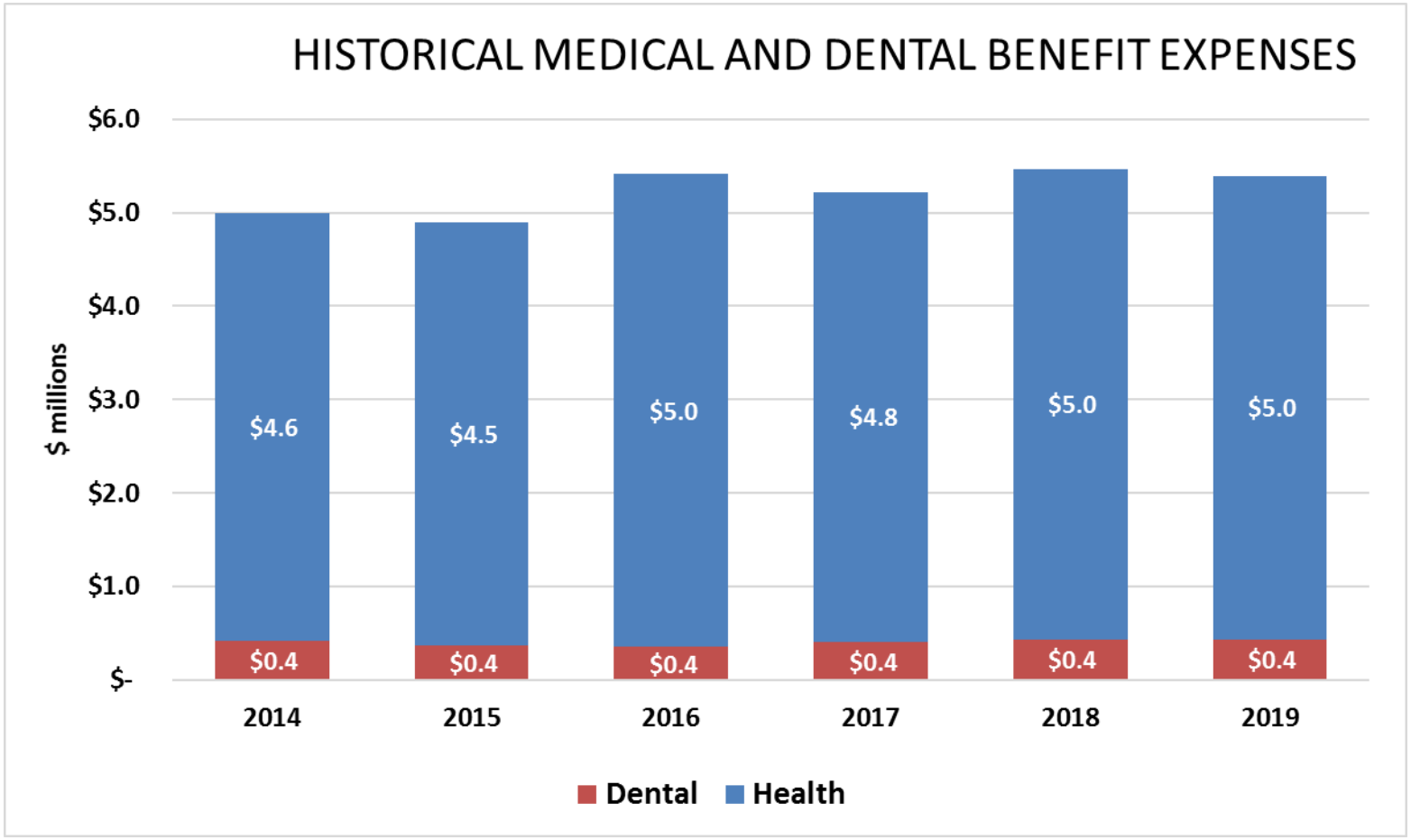
Budgeted Attrition:

- Operations, planned retirement (1)
- Unidentified (2)

Salaries and Benefits-Pension

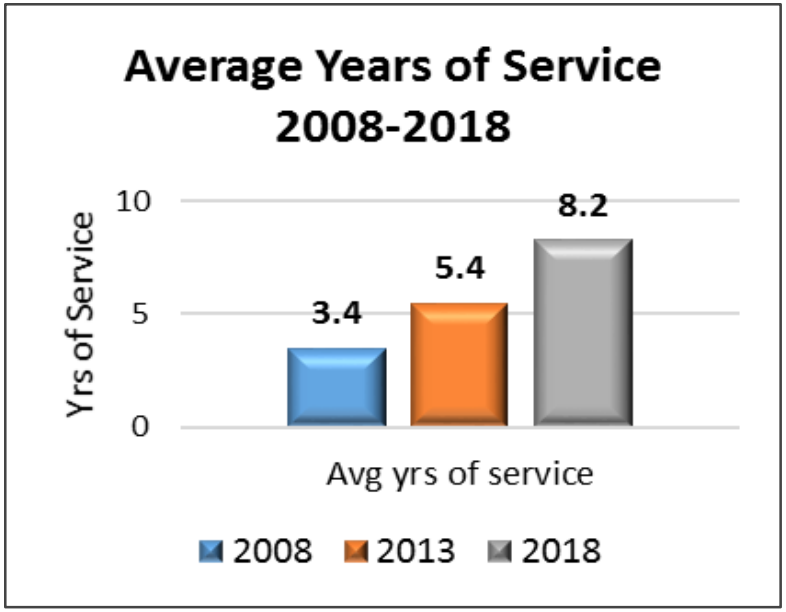


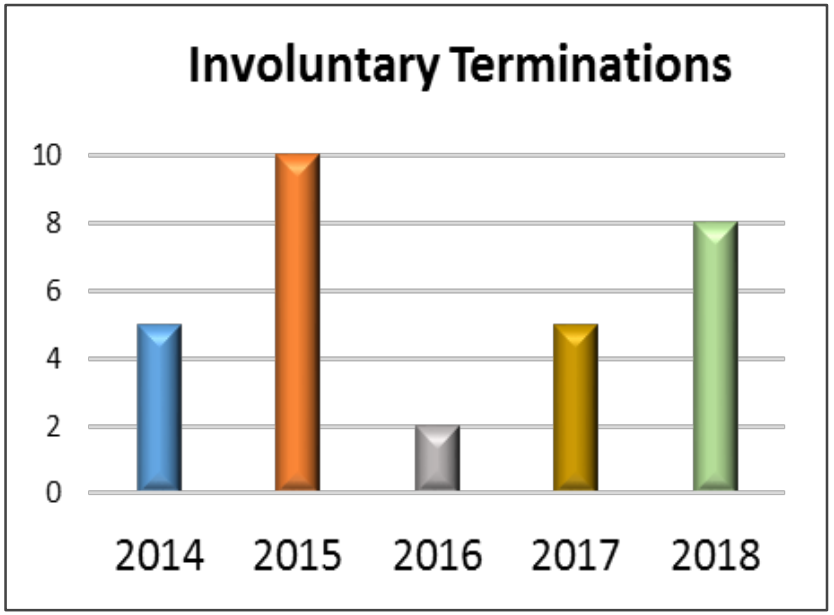
Salaries and Benefits-Medical & Dental

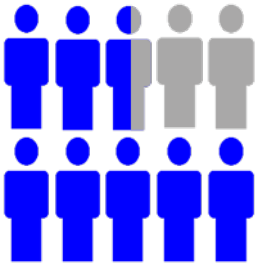


Net cost of the self-funded medical plan in the 2019 budget is $5.0 million, which is in line with the 2018 budget and forecast.

Workforce Statistics







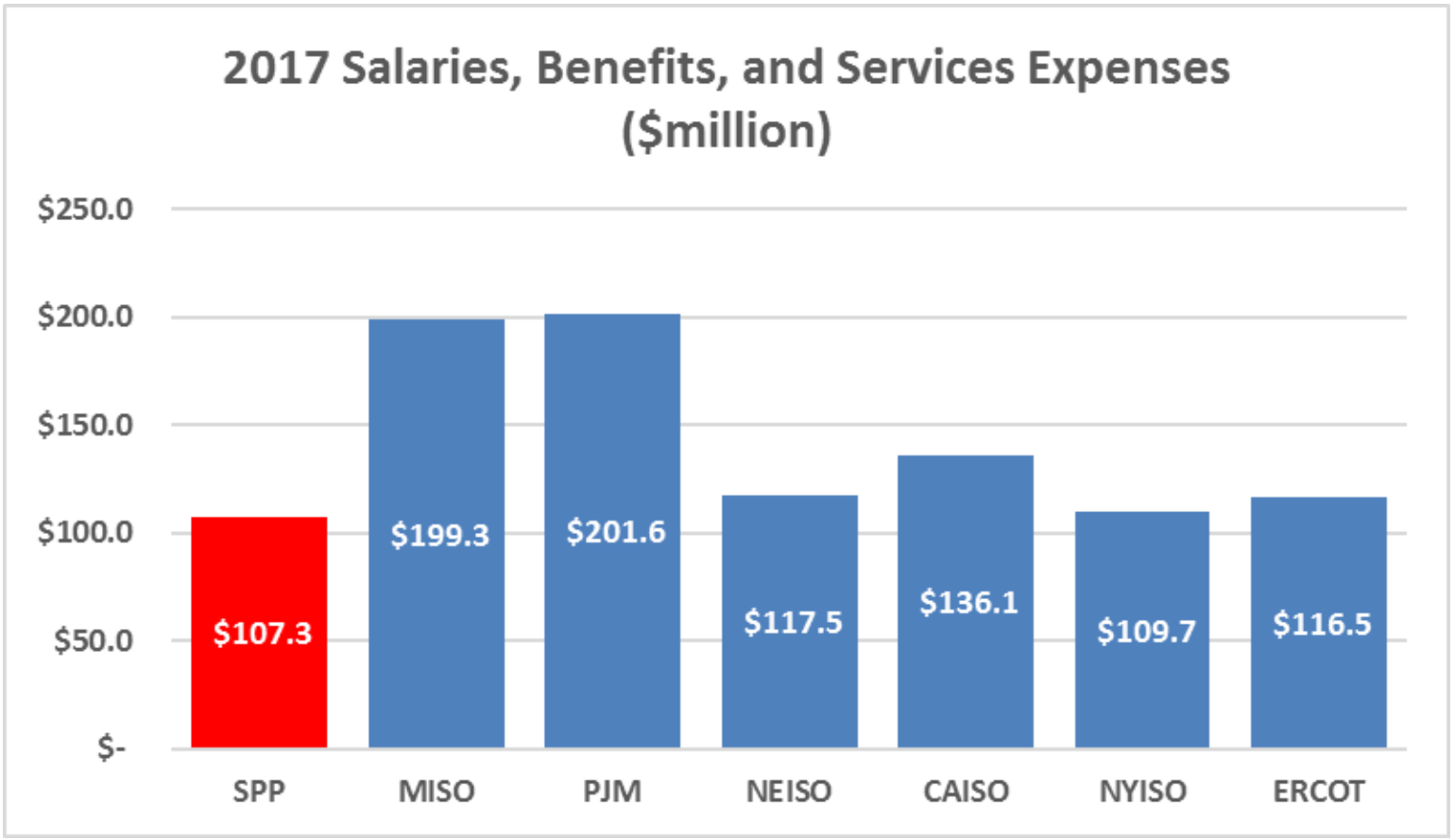
Employee Retention
78%
2014 - 2018

Educational Assistance
95 Employees, $0.3 million
2014 - 2018

Hiring Retention
85%
2014 - 2018

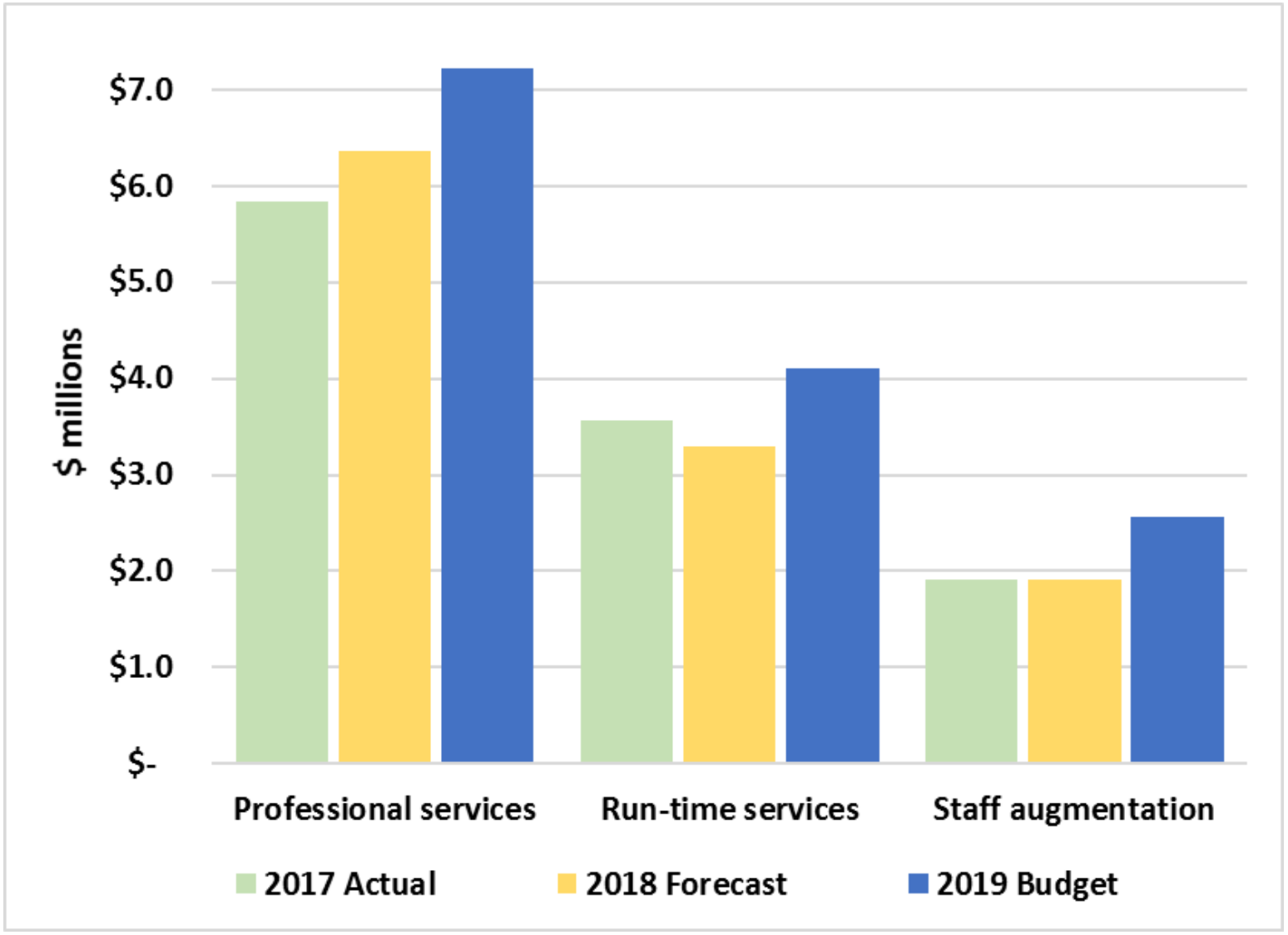
SPP

RTO Comparisons, Comp. & Services



NYISO has lowest spend on personnel and services of peer group; SPP is 2nd lowest.

Outside Services (excluding RE)



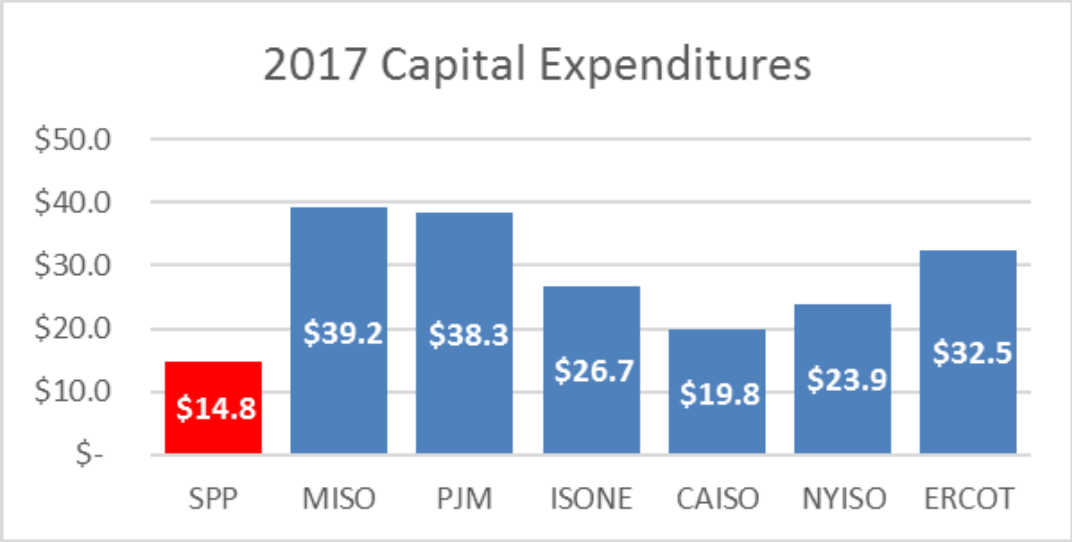
Capital Projects

PROJECT NAME	EXPECTED COSTS ($ millions)				DRIVERS				
	2018	2019	2020	2021	COST	RISK	EFFIC'Y	NEEDS	OTHER
Settlement Systems Replacement	$5.3 million				X				
Data Lake Phase 3	$0.4 million						X		
Dispatcher Training Simulator (DTS) Upgrade Phase 2B		$2.2 million						X	
Project Management Tool Upgrade		$0.5 million						X	
FERC Order 841: Electric Storage		$0.4 million							X
Freeze Date Replacement			$0.3 million				X		
Interface Pricing			$0.2 million				X		
EMS Upgrade				$2.8 million				X	
Online Small Signal Analysis Tool (SSAT)				$1.2 million	X				

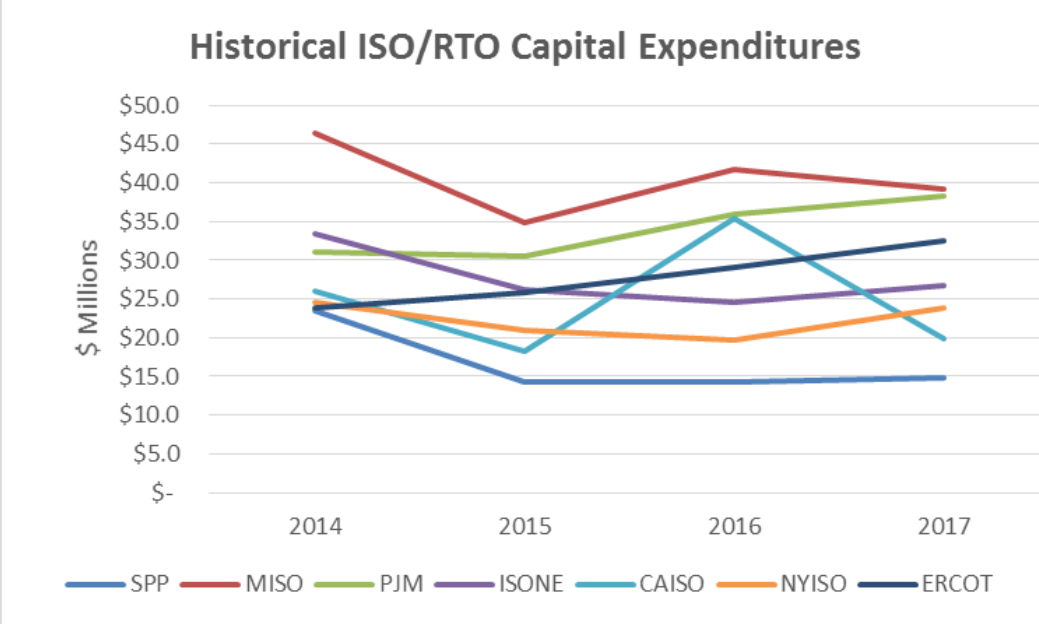
Foundation Capital Expenditures

PROJECT NAME	EXPECTED COSTS ($ millions)			
	2019	2020	2021	Total
IT Foundation	$8.2	$8.4	$8.9	$25.5
Miscellaneous Departments	$0.8	$1.7	$0.8	$3.4
Ops Marketplace & Other System Enhancements	$2.6	$2.3	$2.2	$7.1
Facilities	$1.0	$0.3	$0.3	$1.6
Settlements	$0.2	$0.0	$0.0	$0.2
Total 3-Year Foundation Budget	$12.8	$12.7	$12.2	$37.7

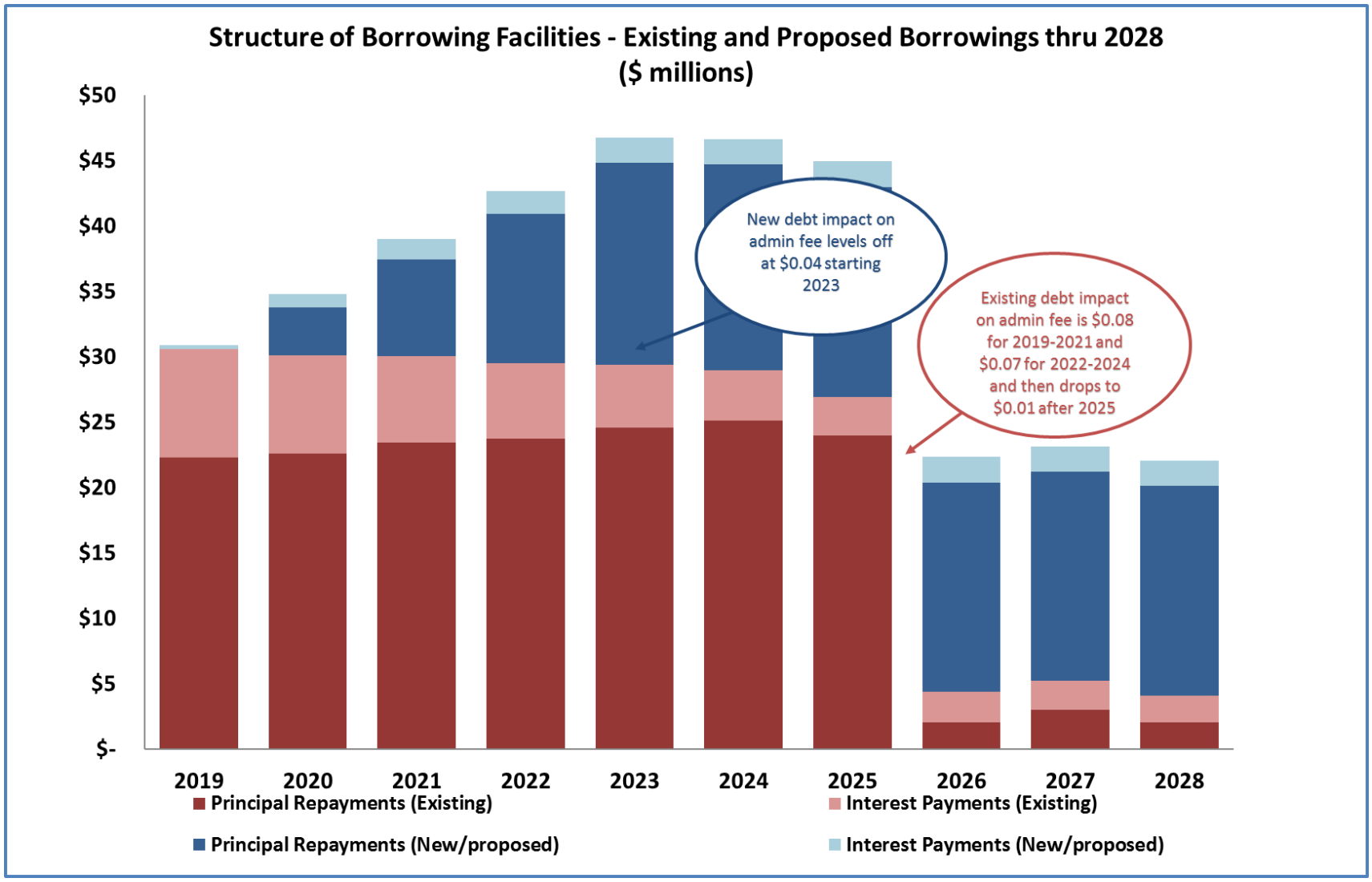
RTO Comparisons, Capital Exp.



- SPP's average capital expenditures since 2014 is less than any of its peers single year capital expenditures
- SPP has lowest capital expenditures of any RTO in the United States

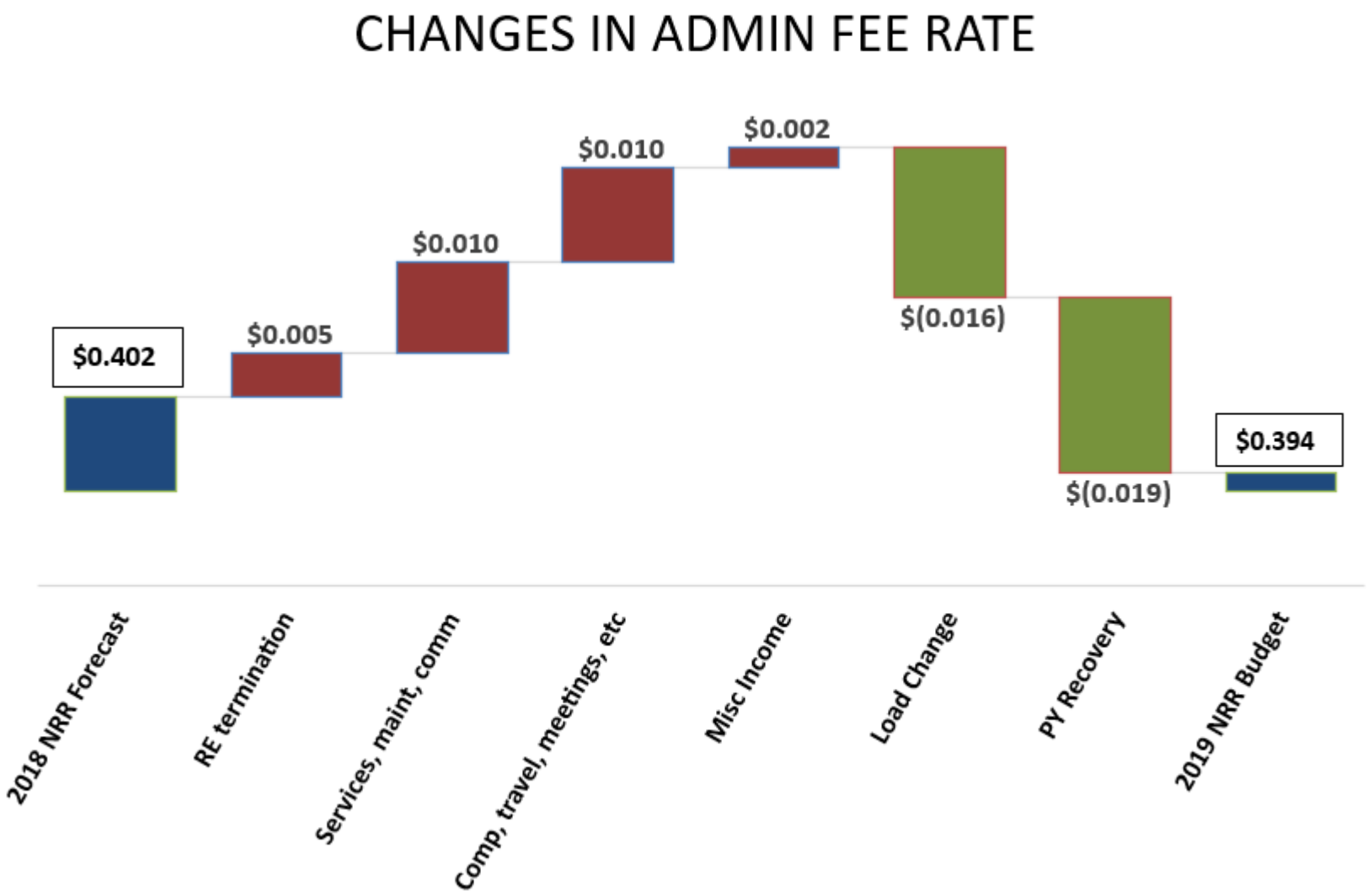


Debt Payments



RTO Comparisons, Debt

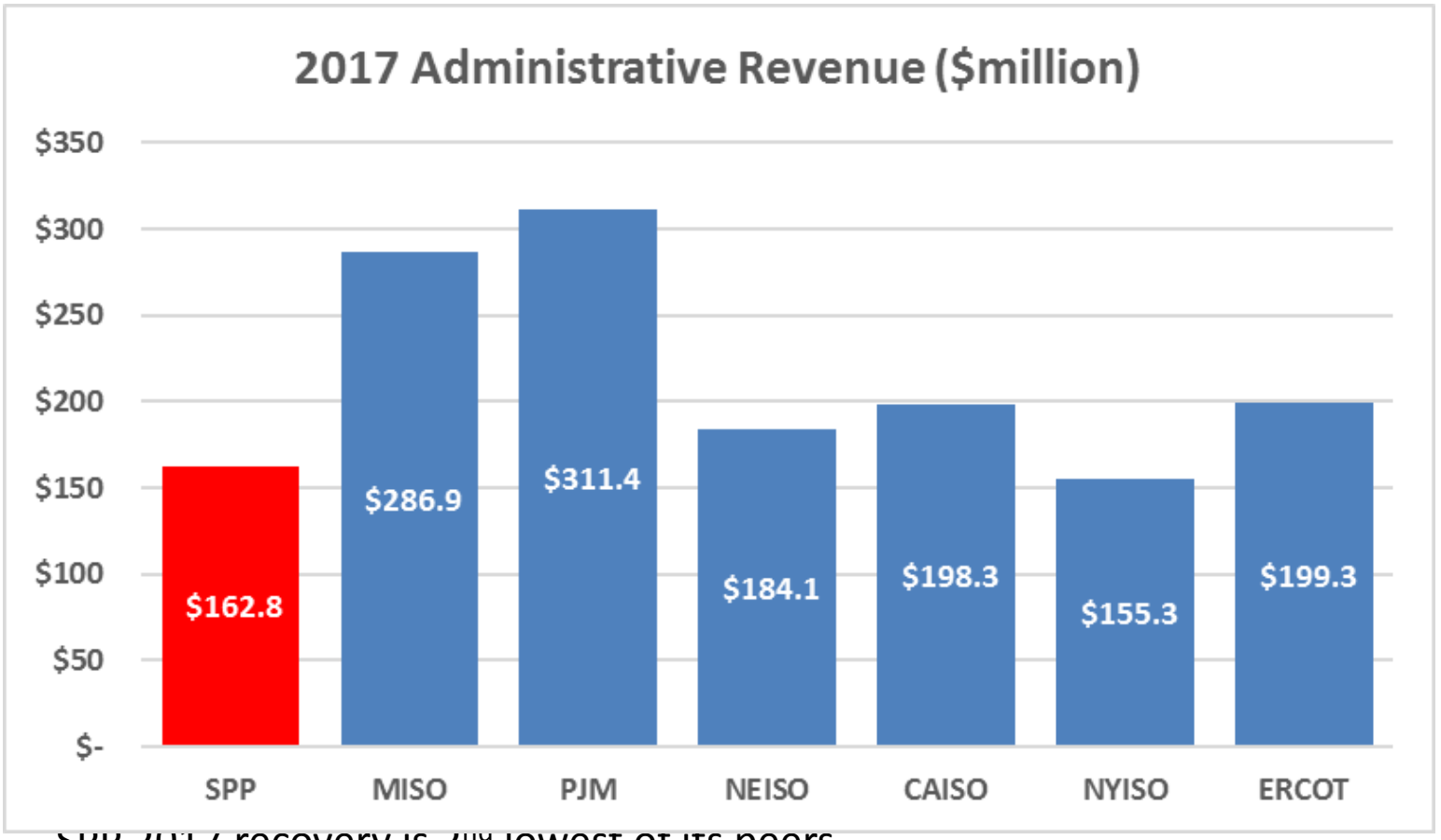
Rate Drivers



Load Forecast

	Peak Demand (GW)			Percent Change Year over Year		
	2016	2017	2018	2017 vs. 2016	2018 vs. 2017	2018 vs. 2016
Jan	38.2	40.4	43.9	5.79%	8.64%	14.93%
Feb	36.1	35.4	39.6	-1.89%	11.69%	9.58%
Mar	32.9	34.9	34.0	6.23%	-2.50%	3.58%
Apr	32.6	33.1	34.4	1.43%	3.97%	5.46%
May	36.9	39.7	45.2	7.62%	13.85%	22.52%
Jun	48.7	46.9	49.9	-3.57%	6.21%	2.42%
Jul	51.0	51.1	52.3	0.12%	2.44%	2.56%
Aug	50.9	45.9	49.5	-9.91%	7.99%	-2.72%
Sep	44.8	45.7		2.02%		
Oct	37.8	37.9		0.30%		
Nov	34.2	33.2		-2.87%		
Dec	41.0	39.5		-3.76%		

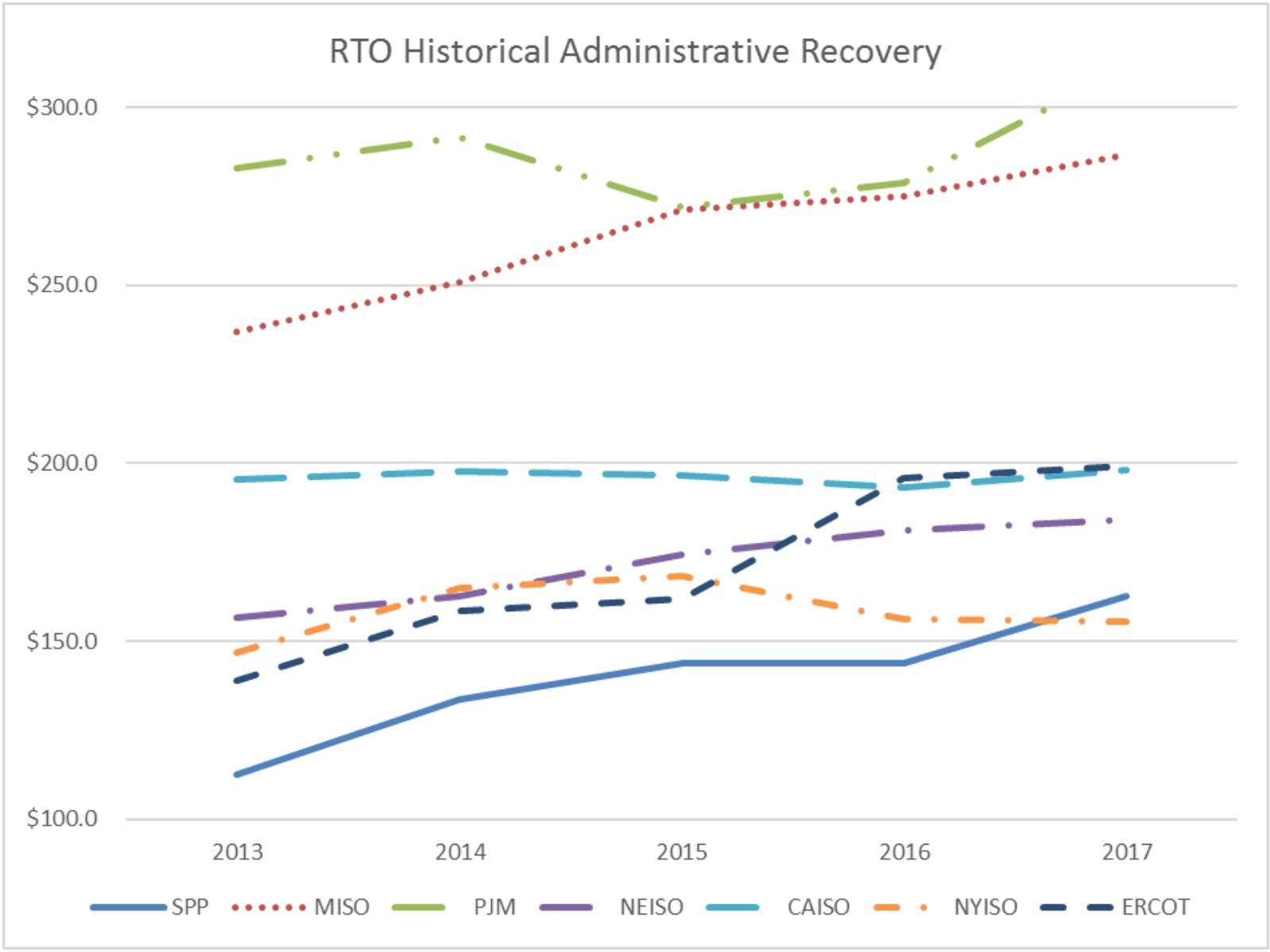
RTO Comparisons, Revenues & Load



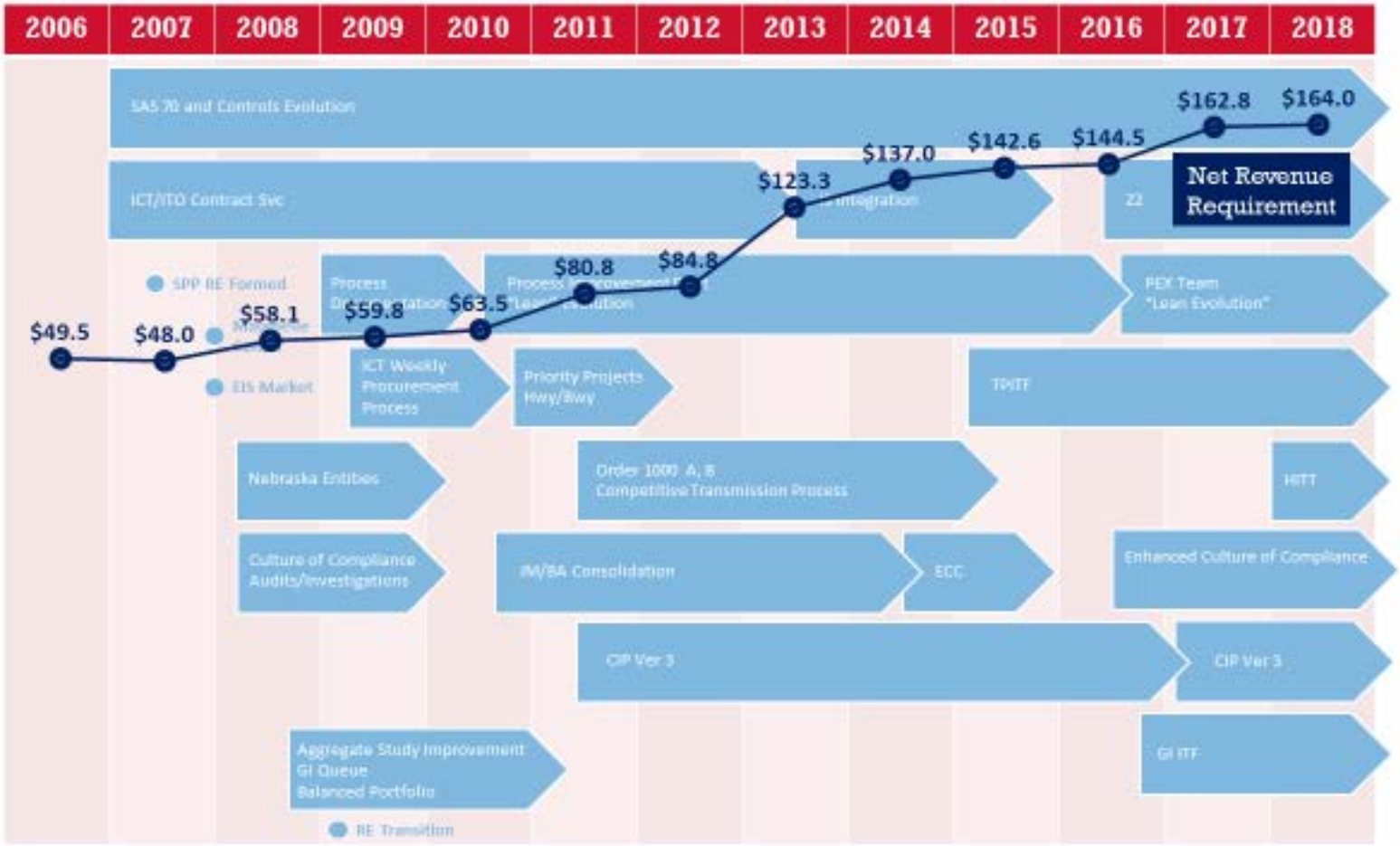
SPP 2017 recovery is 2nd lowest of its peers

Only one RTO has had a lower recovery than SPP since 2013

RTO Comparisons, Revenues & Load



Growth



SPP

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SPP

Southwest Power Pool, Inc.

FINANCE COMMITTEE

Recommendation to the Board of Directors

December 4, 2018

2019 Budget

Organizational Roster

The following persons are members of the Finance Committee:

Bruce Scherr	SPP Director
Larry Altenbaumer	SPP Director
Jerry Peace	OG&E
Laura Kapustka	Lincoln Electric
Sandra Bennett	AEP
Mike Wise	Golden Spread

Background

Section 6.5 of the SPP Bylaws identifies establishment of annual and long-term budgets as a primary duty of the Finance Committee.

Analysis

SPP's management proposed a 2019 budget to include expenditures as follows:

	$millions
Total Expenses	$196.3
Net Revenue Requirement	$157.5
Debt Repayment	$24.2
FERC Assessments	$23.1
Capital Expenditures	$14.9
2018 Over/(Under) Recovery	$10.7

SPP management utilized an incremental approach to prepare the 2019 budget.

Management documented an Operating Plan for 2019 outlining the significant initiatives and plans for the company during 2019. This Operating Plan was presented to the Finance Committee, Strategic Planning Committee, and SPP Board of Directors to seek input and consensus. SPP's 2019 budget was developed to accomplish the plan.

Recommendation

The Finance Committee recommends the SPP Board of Directors approve the 2019 SPP operating and capital budgets as submitted.

Approved: SPP Finance Committee

Action Requested: Approve Recommendation

Southwest Power Pool, Inc.

FINANCE COMMITTEE

Recommendation to the Board of Directors

December 4, 2018

2019 Administrative Fee

Organizational Roster

The following persons are members of the Finance Committee:

Larry Altenbaumer	SPP Director
Bruce Scherr	SPP Director
Jerry Peace	OG&E
Laura Kapustka	Lincoln Electric
Sandra Bennett	AEP
Mike Wise	Golden Spread

Background

Section 8.4 of the SPP Bylaws requires SPP to annually develop an assessment rate based on budgeted expenditures for the upcoming fiscal year and estimated billing determinants for that year.

Analysis

The 2019 SPP operating budget indicates a net revenue requirement ("NRR") for the year of $157.5 million (inclusive of expected over-recovery of $10.7 million in 2018) and estimated billing determinants of 399,600,000 MWh. NRR is derived by adjusting SPP's gross cash outflows (exclusive of capital expenditures) by all non-administrative fee revenue forecast to be earned in the year. The billing determinants are calculated by analyzing the current year to date transmission usage and estimating usage through the remainder of the year.

Billing determinants are estimated based on the billing criteria detailed in the SPP tariff. Presently, network integration transmission service is charged the SPP schedule 1A administrative fee based on the average 12 monthly peaks from the previous year; point-to-point transmission service is charged the SPP schedule 1A administrative fee based on the reserved transmission capacity. Through August 2018, SPP has realized year-over-year growth in average monthly peaks of 6.5%. SPP expects peaks realized for the remaining months to be flat or below the prior year peaks due to more difficult comparisons with the second half of 2017 and general comments from SPP's larger utilities regarding the low demand they realized recently. Based on flat rest of the year results, SPP is forecasting a 4.4% increase in billing determinants for 2019.

The administrative fee rate is calculated by dividing the NRR by the estimated billing determinants. $157.5 million divided by 399.6TWh equals a rate of 39.4¢/MWh.

Recommendation

The Finance Committee recommends the SPP Board of Directors establish an assessment rate and tariff administrative fee (schedule 1-A) of 39.4¢/MWh beginning on January 1, 2019.

Approved: SPP Finance Committee

Action Requested: Approve Recommendation

SPP Southwest Power Pool

2019 BUDGET

Prepared by Accounting Department

TABLE OF CONTENTS

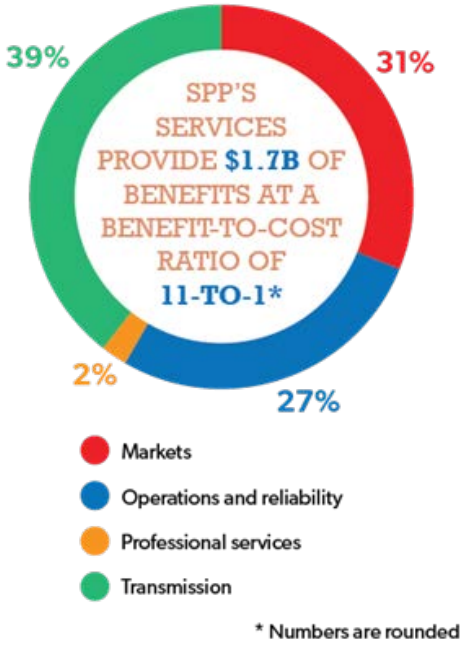
I. EXECUTIVE SUMMARY

SPP VALUE

SPP has a proven record of creating value for our diverse member companies. The integrated marketplace, transmission planning, and reliability and professional services provide significant benefits to members and customers throughout the region.

SPP's services provide net benefits to its members in excess of $1.7 billion annually at a benefit-to-cost ratio of more than 11-to-1. For the typical end-use retail customer using 1,000 kWh per month, this means their $100 electric bill would be $106.02 without the services SPP provides.

SPP's Integrated Marketplace enhances our Reliability Coordination services and has produced more than $2 billion in cumulative benefits to the region since it launched in 2014. Over the last decade SPP has directed nearly $10 billion in transmission construction and upgrades, and studies based on real-world data show that every $1.00 SPP directs toward transmission expansion will return $3.50 in benefits. In addition to our core products of reliability coordination, market administration and transmission planning, SPP provides a suite of professional services that benefit stakeholders through economies of scale and cost savings.



SPP remains committed to providing value to stakeholders and providing customers with increased options and greater efficiency to meet the reliability and affordability needs of their end users. SPP is able to:

- Reduce overall costs by operating as a region;
- Provide reliability assurance and predictable operations of the bulk electric system;
- Facilitate effective transmission planning processes resulting in building and maintaining an economically optimized transmission system;
- Offer an open and transparent marketplace with economic benefits;
- Optimize market efficiencies and transmission expansion along the seams of other markets and the emerging seam associated with the natural gas supply; and

- Ensure fair and equitable allocation of transmission expansion costs.

OPERATING PLAN

SPP's 2019 Operating Plan takes into consideration the changing business environment, as well as the many opportunities and challenges affecting SPP such as cybersecurity risks, a changing generation mix, electrification impacts, regulatory changes and SPP's expansion into the west.

Senior SPP staff met in late July 2018 under the leadership of the SPP Markets and Operations Policy Committee (MOPC), Strategic Planning Committee (SPC) and the Finance Committee to discuss coordination and communication of the 2019 Operating Plan. As a result, objectives were grouped into three broad categories in order to align functional performance, resource allocation and desired outcomes.

The 2019 operating plan includes the following categories:

Category A — Contains everything SPP is required to do per its tariff, regulatory and reliability standards, legal requirements and sound business requirements. Activities in these areas are considered to be required and thereby non-negotiable.

Activities in this category represent the majority of SPP's expected effort and resource allocations. Significant among these activities include operations division functions which involve administration of the transmission and market tariff services; engineering division functions which encompass performance of long-term transmission planning, transmission service and generation interconnection studies; and various activities performed within the information technology division which provides the technical resources and support for SPP's critical systems.

Category B — Contains activities not required by tariff, regulatory, legal, etc., but have been requested by stakeholders and/or are overseen by a stakeholder group.

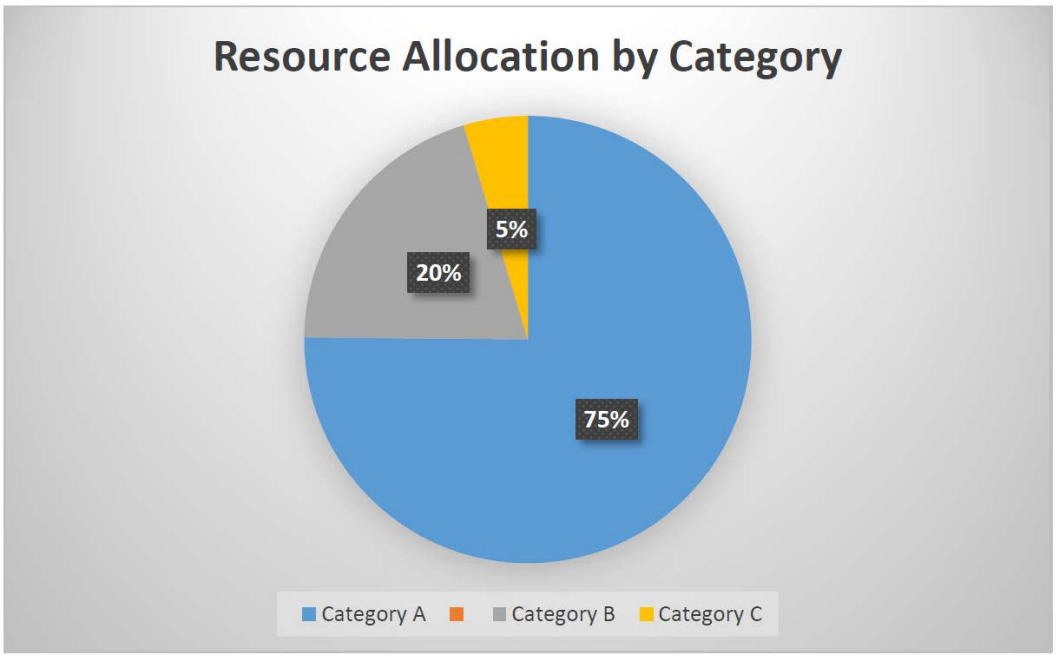
Activities in this category represent work with a direct connection to the SPP stakeholder process. These activities are generally decision items from a stakeholder group and/or involve clear oversight from stakeholder groups such as the human resource committee, MOPC, oversight committee or the board of directors.

Category C

Contains activities that do not fall under the prior two categories. Generally, these are activities deemed reasonable and prudent by SPP management/board of directors.

Resources in this category are deployed based on decisions by SPP's management and board of directors. Tasks performed in this area are deemed to be worthwhile for the success of the company, even though they may lack a direct connection to a stakeholder group and/or operations aspect of the business. Examples in 2019 include implementing phase 2B of the dispatcher training simulator (DTS) and replacement of project management office (PMO) tool utilized for managing the SPP project portfolio.

The following chart illustrates the relative allocation of resources by category.



It is important to note that although categories A and B account for 95 percent of SPP's resource allocation, the identification of an activity in any one category should not be construed to mean that activity is any more or less important than activities identified in other categories.

The operating plan document in its entirety is included following the Supplementary Schedules in section X.

NET REVENUE REQUIREMENT (NRR)

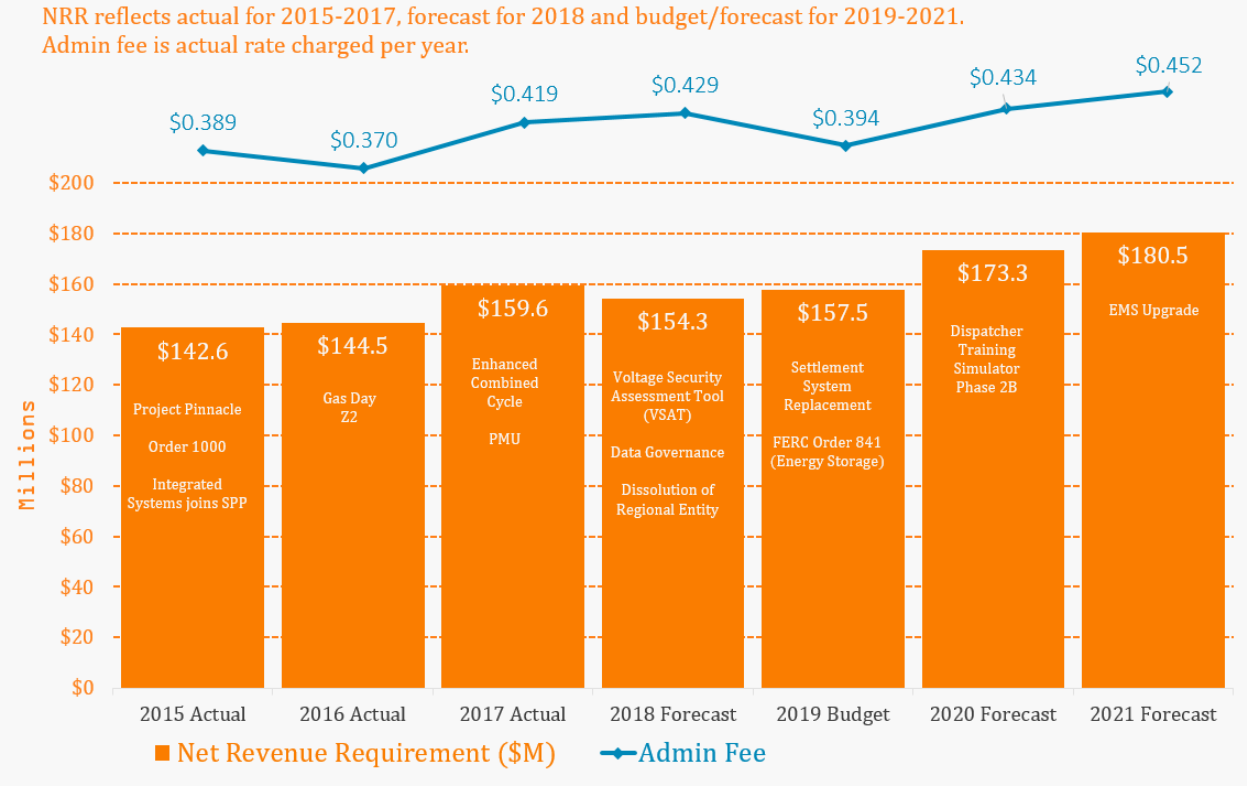
The NRR represents the funding necessary to provide services throughout the footprint. The NRR is comprised of operating expenses (excluding depreciation and Federal Energy Regulatory Commission (FERC) assessment), principal payments on loans for capital expenditures and a capital reserve fund intended to partially offset future borrowings.

Revenues from various activities and contractual agreements serve as an offset to expense in the calculation of the NRR. Miscellaneous revenues include reimbursements for engineering studies and other revenue sources such as the MISO joint operating agreement, miscellaneous rebates, reserve sharing, market transactions and circuit reimbursements. Service fees from certain contractual agreements also provide a minimal reduction of the NRR. Lastly, a projected over-recovery for 2018 provides a $10.7 million offset to the 2019 NRR.

The proposed admin fee rate of 39.4¢/MWh is based on NRR of $157.5 million.

The 2018 projected over-recovery of $10.7 million is associated with various revenue and expense variances throughout 2018 as well as a $1.8 million (2 percent) change in the projected over-recovery from 2017 (as compared to the 2017 forecast during the 2018 budget cycle).

NET REVENUE REQUIREMENT AND SPP INITIATIVES

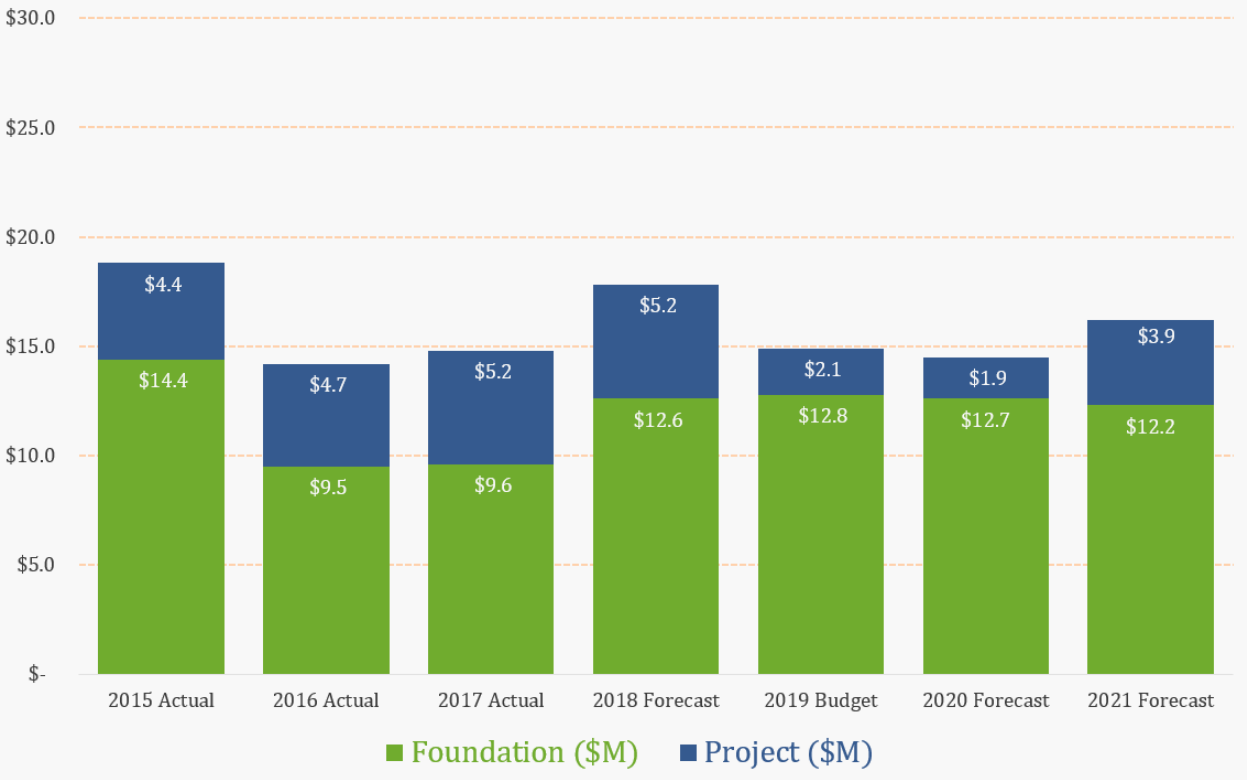


CAPITAL EXPENDITURES

The 2019 budget identifies capital expenditures totaling $45.6 million for 2019-2021. These monies represent investments in various initiatives, each of which is driven by either stakeholder requests, compliance-related concerns or capital spending intended to improve and strengthen information technology and operations foundation.

Projects are consistently evaluated throughout the year under oversight of SPP's internal Project Review and Prioritization Committee (PRPC). Reprioritization due to new developments and/or resource constraints throughout the rest of 2018 and into 2019 could potentially impact the project portfolio. Capital expenditures planned for 2019 could be impacted by: 1) addition of projects not currently reflected in the budget, 2) deferrals of projects into future years, 3) elimination of projects due to time constraints and/or completion of the project without incurring external costs, or 4) costs carried forward into 2019 for projects not completed as planned during 2018.

CAPITAL EXPENDITURES



The capital projects section V. describes noteworthy projects in greater detail, and a complete list of initiatives and associated capital budgets appear in the supplementary schedules section X.

SPP HEADCOUNT

The dissolution of the Regional Entity in August 2018 resulted in restructuring of staff in various divisions of SPP.

The total number of staff in 2019 is expected to decrease from 2018. The 2019 staffing level is budgeted at 605, compared to 610 projected last year for 2019 and compared to 606 in the 2018 forecast.

The net decrease in headcount is associated with various offsetting factors.

The 2018 budget assumed SPP would retain 11 of the 23 RE employees; however, only 7 of the RE staff were ultimately absorbed. Operations was able to eliminate three positions as a result of advance preparations for resignations/retirements. After evaluating the workload associated with unprecedented growth in volume and complexity of generation interconnection studies, three engineering positions were added. Due to restructuring needs associated with the IT strategic work plan, an employee from SPP's intern program was permanently hired in the cybersecurity department. Management has committed to one overall staff reduction within the IT division to offset this increase by 2021.

2018 Staffing Changes

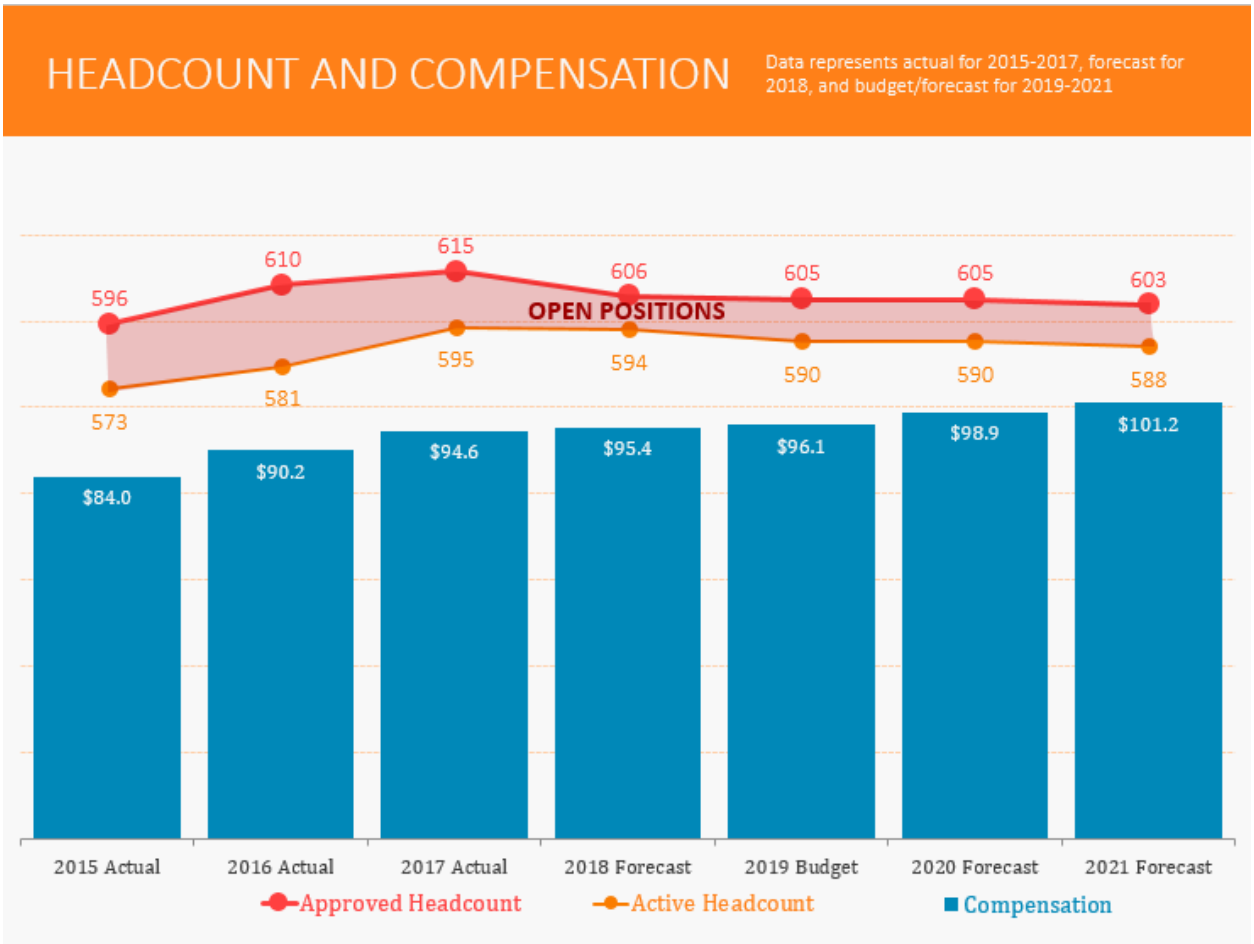
	RTO	RE
2018 Beginning RTO budget	598	
2018 Beginning Regional Entity budget		23
RE resignations / retirements		(9)
RE staff filling open RTO positions		(7)
RE staff absorbed by RTO *	7	(7)
Operations positions eliminated	(3)	
Out-of-budget positions added (Eng/IT)	4	
2018 Year-end RTO forecast	606	0

** 2018 Budget assumed RTO would absorb 11 of 23 RE positions.*

Approved Staffing Levels

	2018	2019
2018 Budget	**609**	
Net incremental (3 Eng, 1 IT)	4	
Net reductions (4 additional RE, 3 Ops)	(7)	
2018 Forecast	**606**	
Business Continuity Specialist (Credit)		1
Supply Chain Analyst (IT)		1
Budgeted attrition (1 Ops, 2 unidentified)		(3)
2019 Budget		**605**

For 2019, management identified the need for two incremental staff associated with business continuity (1) and supply chain management (1). As a result of advanced planning and focused training, one additional operator position will be eliminated after a planned retirement in the first quarter of 2019. The budget assumes an additional two positions will be eliminated through attrition in 2019 with collaboration across all divisions as vacancies occur.



More details on the staffing budget is included in resource utilization section VI.

II. SPP VALUE

SPP collaborates with members, market participants, regulators and ratepayers through an inclusive and transparent stakeholder process. It takes time to achieve consensus, hold ourselves to impeccable standards, and strive to continuously learn, grow and become more efficient and effective in our work. As a result of this approach, it provides services at a benefit-to-cost ratio of 11-to-1 and earn top-tier stakeholder satisfaction scores year after year.

Member-Driven Culture

SPP is value-oriented and works to ensure that its people and processes are aligned in support of its members' goals.

SPP is governed through a transparent and collaborative stakeholder process. The independent board of directors oversees dozens of committees, working groups and task forces. In these groups' meetings - nearly all of which are open to the public - member representatives and SPP staff debate and work toward consensus on our organization's strategic direction, financial decisions, processes and procedures and more. Everyone who wants to participate in the process can.

One of SPP's value principals is promoting independence through diversity with a commitment to remaining a member-driven organization.

SPP manages change by building consensus, not strong-arming members into following our lead. A stakeholder prioritization process gives the people whose support and input SPP depends on the chance to provide direct input into prioritization of project work and changes to market protocols, governing documents and more.

This consensus-building and relationship-based approach to business is unique, and it provides immeasurable value. It ensures the whole of our customer base has the opportunity to make its voice heard in decisions both big and small.

SPP derives value from the diverse perspectives of its membership and other engaged stakeholders and remains independent of undue influence from any single entity or group of like-minded entities. It facilitates dialogue and collaboration among its members, who work together to keep the lights on today and in the future, ensuring all perspectives are appropriately considered.

SPP's membership includes investor-owned utilities, rural electric cooperatives, municipalities, public power, state and federal agencies, and large retail customers. Its service territory is diverse, too. It includes seven of the 100 largest cities in the U.S. as well as a large and significant area of rural America. SPP's business model and strategic direction reflect the common interests of this diverse membership: ensuring reliable and affordable electricity through collaboration. We understand the challenges of managing transmission in rural areas as well as maintaining reliability in large population centers.

Major Services

SPP has a proven record of creating value by leveraging economies of scale, the expertise of its staff and the diverse perspectives of its member companies.

Thanks to efficient processes, effective controls and business practices, and a culture that promotes doing the right thing for the right reason in the right way, SPP gives members an eleven-to-one return on every dollar they contribute to SPP's mission.

SPP's services provide net benefits to members in excess of $1.7 billion annually at a benefit-to-cost ratio of more than 11-to-1.

SPP's Integrated Marketplace has produced more than $2 billion in cumulative benefits to the region since it launched in 2014. SPP's wholesale electricity markets determine the resources needed to economically ensure reliability and then dispatch the most cost-effective generation to meet demand and mitigate congestion in real-time. They also complement our Reliability Coordination services by enabling operations staff to spend more time addressing circumstances that require manual intervention and critical thinking. Synergies like this are at the heart of our belief that reliability and economics are inseparable.

Over the last decade, SPP has directed nearly $10 billion in transmission construction and upgrades that will enhance reliability and reduce electricity costs for decades to come. Studies based on real-world data have shown that every $1.00 SPP directs toward transmission expansion will return $3.50 in benefits.

In addition to the core products of reliability coordination, market administration and transmission planning, SPP provides a suite of professional services that benefit stakeholders through economies of scale and cost savings. Stakeholders trust SPP to deliver industry-best training, project management, strategic planning, counsel and representation in regulatory and government affairs, and a lot more.

These and other services provide net benefits to SPP's region in excess of $1.7 billion annually at a benefit-to-cost ratio of more than 11-to-1. For the typical end-use customer using 1,000 kWh per month, this means their $100 electric bill would be $106.02 without the services SPP provides.

Continuous Improvement

SPP embraces a strategy of continuous improvement and strives to always innovate, question the status quo and take every chance to cut costs, improve outcomes and work more efficiently.

In 2017 and 2018 alone, staff-led teams devoted to performance excellence have completed more than 25 projects that address compliance risks, enhance reliability, reduce administrative overhead and eliminate waste. Looking further back, over the last decade SPP has:

- Expanded its footprint twice, into Nebraska in 2008 and to incorporate the Integrated System in 2015
- Become a consolidated balancing authority on behalf of 16 legacy areas, enabling SPP's Integrated Marketplace to balance generation and load across a single, footprint-region rather than in 16 legacy areas
- Launched its Integrated Marketplace in 2014, which paid for itself in less than one year and provides approximately $500M in net benefits annually to our members
- Made numerous improvements to its aggregate study and generator interconnection queue processes, saving members time and money
- Implemented a competitive bidding process for transmission projects in compliance with the Federal Energy Regulatory Commission's Order 1000
- Created a cybersecurity department to help ensure compliance with mandatory standards and maintain the safety of the cyber and physical assets of SPP and its stakeholders

Through process improvements, efficiencies and the constant maturation of our business practices, SPP has expanded its territory and service offerings, adapted to changing requirements and circumstances and saved members billions of dollars, and has done so by helping members provide affordable and reliable electricity to their customers.

III. BUDGET OVERVIEW

BUDGET GUIDANCE AND ASSUMPTIONS

The SPP 2019 Operating Plan was used as a guide for development of the budget, with the strategic plan serving as the foundation for the Operating Plan.

Planning meetings that began in May 2018 provided guidance in developing the 2019 budget. SPP utilized an incremental-based budget approach at the department level for operating expenses. Incremental-based budgeting also was used during the 2018 budget process.

Justifications for significant changes from the current 2018 forecast were required and reviewed by management. Material changes are discussed in detail in the Resource Utilization section of this document.

The combined efforts of identifying required operating expenses and planning for capital projects and associated funding resulted in the recommended Net Revenue Requirement (NRR).

Major assumptions used to create the 2019 budget include, but are not limited to, the following.

- Salaries and benefits: Existing salaries are expected to increase by 3.75 percent per the 2019 merit and promotion funding recommendation approved by the SPP Human Resources Committee on August 27, 2018. SPP's fully employed headcount per the budget is 605, though compensation expense has been reduced by 2.5 percent to account for staff turnover expected to occur during the year. The estimate for vacancy is based on the 2018 average of 2.6 percent. Pension expense was calculated assuming an annual rate of return on the pension assets of 7 percent (consistent with the assumed rate of return in SPP's investment policy statement). As of the third quarter of 2018, pension plan assets have experienced a 6.6 percent year-to-date return and a 10.8 percent trailing 12 month return.
- 2018 True-up of Schedule 1A: Favorable variances to budget for both revenues and operating expenses resulted in a projected over-recovery of SPP's costs in 2018. The estimated over-recovery of $10.7 million is included in the 2019 budget as an offset to the 2019 Net Revenue Requirement.
- Communication and maintenance: Communications infrastructure includes all expenditures related to SPP's internal and external networks and telecommunications. Two projects (associated with cloud storage implementation and PMU data exchange) were budgeted in 2018 but delayed into 2019. These projects require additional and more secure bandwidth, which drives communications expense. Maintenance costs are driven by

support agreements to sustain the health and operation of SPP's existing systems, as well as new corporate projects that require support agreements.

- Outside services: Consulting services are engaged for needed staff augmentation or for specific skill sets not possessed on staff. The increase from the 2018 forecast is driven primarily by various IT initiatives (mostly associated with cybersecurity) and consultants for engineering studies (which is recovered from the study participants). New initiatives in the 2019 budget also include a resiliency for resource integration and market study (RRIMS) which will identify potential modifications to reliability and market tools based on changing technical characteristics of the grid. In addition, the human resources committee requested funds for a compensation study to be conducted in 2019.

  The engagement of outside services remains relatively comparable to the 2018 forecast in areas such as legal counsel, board of director fees, and annual audits, with only slight increases in areas such as corporate security and wind forecasting analysis.

- Billing determinants: Billing determinant forecasts are a key component in determining an appropriate rate for SPP to charge for its services. Year-over-year comparisons through August 2018 indicate a six percent increase in average monthly peak demand. The peak demand for the last four months of 2018 is expected to show zero growth compared to August 2017. Based on this information, the 2019 budget assumes a four percent increase in the billing units from the 2018 forecast.

This budget document provides an overview and outlines details of the cost of services and components of the net revenue requirement, which consists of the following:

- Capital projects (discussed in section V)
- Operating expenses (discussed in section VI)
- Debt service (discussed in section IX)

Capital projects are investments in long-term assets required by SPP to meet its strategic goals and operational requirements. These capital expenditures represent costs incurred to enhance or expand current systems and services and/or to maintain existing capabilities.

SPP budgets for ongoing foundation expenditures and for specific planned capital projects. The foundation budget captures hardware and software to support SPP's business applications. This includes upgrades and replacements of SPP's aged hardware infrastructure as well as expenditures for new enterprise technologies driven by security requirements, application and architectural enhancements and legacy growth.

Expenditures related to nine capital projects are included in addition to the foundation budget. Four of the projects are either underway and/or are expected to begin and be completed in 2019.

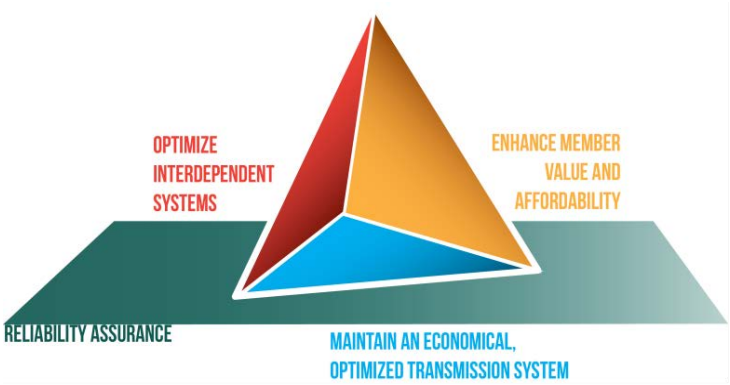
Operating expenses represent the largest component of SPP's NRR and consist of budgeted costs for ongoing operation. Operating expenses are generally fixed relative to SPP's cost recovery structure.

Debt service costs are principal payments and interest expense related to various borrowings obtained to fund SPP's capital expenditures. The debt issuances have terms relatively consistent with the expected useful life of the assets developed or acquired, which is consistent with SPP's longstanding policy. This policy is designed to best recover the cost of the assets from the customers benefiting from the assets.

ALIGNMENT OF 2019 BUDGET WITH SPP'S STRATEGIC PLAN

The Finance Committee (FC) and the Strategic Planning Committee (SPC) endorsed the 2018 Operating Plan as consistent with the alignment with SPP's strategic plan.

The four foundational strategies of SPP's strategic plan are 1) ensuring reliability in planning and operation of the electric power grid, 2) optimizing interdependent systems, 3) enhancing member value and affordability, and 4) maintaining an economical, optimized transmission system.



The focus of these foundational strategies is to create the capabilities and operational processes necessary to fulfill SPP's mission and to maintain or improve its value propositions in the face of a rapidly changing environment. These four strategies are interdependent, with reliability assurance as the basis and the enhancement of member value and affordability as the discipline to drive all SPP strategies.

The SPC meets annually to consider signposts that may require adjustments to the way the organization strategizes and tactically addresses industry trends affecting SPP and its members. During its May 2018 annual retreat, the SPC reviewed a host of trends including: reduced demand for energy, electric vehicle penetration rates, declining marginal energy prices, wind and solar generation penetration rates, distributed energy, demand response, energy efficiency (batteries), energy storage, resilience and member-company retail rate considerations.

The committee also discussed other pressing concerns affecting the market and transmission planning services that SPP provides on behalf of its membership. With all these items identified, the SPC again maintained that the four foundational strategies inherent in the most recent strategic plan remain relevant to the organization, with only minor prioritization changes.

More information on the relationship between these foundational strategies and major projects investments in 2019 can be found in the 2019 Operating Plan document in the Supplementary Schedules section.

IV. 2019 NET REVENUE REQUIREMENT

NET REVENUE REQUIREMENT (NRR)

Operating expenses (excluding depreciation and FERC fees) and debt payments are the main components of the NRR.

In addition to operating expenses related to day-to-day operations, the income statement includes tariff administration service income (which is equal to the NRR), contract service revenues, miscellaneous income (primarily related to engineering studies), and various other income/expense items that are excluded from the NRR calculation (including depreciation and income/expense related to FERC fees and assessments).

Income Statement

$ millions	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Income				
Tariff Administration Service	$164.0	$164.9	$157.5	$178.8
Fees & Assessments	26.1	26.6	31.8	21.4
Contract Services Revenue	0.2	0.8	0.2	0.0
Miscellaneous Income	4.0	5.2	5.2	4.0
Total Income	**$194.2**	**$197.6**	**$194.7**	**$204.2**
Expense				
Salary & Benefits	$96.1	$95.4	$96.1	$101.6
Depreciation	19.4	18.2	19.4	22.0
Communications & Maintenance	22.8	21.6	23.1	24.3
Outside Services	14.6	12.2	14.3	13.7
Administrative / Other	14.5	12.2	14.0	14.2
Assessments & Fees	20.3	21.1	23.1	20.3
Travel & Meetings	3.1	2.9	3.0	2.9
Total Expense	**$190.8**	**$183.5**	**$193.1**	**$198.9**
Net Income (Loss)	**$3.5**	**$14.1**	**$1.6**	**$5.3**
Debt Repayment	$23.4	$23.4	$24.2	$26.6
MWh Forecast (in millions)	382.1	384.0	399.6	382.1
Net Revenue Requirement	$164.0	$154.3	$157.5	$178.8
Recommended Admin Fee / MWh	$0.429	$0.429	$0.394	$0.468

As a result of the dissolution of the Regional Entity (RE) in August 2018, expenses for the 2018 budget and forecast include a partial year of data associated with the RE that is not reflected in the 2019 budget.

For analysis purposes, RE expenses are excluded from the 2018 data in the following discussion of comparing expense changes from 2018 to 2019.

Operating Expense Excluding 2018 Regional Entity

$ millions	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Salary & Benefits	$93.6	$92.7	$96.1	$101.6
Communications & Maintenance	22.8	21.6	23.1	24.3
Outside Services	13.9	11.8	14.3	13.7
Administrative / Other	14.4	13.8	13.9	14.2
Travel & Meetings	2.8	2.8	3.0	2.9
Total	**$147.6**	**$142.6**	**$150.5**	**$156.6**
Depreciation	19.4	18.2	19.4	22.0
Assessments & Fees	20.3	21.1	23.1	20.3
Total Expense Excluding RE	**$187.2**	**$181.9**	**$193.0**	**$198.9**

* *Total Administrative / Other expense for 2018 excludes non-cash items such as swap valuation adjustments and realized/unrealized gains on investments*

Operating expenses (excluding RE, depreciation and FERC assessments) are expected to be $150.5 million in 2019, an increase of $7.9 million compared to the 2018 forecast. Growth in operating expenses results primarily from compensation due to merit increases; enterprise technology maintenance and communication infrastructure increases; and outside services for staff augmentation in IT and engineering.

The salary and benefits budget assumes a merit increase of 3 percent, a promotion increase of 0.75 percent and a vacancy factor of 2.5 percent (which is comparable to 2018 forecasted vacancy).

Communications and maintenance expenses are expected to increase in 2019 by $1.5 million over the 2018 forecast, as SPP continues to expand the quality and quantity of its services through investments in SPP's IT infrastructure and IT-intensive capital projects. The increase is primarily due to year-over-year inflationary increases (2 percent) related to agreements required to sustain the health and operation of the system, plus additional increases related to

maintenance and communication infrastructure costs associated with new projects and/or purchases.

Growth of $2.5 million in outside services expense over the 2018 forecast is primarily related to staff augmentation associated with an increase in IT initiatives centered on security, critical infrastructure protection standards, automation and infrastructure consolidation activities; and staff augmentation related to engineering studies, which is recovered from study participants.

BILLING DETERMINANTS

SPP allocates the NRR to transmission customers based on their purchase of point-to-point transmission service (PtP) and/or network integrated transmission service (NITS) with true-ups provided by monthly assessments.

Customers purchasing PtP represent approximately 8 percent of total annual billing determinants while NITS customers represent approximately 90 percent of total annual billing determinants. Monthly assessments act as a true-up to cover any unreported load not covered by PtP or NITS and represents approximately 2 percent of the annual billing determinants. PtP service is billed based on reserved hourly transmission capacity. NITS is billed based on the prior year's 12- month average monthly peak demand for each customer.

The 2019 budget assumes a four percent increase in billing units from the 2018 forecast.

SPP collected monthly peak demand data from its membership for the months of January through August 2018. The average monthly peak demand through August 2018 is 6.3 percent higher than the same period in 2017 and 8.3 percent higher than the same period in 2016.

The growth in monthly peak demand experienced in the SPP footprint was largely due to below average temperatures January through April 2018 and above average temperatures May through July 2018. April 2018 set the record as the coldest April in 124 years and May 2018 set the record as the warmest May in 124 years.

The average peak demand in the last four months of 2018 is assumed to show zero growth compared to the same period in 2017. Based on the above analysis and illustrated in the table below, the 2019 budget assumes a 4 percent increase in billing units from the 2018 forecast. The units below represent Schedule 9 average monthly peaks.

	Peak Demand (GW)			Percent Change Year over Year		
	2016	2017	2018	2017 vs. 2016	2018 vs. 2017	2018 vs. 2016
Jan	38.2	40.4	43.9	5.79%	8.64%	14.93%
Feb	36.1	35.4	39.6	-1.89%	11.69%	9.58%
Mar	32.9	34.9	34.0	6.23%	-2.50%	3.58%
Apr	32.6	33.1	34.4	1.43%	3.97%	5.46%
May	36.9	39.7	45.2	7.62%	13.85%	22.52%
Jun	48.7	46.9	49.9	-3.57%	6.21%	2.42%
Jul	51.0	51.1	52.3	0.12%	2.44%	2.56%
Aug	50.9	45.9	49.5	-9.91%	7.99%	-2.72%
Sep	44.8	45.7		2.02%		
Oct	37.8	37.9		0.30%		
Nov	34.2	33.2		-2.87%		
Dec	41.0	39.5		-3.76%		

COMPONENTS OF 2019 NRR AND ADMINISTRATIVE FEE

The following tables illustrate the calculation of the NRR and the administrative fee. The 2019 calculation includes funding of the 2019 capital reserve and an adjustment to NRR to account for expected over-recovery in 2018. The 2018 RE data is included in the NRR calculation.

Net Revenue Requirement (NRR) & Administrative Fee ($ millions)

	2018 Budget	2018 Forecast [1]	2019 Budget	2019 Prior Estimate [2]
Total expense (excluding deprec., FERC and interest exp.)	**$141.7**	**$136.8**	**$141.5**	**$147.5**
Debt service - principal payments	23.4	23.4	24.2	26.6
Debt service - interest expense	9.3	9.3	8.9	9.0
Capital expenditure reserve	3.6	3.6	3.0	3.3
Gross revenue requirement	**$177.9**	**$173.0**	**$177.7**	**$186.5**
Less:				
NERC revenue	($4.7)	($5.1)	$0.0	$0.0
Other revenues	(4.7)	(6.8)	(6.1)	(4.7)
NRR adjustments [3]	(4.5)	(6.8)	(14.1)	(3.0)
Net revenue requirement	**$164.0**	**$154.3**	**$157.5**	**$178.8**
Billing determinants (MWh millions) [4]	382.1	384.0	399.6	382.1
Calculated admin fee / MWh	$0.429	$0.402	$0.394	$0.468
Proposed admin fee / MWh	**$0.429**	**$0.429**	**$0.394**	**$0.468**
Admin fee tariff cap	$0.430	$0.430	$0.430	$0.430

(1) Total expense for 2018 also excludes non-cash items such as swap valuation adjustments and realized/unrealized gains on investments

(2) 2019 Prior Year Estimate refers to the 2019 estimate made during the 2018 budget presentation.

(3) Refer to section below.

(4) Defined as prior-year average monthly coincident peak for network service and capacity for point-to-point service in MWh.

Following operating expenses as previously discussed, debt service comprises the second largest component of NRR. The increase in debt service over the 2018 forecast is primarily due to higher scheduled principal repayments on existing debt.

NRR Adjustments ($ millions)

NRR Adjustments ($ millions)	2018 Budget	2018 Forecast	2019 Budget	2019 Prior Estimate
Pension & retiree healthcare (non-cash)	($2.6)	($3.1)	($3.0)	($2.6)
Capital lease maintenance (non-cash)	(0.4)	(0.4)	(0.4)	(0.4)
2017 Over-recovery	(1.5)	(3.3)		
2018 Projected over-recovery			(10.7)	
Total NRR adjustments	**($4.5)**	**($6.8)**	**($14.1)**	**($3.0)**

The 2018 projected over-recovery of $10.7 million is associated with various revenue and expense variances throughout 2018 as well as a $1.8 million change in the projected over-recovery from 2017 (as compared to the 2017 forecast during the 2018 budget cycle).

Lower expenses throughout 2018 ($5.5 million) are primarily the result of various delays/reassessments of maintenance and/or service engagements in IT, compliance, engineering, and operations.

Increases in 2018 revenues ($3.4 million) that contribute to the over-recovery are associated with additional staff time for engineering studies, increase in billing determinants as compared to original projections and new/extended contract service fees.

2018 Projected over-recovery	
2018 lower expense forecast (services, maintenance, etc)	$5.5
2018 higher revenue (engineering studies, contract services, etc)	3.4
2017 Over-recovery change	1.8
2018 Projected over-recovery	**$10.7**

FUTURE FORECASTING

SPP constructs a three-year budget plan each year in accordance with the tariff. The 2019–2021 budget is used as the basis for the five-year forecast. The billing units for 2022 and 2023 remain equal to the 399.6 MWh forecast for 2019 thru 2021, and only inflation adjustments were applied to the operating expenses.

Capital expenditures for 2022 and 2023 are also assumed to be consistent with the 2021 forecast with only inflation adjustments applied. Consistent with the budget for 2019-2021, SPP has included collection of 20 percent of the forecasted capital expenditures for each year in 2022 and 2023. This collection will serve to reduce future financing costs.

SPP Five Year Forecast

	2019 Budget	2020 Budget	2021 Budget	2022 Budget	2023 Budget
Income					
Tariff Administration Service	$157.5	$173.3	$180.5	$187.2	$194.1
Fees & Assessments	31.8	24.9	26.4	27.0	27.5
Contract Services Revenue	0.2	0.2	0.2	0.2	0.2
Miscellaneous Income	5.2	5.2	5.2	5.3	5.4
Total Income	**$194.7**	**$203.6**	**$212.3**	**$219.7**	**$227.2**
Expense					
Salary & Benefits	$96.1	$98.9	$101.2	$103.2	$105.2
Depreciation	19.4	19.9	17.8	18.2	18.5
Communications & Maintenance	23.1	23.8	24.8	25.3	25.8
Outside Services	14.3	13.7	13.1	13.4	13.7
Administrative / Other	14.0	13.8	13.5	13.1	12.4
Assessments & Fees	23.1	24.5	26.0	26.5	27.1
Travel & Meetings	3.0	3.1	3.1	3.2	3.2
Total Expense	**$193.1**	**$197.7**	**$199.5**	**$202.8**	**$205.9**
Net Income (Loss)	**$1.6**	**$5.9**	**$12.8**	**$16.9**	**$21.2**
Debt Repayment	$24.2	$26.3	$30.8	$35.1	$39.8
MWh Forecast (in millions)	399.6	399.6	399.6	399.6	399.6
Net Revenue Requirement	$157.5	$173.3	$180.5	$187.2	$194.1
Recommended Admin Fee / MWh	$0.394	$0.434	$0.452	$0.469	$0.486

V. CAPITAL PROJECTS

SPP expects 2019-2021 capital expenditures to be approximately $45.6 million.

Beginning in early 2018, a comprehensive list of new and ongoing projects was compiled in consideration for the 2019-2021 budget under the direction of SPP's project review and prioritization committee (PRPC) and in collaboration with staff from the project management office (PMO), accounting and IT departments. These projects are in addition to the foundation capital expenditures for IT, operations, settlements and facilities for routine refresh and upkeep.

The PRPC worked closely with project managers, IT directors, business owners and vendor managers to create scope requirements and to estimate anticipated workload associated with the implementation of the projects.

The PRPC reviewed 11 new project requests for the 2019-2021 budget cycle and ultimately submitted its recommendation to the SPP officers in August 2018 for the approval of seven new enterprise projects. There were four project submissions that were not deemed to be enterprise projects and would therefore be included within the scope of normal foundation work. Although no projects were declined, three of the seven recommended projects were delayed beyond 2019 due to uncertainty concerning requirements and timelines.

All of the proposed projects are anticipated to be feasible with current approved staffing levels. Therefore, there were no incremental headcount requests for any of the projects evaluated.

CAPITAL PROJECTS AND THE STRATEGIC PLAN

The capital budget was designed to support foundational strategies within the SPP Strategic Plan, with the capital initiatives acting as guidelines for the tactical implementation.

Following is a table with budgeted amounts for each of the seven new and two carryover projects organized by foundational strategy.

2019 - 2021 Capital Expenditures ($ millions)

	Prior Year(s)	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
Reliability Assurance					
EMS Upgrade	$ -	$ -	$ -	$ 2.8	$ 2.8
DTS Upgrade Phase 2B	-	0.8	1.3	-	2.2
Online SSAT	-	-	-	1.2	1.2
Total Reliabity Assurance	**$ -**	**$ 0.8**	**$ 1.3**	**$ 3.9**	**$ 6.1**
Enhance Member Value and Affordability					
Settlement Systems Replacement	$ 5.1	$ 0.2	$ -	$ -	$ 5.3
PMO Tool Upgrade/Replacement	-	0.5	-	-	0.5
Total Enhance Member Value and Affordability	**$ 5.1**	**$ 0.7**	**$ -**	**$ -**	**$ 5.8**
Enhance and Optimize Interdependent Systems					
Data Lake Phase 3	$ 0.3	$ 0.1	$ -	$ -	$ 0.4
FERC Order 841: Electric Storage	-	0.4	-	-	0.4
Freeze Date Replacement	-	-	0.3	-	0.3
Interface Pricing	-	-	0.2	-	0.2
Total Enhance and Optimize Interdependent Systems	**$ 0.3**	**$ 0.5**	**$ 0.5**	**$ -**	**$ 1.3**
Total Foundation Projects *	**$ -**	**$ 12.8**	**$ 12.7**	**$ 12.2**	**$ 37.7**
Total Capital Budget	**$ 5.4**	**$ 14.9**	**$ 14.5**	**$ 16.2**	**$ 50.9**

2019 - 2021 Capital Budget **$ 45.6**

** Foundation projects are reforecast during each budget cycle and do not include any carry-over funds.*

The following narrative provides a brief explanation of how major initiatives are designed to support the strategies. Capital expenditures for IT foundation include expenditures for both improving and maintaining SPP's technology infrastructure. Such expenditures support services across all areas of the company and are not specifically tied to any specific foundational strategy. The IT foundation initiatives are discussed in greater detail in the Foundation Capital Expenditures section following the discussion on capital projects and the strategic plan.

RELIABILITY ASSURANCE

The reliability assurance foundation strategy seeks a proactive approach to the changing dynamics of the transmission system to maintain and enhance the reliable transmission of energy over member facilities.

	Prior Year(s)	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
Reliability Assurance					
EMS Upgrade	$ -	$ -	$ -	$ 2.8	$ 2.8
DTS Upgrade Phase 2B	-	0.8	1.3	-	2.2
Online SSAT	-	-	-	1.2	1.2
Total Reliabity Assurance	**$ -**	**$ 0.8**	**$ 1.3**	**$ 3.9**	**$ 6.1**

- Energy Management System (EMS) Upgrade: EMS is critical to providing reliability and market functions. Vendor support for this system expires in 2023. Work on upgrading the system will need to begin in 2021 to maintain uninterrupted support.

- Dispatcher Training Simulator (DTS) Upgrade Phase 2B: In recent years, SPP has incrementally added capabilities to help train operations staff in a realistic environment. Despite these efforts, current processes still require significant manual intervention to support the market simulations. The upgrade project proposes to engage an external vendor to develop a more integrated solution.

- Online Small Signal Analysis Tool (SSAT): This tool is an evolution upon SPP's efforts to include stability analysis in its operations reliability analyses. Online SSAT can help operations staff predict and take actions to prevent oscillations within the bulk electric system.

ENHANCE MEMBER VALUE AND AFFORDABILITY

This strategy seeks to improve the value SPP provides to its members through efficiency and effectiveness of processes and deliverables.

	Prior Year(s)	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
Enhance Member Value and Affordability					
Settlement Systems Replacement	$ 5.1	$ 0.2	$ -	$ -	$ 5.3
PMO Tool Upgrade/Replacement	-	0.5	-	-	0.5
Total Enhance Member Value and Affordability	**$ 5.1**	**$ 0.7**	**$ -**	**$ -**	**$ 5.8**

- Settlement Systems Replacement: Development of a new settlement system will provide SPP settlement analysts with greater flexibility to respond to SPP and member-driven initiatives with respect to transmission and market transactions. The system will be wholly supported by SPP staff resulting in significant long-term savings. The replacement project is currently projected to be delivered on-time and on-budget.

- Project Management Office (PMO) Tool Upgrade/Replacement: A robust management tool contributes to a disciplined approach for the selection, prioritization and implementation of projects that deliver value to members and all other stakeholders. Utilizing an efficient, effective and standardized methodology will help ensure all SPP projects deliver on the benefits identified, within the approved budget and on schedule.

ENHANCE AND OPTIMIZE INTERDEPENDENT SYSTEMS

This foundational strategy seeks to both enhance and protect the interdependency of critical energy systems within the region and along regional seams and includes the further optimization of SPP's Integrated Marketplace.

	Prior Year(s)	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
Enhance and Optimize Interdependent Systems					
Data Lake Phase 3	$ 0.3	$ 0.1	$ -	$ -	$ 0.4
FERC Order 841: Electric Storage	-	0.4	-	-	0.4
Freeze Date Replacement	-	-	0.3	-	0.3
Interface Pricing	-	-	0.2	-	0.2
Total Enhance and Optimize Interdependent Systems	**$ 0.3**	**$ 0.5**	**$ 0.5**	**$ -**	**$ 1.3**

- Data Lake Phase 3: The Integrated Marketplace has created massive amounts of stored data, which can encumber server and database efficiency. The Data Lake initiative continues SPP's efforts to offload less frequently used data onto more cost-effective storage devices, resulting in increased performance and cost effectiveness for critical data access.

- FERC Order 841 Electric Storage: The benefit of this project is to increase reliability and economic efficiencies within SPP's marketplace. This is done by removing barriers of entry for energy storage type devices such that they may easily participate as a standalone market storage resource (MSR) registration type. Order 841 must be implemented into production by December 2019.

- Freeze Date Replacement: SPP participates in a congestion-management process with certain other entities along its seams using a baseline set in 2004. The objective of this project is to implement a new method to assign firm rights among the parties, which will impact transmission service, schedule curtailments and market-to-market settlements.

- Interface Pricing: The goal of this project is to implement a methodology (to be agreed upon) in both the SPP and MISO markets to change Locational Marginal Pricing (LMP) calculations on the seam to address the overlap that occurs when both markets are re-dispatching to relieve the same constraint. The overlap between markets was confirmed in a previously conducted joint study.

The following section describes noteworthy projects in greater detail. A complete list of initiatives and associated capital budgets appears in the Supplementary Schedules Section VI.

MAJOR CAPITAL PROJECTS

Settlement Systems Replacement

The objective of this project was to replace the current market and transmission settlement systems with a custom designed, single, high-performance and scalable system solution that will provide greater flexibility to respond to SPP initiatives and member requests. System capabilities will expand automation of existing manual processes enhancing accuracy, timeliness and auditability of settlements results.

The system was architected to facilitate in-house changes to respond to requirements needed to implement approved SPP revision requests. SPP will own the code to the system and be able to maintain and upgrade the system using dedicated in-house IT resources. This project kicked off in 2016 and is expected to be completed on-time and within budget with a May 2019 go-live date.

DTS Upgrade Phase 2B

The current Dispatcher Training Simulator (DTS) does not allow for production-like training due to the lack of an integrated market system and does not meet the current needs of SPP operators with the addition of balancing authority (BA), reliability unit commitment (RUC) and real-time balancing market (RTBM) functions. Since the implementation of the Integrated Marketplace and consolidated balancing authority, market systems have become almost as critical to reliability and balancing as the Energy Management System (EMS). Realistic simulation training using market systems is imperative to SPP operator readiness and ultimately increased reliability for the SPP footprint.

SPP has had a multiyear project to upgrade its dispatcher training simulator to increase availability to real-time operations staff, configure simulation displays to match those used on the operations floor and to incorporate market functionality to provide a more realistic simulation experience. Market functionality remains the most significant component not addressed. SPP plans to focus its effort on this component in the second half of 2019 and complete the work in 2020.

FERC Order 841

The order requires each RTO and ISO to revise its tariff to establish a participation model consisting of market rules that while recognizing the physical and operational characteristics of electric storage resources facilitates their participation in the RTO/ISO markets.

The participation model must (1) ensure that a resource using the participation model is eligible to provide all capacity, energy and ancillary services that the resource is technically capable of providing in the RTO/ISO markets; (2) ensure that a resource using the participation model can be dispatched and can set the wholesale market clearing price as both a wholesale seller and wholesale buyer consistent with existing market rules that govern when a resource can set the wholesale price; (3) account for the physical and operational characteristics of electric storage resources through bidding parameters or other means; and (4) establish a minimum size requirement for participation in the RTO/ISO markets that does not exceed 100 kilowatts (kW).

Additionally, each RTO/ISO must specify that the sale of electric energy from the RTO/ISO markets to an electric storage resource that the resource then resells back to those markets must be at the wholesale locational marginal price.

A high-level timeline for implementation of the order is as follows:

- October 2018 – Market Working Group (MWG) recommendation to the Markets and Operations Policy Committee (MOPC) and board
- December 2018 – Compliance filing due to FERC
- December 2019 – Implementation

Project Management Tool Upgrade/Replacement

The current project management tool is utilized for project and program management as well as for resource management in the IT applications and engineering departments. Mainstream support for the tool expires in 2018 and hardware reaches end of life in 2020. The project is scheduled to be completed in two phases. Phase one occurs in 2018 and would include discovery, analysis, and solution selection. Phase two follows in 2019 with the implementation of the identified solution.

The upgraded or new system shall support the current Project Management Institute's best practices for waterfall and agile methodologies. This includes sub-disciplines such as program management, portfolio management and resource management (allocation and forecasting). The new system shall provide dashboards and metrics that convey project health, the project pipeline, resource availability and the ability to track an individual's time against tasks in the project schedule. The new system shall also provide a mechanism for tracking budget-level expenditures along with the ability to provide billing data (number of hours) reported against tasks and associated bill rates. Lastly, the new system shall provide a mechanism to track

projects throughout the project pipeline from the initial project request through the closeout phase of the project.

FOUNDATION CAPITAL EXPENDITURES

The following section describes the various categories of foundation capital expenditures in greater detail.

	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
Foundation				
IT Infrastructure	$ 8.2	$ 8.4	$ 8.9	$ 25.5
Miscellaneous Departments	0.8	1.7	0.8	3.4
Total IT	$ 9.0	$ 10.1	$ 9.7	$ 28.9
Operations	2.6	2.3	2.2	7.1
Facilities	1.0	0.3	0.3	1.6
Settlements	0.2	-	-	0.2
Total Foundation *	$ 12.8	$ 12.7	$ 12.2	$ 37.7

** Foundation projects are reforecast during each budget cycle and do not include any carry-over funds.*

IT Foundation

Historically, the IT budget was subdivided into departmental budgets (systems administration, network, applications, service management, cybersecurity, IT architecture) with each group managing and prioritizing its respective budget independently. A new approach was employed in the current year to consolidate the categorical structure into two general categories – refresh and new initiatives. The intended benefits of this realignment include stronger inter-departmental prioritization, collaboration and teamwork, elimination of excess and/or redundant initiatives (and the associated budget), and better oversight and capturing of solutions that are supported and owned by multiple teams.

IT will continue to coordinate the capital budget requirements for a variety of additional departments outside of IT, the goal being to increase awareness of new capital spending and its relationship to the enterprise maintenance budget for which IT is responsible.

The budget is reflected in the following classifications.

	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
IT Foundation				
IT Infrastructure Refresh	$ 7.3	$ 7.4	$ 7.8	$ 22.6
New Initiatives	0.9	1.0	1.1	2.9
Miscellaneous Departments				
Engineering	$ 0.7	$ 1.6	$ 0.6	$ 3.0
Human Resources and Training	0.1	0.1	0.1	0.2
Corporate Communications and Regulatory	0.1	0.1	0.1	0.2
Total Miscellaneous Departments	$ 0.8	$ 1.7	$ 0.8	$ 3.4
Total IT Foundation	$ 9.0	$ 10.1	$ 9.7	$ 28.9

IT Foundation – IT Infrastructure Refresh

This category includes upgrades and replacements of aged technology and software to support existing systems and services (markets, reliability, settlements, etc.). This category can also be considered the ongoing infrastructure to "keep the lights on".

The major initiatives in the 2019 budget include the following:

	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
IT Foundation				
IT Infrastructure Refresh				
Servers	$ 3.1	$ 3.1	$ 3.3	$ 9.6
Storage	2.2	2.2	2.4	6.8
Network	1.8	1.8	1.9	5.6
Software licenses and upgrades	0.2	0.2	0.2	0.6
Total IT Infrastructure Refresh	$ 7.3	$ 7.4	$ 7.8	$ 22.6

- Servers: It is the policy of IT to replace physical server hardware after a five or six year useful life based on many factors such as withdrawn support from the vendor, high failure rates, increased performance requirements, incompatibility with other technology and performance/economic considerations.

  SPP has approximately 130 servers that are targeted for replacement during 2019. The cost per server ranges from $10,000 to $45,000 (capital expense portion), contributing to roughly 43 percent of the infrastructure-refresh budget. This activity is anticipated to be relatively aggressive as compared to previous years due to the extended use of eligible aged servers that were not replaced in previous years. Of these 130 devices,

there are 14 “ESX Hosts” (to continue SPP’s virtualization efforts) and 116 devices serving as dedicated application servers.

Storage: Due to the significance of the data growth experienced over the past several years, starting in 2018 there has been concentrated focus on “data governance” to ensure optimal management and retention of corporate application data, with a desired outcome that would curtail the rampant growth rate and minimize the need for additional storage capacity going forward. This effort will continue throughout 2019 and beyond to ensure adequate storage management processes are being implemented. Based on the high utilization levels and the need to accommodate space for a second copy of archived data, there are plans to upgrade the existing backup/recovery equipment (known as “Data Domain” equipment) during 2019 at the Chenal, Maumelle and leased data centers.

There also exists the need to replace the existing storage directories at Chenal and Maumelle. SPP currently has a total of eight storage directories within the electronic security perimeter (ESP) and non-ESP environments. These have been installed and operating for five-six years and are experiencing throughput and bandwidth limitations, as well as approaching the end-of-support from the vendor in April 2019. This replacement project will commence during the fourth quarter of 2018, with the implementation continuing through late 2019.

Finally, it is expected that a nominal amount of incremental storage capacity (roughly 120 terabytes) will be needed to accommodate data growth.

- Network: SPP has an extensive corporate voice and data network that is required to provide high throughput, high availability, protective security and ample communications across business locations and members. With over 550 hardware network appliances in operation, SPP remains in a continuous state of implementing software maintenance and infrastructure upgrades/replacements to remain current and/or stay ahead of dynamic communication demands. The following key areas are planned to be addressed in 2019:

    - ESP Firewall refresh: SPP utilizes firewall technology to monitor, control, and protect systems. The existing production ESP firewalls, located in both Chenal and Maumelle, are reaching end-of-vendor support. The plan is to replace the current firewall technology with features that include intrusion prevention system (IPS) and uniform resource locator (URL) filtering to better control access

from the ESP. This also will provide improved monitoring, logging and evidence gathering for audit purposes.

- VoIP refresh: SPP currently utilizes Voice over Internet Protocol (VoIP) technology to deliver voice communications over SPP's network. As part of this technology, the SPP Service Desk utilizes Cisco Contact Center Express (CCX) for inbound calls and customer call queuing. The existing CCX hardware has reached end-of-support and needs to be refreshed. IT plans to replace the current system with hardware that is compatible with the latest software release of CCX.

- IPS expansions: The corporate IPS appliances inspect all traffic entering and exiting the SPP network. These appliances are becoming more saturated with high volumes of traffic that overrun the IPS inspection engine and flow into the SPP network without inspection, causing network latency to current applications. IT anticipates either a technology refresh or module expansion in 2019 to satisfy performance levels and traffic volumes.

- Access Management: SPP's ongoing continuous improvement program identified an opportunity to eliminate a stand-alone application providing authentication and authorization for applications. This stand-alone application will be replaced by utilizing functionality of another application currently utilized by SPP. The change will require SPP to obtain additional licenses to deploy the application for authentication and authorization purposes but will result in a lower overall cost.

- Infrastructure cabinets: SPP utilizes network infrastructure cabinets in both the Chenal and Maumelle data centers to house SPP servers. The existing cabinets are reaching capacity with the growth in servers over the past few years. The plan is to deploy additional cabinets in both locations to address the server growth.

- Software Licenses and Upgrades: SPP performs routine software upgrades and installations each year to maintain product currency, as well as to accommodate growth of user and/or server requirements. IT plans to perform upgrades to several applications in 2019, as well as acquire incremental licenses for a number of existing products including the following:

- Data Management: SPP utilizes a data-management tool to develop, manage and transform the flow of data within the data warehouse environment. IT anticipates additional licenses will be needed in 2019 to support an increase in product usage.

- Security Access: Security access tools are utilized to secure and protect all privileged account passwords and SSH keys in a highly secure central repository to prevent the loss, theft or unauthorized sharing of credentials. Additional licenses are anticipated during 2019 based on growth.

- Security Data Logging: SPP utilizes a software platform that provides logging of security data including network, endpoint, access, malware, vulnerability and identity information. It is anticipated that more assets and data will be added during 2019, resulting in additional software licenses.

- Access Management: Additional software licenses for tools providing centralized access and management control to SPP servers will be needed to align with SPP's anticipated server growth.

- Monitoring and baseline management: Additional licenses for software utilized to ensure usage and change activity is properly captured will be needed for incremental servers implemented into the IT production/ESP environment.

- Risk Management: SPP utilizes certain software for vulnerability assessments and security risk management. Based on the North American Electric Reliability Corporation (NERC)/Critical Infrastructure Protection (CIP) standards, SPP is required to perform cyber vulnerability assessments of the ESP and all cyber assets. Additional licenses will likely be required as qualifying assets grow in these environments.

- Data Visualization: SPP utilizes software to collect, integrate, analyze and provide data visualizations to support better SPP business decision making. An expanded user base across multiple departments is expected during 2019, resulting in additional server and viewer licenses.

IT Foundation - New Initiatives

The new initiatives category consists of both software purchases related to new technology /functionality as well as incremental hardware and software associated with capital projects.

IT Foundation	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
New Initiatives				
Software enhancements and consulting	$ 0.8	$ 0.9	$ 0.8	$ 2.5
Enterprise PRPC projects *	0.1	0.1	0.2	0.4
Total New Initiatives	$ 0.9	$ 1.0	$ 1.1	$ 2.9

** PRPC projects: 2019 PMO Replacement Tool , 2020 Freeze Date, 2020 Online SSAT*

Software enhancements and consulting

- Identity and Access Management (IAM): IAM is the security discipline that ensures appropriate access to resources across diverse technology environments, allowing SPP to meet increasingly stringent compliance requirements. There are plans to continue enhancing the current IAM software in order to keep up with the growing demands of cybersecurity.

- User behavior analytics: Sophisticated cyberattacks can be hidden and difficult to find, yet addressing these threats is critical to protecting SPP and its information assets. A user behavior analytics (UBA) solution is planned for implementation in 2019. This will help identify known, unknown and hidden threats by using multi-dimensional behavior baselines, dynamic peer group analysis and unsupervised machine learning to detect compromised or misused accounts or devices, which can lead to data exfiltration or IP theft.

- Risk management: SPP utilizes a vulnerability and security risk management system to measure and manage potential risk to network security. There are several enhancements/customizations needed during 2019 that will require implementation services from the associated vendor.

- Application whitelisting software: Traditional malware prevention methods such as anti-virus software, firewalls and intrusion-prevention systems often do not provide the necessary level of defense needed to protect endpoints such as application servers, operator consoles, and desktops. As a result, there are plans to implement a software solution known as “application whitelisting” that will only permit pre-identified, authorized programs to be accessed and/or executed. Essentially, whitelisting flips the traditional antivirus model from a “default allow” to a “default deny” approach for all executable files. This model is a considerably more effective defense mechanism.

- Public key infrastructure (PKI): PKI entails hardware, software and processes for the creation and management of encryption keys to encrypt sensitive data. Member data currently exists within file systems (e.g., member invoices) without any encryption. Encryption of this sensitive data will improve SPP's security posture and protect against unintended exposure and access by unauthorized users.

- Enterprise PRPC projects: The PRPC approved a relatively small number of new projects in July 2018 that will begin over the next three years. While each project carries a dedicated capital project budget, several projects will also require incremental hardware and software that impacts the IT Foundation budgets. The only project affecting the 2019 IT Foundation budget is the PMO replacement tool project, which will require 12 virtual servers and associated software.

IT Foundation - Miscellaneous Departments

Items included in this foundation budget encompass all other software and hardware needs for departments outside of IT.

	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
Miscellaneous Departments				
Engineering	$ 0.7	$ 1.6	$ 0.6	$ 3.0
Human Resources and Training	0.1	0.1	0.1	0.2
Corporate Communications and Regulatory	0.1	0.1	0.1	0.2
Total Miscellaneous Departments	$ 0.8	$ 1.7	$ 0.8	$ 3.4

Engineering: The majority of this budget is planned for new enhancements to the congestion hedging system as well as modifications to the existing functionality. The following enhancements to engineering systems/tools are also planned for 2019:

- Additional processing capacity and licenses will allow economic planning engineers to meet shorter study deadlines and address changing Integrated Transmission Planning (ITP) processes.

- Enhancements to the transmission and generation implementation tracking (TAGIT) and standardized cost estimation reporting tool (SCERT) systems will allow for better tracking and management of transmission projects and notifications to construct (NTCs).

- Enhancements to the engineering hub will improve and enable straightforward data transfer between the modeling team and SPP members.

HR training and professional development: Various enhancements to the HR system planned for 2019 including preparing for new IT compliance training, along with assorted upgrades to the recruiting software.

Corporate communications: For 2019 and beyond, the corporate communications department anticipates ongoing enhancements to the "Circuit" as well as a possible replacement of the existing Message 911 system.

Operations Marketplace and Other System Enhancements

The operations foundation budget primarily consists of planned enhancements to the market operations system (MOS). This includes modifications to the market operator interface (MOI), market user interface (MUI) and market clearing engine (MCE) applications as well as the market database (MDB). MOS enhancements represent approximately 75 percent of the operations foundation budget. The remaining 25 percent includes budgeted enhancements for numerous other systems and tools as summarized in the table below.

	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
Operations Marketplace and Other System Enhancements				
Market Operation System (MOS)	$ 2.0	$ 2.0	$ 2.0	$ 6.0
Open Access Same-Time Information System (OASIS)	0.2	0.0	0.0	0.2
Dispatch Training Simulator (DTS)	0.1	0.1	0.1	0.2
DSA Tools (PSAT, VSAT, TSAT)	0.1	0.1	0.1	0.2
Control Room Operations Window (CROW)	0.1	0.0	0.0	0.1
Interchange Distribution Calculator (IDC)	0.0	0.0	0.0	0.1
Miscellaneous Other *	0.2	0.1	0.0	0.3
Total Operations Marketplace and Other System Enhancements	$ 2.6	$ 2.3	$ 2.2	$ 7.1

* Includes Energy Management System (EMS), Open Access Technology Int'l/Native Network Limit (OATI/NNL), Centralized Modeling Tool (CMT), Phaser Measurement Unit (PMU) and PI.

As in past years, the foundation budget includes funding for system enhancements that do not rise to the level of enterprise projects. This includes enhancements, some of which are requested by members and market participants that are small enough to be covered by the foundation budget and included with future software releases. During the capital project review process, the PRPC determined the following project submissions to be more appropriately considered within the scope of normal foundation work:

- Fast start resource logic: This initiative is to enhance the market from a FERC proceeding to investigate price formation in the market. This is aimed to ensure that pricing rules would satisfy four objectives: 1) maximize market surplus for consumers and suppliers; 2) provide correct incentives for market participants to follow

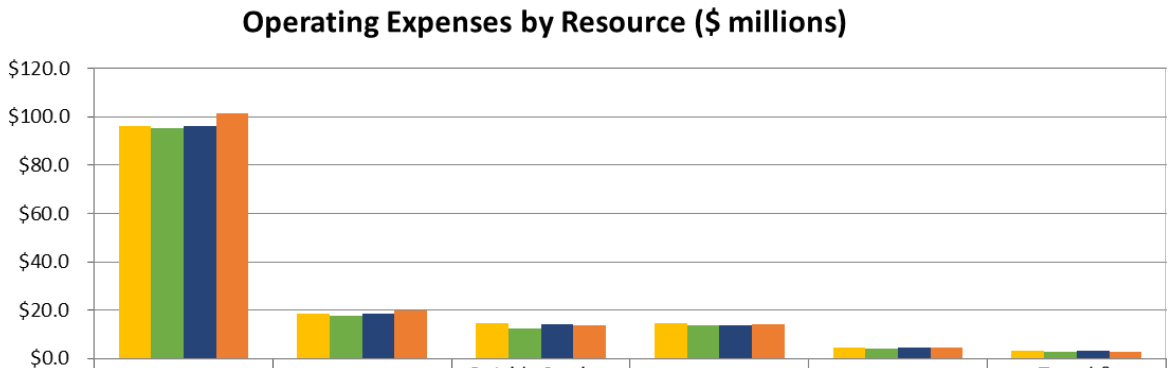
commitment and dispatch instructions, make efficient investments in facilities and equipment and maintain reliability; 3) provide transparency so that market participants understand how prices reflect the actual marginal cost of serving load and the operational constraints of reliably operating the system; and 4) ensure that all suppliers have an opportunity to recover their costs. There is a risk that the actual effort required may be higher than anticipated depending on how FERC directs SPP to respond.

- Multi-day unit commitment: SPP will be providing a non-financially binding forecast as an initial step towards the full implementation of a financially binding multi-day unit commitment process. This will help market participants make better decisions with respect to offering resources into the market and making associated fuel procurement decisions. The impacts of implementing the initial step are small. Subsequent steps have not yet been determined, and the associated impacts are not yet known.

- Ramping product: By designing methods to better anticipate the need for responsive resources in the market, this initiative will address the impact that resource ramp shortages in the market cause with respect to short-term spikes in market prices. The work associated with implementing these methods is relatively small and will be integrated with a market release that contains other enhancements and fixes.

VI. RESOURCE UTILIZATION

SPP's 2019 budget incorporates the funds necessary for SPP to provide day-to-day operations while pursuing the strategic goals and organizational objectives. The chart below shows the various resource components and the corresponding 2019 budget amounts in comparison to 2018 budget and forecast, as well as a comparison to amounts forecast for 2019 during the 2018 budget cycle. The following section discusses each component in detail.



	Compensation	Maintenance	Outside Services & Consulting	Admin & Other	Communications	Travel & Meetings
2018 Budget	$96.1	$18.4	$14.6	$14.4	$4.5	$3.1
2018 Forecast	$95.4	$17.6	$12.2	$13.8	$4.0	$2.9
2019 Budget	$96.1	$18.6	$14.3	$13.9	$4.5	$3.0
2019 Prior	$101.6	$19.7	$13.7	$14.1	$4.6	$2.9

Operating Expenses by Resource ($ millions)

	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Compensation	$96.1	$95.4	$96.1	$101.6
Maintenance	18.4	17.6	18.6	19.7
Outside Services & Consulting	14.6	12.2	14.3	13.7
Admin & Other	14.4	13.8	13.9	14.1
Communications	4.5	4.0	4.5	4.6
Travel & Meetings	3.1	2.9	3.0	2.9
Total Operating Expense *	**$151.0**	**$145.8**	**$150.5**	**$156.5**

** Excludes depreciation & FERC fees. Other expense in 2018 Forecast also excludes non-cash items.*

STAFFING

Valuing Resources

The employees of SPP are the most valuable asset, and keeping employees engaged and challenged is a key focus of SPP management.

SPP employs various initiatives to foster retention and build bench strength, which ultimately enhances the ability to provide the highest level of service and value for members and customers. Employees are encouraged to seek opportunities that match their career goals and to expand their knowledge base through career development initiatives such as rotation programs, job shadowing and career planning tools.

The SPP Human Resources Committee is responsible for the review and approval of employee and executive benefit plans, organizational structure and compensation programs. Each of these components are crucial to attracting and retaining career employees that are well suited to the SPP corporate culture.

The committee benchmarks SPP compensation and benefit programs every three years and reviews these plans on an annual basis to ensure competitiveness in the marketplace while adhering to a cost-effective budget. Compensation elements are developed using benchmarks of the peer group as determined by the SPP Human Resources committee. SPP establishes compensation elements that competitively target the 50th percentile.

SPP employs various initiatives to help foster retention and build bench strength in order to provide the highest level of service and value for its members.

Continuous improvement is one of SPP's culture drivers and inspires creative approaches to employee-centric initiatives from recruiting to training and development. Recruiting initiatives focus on qualifications, culture and diversity. The budget includes funds for employee training and tuition reimbursement. Employees are offered various learning opportunities, including an annual leadership conference, supervisor-approved outside training and access to multiple online and in-person training classes through the SPP corporate training and professional development department. SPP administers an in-house Engineer-in-Rotation program, which seeks the most talented engineering graduates for an expansive training program. The rotating staff of engineers gain experience through on-the-job training and are placed in permanent roles at the completion of their rotation assignments.

Successfully keeping employees engaged and challenged helps promote lower turnover. SPP management reviews staffing levels as vacancies occur and looks for opportunities to manage headcount through attrition. These efforts are evident and described in detail in the following discussion on staffing levels.

Staffing Levels

2018 Staffing Changes

Staffing levels throughout the organization are frequently assessed while resource needs continually evolve as the organization matures. As a result of the continued assessments, various changes were made throughout 2018.

2018 staff reductions

Regional Entity (four reductions): The Amended and Restated Delegation Agreement between NERC and SPP was terminated as of Aug. 31, 2018, resulting in the dissolution of the SPP Regional Entity (RE) division. The 2018 budget assumed SPP would retain 11 of the 23 staff members (i.e. the other 12 would either resign or retire). This assumption was for budgeting purposes only and did not negate the possibility of retaining all 23 staff members if necessary, as SPP committed to the continued employment for all remaining RE staff. By the termination date, seven RE staff had filled open positions within the RTO and nine terminated employment with SPP, resulting in reductions in overall SPP staff of 16.

Headcount	2018 Budget	2018 Forecast
RTO Total	598	606
Regional Entity	11	0
SPP Total	609	606

The total number of RE staff absorbed by the RTO was seven, which was four less than the budget assumption of 11. Of the seven positions transferring to the RTO, five new positions were added to augment compliance and interregional affairs functions, and the remaining two were placed in human resources and corporate communications.

2018 Staffing Changes

	RTO	RE
2018 Beginning RTO budget	598	
2018 Beginning Regional Entity budget		23
RE resignations / retirements		(9)
RE staff filling open RTO positions		(7)
RE staff absorbed by RTO *	7	(7)
Operations positions eliminated	(3)	
Out-of-budget positions added (Eng/IT)	4	
2018 Year-end RTO forecast	606	0

** 2018 Budget assumed RTO would absorb 11 of 23 RE positions.*

Operations (three reductions): The operator-in-training (OIT) program is utilized for the development of qualified personnel to facilitate the staffing of system operator vacancies as they occur through natural attrition. An evaluation of real-time operations staffing requirements in relation to anticipated staff retirements occurred during 2017, at which point operations management recommended a temporary increase in staff for the OIT program from three to six. This planning allowed for restructuring and transfer of knowledge/expertise to

accommodate staff retirements, and therefore resulted in an overall reduction in staff during 2018. Excluding an intercompany transfer of two positions from the interregional relations division, operations has been able to decrease staff by three positions since 2016. The OIT rotation program is expected to remain at three positions going forward.

2018 Staff increases

Engineering (three additions): Growth in volume and complexity of generation interconnection (GI) studies over the years resulted in significant backlogs and delays in the administration of the studies. SPP created three incremental staff positions in 2018 to supplement the GI studies process. The addition of these positions will result in efficiency gains within the GI studies department and in eventual savings for GI customers and additional revenue for SPP stakeholders once the new staff are able to absorb more of the work currently supplemented by outside contractors.

Information Technology (one addition): A position was added in the IT cybersecurity department to enhance focus on cybersecurity issues. IT has committed to one overall staff reduction within the IT division (due to attrition and/or gained efficiencies) to offset this increase by 2021.

2019 Staffing Changes

Management identified the need for incremental staff associated with business continuity and supply chain management. The two incremental positions were assessed by the senior management team and recommended for inclusion in the 2019 budget.

Credit (one addition): As a continuation of SPP's cybersecurity roadmap, a business continuity specialist position was recommended to facilitate maintenance, training, and exercising of SPP's corporate and departmental business continuity plans. The position will lead efforts to mature current plans and help SPP staff maintain a continual state of readiness to effectively react to short-term or long-term business interruption events.

Information Technology (one addition): As part of the cybersecurity strategic plan reviewed with the board and members committee in July 2018, IT recommended a supply chain analyst position to help mitigate the risk of procured hardware and software being leveraged to compromise SPP's cyber security perimeters.

Operations (one reduction): As the result of advance planning and training, one additional operator position will be eliminated due to a planned retirement in the first quarter of 2019.

Unidentified (two reductions): SPP officers recommended managing attrition to reflect reductions in staffing levels over 2019-2021. The proposed staff reductions are two in 2019, three in 2020 and two in 2021. In addition, IT commits to one overall staff reduction by 2021 to offset the incremental position added during 2018. The reductions in staff will be achieved by collaboration across all divisions to consider restructuring or redistributing the workload as attrition occurs over the specified timeframe.

Overall changes in the approved staffing levels is illustrated in the table below:

Approved Staffing Levels

	2018	2019	2020	2021
2018 Budget	**609**			
Net incremental (3 Eng, 1 IT)	4			
Net reductions (4 additional RE, 3 Ops)	(7)			
2018 Forecast	**606**			
Business Continuity Specialist (Credit)		1		
Supply Chain Analyst (IT)		1		
Budgeted attrition (1 Ops, 2 unidentified)		(3)		
2019 Budget		**605**		
Customer Relations Representative			1	
Programmer/Analyst (DTS project) *			1	
Governance & Compliance Tool Administrator			1	
Budgeted attrition (3 unidentified)			(3)	
2020 Forecast			**605**	
Customer Relations Representative				1
Budgeted attrition (1 IT, 2 unidentified)				(3)
2021 Forecast				**603**
Prior Budget / Forecast		610	612	n/a

** Refer to capital project section for details on project descriptions.*

The following table shows the staff numbers by executive division:

2018 - 2021 APPROVED POSITIONS BY DIVISION

Headcount	2018 Budget	2018 Forecast	2019 Budget	2020 Forecast	2021 Forecast
Operations	162	161	160	160	160
Information Technology	164	167	168	169	169
Engineering	80	83	83	83	83
Finance & Corporate Services	68	68	69	69	69
Process Integrity [1]	54	58	58	60	60
Regulatory & Legal	27	27	27	27	27
Market Monitoring (MMU)	16	16	16	16	16
Officer	11	11	11	11	11
Interregional Relations & Market Design	9	7	7	7	7
Corporate Communications & Gov't Affairs	7	8	8	8	8
Other [2]	0	0	(2)	(5)	(7)
RTO Total	598	606	605	605	603
Regional Entity [3]	11	0	0	0	0
SPP Total	609	606	605	605	603

1) The Process Integrity division includes compliance, project management, training, customer relations, internal audit and interregional relations departments.

2) "Other" represents total of 7 unidentifed reductions for attrition (2 in 2019, 3 in 2020 and 2 in 2021).

3) The 2018 budget assumed 11 of 23 positions would be absorbed by the RTO by mid-year 2018.

Note: In some instances, the net increases/decreases by division discussed in the previous section are partially offset by additional interdepartmental transfers including but not limited to allocation of remaining RE staff.

Staffing Components

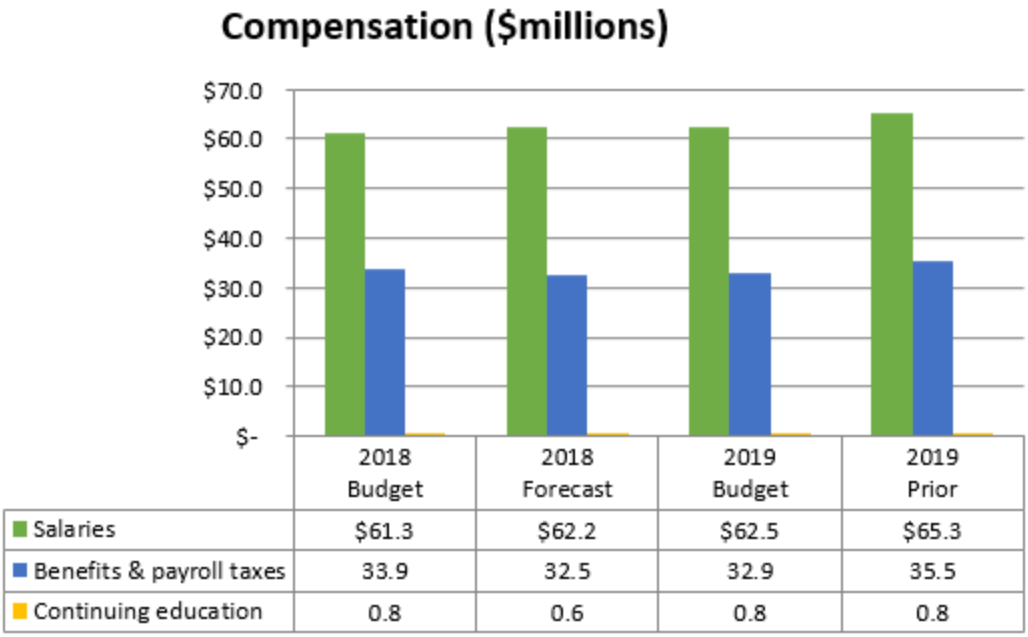
The base salary budget assumes a merit increase of 3 percent, a promotion increase of 0.75 percent and a vacancy factor of 2.5 percent.

The staffing budget for 2019 includes funding for salaries (including base salary and overtime pay), benefits and payroll taxes, and continuing education.

Salary Expenses ($ millions)	2018 Budget [1]	2018 Forecast	2019 Budget [2]	2019 Prior [2]
Base salaries at beginning of year	$60.1	$60.1	$60.6	$61.9
Merit increase	1.8	1.8	1.8	1.9
Premium pay	1.0	1.1	1.0	1.0
Retention and severance	0.0	0.7	0.0	0.0
Incremental staff	0.3	0.6	0.1	0.1
Promotions	0.5	0.5	0.5	0.5
Vacancy	(1.9)	(1.8)	(1.6)	0.0
RE reductions	(0.5)	(0.7)	0.0	0.0
Total Salary Expenses	**$61.3**	**$62.2**	**$62.5**	**$65.3**

(1) 2018 budget vacancy 3.0%, merit 3.0%

(2) 2019 budget vacancy 2.5%, merit 3.0%, 2019 prior vacancy 0.0%



	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Salaries	$61.3	$62.2	$62.5	$65.3
Benefits & payroll taxes	33.9	32.5	32.9	35.5
Continuing education	0.8	0.6	0.8	0.8

Unbudgeted retention payout associated with the dissolution of the RE plus incremental staff and severance payout within the RTO resulted in an increase in the 2018 salary forecast as compared to the 2018 budget.

Only a minimal increase is reflected in salaries from the 2018 forecast to the 2019 budget. This is due to a partial year of RE expenses included in both the 2018 budget and forecast that are no longer reflected in the 2019 budget. Removing RE salaries from the 2018 forecast more clearly illustrates the expected year-over-year variance, which is primarily associated with merit/promotion pool additions and full-year compensation in 2019 for the incremental positions added at various times throughout 2018.

Salary Expenses Excluding RE				
($ millions)	**2018 Forecast**	**2019 Budget**	**Increase**	
Total Salary	$60.0	$62.5	$2.4	4%

Vacancy and Merit Assumptions

During the 2018 budget planning process, 2017 vacancy levels averaged approximately 3 percent and therefore a vacancy factor of 3 percent was applied to the 2018 budget. Zero vacancy was reflected in the prior year 2019 forecast based on the commitment to integrate RE positions.

The average vacancy for 2018 headcount is expected to be approximately 2.6 percent for the year. SPP anticipates staff turnover in 2019 to be relatively consistent with its experience in 2018, and a vacancy rate of 2.5 percent was applied to the 2019 budget. This equates to headcount vacancy averaging 15 positions during the calendar year.

	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Vacancy rate	3.0%	2.6%	2.5%	0.0%

The Human Resources Committee recommended an overall merit increase of $1.8 million (3 percent) and a promotion pool of $0.5 million (0.75 percent) for 2019 based on their review of several regional and industry factors, including SPP members.

Merit and Promotion Budget

	2015	2016	2017	2018	2019
Merit Increase	$1.1	$1.4	$1.7	$1.8	$1.8
Promotion Pool	$0.4	$0.4	$0.5	$0.5	$0.5
Merit %	2.0%	2.5%	3.0%	3.0%	3.0%
Promotion %	0.75%	0.75%	0.75%	0.75%	0.75%

Benefits and Taxes

The budget for benefits and payroll taxes includes pension cost; performance compensation; payroll taxes; medical, dental and life insurance benefits; employee events; and relocation expenses. Below is a breakdown of employee benefits and taxes:

Benefits & Taxes ($ millions)	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Retirement Plans (401K, pension, deferred comp)	$12.6	$11.2	$11.1	$12.7
Performance Compensation	10.2	10.2	10.4	10.9
Payroll Taxes	5.0	4.8	5.1	5.4
Medical Benefits	4.9	5.0	5.0	5.3
Other Employee Benefits	0.4	0.5	0.5	0.4
Dental Benefits	0.4	0.4	0.4	0.4
Life Insurance Benefits	0.4	0.4	0.4	0.4
Total Benefits & Taxes	**$33.9**	**$32.5**	**$32.9**	**$35.5**
Continuing Education	0.8	0.6	0.8	0.8
Total Benefits, Taxes & Con't Education	**$34.7**	**$33.1**	**$33.6**	**$36.3**

The 2018 forecast and 2019 budget amounts for pension and retiree healthcare expense are based on the most recent actuarially calculated pension costs. SPP will make cash contributions of $4.5 million to the pension plan during 2018. Contributions to the plan are expected to be $5.0 million in 2019. Pension expense is included in compensation, but has no cash impact to

the current year NRR. The difference between the pension expense and the expected cash contributions is included as a non-cash adjustment in the NRR calculation.

	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Pension				
Pension expense	$7.4	$6.6	$7.0	$7.6
Cash contribution	(5.9)	(4.5)	(5.0)	(6.0)
Non-cash adjustment	$1.5	$2.1	$2.0	$1.5
Retiree healthcare				
Retiree healthcare expense	$1.1	$1.0	$1.0	$1.1
Cash contribution	0.0	0.0	0.0	0.0
Non-cash adjustment	$1.1	$1.0	$1.0	$1.1
Total non-cash adjustment	**$2.6**	**$3.1**	**$3.0**	**$2.6**

Performance compensation is budgeted at the target level of 15 percent of base salary and is paid in March of the following year. Funding for 401(k) matching contribution is estimated at 4.7 percent of the salary expense (including performance compensation) based on recent company trends.

Medical Benefits Costs

The net cost of the self-funded medical plan in the 2019 budget is $5.0 million, which is in line with the 2018 budget and forecast.

SPP experienced an increase in medical claims beginning in 2015 and continuing throughout 2016. The increase has since leveled off starting in 2017. Total gross claims are estimated to be $5.4 million in 2019, which is consistent with the 2018 forecast.

Close to 94 percent of employees participate in the medical plan, which is comparable with previous years. The total estimated number of employee participants in 2019 is 567, compared to 557 in 2018 (total insured participants is estimated to be 1,643 as compared to 1,620 in 2018). SPP retirees were removed from SPP's self-funded plan in 2015. SPP now provides eligible retirees fixed monthly payments through a tax-free health reimbursement account to pay for individual Medicare supplement health-insurance plans or other eligible healthcare expenses. This change decreased SPP's medical funding exposure for those retiree participants.

Changes were implemented in 2018 to limit the increase in claims and administrative costs, as well as provide cost savings to employees with differing medical insurance needs and priorities. A healthcare savings account (HSA) option was added to the medical plan, which reduces SPP's

exposure to claims expense. Under the HSA option, SPP contributes on a semi-annual basis a fixed dollar amount to participants' accounts. Participants are then responsible for paying for their medical expenses utilizing the accumulated savings. Deductibles under this plan are much higher which reduces SPP's exposure. Sixty-three employees participated in this new option in 2018. Administrative changes were implemented in the drug prescription process which reduced pharmaceutical claims as well during 2018.

Fees are paid to the insurance provider to cover administrative costs and insure against excessive losses at both the participant and corporate level. These fees are estimated to be $1.0 million in 2019, which is also consistent with 2018.

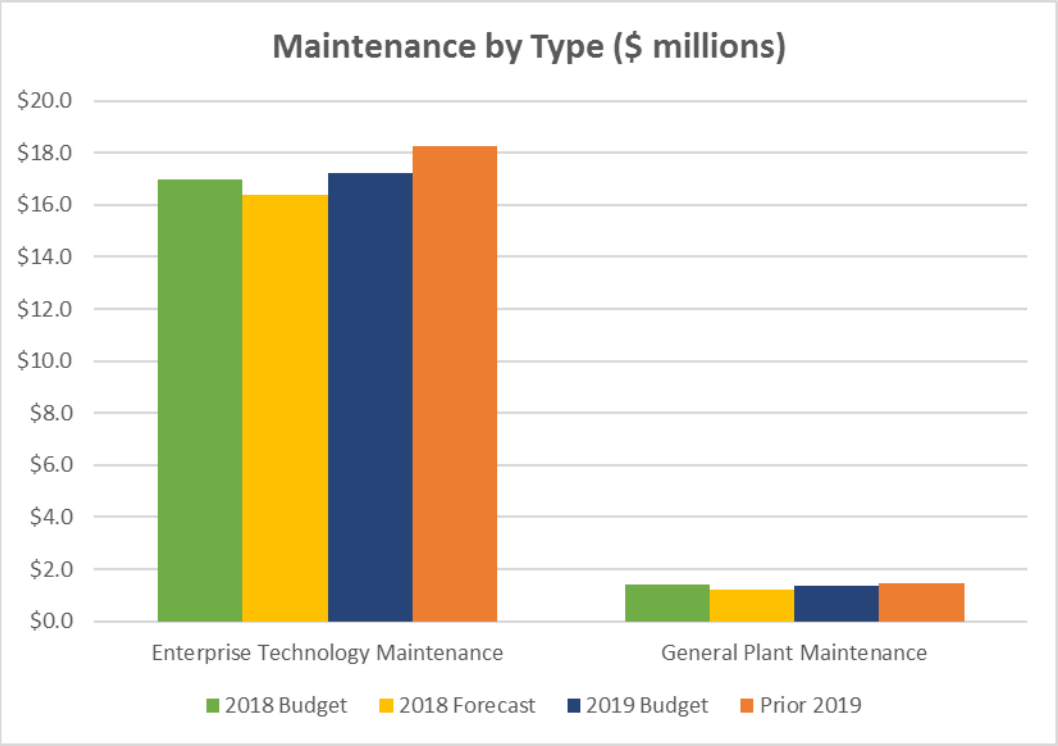
Employee contributions to the medical plan offset the overall cost and are estimated to be $1.4 million in 2019. The net annual cost of the medical plan to SPP per participant is expected to be approximately $8,700 thousand in 2019. SPP's Human Resource Committee continues to target an 80/20 cost share between employer and employee for the medical benefit costs.

Healthcare Costs ($ millions)

	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Gross Claims	$5.3	$5.4	$5.4	$5.7
Admin Fees	1.0	1.0	1.0	1.0
Employee Contributions	(1.4)	(1.4)	(1.4)	(1.4)
Net Expenses	$4.9	$5.0	$5.0	$5.3
Number of employee participants	549	557	567	567

MAINTENANCE

Maintenance expense is primarily related to contractual agreements in IT to cover hardware and software assets, plus expense for general upkeep of facilities. The increase in the 2019 budget is primarily related to year-over-year inflationary increases on existing IT contracts.

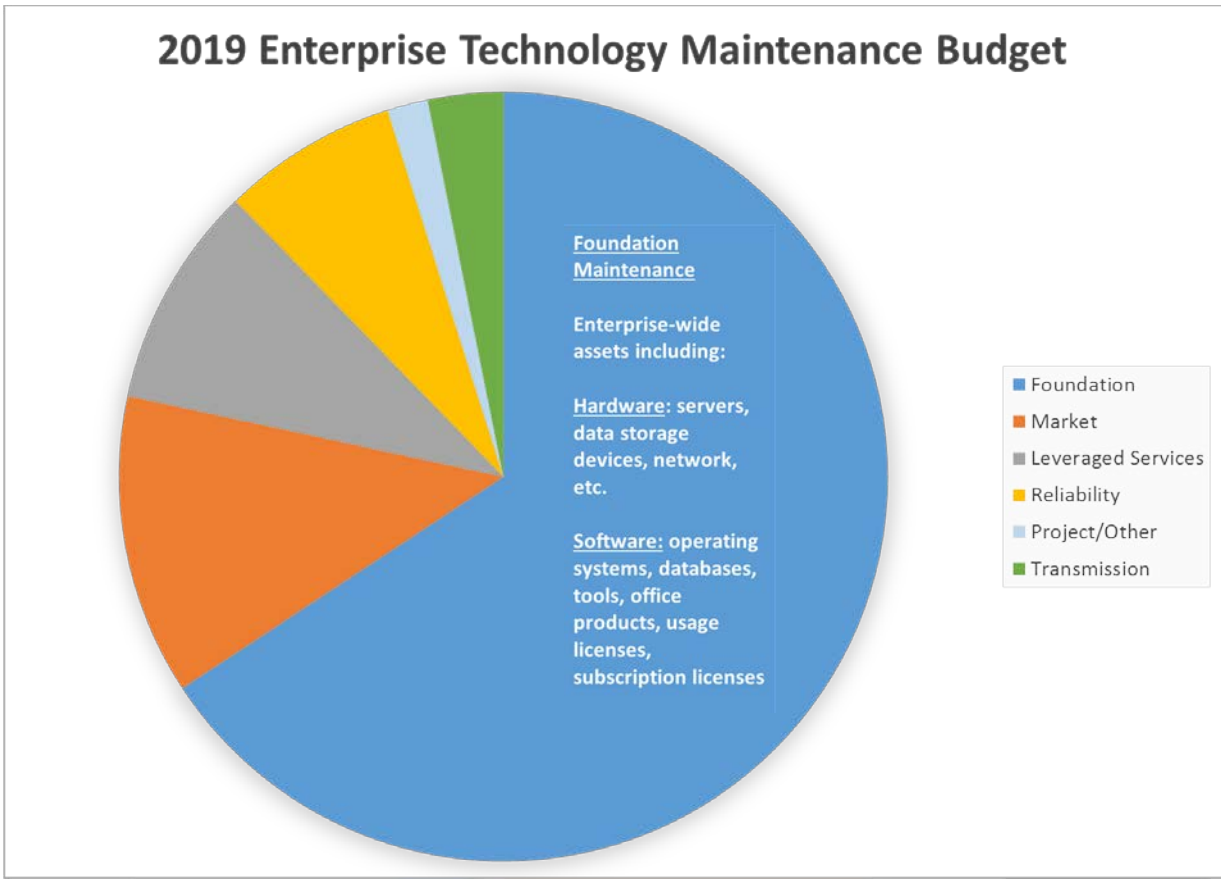


Maintenance Expense ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Enterprise Technology Maintenance	$17.0	$16.4	$17.2	$18.3
General Plant Maintenance	1.4	1.2	1.3	1.5
Total	**$18.4**	**$17.6**	**$18.6**	**$19.7**

Enterprise Technology Maintenance

Enterprise technology maintenance expense covers hardware and software assets in the existing portfolio as well as incremental purchases and new systems developed across the organization.

Enterprise technology maintenance agreements encompass necessary coverage such as defect restorations, security patches, product updates and version upgrades of software products. SPP retains maintenance agreements on the majority of in-use installed hardware and software. The level of maintenance is selected based on factors including the criticality of the application and the environment (testing, development or production).



The three primary components of enterprise technology maintenance include hardware maintenance, perpetual software maintenance and software subscriptions.

Components within each maintenance category include:

- Maintenance/support agreements for hardware (servers, storage, network, etc.)
- Maintenance/support agreements for software (operating systems, databases, tools, Office products, usage licenses, subscription licenses)

The majority of the increase in 2019 maintenance expense is related to year-over-year increases (two percent) to support the existing environment.

- Maintenance/support agreements for business applications (market, reliability, transmission, leveraged services, etc.)

Approximately 80 percent of the maintenance budget is under a multi-year contract in support of the existing environment.

The increase in the 2019 maintenance budget is primarily due to year-over-year inflationary increases (two percent) related to agreements that are required to sustain the health and operation of the system, plus additional increases related to maintenance associated with new projects and/or purchases.

In addition to maintaining the existing environment, the budget also is driven by new capital projects requiring annual support agreements.

Enterprise Maintenance Expense ($ millions)		
2018 Forecast	$16.4	
Increases for existing portfolio (2%)	0.4	50%
New 2019 PRPC projects	0.2	22%
Incremental maintenance on new security software	0.1	16%
Topological control subscription license (for SPP Operations)	0.1	12%
2019 Budget	$17.2	

The IT sourcing staff remains focused on scrutinizing maintenance costs and trends. The staff makes conscious efforts to minimize maintenance costs through negotiating multi-year term and price-protection agreements, leveraging product purchases and rightsizing the level of support with the criticality of the environment.

Over the past few years, the foundation maintenance budget was estimated to correspond with original business plans under the expectation that new capital expenditures (drivers of incremental maintenance) would occur early in the project cycle. Trending analysis has shown that many budgeted capital expenditures become deferred (or avoided altogether), which results in a corresponding delay or elimination of maintenance expenses. In consideration of this recurring trend, a more aggressive approach was utilized for the 2018 budget and again in 2019. This approach results in a relatively low increase from 2018 forecast to 2019 budget for incremental maintenance.

General Plant Maintenance

In addition to maintenance for hardware and software, other facility expenses are included in the general plant maintenance budget such as janitorial expense, landscape services and preventive maintenance.

SPP utilizes historical data to estimate costs associated with general upkeep such as waste removal, landscape maintenance, janitorial services, etc. These costs remain fairly constant with minimal projected increases. Costs associated with facilities systems and equipment maintenance are generally defined in multi-year service agreements (e.g. elevators, chillers, generators, etc.).

Additional maintenance costs are required for general repairs and upkeep of the SPP facilities.

COMMUNICATIONS INFRASTRUCTURE

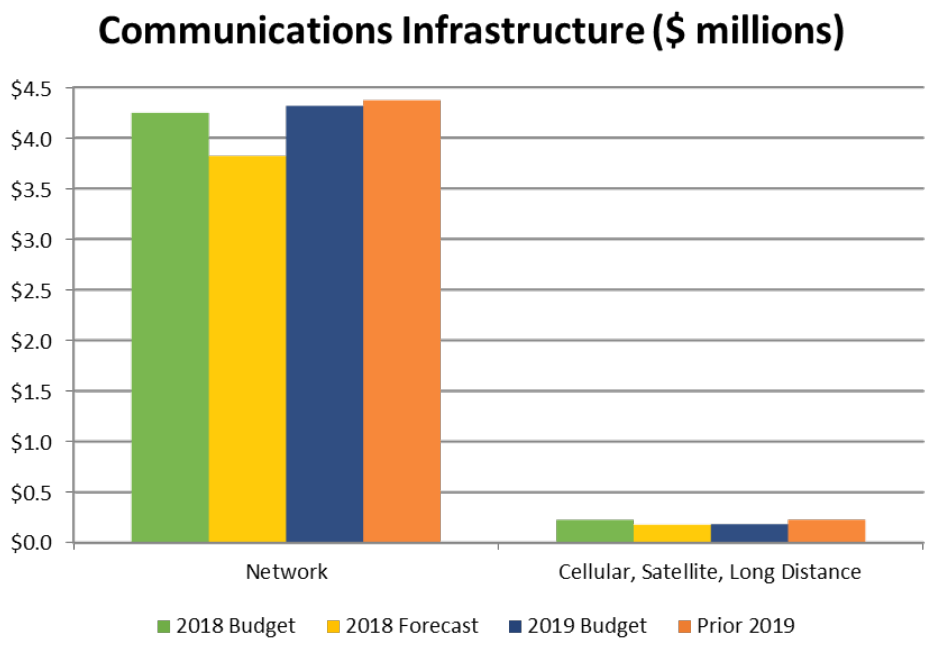
Communications infrastructure includes all expenditures related to SPP's internal and external networks and telecommunications. Network communications include frame relay and circuit costs, including components for bandwidth between data centers, and circuits to members, market participants, and other service organizations. The majority of expenses in this budget are ongoing and under long-term contracts, making the overall spend fairly consistent each year.

The increase in 2019 over the 2018 forecast is primarily attributable to projects budgeted in 2018 that were delayed until 2019. The delayed projects are associated with cloud storage implementation and phasor measurement unit (PMU) data exchange.

Additional bandwidth for cloud storage data backup: SPP's data requirements continue to increase, including the need to store and archive data. The use of cloud technologies for offsite data storage requires appropriate internet bandwidth between SPP and the storage provider.

Circuit costs to share PMU data over secure network: A limited amount of PMU data is currently shared across the internet. Additional and more secure bandwidth will be required as the volume of data and number of participants increase.

SPP implemented a second circuit/carrier in July 2018 between the primary and backup datacenters to satisfy the critical infrastructure protection standard requiring separation of ESP traffic and non-ESP traffic. The full-year impact in 2019 contributes to the year-over-year increase.



Communications ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Network	$4.2	$3.8	$4.3	$4.4
Cellular, satellite, long distance	0.2	0.2	0.2	0.2
Total	**$4.5**	**$4.0**	**$4.5**	**$4.6**

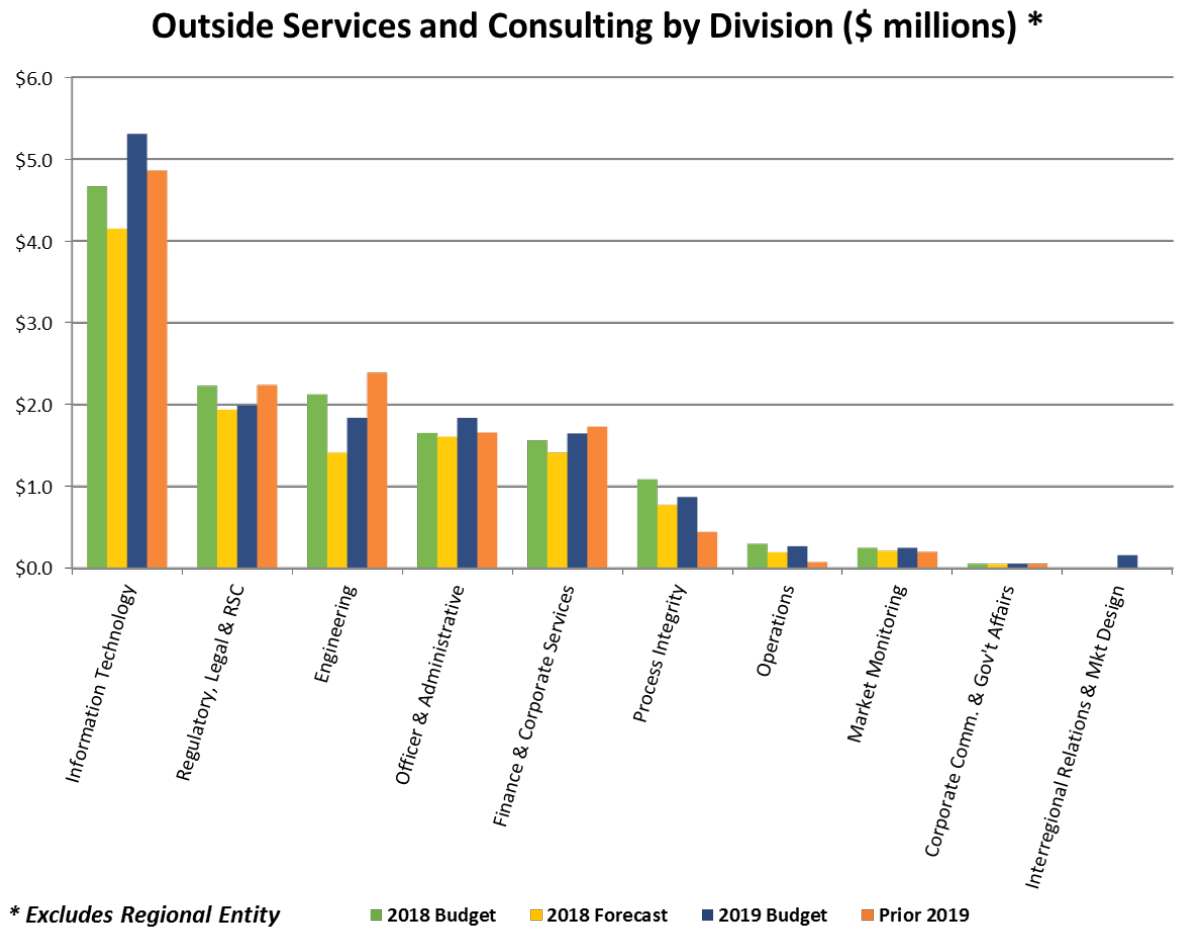
OUTSIDE SERVICES AND CONSULTING

Outside services and consulting expenses have increased from both the 2018 forecast and prior-year estimates for 2019.

Outside services consist of third-party expertise to assist SPP in deploying various services. Over 75 percent of the outside services budget is related to IT initiatives, legal counsel, engineering studies and board compensation. IT utilizes outside services for a variety of functions including hosted services, data storage, consulting for key projects and initiatives, etc. Additionally, wind forecasting and interchange distribution calculator (IDC) fees are paid to outside providers in support of reliability coordination functions.

Outside counsel for legal expertise on specific FERC matters allows SPP to leverage the counsel's relationships with FERC staff, while also utilizing their knowledge of RTO-specific matters. The majority of consulting in engineering is for work on generation interconnection studies, which is passed through to study participants and offset by income.

Consulting services related to the RE in 2018 are not included in the following discussion.



Outside Services and Consulting by Division ($ millions)

	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Information Technology	$4.7	$4.1	$5.3	$4.9
Regulatory, Legal & RSC	2.2	1.9	2.1	2.2
Engineering	2.1	1.4	1.8	2.4
Officer & Administrative	1.7	1.6	1.8	1.7
Finance & Corporate Services	1.6	1.4	1.6	1.7
Process Integrity	1.1	0.8	0.9	0.4
Operations	0.3	0.2	0.3	0.1
Market Monitoring	0.2	0.2	0.2	0.2
Corporate Comm. & Gov't Affairs	0.1	0.1	0.1	0.1
Interregional Relations & Mkt Design	0.0	0.0	0.2	0.0
RTO Total	**$13.9**	**$11.8**	**$14.3**	**$13.7**
Regional Entity	0.7	0.4	0.0	0.0
SPP Consolidated Summary	**$14.6**	**$12.2**	**$14.3**	**$13.7**

Information Technology (IT)

The largest component of the 2019 outside services budget and the largest increase over the 2018 forecast resides in the IT department.

Outside Services and Consulting ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Information Technology	$4.7	$4.1	$5.3	$4.9

Although IT management continually analyzes options and seeks opportunities to leverage existing staff, in many cases the utilization of external entities is more cost-efficient based on the required skillsets or longevity of the project.

The 2019 work plan includes in-progress initiatives that will continue from 2018 as well as new corporate and IT objectives targeted to be implemented in 2019 and beyond.

The IT organization uses outside services for a variety of functions including:

- Hosted services (i.e., software-as-a-service) for WebOasis, Webtrans, and other related transmission reservation services
- Data center services for remote data storage
- Wind and weather forecasting services for operations
- Interchange distribution calculator (IDC) association fees
- Consulting for key projects and initiatives
- Staff augmentation for interim resource needs and/or skill requirements
- Data center cabling and wiring services and asset disposal services
- Cybersecurity vulnerability assessments and testing services

The primary IT initiatives are centered on security, CIP, automation and infrastructure consolidation activities.

IT Outside Services and Consulting Expense ($ millions)	
Existing services (ongoing) *(Hosted services, wind/weather forecasting, IDC, remote data storage, etc.)*	$3.5
New services (ongoing) *(Vendor security patching, static code analysis, mobile phone security, etc.)*	0.8
Projects (short-term engagements and implementations) *(IAM, CIP 13 supply chain, automation design, data governance, cloud hosting, etc.)*	0.8
Staff augmentation *(Settlements, data protection software and storage backup)*	0.3
2019 Budget	**$5.3**

The primary IT initiatives are centered on security, CIP, automation and infrastructure consolidation activities. The majority of IT's outside services and consulting budget relates to existing and new ongoing services that will continue throughout each year. The remainder of the budget is comprised of short-term project engagements and staff augmentation assistance that vary from year to year.

The increase in outside services from the 2018 forecast to the 2019 budget is attributed to 1) new initiatives primarily related to cybersecurity, 2) items deferred from the 2018 budget, and 3) annual price increases.

Increase in IT Outside Services and Consulting Expense ($ millions)	
New services - ongoing	$0.7
Security patch assessments and static code analysis	
Mobile phone security	
Outsource / cloud services – email and data backup	
Secondary wind/solar forecasting product	
New short-term projects including deferred projects	0.4
Controls development for cybersecurity and quality control departments	
Integration consulting for settlements project	
Automation and application-architecture consulting	
CIP 13 supply chain and vendor risk management consulting	
Identity and access management consulting (non-project)	
Data governance consulting	
Splunk & tripwire consulting	
Year-to-year increases for existing services	0.1
Incident response	
Cyber risk information sharing program (CRISP)	
Weather services	
Vendor impact assessments	
2019 Budget increase over 2018 forecast	**$1.2**

Regulatory, Legal and Regional State Committee (RSC)

Outside legal counsel is employed for various litigation matters throughout the year. These services provide unique legal expertise on specific FERC matters and allows SPP to leverage the counsel's relationships with FERC staff, while utilizing their knowledge of RTO-specific matters. Expense for outside counsel is expected to remain reasonably consistent year-over-year.

Outside Services and Consulting ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Legal	$1.9	$1.7	$1.7	$1.9
Regional State Committee	0.3	0.2	0.4	0.3
Regulatory, Legal & RSC	$2.2	$1.9	$2.1	$2.2

The RSC provides collective state regulatory agency input on matters of regional importance related to the development and operation of bulk electric transmission. The budget is created

and submitted to SPP by the RSC each year and includes all costs associated with RSC travel, meetings and consulting.

Engineering

The engineering organization engages consultants primarily for planning and tariff services processes primarily for 1) engineering studies, 2) support of reliability and economic planning processes during peak periods associated with the Integrated Transmission Planning (ITP) process, and 3) administering the detailed project proposal (DPP) process and transmission project cost estimation related to FERC Order 1000.

The largest component of engineering outside services expense is related to generation interconnection studies, which is offset by income from study participants.

Engineering also engages consultants to assess new approaches and tools to refine performance objectives that align with future planning needs. Additional resources will be required to finalize action plans with stakeholder and regulatory approvals and to implement recommendations to improve the generator interconnection (GI) process.

Outside Services and Consulting ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Pass-thru studies consulting	$1.4	$0.9	$1.2	$1.4
Transmission planning	0.1	0.2	0.4	0.4
Engineering support (Order 1000/DPP)	0.2	0.2	0.2	0.2
Research and development	0.4	0.1	0.1	0.4
Engineering Outside Services and Consulting	$2.1	$1.4	$1.8	$2.4

Growth of renewable generation in the SPP footprint continues to drive increases in GI study requests. Engineering engages contractors to complete studies when requests exceed SPP staff's capacity and to perform specific stability analysis where currently staff lacks the required skills. Contractor costs associated with studies are passed through to the study participants as part of overall study charges.

Of the $4.1 million studies revenue, $1.2 million is for pass-through contractor costs and $2.9 million is for SPP engineering staff time.

Net Studies Income/(Expense) ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Engineering staff time income	$1.6	$2.9	$2.9	$1.6
Pass-thru consulting income	1.4	0.9	1.2	1.4
Pass-thru consulting expense	(1.4)	(0.9)	(1.2)	(1.4)
Net Studies Income/(Expense)	$1.6	$2.9	$2.9	$1.6

Although engineering staff's growing knowledge and experience in the studies activities has led to increased productivity, three incremental engineering positions were added in 2018 to reduce a continued backlog of study requests. Revenue associated with engineering staff time is expected to be consistent with the activity experienced in 2018.

Other Outside Services Expenses

The 2019 budget includes outside services and consultants in various other areas including:

Officer and Administrative: Board of directors compensation and miscellaneous consulting engagements
$1.8 million

Finance and Corporate Services: Security and employee services and financial audits
$1.6 million

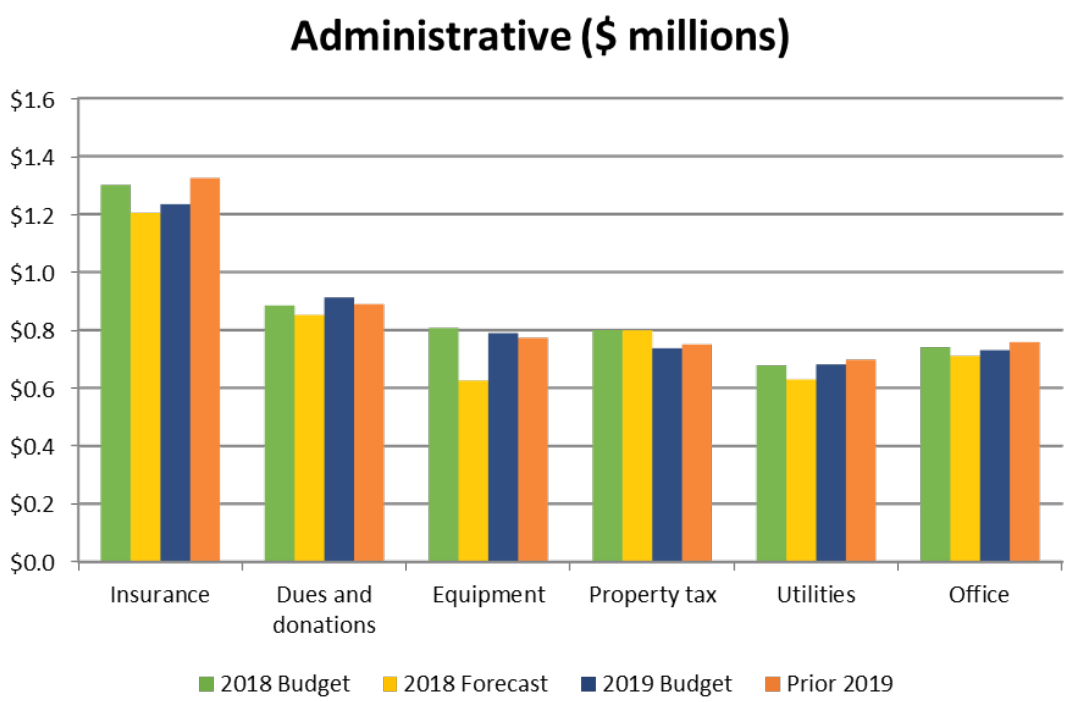
Process Integrity: Compliance and project management staff augmentation [CIP compliance program review, governance risk and compliance (GRC) tool support, project management support] and SOC 1 audit services
$0.9 million

Other Departments: Remaining outside services expense is spread across numerous departments including operations (wind studies); market monitoring (legal counsel and special studies); communications and government affairs (reporting and data services); and interregional relations and market design (interregional planning and market resilience study)
$0.8 million

ADMINISTRATIVE EXPENSES

Overall administrative expenses are expected to remain relatively consistent with the 2018 budget and forecast.

Administrative expenses include items such as insurance costs, small equipment purchases, property taxes, professional dues, charitable donations, and utility and office expenses.



The largest component of the administrative expense is for insurance costs.

Administrative ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Insurance	$1.3	$1.2	$1.2	$1.3
Dues and donations	0.9	0.9	0.9	0.9
Equipment	0.8	0.6	0.8	0.8
Property tax	0.8	0.8	0.7	0.8
Office	0.7	0.7	0.7	0.8
Utilities	0.7	0.6	0.7	0.7
Total Administrative	**$5.2**	**$4.8**	**$5.1**	**$5.2**

Insurance Expense

SPP's corporate insurance policies allow for the transfer of certain financial and operational risks from the corporation to third-party insurers. The majority of SPP's premiums are used to purchase policies to provide additional indemnification related to commercial and director and officer (D&O) liabilities.

Commercial liability policies provide additional indemnification from claims arising from SPP's administration of its Open Access Transmission Tariff (OATT) and other contractual arrangements. Within this classification is a new policy SPP has obtained which is specific to cyber-related liabilities and events.

D&O liability policies provide additional indemnification to SPP's independent directors, management and employees from claims arising from certain actions taken in oversight of the corporation. Both commercial and D&O policies include the insurer's obligation to pay for legal costs for claims made, which could be extensive depending on actual claims made.

Insurance Expense ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Commercial excess liability	$0.8	$0.8	$0.8	$0.8
General liability and pension	0.4	0.3	0.3	0.4
Directors & Officers (D&O) liability	0.1	0.1	0.1	0.1
Workers compensation	0.1	0.1	0.1	0.1
Total	**$1.3**	**$1.2**	**$1.2**	**$1.3**

Dues and Donations

Dues are budgeted for professional and technical licenses and memberships in professional organizations that are related to employment by SPP, required to maintain professional standing for employees, or otherwise beneficial to SPP.

Dues & Donations ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
EPRI membership	$0.4	$0.4	$0.4	$0.4
Engineering R&D university partnerships	0.2	0.1	0.2	0.2
Corporate donations/contributions	0.2	0.2	0.2	0.2
Staff license/memberships	0.1	0.1	0.1	0.1
Total	$0.9	$0.9	$0.9	$0.9

A substantial portion of the dues budget is for Electric Power Research Institute (EPRI) membership ($0.4 million) which allows access to research related to the electric power industry. SPP's long-standing relationship and engagement with EPRI enables participation in programs related to grid operations, planning and renewable integration and high voltage direct current (HVDC) ties applications. This agreement includes support for new markets initiatives, new tools to enable additional and more efficient NERC transmission planning compliance activities and operational needs such as tools for system restoration. Engagement by SPP staff at EPRI provides value in terms of development of new tools and analytics such as case studies using SPP data to address ramping needs for wind integration studies.

The remaining costs consist of engineering research and development partnerships with specific universities; SPP corporate donations and contributions; and professional and technical license and memberships for staff.

The engineering organization's involvement with university research and development programs keeps SPP engineers up to date with processes and ideas coming out of respected engineering institutions. These relationships foster collaboration between SPP and regional university programs which in turn attracts talented job candidates.

SPP establishes a budget for community relations and charitable donations to add value in the community and region. SPP believes in serving the community to make it a better place for employees and all citizens to live and work. This belief is a part of the core ideology to "do the right thing, for the right reason, in the right way." The company and its employees take great pride in working with many worthwhile nonprofit organizations to build stronger families and a vibrant community to continue attracting career employees who share SPP's culture.

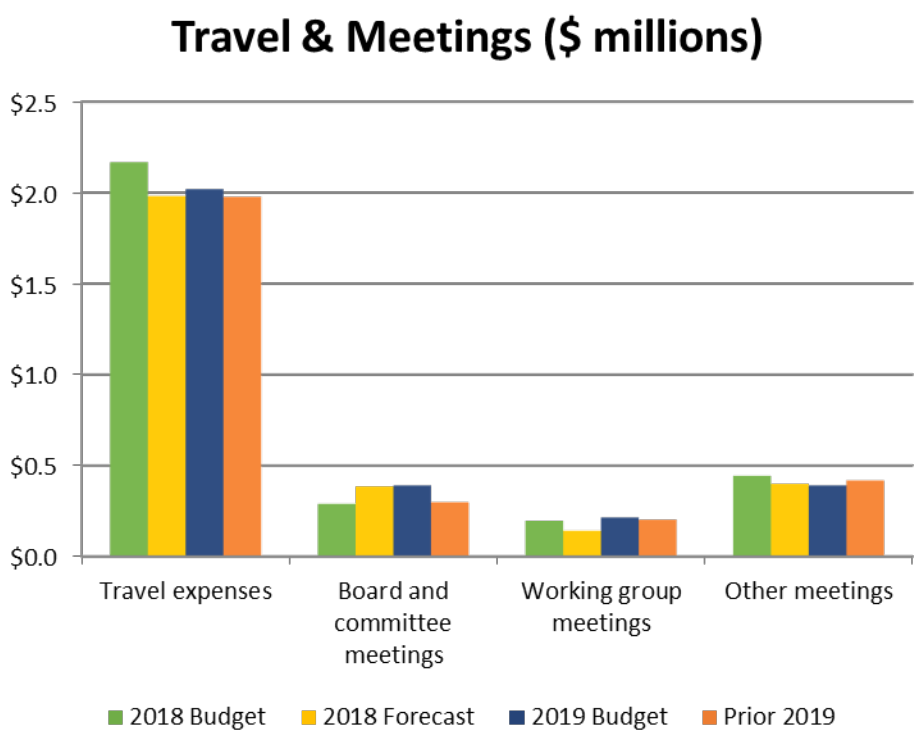
Other Administrative Expenses

Small equipment purchases, property taxes, utilities and general office expenses make up the remainder of the administrative expenses and remain reasonably consistent year- over- year. Small equipment purchases are items less than $5,000 in value (expensed rather than capitalized) and include purchases such as personal computers and related equipment, member routers and local area network access points, and fixtures and furniture.

TRAVEL AND MEETINGS

Travel and meetings expenses in 2019 remain relatively consistent compared to the 2018 forecast and budget.

SPP continues to encourage the use of corporate or member facilities when planning external meetings to maintain lower travel and meeting expenses. SPP also encourages organizational groups to include Little Rock in the rotation for working group meetings.



Travel & Meetings ($ millions)	2018 Budget	2018 Forecast	2019 Budget	Prior 2019
Travel expenses	$2.2	$2.0	$2.0	$2.0
Board and committee meetings	0.3	0.4	0.4	0.3
Working group meetings	0.2	0.1	0.2	0.2
Other meetings	0.4	0.4	0.4	0.4
Total	**$3.1**	**$2.9**	**$3.0**	**$2.9**

VII. OPERATING EXPENSE BY DIVISION

Total operating expenses for each division is illustrated below. With the exception of the administrative and IT divisions, the operating expense within each division is mostly comprised of compensation expense.

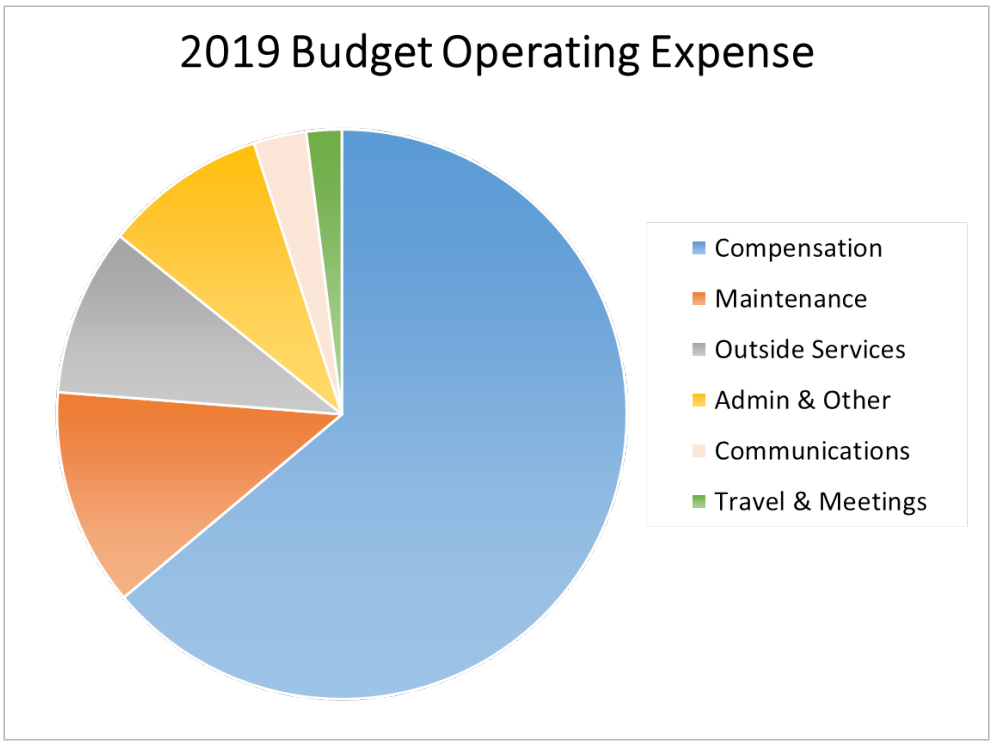
Operating Expense by Division ($ millions)

	2018 Forecast		2019 Budget		Variance Fav/(Unfav)		
	Expense	Staff	Expense	Staff	Expense	Staff	%
Operating Expense ($ millions)							
Information Technology	$46.8	167	$50.5	168	($3.7)	(1)	-8%
Officer & Administrative	27.7	11	26.7	11	1.0	-	4%
Operations	23.1	161	23.7	160	(0.7)	1	-3%
Engineering	12.6	83	13.8	83	(1.3)	-	-10%
Finance & Corporate Services	12.5	68	13.5	69	(1.0)	(1)	-8%
Process Integrity	8.9	58	10.0	58	(1.1)	-	-12%
Regulatory, Legal & RSC	6.2	27	6.6	27	(0.4)	-	-6%
Market Monitoring (MMU)	3.0	16	3.2	16	(0.2)	-	-8%
Interregional Relations & Market Design	1.0	7	1.3	7	(0.3)	-	-28%
Corp Communications & Gov't Affairs	0.9	8	1.1	8	(0.2)	-	-20%
2019 Unidentified staff reduction		-		(2)		2	
RTO Total *	**$142.6**	**606**	**$150.5**	**605**	**($7.8)**	**1**	-5%
Regional Entity	$3.2	-	0.0	-	3.2	-	100%
SPP Total	**$145.8**	**606**	**$150.5**	**605**	**($4.6)**	**1**	-3%

** Excludes depreciation & FERC fees. Total expense for 2018 also excludes $1.8 non-cash items such as swap valuation adjustments and realized/unrealized gains on investments.*

The largest component of operating expenses resides in IT, which not only contains the largest number of staff but also includes company-wide expenses for maintenance and communications infrastructure (which combined represent the second largest expense following compensation).

The officer and administrative division expenses make up the second largest component of operating expenses. The primary driver of expense within this division is associated with company-wide items such as interest expense, insurance, property taxes and board of director fees.



Overall Variances in Compensation

This increase in compensation is primarily attributed to an annual merit increase of three percent in the 2019 budget.

Compensation by Division ($ millions)

	2018 Forecast	2019 Budget	Fav/(Unfav) Variance
Compensation ($ millions)			
Information Technology	$21.7	$22.8	($1.1)
Operations	22.5	23.1	(0.6)
Officer & Administrative	14.2	13.1	1.1
Engineering	10.3	11.1	(0.8)
Finance & Corporate Services	8.2	8.7	(0.5)
Process Integrity	7.7	8.6	(0.9)
Regulatory & Legal	3.9	4.1	(0.2)
Market Monitoring (MMU)	2.5	2.7	(0.1)
Interregional Relations & Market Design	0.9	1.1	(0.1)
Corp Communications & Gov't Affairs	0.7	0.9	(0.1)
RTO Total	**$92.7**	**$96.1**	**($3.4)**
Regional Entity	2.6	0.0	2.6
SPP Total	**$95.4**	**$96.1**	**($0.8)**

After the vacancy rate is determined for the budget, an adjustment for vacancies is included as an expense reduction in the administrative department. Although vacancies are not budgeted at the department level, vacancies are represented at the department level in the 2018 forecast. Since the budgeted vacancy is reflected in the administrative department, a decrease is noted in the 2019 budget in the officer and administrative division as compared to the 2018 forecast.

The Regional Entity shows a favorable variance in compensation due to the elimination of staff in August 2018.

Other Notable Variances (Other Than Compensation)

2018 Forecast vs 2019 Budget

	Compensation Variance	Other Variance	Fav/(Unfav) Variance
Variances by Division ($ millions)			
Information Technology	($1.1)	($2.6)	($3.7)
Engineering	(0.8)	(0.4)	(1.3)
Process Integrity	(0.9)	(0.2)	(1.1)
Finance & Corporate Services	(0.5)	(0.6)	(1.0)
Operations	(0.6)	(0.1)	(0.7)
Regulatory, Legal & RSC	(0.2)	(0.2)	(0.4)
Interregional Relations & Market Design	(0.1)	(0.2)	(0.3)
Market Monitoring (MMU)	(0.1)	(0.1)	(0.2)
Corp Communications & Gov't Affairs	(0.1)	(0.0)	(0.2)
Officer & Administrative	1.1	(0.1)	1.0
RTO Total	**($3.4)**	**($4.4)**	**($7.8)**
Regional Entity	2.6	0.5	3.2
SPP Total	**($0.8)**	**($3.9)**	**($4.6)**
RTO Variance Percentage	*44%*	*56%*	*100%*

- Information technology: The remaining unfavorable variance is driven by: 1) increased *maintenance* costs for year-over-year inflationary increases (2 percent) related to agreements required to sustain the health and operation of the system, plus additional increases related to maintenance associated with new projects and/or purchases, 2) increased *communications* expense primarily attributed to various projects (that were delayed from 2018 into 2019) which drive additional circuit costs., and 3) increased *outside services* attributed to new cyber-security initiatives, the deferral of several items

from 2018 to 2019, and annual price increases for on-going support.
$2.6 million

- Finance and corporate services: Funding of $0.2 million for a compensation survey was added to the 2019 budget at the recommendation of the human resource committee. Increases in areas such as office and meeting expense, as well as maintenance costs and small equipment purchases associated with the upkeep of the campus facilities, make up the remaining increase over 2018.
  $0.6 million

- Engineering: The increase is primarily related to outside services expense. Of the $0.4 million increase, $0.3 million is related to contractors engaged to work on generation interconnection studies, which are passed through to the study participants. The remaining increase is for consulting related to transmission planning for the ITP process.
  $0.4 million

Other variances are individually immaterial.

VIII. WESTERN INTERCONNECTION RELIABILITY COORDINATION SERVICES

SPP has executed contracts to serve as the reliability coordinator (RC) for 15 utilities in the Western Interconnection representing approximately 101 TWh of electrical load.

The agreements stipulate SPP will provide RC services as defined by NERC, and in return, SPP will receive annual payments from the utilities based upon a calculated contractual rate multiplied by each utilities' net energy for load. Customers will make payments prior to each production year, and the agreement will be in force for a minimum of five years.

SPP expects an implementation period of approximately 15 months beginning in the fourth quarter of 2018 with service beginning around January 2020. These services will generate approximately $5.7 million in annual revenues for an initial term of five years. These annual contract revenues will fund both implementation costs and annual operating and financing expenses.

($ millions)	2019	2020	2021	2022	2023	2024	Total
Contract services revenues	$0.0	$5.5	$5.6	$5.7	$5.8	$5.9	$28.4
Incremental expense	4.5	4.0	4.0	4.1	4.2	4.3	25.0
Net Income	($4.5)	$1.5	$1.5	$1.6	$1.6	$1.6	$3.4
Financing of implementation	$4.5	($1.1)	($1.1)	($1.1)	($1.1)	$0.0	$0.0
Net cash flows	$0.0	$0.4	$0.4	$0.5	$0.5	$1.6	$3.4

SPP staff has developed a budgetary estimation of the operating and capital costs required for successful implementation and production of RC services for its contractual commitments.

Costs incurred by SPP during the fifteen-month implementation period will be financed by SPP, and will be recovered by the western utilities over the five-year production period within the annual contract service fees calculation. As a result, there will be no impact to the NRR in 2019. Annual contract revenues and principal payments will begin in 2020 resulting in a favorable impact to the NRR of $0.4 million in 2020 and 2021.

2021 Consolidated Net Revenue Requirement
SPP Including RC Services Contract

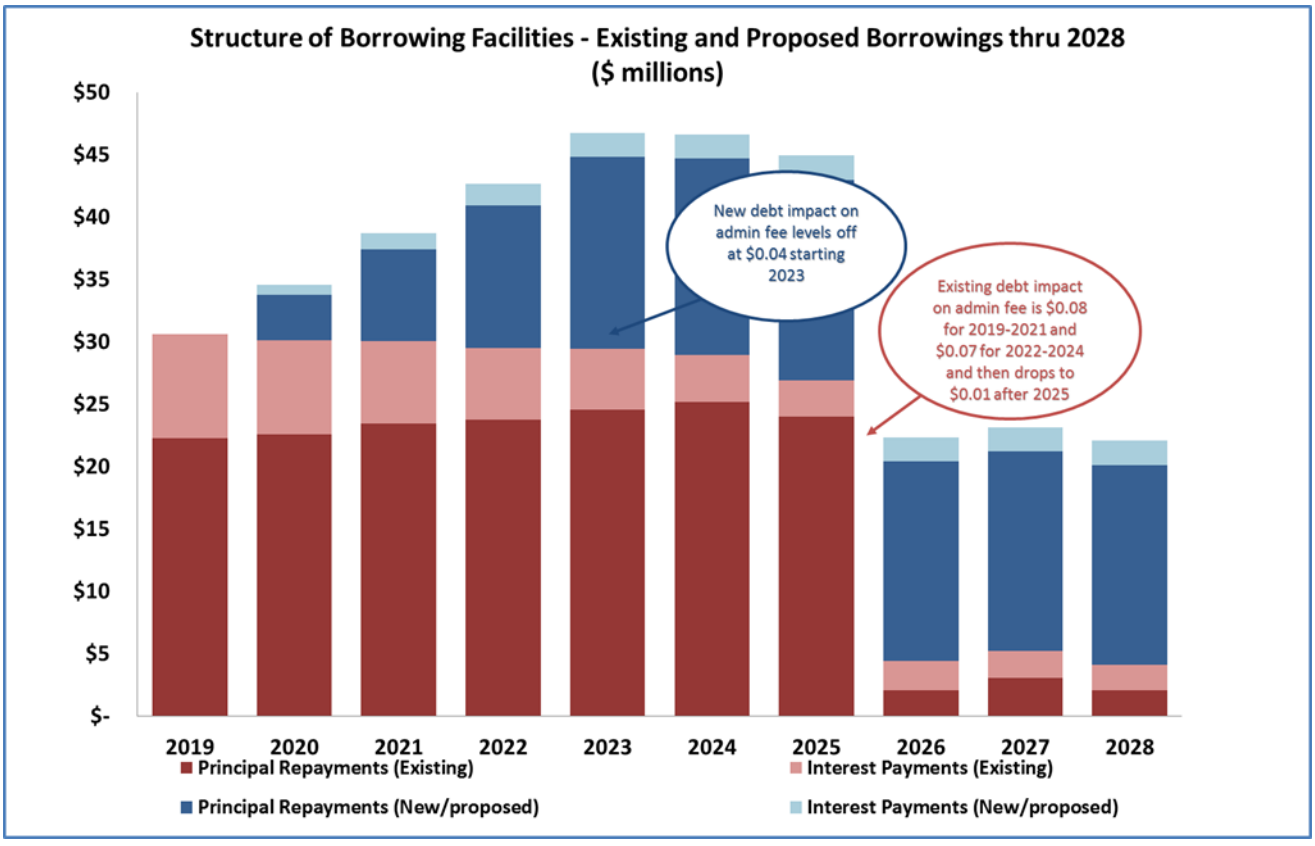
($ millions)	2019 Budget			2020 Budget			2021 Budget		
	SPP	RC	Total	SPP	RC	Total	SPP	RC	Total
Operating Expenses									
Salary & Benefits	$96.1	$2.6	$98.7	$98.9	$2.8	$101.7	$101.2	$2.8	$104.0
Communications & Maintenance	23.1	0.5	23.6	23.8	1.0	24.8	24.8	1.0	25.8
Outside Services	14.3	0.0	14.3	13.7	0.0	13.7	13.1	0.0	13.1
Administrative / Interest	13.9	0.2	14.1	13.7	0.2	13.8	13.4	0.1	13.5
Travel & Meetings	3.0	0.0	3.1	3.1	0.0	3.1	3.1	0.0	3.1
Operating Expenses	$150.5	$3.4	$153.8	$153.2	$4.0	$157.1	$155.6	$4.0	$159.6
Debt Payments	24.2		24.2	26.3	1.1	27.4	30.8	1.1	31.9
Capital Expenditure Reserve	3.0		3.0	2.9		2.9	3.2		3.2
Gross Revenue Requirement	**$177.7**	**$3.4**	**$181.0**	**$182.3**	**$5.1**	**$187.4**	**$189.6**	**$5.2**	**$194.7**
Less:									
Miscellaneous & Contract Revenues	($6.1)		($6.1)	($6.0)	($5.5)	($11.5)	($6.0)	($5.6)	($11.6)
NRR Adjustments	(14.1)		(14.1)	(3.0)		(3.0)	(3.0)		(3.0)
RC Capital Expenditures		1.2	1.2						
RC Borrowings to Fund Implementation		(4.5)	(4.5)						
Net Revenue Requirement	**$157.5**	**$0.0**	**$157.5**	**$173.3**	**($0.4)**	**$173.0**	**$180.5**	**($0.4)**	**$180.1**
Capital Expenditures	$14.9	$1.2	$16.0	$14.5	$0.0	$14.5	$16.2	$0.0	$16.2
Debt Service (Principal & Interest)	$33.2	$0.1	$33.3	$35.1	$1.3	$36.4	$39.3	$1.3	$40.5
Headcount	605	20	625	605	20	625	603	20	623

IX. DEBT SERVICE

SPP's capital spending is financed through borrowings that SPP has historically successfully secured from financial institutions and investors at competitive terms.

SPP's capital projects are funded from monies borrowed under medium and long-term credit agreements, primarily with institutional investors. SPP generally aims to match the duration of these borrowings to the useful life of assets they are used to acquire. The entire capital project costs are not included in the NRR calculation; though annual principal and interest payments for borrowings (net of capitalized interest) are considered. SPP's outstanding borrowings are projected to equal $216.4 million as of Jan. 1, 2019, with principal payments of $24.3 million, $26.3 million and $30.8 million in 2019, 2020 and 2021, respectively.

SPP has recently obtained an unsecured five-year $80.0 million revolving line of credit to fund capital expenditures. SPP anticipates drawing funds from this new facility beginning in 1Q'19. Advances from the credit line will be converted to four-year term notes at the end of each year. The following chart illustrates SPP's principal and interest payment obligations including projected new borrowings through 2028.



The schedule below shows the principal amounts outstanding for each borrowing at the beginning and end of the 2019-2021 budget periods, as well as annual principal payments.

Future Debt Repayments ($ millions)								
	Issue Date	Issue Amount	Due Date	Balance 1/1/2019	2019 Prin. Pmts.	2020 Prin. Pmts.	2021 Prin. Pmts.	Balance 12/31/2021
5.51% notes due 2027	3/23/2007	$5.1	Feb-2027	$2.7	($0.2)	($0.2)	($0.2)	$2.1
4.82% construction notes due 2042 (2010A, 2010B)	10/31 & 12/28/2010	$65.0	Dec-2042	$58.3	($1.3)	($1.4)	($1.5)	$54.1
3.55% integrated markets notes due 2024 (2010C)	3/30/2011	$70.0	Mar-2024	$36.8	($7.0)	($7.0)	($7.0)	$15.8
3.00% capital funding notes due 2024 (2012D-1)	5/30/2012	$50.0	Mar-2024	$26.3	($5.0)	($5.0)	($5.0)	$11.3
3.25% capital funding notes due 2024 (2012D-2)	11/30/2012	$50.0	Sep-2024	$28.8	($5.0)	($5.0)	($5.0)	$13.8
3.8% capital funding notes due 2025 (2014-E)	3/21/2014	$37.0	Dec-2025	$37.0	$0.0	$0.0	$0.0	$37.0
4.95% senior notes due 2024	3/10/2014	$33.0	Mar-2024	$24.8	($3.8)	($4.0)	($4.8)	$12.3
Capital lease obligation	2/1/2015	$6.9	Nov-2019	$2.0	($2.0)	$0.0	$0.0	$0.0
New term note due 2023 (for 2019 advances)	1/1/2020	$14.7	Dec-2023	-	-	($3.7)	($3.7)	$7.4
New term note due 2024 (for 2020 advances)	1/1/2021	$14.7	Dec-2024	-	-	-	($3.7)	$11.0
Total		**$346.4**		**$216.4**	**($24.2)**	**($26.3)**	**($30.8)**	**$164.6**

X. SUPPLEMENTAL ANALYSIS AND SCHEDULES

INCOME STATEMENT 2018-2019 COMPARISON

($ millions)	2018 Budget	2018 Forecast	2019 Budget	2019 Prior
Income				
Tariff Administration Service	$164.0	$164.9	$157.5	$178.8
Fees & Assessments	26.1	26.6	31.8	21.4
Contract Services Revenue	0.2	0.8	0.2	0.0
Miscellaneous Income	4.0	5.2	5.2	4.0
Total Income	**$194.2**	**$197.6**	**$194.7**	**$204.2**
Expense				
Salary & Benefits	$96.1	$95.4	$96.1	$101.6
Employee Travel	2.2	2.0	2.0	2.0
Administrative	5.2	4.8	5.1	5.2
Assessments & Fees	20.3	21.1	23.1	20.3
Meetings	0.9	0.9	1.0	0.9
Communications	4.5	4.0	4.5	4.6
Maintenance	18.4	17.6	18.6	19.7
Services	14.3	12.0	13.9	13.3
Regional State Committee	0.3	0.2	0.4	0.3
Depreciation	19.4	18.2	19.4	22.0
Other Expense	9.3	7.4	8.9	9.0
Total Expense	**$190.8**	**$183.5**	**$193.1**	**$198.9**
Net Income (Loss)	**$3.5**	**$14.1**	**$1.6**	**$5.3**
Debt Repayment	$23.4	$23.4	$24.2	$26.6
MWh Forecast (in millions)	382.1	384.0	399.6	382.1
Net Revenue Requirement	$164.0	$154.3	$157.5	$178.8
Calculated Admin Fee / MWh	$0.429	$0.402	$0.394	$0.468
Recommended Admin Fee / MWh	$0.429	$0.429	$0.394	$0.468
Tariff Cap on Admin Fee	*$0.430*	*$0.430*	*$0.430*	*$0.430*
Capital Expense	$17.9	$17.7	$14.9	$16.6
Headcount	609	606	605	610

INCOME STATEMENT 2019-2021

($ millions)	2019 Budget	2020 Forecast	2021 Forecast
Income			
Tariff Administration Service	$157.5	$173.3	$180.5
Fees & Assessments	31.8	24.9	26.4
Contract Services Revenue	0.2	0.2	0.2
Miscellaneous Income	5.2	5.2	5.2
Total Income	**$194.7**	**$203.6**	**$212.3**
Expense			
Salary & Benefits	$96.1	$98.9	$101.2
Employee Travel	2.0	2.0	2.0
Administrative	5.1	4.9	5.0
Assessments & Fees	23.1	24.5	26.0
Meetings	1.0	1.0	1.0
Communications	4.5	4.7	4.8
Maintenance	18.6	19.2	20.0
Services	13.9	13.3	12.7
Regional State Committee	0.4	0.4	0.4
Depreciation	19.4	19.9	17.8
Other Expense	8.9	8.8	8.5
Total Expense	**$193.1**	**$197.7**	**$199.5**
Net Income (Loss)	**$1.6**	**$5.9**	**$12.8**
Debt Repayment	$24.2	$26.3	$30.8
MWh Forecast (in millions)	399.6	399.6	399.6
Net Revenue Requirement	$157.5	$173.3	$180.5
Calculated Admin Fee / MWh	$0.394	$0.434	$0.452
Recommended Admin Fee / MWh	$0.394	$0.434	$0.452
Tariff Cap on Admin Fee	*$0.430*	*$0.430*	*$0.430*
Capital Expense	$14.9	$14.5	$16.2
Headcount	605	605	603

BALANCE SHEET

($ millions)	12/31/2018	12/31/2019
ASSETS		
Current Assets		
Cash & Equivalents	$97.2	$94.5
Restricted Cash Deposits	362.9	399.2
Accounts Receivable (net)	75.6	75.6
Other Current Assets	15.2	15.2
Total Current Assets	550.9	584.5
Total Fixed Assets	76.3	71.7
Total Other Assets	5.9	6.1
Investments	26.5	34.9
TOTAL ASSETS	**$659.6**	**$697.2**
LIABILITIES & EQUITY		
Liabilities		
Current Liabilities		
Accounts Payable (net)	$85.7	$85.7
Customer Deposits	362.9	399.2
Current Maturities of LT Debt	24.2	22.6
Other Current Liabilities	103.6	120.3
Deferred Revenue	1.2	0.2
Total Current Liabilities	577.6	628.0
Long Term Liabilities		
Long-Term Debt	191.4	168.8
Other Long Term Liabilities	33.1	41.5
Total Long Term Liabilities	224.6	210.2
Net Income	14.1	1.6
Members' Equity	(156.7)	(142.6)
Total Members' Equity	(142.6)	(141.0)
TOTAL LIABILITIES & EQUITY	**$659.6**	**$697.2**

CASH FLOW FORECAST

($ millions)	2019 Budget	2020 Budget	2021 Budget
Operating Activities			
Net income/(loss)	$1.6	$5.9	$12.8
Items not requiring cash			
Depreciation	19.4	19.9	17.8
Changes in current assets and liabilities	13.5	(0.0)	1.7
Net cash provided by operating activities	**34.5**	**25.8**	**32.3**
Investing activities			
Acquisition of property and equipment	(14.9)	(14.5)	(16.2)
Net cash used in investing activities	**(14.9)**	**(14.5)**	**(16.2)**
Financing activities			
Repayments of long-term debt	(24.2)	(26.3)	(30.8)
Issuance of long-term debt	-	14.7	14.7
Net cash provided/(used) in financing activities	**(24.2)**	**(11.6)**	**(16.1)**
Increase/(Decrease) in Cash and Cash Equivalents	(4.6)	(0.3)	-
Cash and Cash Equivalents, Beginning of Year *	**4.9**	**0.3**	**0.0**
Cash and Cash Equivalents, End of Year *	**$0.3**	**$0.0**	**$0.0**

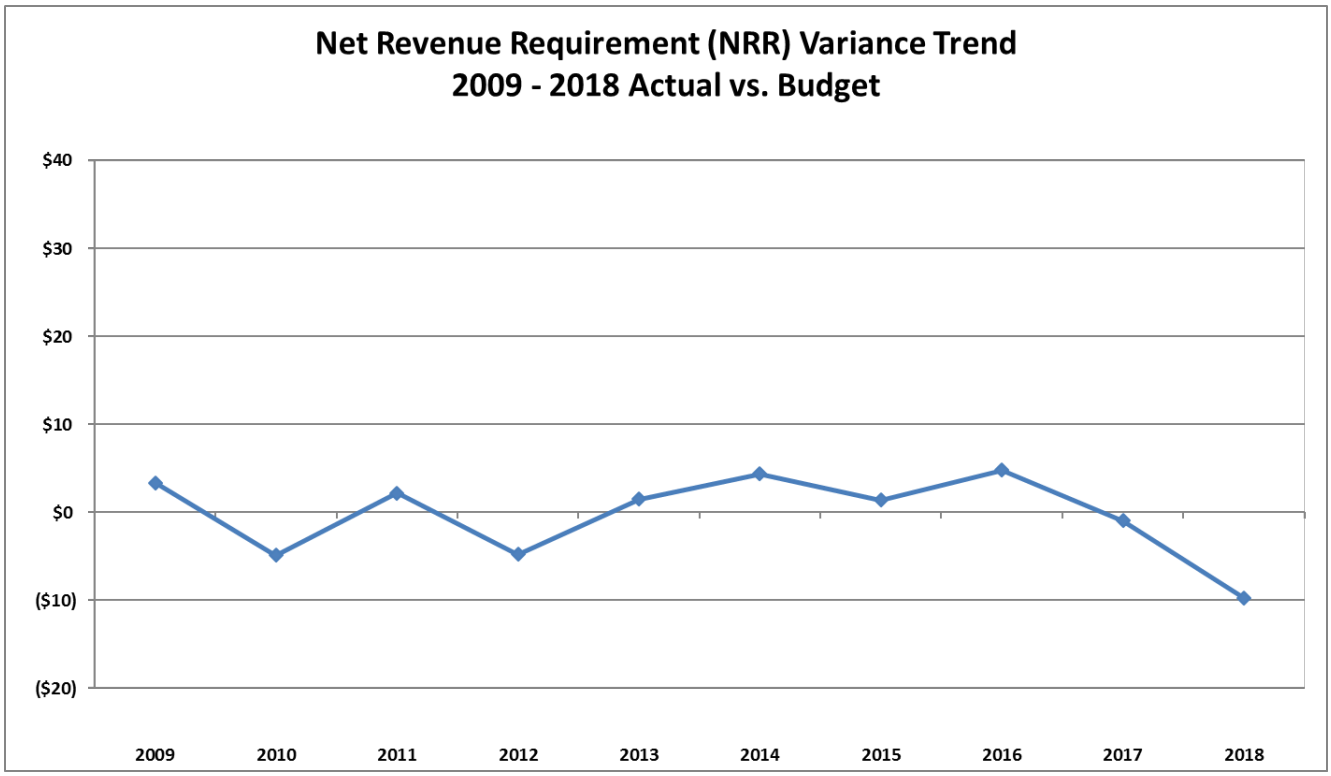
* Operating and capital spending cash accounts.

CAPITAL PROJECTS LIST

($ millions)	Prior Year(s)	2019 Budget	2020 Forecast	2021 Forecast	Total Capital
Reliability Assurance					
EMS Upgrade	$ -	$ -	$ -	$ 2.8	$ 2.8
DTS Upgrade Phase 2B	-	0.8	1.3	-	2.2
Online SSAT	-	-	-	1.2	1.2
Total Reliability Assurance	**$ -**	**$ 0.8**	**$ 1.3**	**$ 3.9**	**$ 6.1**
Enhance Member Value and Affordability					
Settlement Systems Replacement	$ 5.1	$ 0.2	$ -	$ -	$ 5.3
PMO Tool Upgrade/Replacement	-	0.5	-	-	0.5
Total Enhance Member Value and Affordability	**$ 5.1**	**$ 0.7**	**$ -**	**$ -**	**$ 5.8**
Enhance and Optimize Interdependent Systems					
Data Lake Phase 3	$ 0.3	$ 0.1	$ -	$ -	$ 0.4
FERC Order 841: Electric Storage	-	0.4	-	-	0.4
Freeze Date Replacement	-	-	0.3	-	0.3
Interface Pricing	-	-	0.2	-	0.2
Total Enhance and Optimize Interdependent Systems	**$ 0.3**	**$ 0.5**	**$ 0.5**	**$ -**	**$ 1.3**
Total Capital Projects	**$ 5.4**	**$ 2.1**	**$ 1.9**	**$ 3.9**	**$ 13.2**
Foundation					
Information Technology		$ 8.2	$ 8.4	$ 8.9	$ 25.5
Miscellaneous Departments		0.8	1.7	0.8	3.4
IT Total		$ 9.0	$ 10.1	$ 9.7	$ 28.9
Operations		2.6	2.3	2.2	7.1
Facilities		1.0	0.3	0.3	1.6
Settlements		0.2	-	-	0.2
Total Foundation *		**$ 12.8**	**$ 12.7**	**$ 12.2**	**$ 37.7**
Total Capital Budget	**$ 5.4**	**$ 14.9**	**$ 14.5**	**$ 16.2**	**$ 50.9**
2019 - 2021 Capital Budget					**$ 45.6**

** Foundation projects are reforecast during each budget cycle and do not include any carry-over funds.*

NRR VARIANCE HISTORY



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Actual NRR	$59.8	$63.5	$80.8	$84.8	$123.3	$137.0	$142.6	$151.6	$159.6	$154.3 *
Budget NRR	$56.5	$68.4	$78.6	$89.6	$121.8	$132.6	$141.2	$150.5	$160.5	$164.0
Over/(Under) Budget	$3.4	($4.9)	$2.2	($4.8)	$1.5	$4.4	$1.4	$1.1	($0.9)	($9.7)
	6%	(7%)	3%	(5%)	1%	3%	1%	1%	(1%)	(6%)

The graph and table above highlight the range of variance between SPP's actual and budgeted Net Revenue Requirement (NRR) by year. As SPP's NRR has increased over the years, the variances between actual and budget remain relatively small.

** The 2018 NRR represents the forecast as of July 2018.*

PRIOR YEAR BUDGET COMPARISONS

	2015	2016	2017	2018	2019	2020	2021
($ millions)							
Net Revenue Required Estimations							
2015 Budget - NRR Estimations	$141.2	$147.1	$145.9				
2016 Budget - NRR Estimations		$150.5	$148.5	$158.6			
2017 Budget - NRR Estimations			$160.5	$168.2	$179.9		
2018 Budget - NRR Estimations				$164.0	$178.8	$182.4	
2019 Budget - NRR Estimations					$157.5	$173.3	$180.5
Actual NRR	*$142.6*	*$151.6*	*$159.6*				
Billing Unit Estimations							
2015 Budget - Billing Units Estimations	363.5	398.0	398.0				
2016 Budget - Billing Units Estimations		407.2	407.2	407.2			
2017 Budget - Billing Units Estimations			383.0	383.0	383.0		
2018 Budget - Billing Units Estimations				382.1	382.1	382.1	
2019 Budget - Billing Units Estimations					399.6	399.6	399.6
Actual Billing Units	*373.6*	*394.5*	*388.6*				
Administrative Fee Estimations							
2015 Budget - Admin Fee Estimations	$0.390	$0.370	$0.360				
2016 Budget - Admin Fee Estimations		$0.370	$0.370	$0.389			
2017 Budget - Admin Fee Estimations			$0.419	$0.439	$0.470		
2018 Budget - Admin Fee Estimations				$0.429	$0.468	$0.477	
2019 Budget - Admin Fee Estimations					$0.394	$0.434	$0.452
Actual Calculated Admin Fee	*$0.382*	*$0.384*	*$0.411*				

The purpose of this schedule is to quantify the year-to-year changes in SPP's three year projections made during each budget cycle as required by the membership agreement. Accuracy of these projections can be significantly influenced by both internal and external pressures such as board and committee directives, incremental membership, environmental factors, etc.

The actual calculated administrative fee is equal to the NRR divided by the billing units. The administrative fee actually charged is equal to the administrative fee listed under the budget in each three year cycle (i.e. the administrative fee for 2017 was $0.429, but the calculated fee was $0.411).

XI. SPP OPERATING PLAN DOCUMENT

2019 OPERATING PLAN

Published September 18, 2018

By the SPP Finance Department

CONTENTS

BACKGROUND INFORMATION

ABOUT SPP

SPP's mission is "Helping our members work together to keep the lights on ... today and in the future." SPP provides services regionally and independently, focusing on reliability and cost effectiveness. SPP is mandated by the Federal Energy Regulatory Commission (FERC) to ensure reliable supplies of power, adequate transmission infrastructure and a competitive wholesale electricity marketplace.

SPP's primary services provided to members and customers include:

- Facilitation
- Reliability coordination
- Tariff administration
- Transmission planning
- Market operations
- Compliance
- Training

REGULATORY

SPP is directly regulated by FERC. SPP must file changes to the SPP regional tariff with FERC, and FERC must approve changes prior to implementation. SPP's failure to comply with tariff provisions and/or FERC directives must be reported to FERC and may be subject to penalties and fines.

GOVERNING DOCUMENTS

Open Access Transmission Tariff (OATT or "tariff")

The SPP tariff defines the majority of the required workload for SPP's operations and engineering departments. Significant duties include, but are not limited to:

- Provide tariff administration services, including scheduling
- Provide ancillary services
- Operate market and balancing authority
- Settle all transactions under the OATT
- Administer credit services for OATT customers
- Complete system impact studies
- Complete annual SPP Transmission Expansion Plan
- Study generation interconnection requests
- Evaluate long-term transmission service requests
- Administer the competitive process for transmission expansion
- Administer the Southwestern Power Administration transmission system beyond their tariff
- Monitor activities in SPP's energy markets and exercise plans to mitigate market power

Membership Agreement

The membership agreement between SPP and each of its members obligates SPP to perform the services outlined above, including those in the OATT. The agreement describes other significant duties including but not limited to:

- Act as the reliability coordinator for the bulk electric system (BES)
- Develop regional reliability plans and emergency procedures
- Review and approve all planned maintenance of the BES
- Coordinate the maintenance of generation units
- Administer an Open Access Same-Time Information System

Bylaws

The bylaws describe SPP's organizational operation, outlining the duties of the board of directors and committees advising the board. SPP has a responsibility to facilitate meetings of every organizational group. The scope of the organizational structure is as follows:

- Board of directors (1)
- Regional State Committee (1)
- Members committee (1)
- Board-level committees (6)
- Working groups (18)
- Task forces, subcommittees, strike teams (35+)

Protocols and Business Practices

SPP has well-documented business practices that detail the administrative practices SPP follows in administering the OATT, including coordinating the sale of transmission service. SPP also has well-documented market protocols that detail how customers and SPP are to interact. These documents are developed through SPP's stakeholder process.

ORGANIZATIONAL STRUCTURE

SPP operates via two distinct organizational structures. The governance structure (see Appendix A), begins with the board of directors and cascades into board-level committees and working groups. This organizational structure is populated largely with representatives from SPP's member companies. Generally, this structure directs the work SPP is expected to accomplish.

The internal staff structure (see Appendix B) illustrates reporting relationships among employees. The staff structure begins with the SPP president and cascades into vice presidents, departmental directors/managers, etc. The staff structure is generally aligned based on functional responsibilities. Staff receives direction from the governance structure and acts on those directives.

FUNDING

SPP funds its ongoing operating costs through charges to customers under the tariff and customers of specific non-tariff services. SPP's operating costs include scheduled principal and interest payments on its outstanding debt but exclude incurred depreciation and amortization expenses. SPP is able to collect up to 100 percent of its operating costs from charges to transmission customers up to a cap of 43¢/megawatt-hour (MWh). SPP charged customers 42.9¢/MWh for service in 2018.

SPP's capital expenditures are funded with borrowings from periodic debt issuances and with 20 percent equity allocation included in the transmission service charge referenced above. SPP's debt issuances are generally unsecured, have a one-to-two year, interest-only payment period and then fully amortize by the maturity of the notes. SPP is required to obtain regulatory approvals prior to issuing new debt. SPP carries an A rating from Fitch Ratings that was last affirmed in August 2018. SPP issued new notes in August 2018 to fund capital expenditures incurred through 2023.

Short-term liquidity is provided by managing SPP's cash float. SPP has a committed $30 million revolving credit facility to provide additional liquidity support.

2019 EXPECTED BUSINESS ENVIRONMENT

The business environment in which SPP works is constantly changing. Some of the opportunities and challenges affecting SPP are cybersecurity risks, a changing generation mix, electrification impacts, regulatory changes and SPP's expansion to the west.

Cybersecurity

The threat of cyberattacks continues to be a major risk to the electric utility industry. SPP must remain involved in developing Critical Infrastructure Protection (CIP) standards that are flexible enough to meet security challenges but still allow the provision of reliable and affordable electricity. Evolving threats and emerging technologies surface more quickly than standards can be revised or implemented. To ensure the grid is protected from cyber threats, the industry must continue to prioritize cybersecurity maturity above and beyond that which is required for compliance.

A number of new and modified CIP standards are on the horizon. SPP anticipates FERC will approve CIP-013-1 (supply chain management) by the end of 2018. According to FERC's notice of proposed rulemaking, the implementation plan will be shortened to just one year, increasing the urgency of the effort to develop and implement required plans and procedures. Additional standards that will impact SPP are requirements to protect data communications between control centers and the integration of virtual systems, networks and storage into CIP standards. SPP is waiting on the outcome of a recent FERC-ordered study on interactive remote access and what new controls may be required.

Social engineering, and especially phishing, continues to be a cybersecurity concern. SPP conducts quarterly and annual cybersecurity awareness training and regularly conducts phishing email exercises to test risk awareness.

Electrification, Energy Efficiency and Demand Response

While many projections show total energy consumption is expected to continue to decline, they anticipate that overall electricity use will increase with technologies such as electric cars and heat pumps. While electrification occurs within the energy sector, it is expected there will be continued

growth in SPP members' demand response and energy efficiency programs. Over time, these changes will likely cause lower summer peaks, higher winter peaks and a flattening of load shapes. Consumers will have more choices about how they use energy and interact with the electric grid. While major changes may not materialize over the next year, SPP is incorporating more of these evolving electricity usage assumptions in its engineering models.

Western Markets and Services

In the western U.S., energy markets and reliability services are undergoing major changes. In 2018 Peak Reliability announced it will wind down by the end of 2019. The Western Electricity Coordinating Council requested that Peak members choose another reliability coordinator. As of September 2018, California ISO (CAISO) and SPP are both seeking to become the reliability coordinator for Peak members. The California state legislature considered a bill that would change CAISO's governance to a regional governance structure, turning CAISO into a multistate regional transmission organization. The bill failed to make it out of committee before the end of the August 2018 session, though there is a chance the governor could call a special session to address the legislation.

SPP continues to talk with entities in the west about joining SPP as members and participating in its markets. In 2018, a group of six utilities selected SPP to administer the Western Interconnection Unscheduled Flow Mitigation Plan, a blueprint for the use of certain controllable devices to mitigate congestion on transmission lines.

Changing Generation Mix

The SPP region is rich in renewable resources, containing the strongest on-shore wind potential and the highest confluence of wind and solar potential in the country. This tremendous growth opportunity makes the SPP region attractive to large industrial customers such as Walmart, which joined SPP in 2018.

Wind is a zero-fuel-cost generation source and plays a major role in keeping electricity prices down and allowing SPP members to provide affordable power. SPP has about 10,000 wind turbines installed that generate almost 20 GW of generation. SPP is studying more than 64 GW of wind to determine what transmission upgrades would be needed to add it to the electric grid. Many potential customers are seeking to interconnect their wind to the grid before eligibility to get production tax credits expires in 2020.

While SPP has reliably managed wind-penetration levels of more than 64 percent, and an average of 26 percent of SPP's load is served by wind, a saturation point will be reached and wind energy will need to be curtailed or exported to other areas. SPP needs to develop economic and cost recovery strategies to use this excess wind and identify upgrades across seams to move wind energy into other markets.

Other types of generation must be available to supply demand when wind generation is not available. Coal still serves as baseload generation, but the use of coal has decreased in the SPP region, and the use of natural gas for quick-start, reliability driven purposes has increased. While there is only a small amount of solar energy installed in SPP, 20 GW of solar energy are in the generation interconnection queue. SPP has 3 GW of battery storage in the queue as well.

Regulatory

FERC directives in 2018 are impacting SPP and will require effort in the next few years. Order 841 requires ISO/RTOs to revise their tariffs to establish market rules that facilitate the participation of electric storage resources in their markets. Order 845 revises interconnection rules for generators larger than 20 MW and will allow interconnection customers to request a level of service lower than its generating capacity — an issue that has become increasingly prevalent with the rise of renewable resources. Energy storage, coupled with renewables, can reduce volatility. SPP is studying what market products are needed long-term to address these changes. The expectations described below largely resemble those in last year's Operating Plan, with attention given to cybersecurity, the proliferation of renewable energy resources and the impact of energy efficiency on load. An exception, though, is found in the regulatory arena, where a new presidential administration and subsequent changes in policy and regulatory and legislative leadership have brought numerous issues into question.

2019 OPERATING PLAN BY CATEGORY

2019 SPP OPERATING PLAN ORGANIZATION

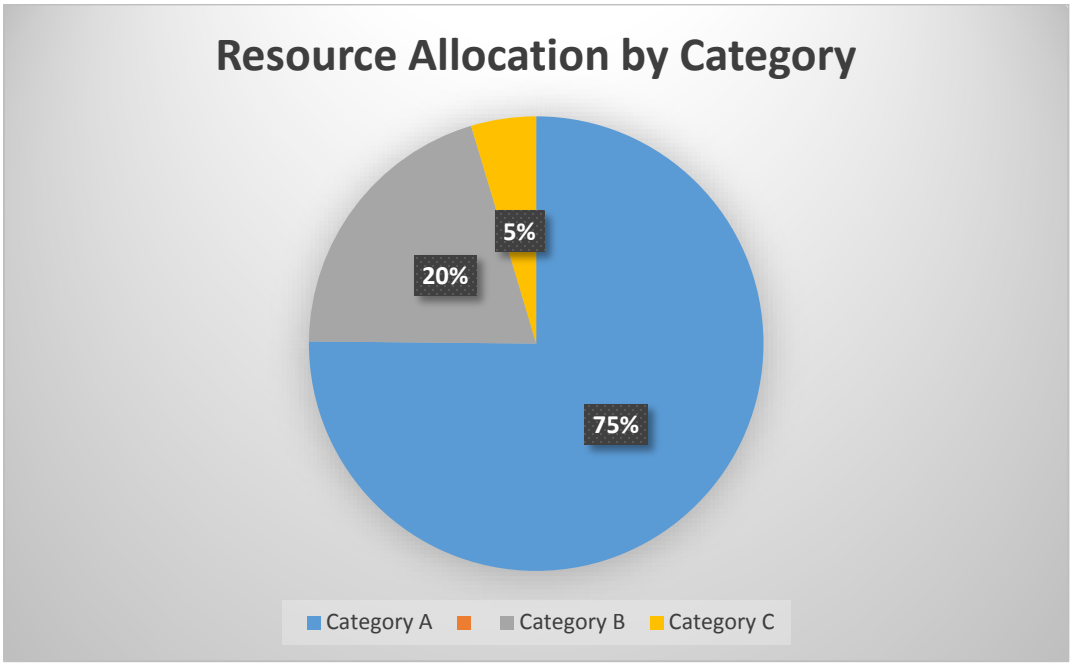
In July 2018, senior SPP staff met with leadership of the Markets and Operations Policy Committee, Strategic Planning Committee and Finance Committee to discuss how to best coordinate and communicate the 2019 Operating Plan. The group determined SPP should organize its operating plan by aligning functional performance, resource allocation and outcomes within three broad categories:

Category A	Activities SPP is required to do per its tariff, regulatory orders or directives, reliability standards, legal requirements, and sound business requirements. These are mandatory and non-negotiable activities.
Category B	Activities that are not required by the tariff, regulatory, legal, etc., but were requested by stakeholders or are overseen by a stakeholder group.
Category C	Activities that do not fall under categories A and B. Generally, these are activities deemed reasonable and prudent by SPP staff/board.

Category A activities are no more or less important than category B and C activities. The items in each category are subject to further development and review by staff, stakeholders and the board. Descriptions of the initiatives are intended to illustrate the scope of the issues, not to dictate the final implementation, approach, or restrict discussion.

This symbol denotes a 2019 SPP initiative:

The following pie chart illustrates the relative allocation of resources by category. Categories A and B account for 95 percent of SPP's resource allocation.



CATEGORY A

Category A activities represent the majority of SPP's expected effort and resource allocations. Significant among these are:

- Operations functions, encompassing transmission and market tariff administration
- Engineering functions, including long-term transmission planning, transmission service and generation interconnection studies
- Information technology functions, which provide the technical resources and support that make SPP's systems run

Noteworthy SPP initiatives that are required by legal or regulatory directives include:

FERC Order 841: Electric Storage Participation in Markets Operated by ISOs/RTOs

The order requires each RTO and ISO to revise its tariff to establish market rules that facilitate participation of electric storage resources in RTO/ISO markets. The participation model must:

- Ensure a resource is eligible to provide all capacity, energy and ancillary services of which it is technically capable
- Ensure a resource can be dispatched and set the wholesale market clearing price as both a wholesale seller and wholesale buyer, consistent with existing market rules that govern when a resource can set the wholesale price
- Account for the physical and operational characteristics of electric storage resources through bidding parameters or other means
- Establish a minimum size requirement that does not exceed 100 kilowatts

Each RTO/ISO has to specify that energy must be at the wholesale locational marginal price if it is sold from a market to a storage resource and then resold back to the market.

A high-level timeline for implementing Order 841 is as follows:

October 2018	Market Working Group recommendation to MOPC and board
December 2018	Compliance filing due to FERC
December 2019	Implementation

Supply Chain Management

The North American Electric Reliability Corporation (NERC) proposed Critical Infrastructure Protection standard 013-1 (CIP-013-1) in response to FERC Order 829. That order required NERC to develop standards to address supply chain risk management for industrial control system hardware, software, and computing and networking services. In January 2018, FERC proposed to approve the NERC standard. FERC required NERC to include electronic access control and monitoring systems within the standard's scope and to evaluate risks presented by physical access controls and protected cyber assets as part of a NERC study.

Managing supply chain risk and complying with CIP-013-1 will result in significant additional workload including but not limited to:

- Managing contracts with vendors and negotiating additional terms and conditions
- Evaluating vendors' risk management and security processes
- Adding rigor for evaluating ALL software that is introduced into SPP
- Having tools and running analyses on all hardware prior to installing into an SPP environment
- Developing and administering additional processes and controls related to software and hardware acquisition while collecting appropriate evidence to ensure compliance

Integrated Transmission Planning (ITP)

The SPP Board of Directors and stakeholders approved sweeping changes to the ITP processes in 2017. The first ITP study completed under the new processes began in late 2017 and will complete in 2019. The study process will consume over 28,000 man-hours of labor and require at least 60 stakeholder meetings until it is presented to the SPP board.

Resource Adequacy Process

SPP will implement new tariff provisions that FERC approved in 2018. Foremost among these will be the new enforcement process and the enhanced data collection and monitoring provisions that ensure load responsible entities are planning sufficient resource capacity.

CIP Compliance

SPP will mitigate issues identified in NERC's mid-2018 audit of SPP's CIP compliance. SPP expects the final audit report will be issued in late 2018 and will contain several findings of non-compliance. The mitigation effort will include three parallel paths: quick-fix and "low-hanging" items, high-risk items requiring longer-term architectural changes, and root-cause examination and rectification of key processes. This effort will engage the majority of the IT department and potentially require outside consulting.

Category A Financial Impact

	Expected Financial Impact					
Initiative	O&M	Capital	Required	Required	Status
FERC Order 841 - Storage	$ -	$ 0.4	FERC	FERC Order	Development, implement by 12/2019
Supply Chain Management	$ 0.1	$ -	NERC	NERC Standard	Underway
Integrated Transmission Plan	$ -	$ -	Tariff	Tariff	Underway, delivery of 1st report in 2019
Resource Adequacy Process	$ -	$ -	Tariff	Tariff	Underway
CIP 5 Audit Mitigation	$ -	$ -	NERC	NERC Standard	Underway

CATEGORY B

Activities in this category represent work that is directly tied to the SPP stakeholder process. Generally, a stakeholder group will decide on these activities or will oversee the work.

Human Resources Committee

Compensation Survey

The committee is studying SPP's retirement plan structure to determine if an alternative structure exists that could provide a similar level of benefit yet be more affordable long term. The committee has engaged Mercer, the world's largest human resources consultant, to identify and analyze opportunities.

The committee has commissioned a third-party vendor to conduct a salary survey to ensure SPP's salary structure and job slotting within the structure are at the 50th percentile of its peer group.

Markets and Operations Policy Committee (MOPC)

Revision Requests & Enhancements

The MOPC is evaluating alternatives to SPP's current cost recovery methodology. The committee expects to deliver a recommendation to the SPP board of directors in early 2019 with implementation anticipated in mid-2020.

The MOPC is charged with reviewing and approving revisions to SPP's Integrated Marketplace. As of July 2018, the committee had approved eight revision requests that would require approximately $1.6 million in capital investment. The table below illustrates the scope of these revisions.

RR Number	Title	Estimated Cost	MWG Review	MWG Action	Estimated Implementation Date
116	Quick-Start Real-Time Commitment	$200,000	9/15/2015	Approved	TBD
210	Contingency Reserve Deployment Tests	$100,000	4/17/2017	Approved	Q2 2019
231	Mitigation of Locally Committed Resources	$235,480	8/22/2017	Approved	Q4 2018
245	Mitigated Start-Up and No-Load Offer Maintenance Cost	$101,200	10/24/2017	Approved	Q1 2019
252	OOME Enhancement	$168,176	11/14/2017	Approved	Q2 2019
253	DVER Regulation Enhancement	$146,800	11/14/2017	Approved	Q1 2019
266	JOU Combined Single Resource Modeling post Settlement Share Allocation	$389,290	12/11/2017	Approved	Q2 2019
306	Multi-Day Minimum Run Time	$267,448	6/12/2018	Approved	Q4 2019

Seven other revision requests representing $0.6 million in financial impacts are working through the stakeholder process. Active in the stakeholder process are another 52 revision requests that do not require financial resources to be implemented. Annually, SPP receives 60-70 revision requests for evaluation and action.

Oversight Committee

Business Continuity

The Oversight Committee is driving meaningful improvements to SPP's emergency management and business continuity processes. Transactions settled under the tariff have grown, significantly outpacing the maturity of SPP's business continuity processes. Under the committee's oversight, SPP is undertaking deliberate steps to ensure its business continuity plans are well documented, coordinated and tested. This process will accelerate in 2019 and continue into 2020 to get SPP to the minimum maturity level identified by the committee.

Board of Directors

The board is refocusing on SPP's strategic direction. Board discussions have tended to address more tactical and technical issues and have not been as deliberate when looking at strategic issues.

Holistic Integrated Tariff Team (HITT)

The SPP board of directors created the HITT in March 2018. The team is expected to deliver recommendations for improvement to the board in April 2019. The recommendations are expected to address issues such as:

- Changes to SPP's transmission planning and study processes, including but not limited to: generation interconnections; the generation interconnection queue; aggregate studies; energy resource interconnection service; network resource interconnection service; capacity requirements, including more attributes than energy; and related FERC planning requirements.
- Transmission cost-allocation issues, including but not limited to: highway/byway, directly assigned costs, attachment Z2 credits, cost-allocation impacts on transmission pricing zones with large wind resources, and state-by-state supply resource mix requirements and/or goals.
- Integrated Marketplace impacts related to: a changing resource mix, access to lower cost generation, potential changes in production tax credits, approach of using market-based compensation for varying attributes of different types of generators, etc.
- Disconnects or potential synergies between transmission planning and real-time reliability and economic operations.

Due to the uncertainty of the expected HITT recommendations, this operating plan does not contain any specific activities or resource allocation to address HITT's initiatives.

Generation Interconnection (GI) Process:

SPP will submit to the board proposed tariff language to implement GI process improvements that were recommended by the GI Improvement Task Force and approved by the MOPC. Significant improvements are the elimination of the single source study process, which does not contribute significant benefit, and the establishment of a three-stage process with escalating levels of financial commitment from study participants. Once approved by the board, SPP will make a FERC filing seeking approval to implement these changes.

Markets and Operations Policy Committee and Working Groups

Ramp Product

Members requested a market-based ramp management approach that leverages operational experience to manage variances associated with system net obligation and the intermittency of variable energy resources. It will allow the market to value resource flexibility through a product that indicates the value to build resources that are capable of offering such product to the market.

A ramping product allows two processes SPP does not currently use in its reliability-based economic approach. The first is a systematic way to "hold back" resources that have available ramp capability for situations when it is needed. This is particularly useful in ramping events in which cheap, fast-moving generation has been dispatched to the maximum, leaving only slower-moving generation online to manage the ramp. The second is the calculation and systematic procurement of ramping capability that accounts for the potential error in load and renewable energy forecasts. The procured excess ramping capability would be insurance against issues that occur when SPP under-forecasts ramping capability. This new process will increase grid security and allow for fewer pricing excursions. SPP would be able to transparently price these megawatts, provide an opportunity for market participants to compete to provide this product, and have assurance when studying additional generation additions into the footprint.

Multi-Day Economic Commitment

This is a member-requested enhancement. The first phase, which SPP staff supports, is providing a generation commitment forecast to the market participants that are responsible for those generation assets. Market participants will benefit by having more information on whether SPP will commit those assets, allowing them to reduce risk, possibly make better offers, procure fuel, etc. The second phase, which SPP staff does not support, would be a multi-day clearing, similar to a day-ahead of the day-ahead market. Staff's initial assessment is that the effort to perform multi-day clearing would outweigh the perceived benefits.

R-COMM

Members have been asking staff to develop R-COMM since 2015. The tool provides a robust forum for the reliability coordinator to communicate with transmission operators and balancing areas about issues that are not appropriate for email or phone calls. This new tool's automation will improve operator efficiency and reduce the risk of human error. Operators will no longer need to make phone calls during load-shed events, flowgate activation and deactivation, or other situations.

Primary Frequency Response (PFR) & System Inertia

These are ancillary services required to maintain reliability while operating an alternating current grid. SPP is participating with other ISOs/RTOs and NERC to decide if Eastern Interconnection grid operators need to provide or require this service. The effort to determine SPP's PFR and System Inertia requirements is the primary scope of the PFR Task Force, which reports to SPP's Operating Reliability Working Group. The group's first goal is to identify the ongoing requirement of this service for SPP's footprint. The second goal is to determine if SPP should develop tariff requirements for generation to provide the services, or if SPP should create a market in which capable generation can offer the service for payment.

De-commitment

This is a member-requested enhancement. SPP believes there are time periods that have too many long-lead (base) resources online. During these times, the energy price may be lower if SPP could turn these resources off (de-commitment). This is a very complex issue to resolve, as it involves more than merely assessing the resources' cost for that time period and shutting it off. SPP would need to understand what day-ahead positions the resource has. SPP would also need a robust, trusted, time-coupled solution to prove that de-committing the resource is more economic and does not introduce reliability risk. The Market Working Group is exploring these issues.

Generation Retirement

Fossil-fueled generation retirements are increasing each year. SPP needs a single process for member-driven retirements that quickly assess the impacts and, before any new or planned upgrades, maintains the resource via tariff and market constructs. The Transmission Working Group and Operating Reliability Working Group are studying this issue.

Category B Financial Impact

Initiative	Expected Financial Impact O&M	Capital	New Staff	Org Group	Status
Compensation Survey	$ 0.2	$ -	-	HRC	Not started
Revision Requests & Enhancements	$ -	$ 2.0	-	MOPC	Ongoing
Business Continuity	$ 0.1	$ -	1	OC	Not started
Holistic Integrated Transmission Team	$ -	$ -	-	BOD	Study phase, in stakeholder group
GI Process Changes	$ -	$ -	-	BOD	Underway
Ramp Product	$ -	$ -	-	MWG	Study phase, in stakeholder group
Multi-day Economic Commitment	$ -	$ -	-	MWG	Study phase, in stakeholder group
Reliability Communications Tool	$ -	$ -	-	ORWG	Internal development, implement in 1Q'19
Primary Frequency Response	$ -	$ -	-	ORWG	Study phase, in stakeholder group
De-Commitment	$ -	$ -	-	ORWG	Study phase, in stakeholder group
Generation Retirement	$ -	$ -	-	TWG/ORWG	Study phase, in stakeholder group

CATEGORY C

Category C resources are deployed based on management and board decisions. Tasks in this category are deemed worthwhile for SPP's success, though they may lack a direct tie to a stakeholder group and/or operational aspect.

Process Integrity

PMO Tool Replacement

The project management office (PMO) is engaged with small teams of SPP directors to develop processes and procedures that streamline:

- Project pipeline
- Project management life cycle
- Portfolio management
- Program management
- Deferred asset tracking (time tracking)
- Resource forecasting and management
- Budget cycle management

The teams will evaluate and select the best solution that provides current functionality and adds new functionality to enable greater efficiencies in managing the SPP project pipeline and budget processes.

SPP uses Microsoft Project Web Access (PWA) to plan, manage and track enterprise projects. It also serves as a resource management system for engineering's billing process. PWA is nearing the end of Microsoft support. To streamline project submission/review and develop a functional pipeline for all capitalized projects, it is essential to upgrade or replace the project management system. The replacement must meet the business needs for budget, program and portfolio/pipeline management processes. A system replacement or upgrade is needed to give the PMO the ability to:

- Create displays and dashboards for various audiences including internal and external stakeholders, the Finance Committee, the project review and prioritization committee and the stakeholder prioritization quarterly meeting.

- Easily and accurately track time reporting and metrics, resource forecasting and planning, and time against project tasks related to deferred assets.

- Support and maintain the existing system, which is relegated to one PMO technician who supports the application for the PMO and the engineering planning department. Engineering planning has integrated a custom database that enables their billing process.

Operations

Enhanced Reliability Capabilities

SPP must maintain reliability excellence to operate the bulk electric system's changing landscape. During the previous seven years, coal moved from 63 percent serving SPP load to 46 percent, while wind moved from 6 percent to 23 percent serving SPP load. The generation interconnection queue consists of about 65 GW wind, 20 GW solar, 3 GW batteries, and a gas plant.

Large transfers of variable fueled energy have increased across the SPP footprint. Wind farms are often located where load is not, and the region is experiencing retirements of traditional fossil generation that is close to load centers. Fuel-mix dispatch changes and new generation technologies are creating operational issues that have traditionally not manifested in real-time, such as voltage and transient instability.

To maintain reliability excellence, operational efforts will be focused on these initiatives:

Voltage security assessment tool (VSAT) allows the SPP reliability coordinator function to perform studies and provide warnings to the reliability coordinator and transmission operator that potential voltage instabilities may exist in real-time or up to four hours out. These warnings allow operators to take action that could mitigate a potential voltage collapse. This tool recently moved into production for real-time and look-ahead modes (four hours out). The VSAT tool provides enhanced visibility and reliability by mitigating voltage collapses before they occur.

Transient security assessment tool (TSAT) allows the SPP reliability coordinator function to perform stability studies to determine the transient response on simulated faults. Operators are not able to detect this with current tools. The TSAT tool is scheduled to be placed into production the first quarter of 2019. The TSAT tool's primary benefit is enhanced visibility and reliability by preventing or reducing occurrences of adverse transient responses to resource trips.

Phasor measurement units (PMU) provide more accurate information by receiving high-frequency sampled data and using phasor and frequency estimation algorithms to calculate the voltage magnitude, phase angle and frequency of voltage signals. PMU benefits include more robust model accuracy verification and post-event analysis. A real-time benefit is the ability to feed the measurements into existing operations tools for more accurate situational awareness. The PMU tool will reduce potential risk to load by providing more accurate study results. Generators will benefit when the tool identifies sources of oscillations to prevent equipment damage and reduce unit trips. Additional benefits come from identifying issues that are not visible with traditional SCADA (supervisory control and data acquisition) real-time measurements.

Expand and Improve Market Functionality

In the four years since the inception of the SPP Integrated Marketplace, SPP's operational challenges have become increasingly complex and could be difficult to manage without market enhancements. SPP's geographic location, vast footprint and diverse fuel mix makes its situation unique as compared to other RTOs/ISOs.

SPP's previous focus on transmission expansion was successful in unlocking generation that otherwise might not have been built or would have been limited due to lack of transmission. The majority of this

unlocked generation has been renewable, specifically wind and solar. With the vast amount of variable energy resources online and being interconnected, SPP must constantly assess what we do not know and mitigate forecasted problems. SPP is managing real-time challenges and expecting new challenges that could potentially put reliability and resiliency at risk.

Two major new studies focused on reliability have helped justify speeding up transmission builds (now complete) and the need to run online voltage and transient stability software in real-time (some of this work is completed and some is in progress). While these targeted studies have led to greatly needed insights, SPP has not recently surveyed the whole grid landscape from a combined reliability and economic perspective. The grid is facing many complex issues such as generation retirements, the addition of renewables, short-term capacity needs, energy storage, and generator profitability. SPP needs a more holistic study of the current situation. Actions targeted for 2019:

2019 SPP Market and Reliability Study for Renewable Resource Resiliency and a Long-Term Committable Market Study (RRIMS)

The RRIMS is a coordinated and comprehensive study to evaluate what the SPP footprint needs from a reliability perspective and what market products would best fulfill those needs. This study will help drive the design of a longer-term committable market, a flexibility product or portion of ramp product, and 30-minute/one-hour/two-hour/three-hour/four-hour products.

This initiative will study operational and market needs that may be met with near-term market design changes (less than five years from 2019). As of September 2018, the MOPC, HITT, Economic Studies Working Group, Market Working Group, Operating Reliability Working Group, Transmission Working Group and Supply Adequacy Working Group have been or will be involved in scoping the study. The study is expected to last about six months and deliverables will identify applicable market product recommendations with costs and benefits.

Addressing short-term capacity needs

In the past two years, unique and unforeseen issues have occurred that require additional attention and effort, such as the day-ahead market's choice to run short-lead resources and the loss of SPP's ability to mitigate variances in wind/load. The RRIMS study supports the effort to address short-term capacity needs and will lead to a robust market solution. The goal is to address reliability needs now via operational procedures, quick enhancements to determine uncertainty via in-house tools, and commitment of more long-lead resources in the multi-day reliability assessment process.

Dispatcher Training Simulator (DTS) phase 2B: The current DTS does not allow for production-like training, due to the lack of an integrated market system. The DTS does not meet SPP operators' needs related to the balancing authority, reliability unit commitment, and real-time balancing market functions. Since the implementation of the Integrated Marketplace and consolidated balancing authority, market systems have become almost as critical to reliability and balancing as the energy management system. Realistic simulation training using market systems is imperative to SPP operator readiness and increased reliability.

In 2016, SPP launched a multiyear project to upgrade SPP's DTS. Implementing phase 2B will require market simulator enhancements from GE to create a full training and testing simulated environment (TTSE) that performs more closely to real-time production systems. In February 2018, GE provided an updated budget for performing this work. In March 2018, SPP's North American Transmission Forum Peer Review reaffirmed that SPP, as an RTO operating a market, needs to have a TTSE. Reviewers

compared SPP's current simulation tools to using a Cessna to train 747 pilots. SPP is the only ISO/RTO in the United States without a full market simulator.

Information Technology

Critical Infrastructure Protection Standards (CIP) and Security

Numerous activities are underway and continue into 2019 to enhance overall security and address requirements under NERC's CIP standards. SPP plans to implement:

- A software solution known as "Application Whitelisting" that only permits pre-identified authorized programs to be accessed and/or executed. Essentially, whitelisting flips the traditional antivirus model from a "default allow" to a "default deny" approach for all executable files, which is considerably more effective and secure. This solution should be deployed to key systems supporting bulk electric system operation by the end of 2019.

- "User behavior analytics" that uses machine learning combined with user behavior patterns to detect insider threats and cyberattacks. This functionality will further mature SPP's cybersecurity position.

- Several new functions within its existing product sets to improve SPP's cyber posture. SPP will implement "static code analysis" on vendor application code to identify potential vulnerabilities before it is put into production. The static code effort will require external vendor assistance for vendor-owned applications. Internal SPP resources will scan programs for which SPP has access to the source code.

Increase Operational Efficiency

IT continues to receive an expanding volume of requests and requisite work. This work brings greater awareness and identification of inefficient and manual processes ripe for improvement and automation. Areas of focus include patch management, server provisioning and application testing. In each of these areas, IT staff spends significant time performing manual processes to build, track, replicate and verify information.

- As part of SPP's overall focus on continuous improvement, the IT department will lead an effort to identify and prioritize existing manual processes that consume staff resources and would benefit from new, streamlined processes. In particular, IT will focus on high-touch, repeatable administrative activities that carry a high risk of manual errors, such as ongoing CIP processes and server/application patching processes.

- Another goal is to identify and prioritize opportunities for automation, develop a clearinghouse for automation activities, determine the cost/benefit of automation proposals and develop a holistic implementation plan. The automation framework has been established, and seven automation initiatives are in the queue for 2019.

- SPP has an extensive software portfolio with many tools that provide similar functionality in the areas of source code versioning, issue tracking, application build processes and information sharing. The disparate toolsets result in higher licensing, support and maintenance costs, as well as non-standard processes and potential lack of integration. IT plans to standardize on a single, common platform to reduce the SPP software stack and associated costs.

Evaluate and Leverage Emerging Technologies

IT continues to evaluate and appropriately implement new technologies that increase functionality and/or optimize current functionality. The IT landscape is in a continual state of change. Vendors are rapidly offering products that have new functionality and potential economic benefits. The IT department thinks it is prudent to maintain awareness of evolving technologies and integrate them in alignment with SPP's strategic initiative of enhancing member value and affordability.

For the vast majority of business applications, IT utilizes "on premise" infrastructure to run application systems and store critical business data. While there are many advantages to this approach, there are potentially less-critical systems and data that may be eligible to be implemented in an off-site "cloud" environment. Cloud storage could reduce IT infrastructure, costs, and ongoing support and management resources. During 2019, the team will evaluate cloud opportunities, develop a cloud strategy and position based on security and compliance guidelines and requirements, and evaluate potential targets that could be more favorably and securely implemented in a cloud environment.

The amount of data to support end-user requirements has increased dramatically over recent years, leading to an associated increase in SPP's investment in storage technology. This data must be highly available to end-users, perform satisfactorily, and be backed up to secondary and/or offsite locations as appropriate. In many cases, SPP applications must have duplicate data in multiple environments (test/development/member testing environment/quality assurance/production) that may necessitate various short-term or permanent retention periods, all of which require oversight for efficient allocation and removal of storage consumption.

In recent years, IT has attempted to implement a "fit for purpose" approach, whereby the most cost-effective storage solution is aligned with user/application requirements. During 2019, the team will continue with that approach and further develop a data-governance strategy to ensure the allocation, control, and deletion of data is in accordance with SPP retention policies and/or end-user requirements. The 2019 focus will be on initial development of a unified data governance program that will ultimately eliminate unnecessary data and improve data life-cycle management.

Asset Replacement

The IT department plays a significant role in SPP's ability to keep the lights on. Nearly every system and tool SPP uses to perform its tariff and reliability functions requires technology to make it happen.

Physical technology assets (servers, storage devices, networking equipment) comprise approximately $35-$40 million of capital inventory. Importantly, these physical assets must be replaced on a periodic basis due to: exposure to increased hardware failure rates, discontinued or unaffordable vendor support, operating system incompatibility, and the need for faster application performance and connectivity requirements.

A tremendous volume of resources are devoted to the daily care and upkeep of physical technology assets and software assets. In addition to asset setup and installation, staff must manage a continuous stream of patches and updates across all of the installed hardware and software. SPP processes over 1,700 patch sources annually, resulting in approximately 1,000 patches being applied on its critical cyber assets. NERC standards require these patches to be assessed within 35 days of release and installed within 35 days of completing the assessment.

Settlements

Settlements System Replacement

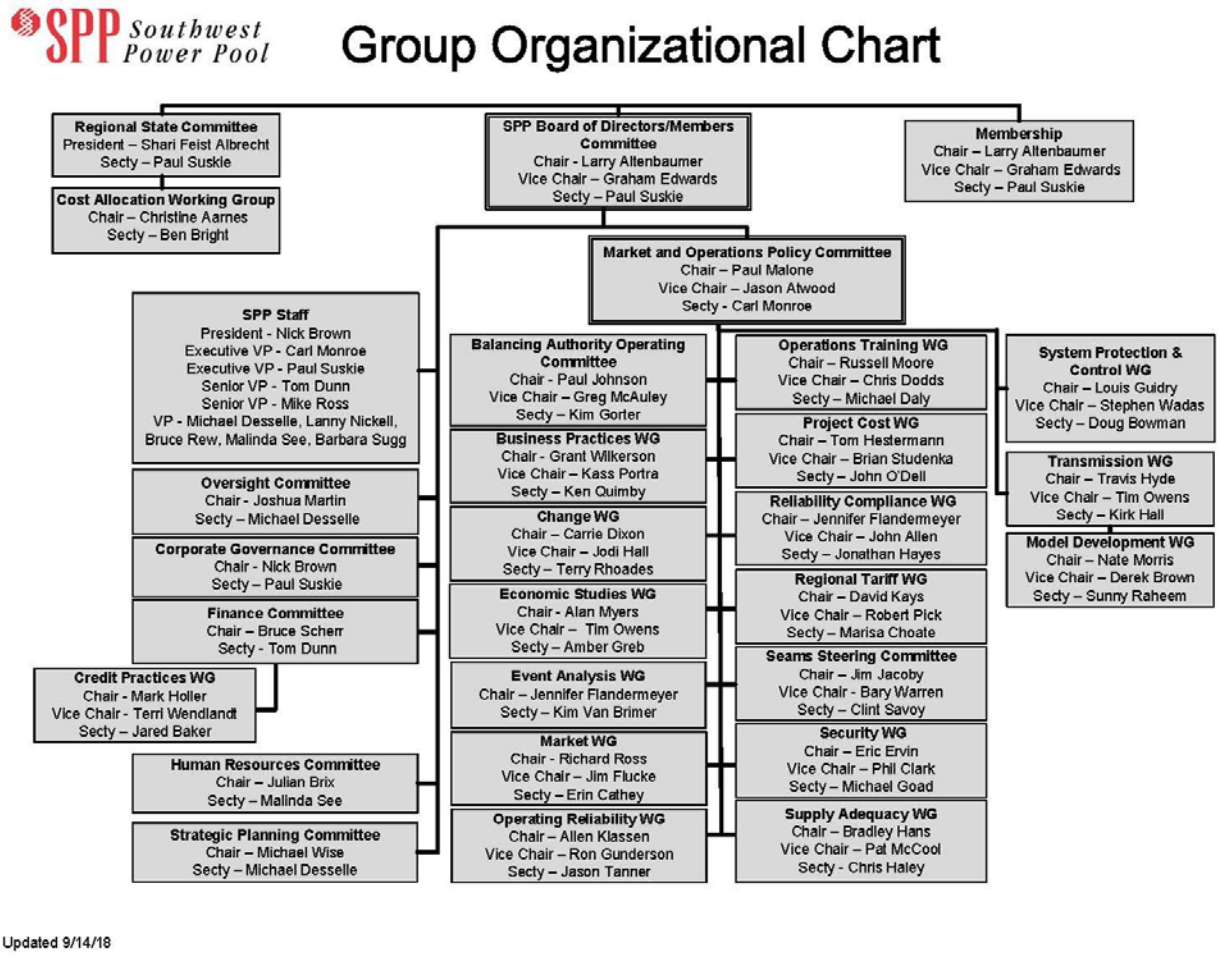
The multiyear project to replace and upgrade SPP's settlements system is slated to move into production in May 2019. The system will expand automation of manual processes to enhance accuracy, timeliness and auditability of settlements results. The system was architected to facilitate in-house changes in response to requirements needed to implement approved revision requests. SPP owns the code to the system and will maintain and upgrade the system using dedicated in-house IT resources. Annual expenses to operate the system are anticipated to be approximately $1.4 million less than the prior system, primarily due to elimination of a third-party maintenance agreement.

$5.3 million in capital investment was budgeted for the replacement system. This project is progressing on time and on budget.

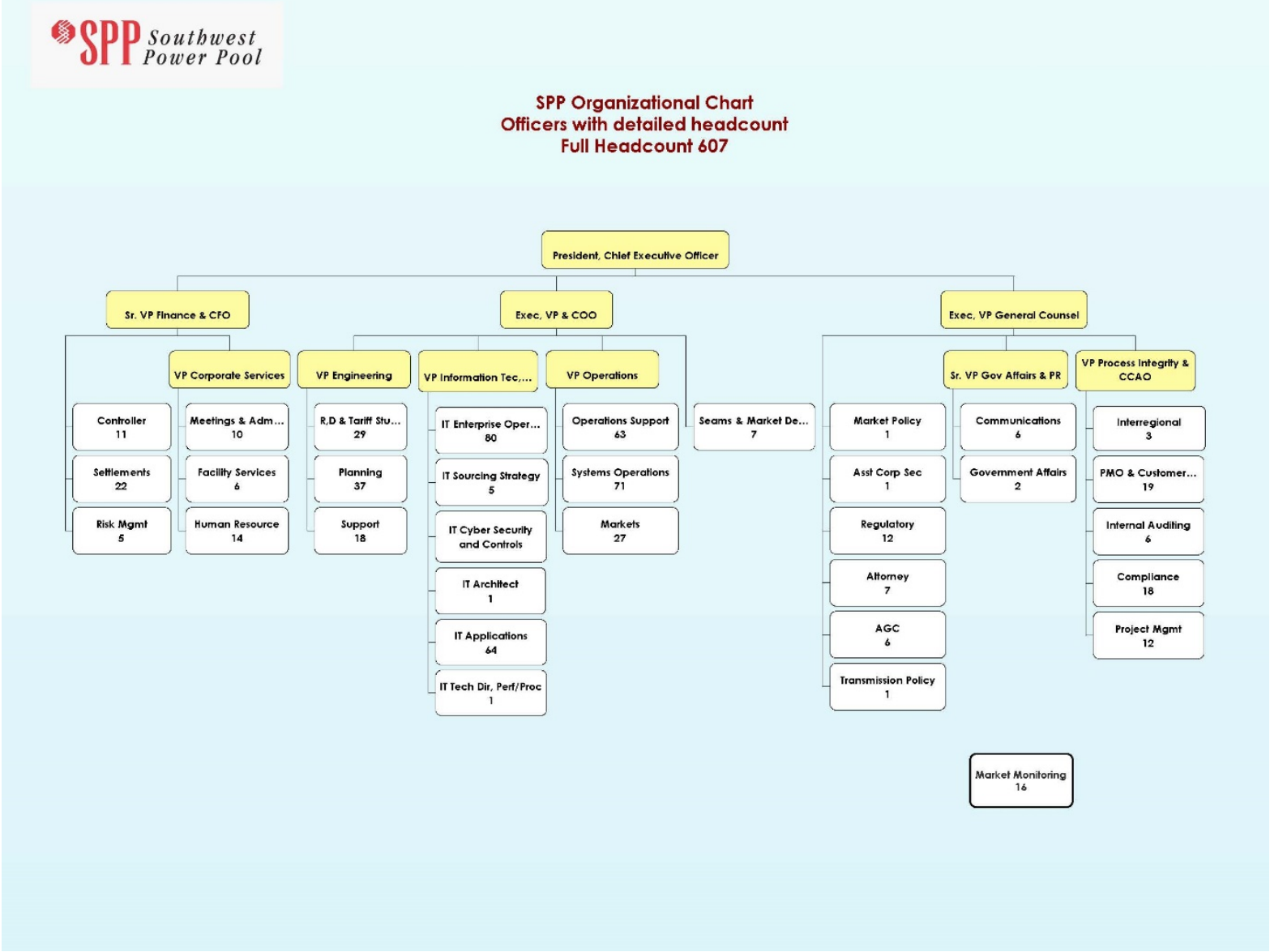
Category C Financial Impact

	Expected Financial Impact					
Initiative	O&M		Capital		New Staff	Status
Dispatcher Training Simulator	$	0.1	$	2.2	-	Not yet approved
PMO Tool Replacement	$	-	$	0.5	-	Researching options
Voltage Security Assessment Tool	$	-	$	1.0	-	In production, new functionality in 2019
Transient Security Assessment Tool	$	-	$	0.8	-	Under construction, deliver in 2Q'19
PMU	$	0.2	$	-	-	In place, working on data security issues
RRIMS	$	0.3	$	-	-	Not yet started
CIP and Security Issues	$	0.7	$	0.5	-	
Increase IT Efficiency	$	0.3	$	0.1	-	
Emerging Technology Application	$	0.1	$	0.3	-	Study and develop framework
Asset Replacement	$	-	$	8.0	-	Ongoing
Settlements System	$	(1.4)	$	5.3	-	Under construction, deliver in 2Q'19

APPENDIX A


SPP Southwest Power Pool
Group Organizational Chart
Regional State Committee
President – Shari Feist Albrecht
Secty – Paul Suskie
Cost Allocation Working Group
Chair – Christine Aarnes
Secty – Ben Bright
SPP Board of Directors/Members Committee
Chair - Larry Altenbaumer
Vice Chair – Graham Edwards
Secty – Paul Suskie
Membership
Chair – Larry Altenbaumer
Vice Chair – Graham Edwards
Secty – Paul Suskie
Market and Operations Policy Committee
Chair – Paul Malone
Vice Chair – Jason Atwood
Secty - Carl Monroe
SPP Staff
President - Nick Brown
Executive VP - Carl Monroe
Executive VP - Paul Suskie
Senior VP - Tom Dunn
Senior VP - Mike Ross
VP - Michael Desselle, Lanny Nickell, Bruce Rew, Malinda See, Barbara Sugg
Oversight Committee
Chair - Joshua Martin
Secty – Michael Desselle
Corporate Governance Committee
Chair - Nick Brown
Secty – Paul Suskie
Finance Committee
Chair – Bruce Scherr
Secty - Tom Dunn
Credit Practices WG
Chair - Mark Holler
Vice Chair - Terri Wendlandt
Secty – Jared Baker
Human Resources Committee
Chair – Julian Brix
Secty – Malinda See
Strategic Planning Committee
Chair – Michael Wise
Secty – Michael Desselle
Balancing Authority Operating Committee
Chair - Paul Johnson
Vice Chair – Greg McAuley
Secty – Kim Gorter
Business Practices WG
Chair - Grant Wilkerson
Vice Chair – Kass Portra
Secty – Ken Quimby
Change WG
Chair – Carrie Dixon
Vice Chair – Jodi Hall
Secty – Terry Rhoades
Economic Studies WG
Chair - Alan Myers
Vice Chair – Tim Owens
Secty – Amber Greb
Event Analysis WG
Chair – Jennifer Flandermeyer
Secty – Kim Van Brimer
Market WG
Chair - Richard Ross
Vice Chair – Jim Flucke
Secty – Erin Cathey
Operating Reliability WG
Chair – Allen Klassen
Vice Chair – Ron Gunderson
Secty – Jason Tanner
Operations Training WG
Chair – Russell Moore
Vice Chair – Chris Dodds
Secty – Michael Daly
Project Cost WG
Chair – Tom Hestermann
Vice Chair – Brian Studenka
Secty – John O'Dell
Reliability Compliance WG
Chair – Jennifer Flandermeyer
Vice Chair – John Allen
Secty – Jonathan Hayes
Regional Tariff WG
Chair – David Kays
Vice Chair – Robert Pick
Secty – Marisa Choate
Seams Steering Committee
Chair – Jim Jacoby
Vice Chair - Bary Warren
Secty – Clint Savoy
Security WG
Chair – Eric Ervin
Vice Chair – Phil Clark
Secty – Michael Goad
Supply Adequacy WG
Chair – Bradley Hans
Vice Chair – Pat McCool
Secty - Chris Haley
System Protection & Control WG
Chair – Louis Guidry
Vice Chair – Stephen Wadas
Secty – Doug Bowman
Transmission WG
Chair – Travis Hyde
Vice Chair – Tim Owens
Secty – Kirk Hall
Model Development WG
Chair – Nate Morris
Vice Chair – Derek Brown
Secty – Sunny Raheem
Updated 9/14/18

APPENDIX B


SPP Southwest Power Pool
SPP Organizational Chart
Officers with detailed headcount
Full Headcount 607
President, Chief Executive Officer
Sr. VP Finance & CFO
Exec, VP & COO
Exec, VP General Counsel
VP Corporate Services
VP Engineering
VP Information Tec,...
VP Operations
Sr. VP Gov Affairs & PR
VP Process Integrity & CCAO
Controller 11
Settlements 22
Risk Mgmt 5
Meetings & Adm... 10
Facility Services 6
Human Resource 14
R,D & Tariff Stu... 29
Planning 37
Support 18
IT Enterprise Oper... 80
IT Sourcing Strategy 5
IT Cyber Security and Controls
IT Architect 1
IT Applications 64
IT Tech Dir, Perf/Proc 1
Operations Support 63
Systems Operations 71
Markets 27
Seams & Market De... 7
Market Policy 1
Asst Corp Sec 1
Regulatory 12
Attorney 7
AGC 6
Transmission Policy 1
Communications 6
Government Affairs 2
Interregional 3
PMO & Customer... 19
Internal Auditing 6
Compliance 18
Project Mgmt 12
Market Monitoring 16

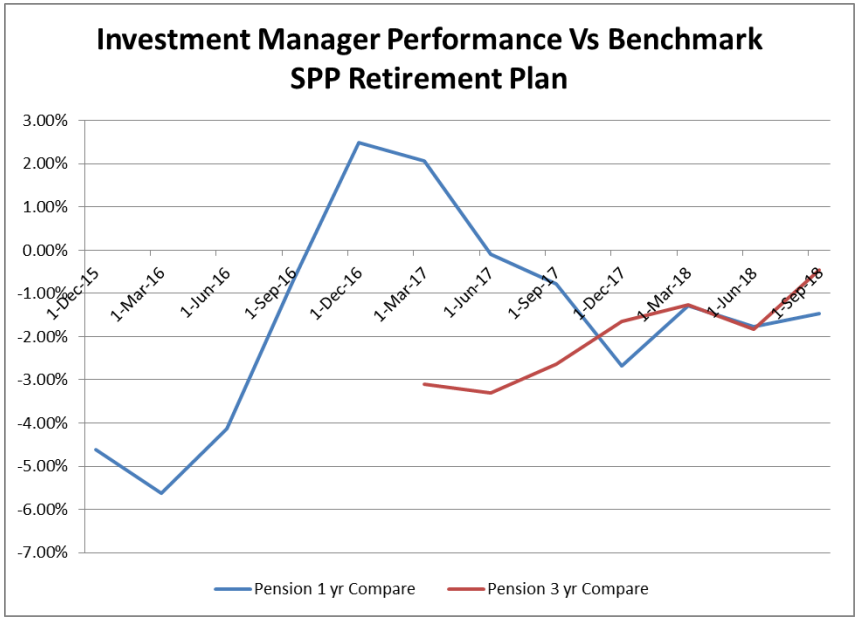
SPP Administrative Committee Report

October 29, 2018

SouthwestPowerPool SPPorg southwest-power-pool

Manager Performance Pension – 3Q'18

- 3-year annualized return approaching benchmark
  - 1-year: 10.81%
  - 3-year: 11.96%
  - LT RofR Target: 7.00%
- Portfolio holdings comply with IPS limits
  - Automated daily monitoring
- No changes to Investment Policy Statement



Manager Performance 401(k) – 3Q'18

- Monitored investment options
- Negotiated new record keeping fee
- Led education session on 401(k) rollovers and rebalancing
- Participation statistics – averages since 2016
  - 95.96% active employee participation
  - 8.71% average deferral

Monthly Financial Reporting Package
September 2018

SPP Southwest Power Pool

SPP Executive Summary – September

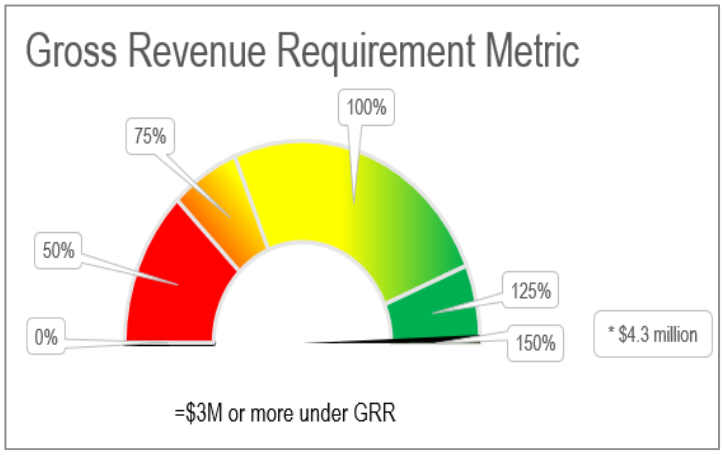
2018 Over / (Under) Recovery

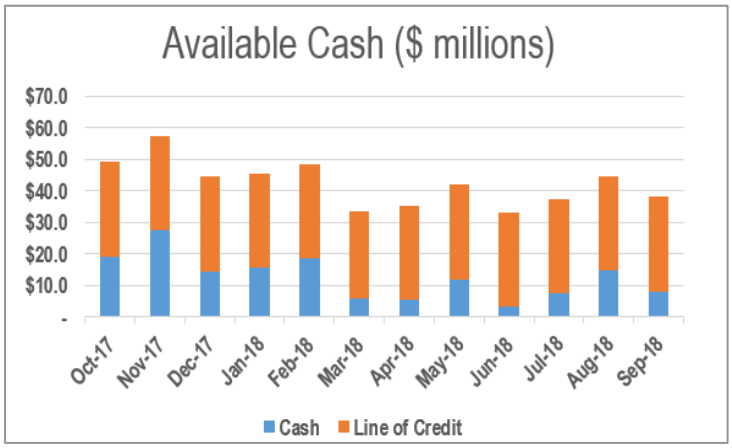
Cost Recovery ($ millions)	2018 Fcst	2018 Budget	Fav/ (Unfav)
Gross Revenue Requirement (GRR) *	$163.6	$167.9	$4.3
Net Revenue Requirement (NRR)	154.9	164.0	9.1
Admin Fee Revenue	165.2	164.0	1.2
Over / (Under) Recovery	$10.3	($0.0)	$10.3

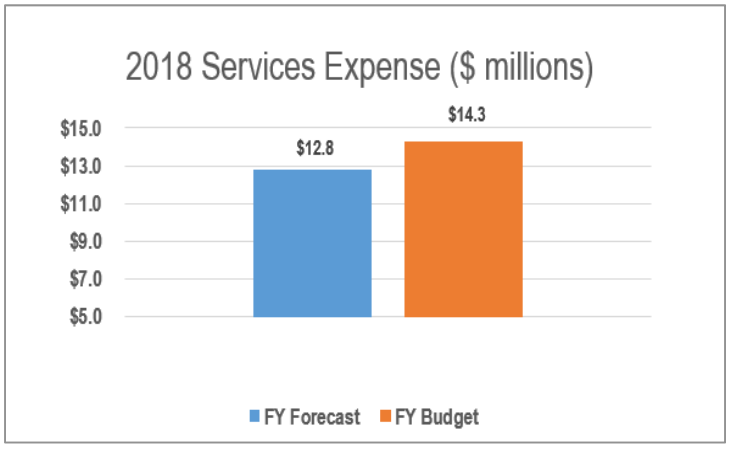
* GRR for HR metric excludes FERC fees and Regional Entity expenses

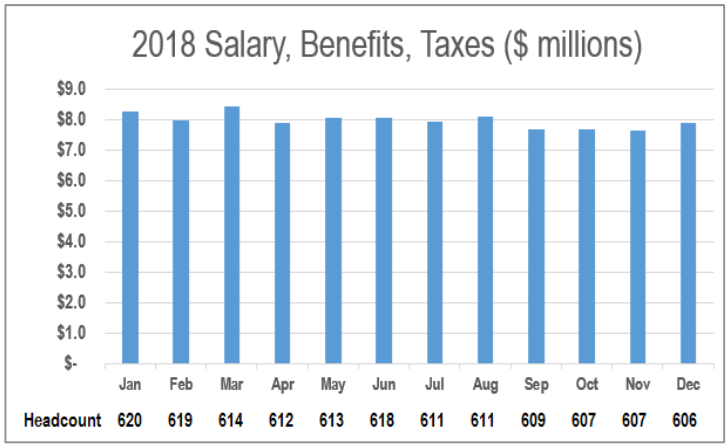
Note: No material changes from prior month GRR.

GRR & Available Cash, Compensation and Outside Services Expenses









Southwest Power Pool
2018 Financial Commentary
September 30, 2018
(in thousands)

Summary

	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Revenues	$198,347	$194,212	$4,135	2.1%
Expenses	183,827	190,752	6,925	3.6%
Net Income/(Loss)	$14,520	$3,460	$11,060	(319.6%)

Revenue

	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Tariff Administration Service	$165,177	$164,001	$1,176	0.7%
FERC Fees & Assessments	21,160	20,769	391	1.9%
NERC ERO Regional Entity Revenue	5,298	4,724	574	12.2%
Miscellaneous Income	5,327	3,963	1,364	34.4%
Contract Services Revenue	810	156	655	420.2%
Annual Non-Load Dues	576	600	(24)	(4.0%)
Total Revenue	$198,347	$194,212	$4,135	2.1%

The annual billing determinants for the 2018 budget were based on year-to-date actual data as of July 2017, with assumptions for peak demand for the months of August through December. The billing determinants associated with Tariff Administrative Service revenue is forecasted at 384 million MWh as compared to the budgeted amount of 382 million MWh, which results in a slightly favorable variance to budget.

NERC revenues exceed budget primarily due to revenue associated with certain compensation expenses (such as retention and unused vacation pay) related to the dissolution of the Regional Entity that were not contemplated in the budget. The budget also assumed a dissolution date of June 30th, whereas the actual date was August 31st. The increase in NERC revenues is partially offset by the increase in RE expenses.

Miscellaneous Income primarily includes revenues associated with engineering studies along with various other revenue sources such as the MISO settlement, miscellaneous rebates, reserve sharing, IM virtual fees, and circuit reimbursements.

The favorable variance is primarily related to increased revenues associated with engineering staff time due to a greater volume of billable GI activities.

Each of the other miscellaneous revenue sources are also trending higher than expected in comparison to the budget.

The budget assumed the OVEC contract would be terminated after the first quarter. Contract Services Revenue forecast assumes SPP will continue to provide services under the existing contract for the full year as per the recent agreement between SPP and OVEC. New contract service fees for the administration of the Western Interconnection Unscheduled Flow Mitigation Plan (WIUFMP) were not assumed in the budget and also contribute to the favorable revenue variance.

Southwest Power Pool
2018 Financial Commentary
September 30, 2018
(in thousands)

Expense

	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Salary & Benefits	$95,505	$96,056	$551	0.6%
Assessments & Fees	21,060	20,269	(791)	(3.9%)
Communications	3,977	4,474	497	11.1%
Maintenance	17,724	18,366	641	3.5%
Outside Services (Including RSC)	12,994	14,588	1,594	10.9%
Administrative	4,753	5,210	457	8.8%
Travel & Meetings	2,897	3,097	199	6.4%
Depreciation	18,193	19,390	1,198	6.2%
Other Expenses	6,724	9,302	2,578	27.7%
Total Expense	$183,827	$190,752	$6,925	3.6%

Salary & benefits are expected to trail budget primarily due a reduction in the pension cost forecast, which was adjusted to reflect the most recent actuarial valuations for both the retirement and retiree healthcare plans. Items partially offsetting the decrease in pension costs include retention payout for the RE staff and individually immaterial variances in various benefit accounts .

SPP received the annual assessment invoice from FERC in June and the forecast reflects the revised estimate for FERC Assessments and Fees, which is higher than the amount assumed in the budget.

The postponement of various initiatives (PMU data sharing, cloud storage solutions, and mobile device security) along with a reduction in assumed circuit growth for members has resulted in a favorable variance in communications expense.

The favorable variance in maintenance is mainly driven by delays and/or deferrals of capital spending that drive incremental hardware and software maintenance. Additionally, spending for facilities related maintenance is trending favorable to budget due to shifts in timing of certain replacement/repair projects.

The overall favorable variance in outside services is driven by the following items: 1) increased utilization of engineering staff which reduces reliance on outside consultants for study activities, 2) various delays/reassessments of service engagements in IT, compliance, engineering, and operations, 3) decline in various assignments as the RE concluded its operations in June, and 4) various other immaterial variances across numerous departments.

Other expenses includes interest expense, capitalized interest, investment income, valuation adjustments, and various other income and expense amounts. Due to the unpredictability, the only amounts budgeted in this category are interest expense and capitalized interest. Interest expense is associated with debt issuances used for capital expenditures.

The valuation adjustments contribute to the overall favorable variance in other expenses and are not reflected in the net revenue requirement (NRR) recovery calculation since they are considered non-cash items.

Southwest Power Pool
Monthly Financial Overview
September 30, 2018
(in thousands)

	Actual Jan-18	Actual Feb-18	Actual Mar-18	Actual Apr-18	Actual May-18	Actual Jun-18	Actual Jul-18	Actual Aug-18	Actual Sep-18	Forecast Oct-18	Forecast Nov-18	Forecast Dec-18	FY 2018 Forecast	FY 2018 Budget	Variance Fav/(Unfav)	FY 2017 Actual	Variance Fav/(Unfav)
Income																	
Tariff Administrative Service	$14,269	$12,483	$13,773	$13,570	$14,127	$13,539	$14,008	$14,124	$13,730	$13,990	$13,573	$13,990	$165,177	$164,001	$1,176	$162,847	$2,330
Fees & Assessments	2,565	2,795	2,456	2,301	2,176	2,570	2,210	2,619	2,099	1,755	1,606	1,881	27,034	26,093	941	27,496	(462)
Contract Services Revenue	44	44	44	44	44	47	46	54	276	55	55	55	810	156	655	533	277
Miscellaneous Income	492	417	395	420	584	387	480	458	369	429	466	429	5,327	3,963	1,364	5,745	(418)
Total Income	17,372	15,740	16,669	16,336	16,931	16,543	16,744	17,255	16,474	16,229	15,700	16,355	198,347	194,212	4,135	196,621	1,727
Expense																	
Salary & Benefits	8,251	7,958	8,438	7,884	8,050	8,030	7,936	8,082	7,683	7,674	7,623	7,896	95,505	96,056	551	94,650	(855)
Employee Travel	127	171	151	198	196	159	129	194	126	180	168	158	1,957	2,168	211	2,023	66
Administrative	195	420	276	568	265	473	334	271	390	793	392	377	4,753	5,210	457	4,656	(97)
Assessments & Fees	1,689	1,689	1,689	1,689	1,689	2,022	1,765	1,765	1,765	1,765	1,765	1,765	21,060	20,269	(791)	21,663	603
Meetings	72	66	67	159	80	62	54	116	55	89	75	47	940	929	(11)	1,040	100
Communications	258	287	293	308	353	362	327	334	350	368	368	368	3,977	4,474	497	3,504	(473)
Maintenance	1,115	1,387	1,328	1,507	1,566	1,434	1,322	1,534	1,317	1,697	1,637	1,880	17,724	18,366	641	16,099	(1,626)
Services	826	1,224	792	877	998	828	1,081	1,299	1,020	1,079	1,491	1,291	12,807	14,257	1,450	12,417	(390)
Regional State Committee	8	25	13	11	21	9	11	18	17	15	23	15	187	331	143	202	15
Depreciation	1,831	1,691	1,354	1,551	1,460	1,396	1,396	1,588	1,425	1,500	1,500	1,500	18,193	19,390	1,198	27,716	9,524
Total Expense	14,372	14,918	14,404	14,751	14,677	14,775	14,357	15,201	14,148	15,162	15,042	15,298	177,103	181,450	4,347	183,971	6,868
Other Income/(Expense)																	
Investment Income	5	5	46	6	7	49	123	7	14	-	-	-	263	-	263	165	98
Interest Expense	(811)	(802)	(812)	(804)	(786)	(791)	(771)	(775)	(774)	(754)	(753)	(752)	(9,386)	(9,424)	38	(10,227)	841
Capitalized Interest	-	-	19	-	-	26	-	-	34	-	-	43	122	122	()	63	59
Change in Valuation of Swap	-	-	547	-	-	269	-	-	224	-	-	-	1,039	-	1,039	789	250
Other Income/Expense	165	(60)	10	35	71	87	38	75	28	-	-	-	449	-	449	(1,414)	1,863
Unrealized Gain on Investment	512	(355)	(261)	13	218	9	334	323	(5)	-	-	-	789	-	789	1,499	(711)
Chg in Emp Benefit Plan Funded Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,434	(6,434)
Net Other Income (Expense)	(129)	(1,212)	(452)	(749)	(491)	(351)	(275)	(370)	(478)	(754)	(753)	(710)	(6,724)	(9,302)	2,578	(2,691)	(4,034)
Net Income (Loss)	$2,871	($391)	$1,814	$835	$1,763	$1,418	$2,112	$1,684	$1,848	$313	($94)	$348	$14,520	$3,460	$11,060	$9,959	$4,561
2018 Headcount																	
Approved Budgeted Positions	619	619	620	620	621	621	609	609	609	609	609	609	609	609		610	
Actual/Forecast Headcount (Incl. Vacancy)	601	603	601	598	594	596	592	589	593	596	596	596	596			595	
Actual/Forecast Positions (Excl. Vacancy)	620	619	614	612	613	618	611	611	609	607	607	606	606			615	
Headcount Vacancy Run rate	3%	3%	2%	2%	3%	4%	3%	4%	3%	2%	2%	2%	2%	3%			
NRR Over / (Under) Recovery	$4,526	$998	($2,402)	$2,430	$2,560	($2,556)	$2,786	$1,964	($2,595)	$1,824	$1,034	($3,588)	$10,269			$3,288	

Southwest Power Pool
Current Month Financial Overview
September 30, 2018
(in thousands)

	Current Month Compared to Forecast			YTD Actual Compared to YTD Budget			FY Forecast Compared to FY Budget		
	Sep-2018 Actual	Sep-2018 Forecast	Variance Fav/(Unfav)	Sep-2018 Actual	Sep-2018 Budget	Variance Fav/(Unfav)	FY 2018 Forecast	FY 2018 Budget	Variance Fav/(Unfav)
Income									
Tariff Administrative Service	$13,730	$13,573	$157	$123,623	$123,001	$622	$165,177	$164,001	$1,176
Fees & Assessments	2,099	1,933	165	21,791	20,850	941	27,034	26,093	941
Contract Services Revenue	276	277	(1)	645	148	497	810	156	655
Miscellaneous Income	369	402	(33)	4,003	2,972	1,031	5,327	3,963	1,364
Total Income	16,474	16,185	289	150,062	146,971	3,091	198,347	194,212	4,135
Expense									
Salary & Benefits	7,683	7,688	6	72,312	72,758	446	95,505	96,056	551
Employee Travel	126	180	55	1,451	1,685	234	1,957	2,168	211
Administrative	390	455	65	3,192	3,542	350	4,753	5,210	457
Assessments & Fees	1,765	1,765	-	15,763	15,202	(562)	21,060	20,269	(791)
Meetings	55	62	7	730	725	(4)	940	929	(11)
Communications	350	368	19	2,872	3,355	484	3,977	4,474	497
Maintenance	1,317	1,501	185	12,511	13,851	1,340	17,724	18,366	641
Services	1,020	849	(171)	8,946	10,981	2,035	12,807	14,257	1,450
Regional State Committee	17	15	(2)	133	248	115	187	331	143
Depreciation	1,425	1,500	75	13,693	14,566	873	18,193	19,390	1,198
Total Expense	14,148	14,385	237	131,602	136,913	5,311	177,103	181,450	4,347
Other Income/(Expense)									
Investment Income	14	-	14	263	-	263	263	-	263
Interest Expense	(774)	(770)	(4)	(7,127)	(7,068)	(58)	(9,386)	(9,424)	38
Capitalized Interest	34	35	()	79	79	()	122	122	()
Change in Valuation of Swap	224	-	224	1,039	-	1,039	1,039	-	1,039
Other Income/Expense	28	-	28	449	-	449	449	-	449
Unrealized Gain on Investment	(5)	-	(5)	789	-	789	789	-	789
Net Other Income (Expense)	(478)	(735)	257	(4,508)	(6,989)	2,481	(6,724)	(9,302)	2,578
Net Income (Loss)	$1,848	$1,065	$783	$13,953	$3,070	$10,883	$14,520	$3,460	$11,060
Headcount	593	592	1	593	609	(16)	606	609	(3)

Southwest Power Pool
Balance Sheet
September 30, 2018
(in thousands)

	9/30/2018	12/31/2017	Net Change
ASSETS			
Current Assets			
Cash & Equivalents	$49,117	$100,496	($51,379)
Restricted Cash Deposits	353,443	340,612	12,831
Accounts Receivable (net)	35,676	74,391	(38,715)
Other Current Assets	16,653	8,539	8,115
Total Current Assets	$454,889	$524,038	(69,149)
Total Fixed Assets	75,782	79,774	(3,992)
Total Other Assets	2,889	5,499	(2,610)
Investments	21,029	24,456	(3,427)
Total Assets	$554,590	$633,767	($79,177)
LIABILITIES & EQUITY			
Liabilities			
Current Liabilities			
Accounts Payable (net)	$21,460	$75,844	(54,384)
Customer Deposits	362,881	340,612	22,269
Current Maturities of LT Debt	23,462	23,359	103
Other Current Liabilities	57,760	98,801	(41,041)
Deferred Revenue	1,450	3,928	(2,478)
Total Current Liabilities	467,013	542,544	(75,531)
Long Term Liabilities			
Long-Term Debt	197,574	213,677	(16,103)
Capital Lease Obligation	499	1,966	(1,467)
Other Long Term Liabilities	32,272	32,301	(29)
Total Long Term Liabilities	230,345	247,944	(17,599)
Net Income	13,953	9,959	3,994
Members' Equity	(156,721)	(166,680)	9,959
Total Members' Equity	(142,768)	(156,721)	13,953
TOTAL LIABILITIES & EQUITY	$554,590	$633,767	(79,177)

Southwest Power Pool
Headcount Analysis
September 30, 2018

	Current Month Actual vs. Budget			Year End Forecast vs. Budget		
	Actual Sep-18	Budget Sep-18	Over/(Under) Budget	2018 Forecast	2018 Budget	Over/(Under) Budget
Information Technology	164	164	0	167	164	3
Operations	160	162	(2)	161	162	(1)
Engineering	79	80	(1)	83	80	3
Process Integrity	57	54	3	58	54	4
Administration	49	49	0	49	49	0
Corporate Services	29	30	(1)	30	30	0
Regulatory Policy & General Counsel	25	27	(2)	27	27	0
Market Monitoring	16	16	0	16	16	0
Market Design	5	6	(1)	6	6	0
Interregional Relations	1	3	(2)	1	3	(2)
Communications & Gov't Affairs	8	7	1	8	7	1
SPP Regional Entity	0	11	(11)	0	11	(11)
Total Positions	593	609	(16)	606	609	(3)
Vacancy Estimate				(10)	(18)	8
Headcount Including Vacancy Est.				596	591	5

Headcount changes *	
2018 Beginning Positions (598 RTO / 23 RE)	621
RE resignations / retirements	(9)
RE staff filling open RTO positions	(7)
Operations positions eliminated	(3)
Out-of-budget positions added (Eng)	3
Out-of-budget position added (IT)	1
Total RTO Forecast	606

Update on RE Staffing	
RE Beginning budgeted positions	23
Transfers to RTO open position (Nov 2017)	(1)
Transfers to RTO open positions (Jun-Sep 2018)	(6)
Resignations (as of Jul 2018)	(6)
Resignations/Retirements (Aug)	(3)
Total positions to transfer to RTO	7

* Beginning positions were 621 with the assumption 12 RE staff would leave SPP and result in a year-end budget of 609 positions. One of the four out-of-budget positions in Engineering is a duplicate Engineer in Rotation position (ERP). The out-of-budget positions for Engineering is reflected as net three since the incremental ERP position is temporary and will be removed once the ERP fills an existing open position by year end.

Notes on RE staffing: The 2018 budget assumed the RE would be dissolved by July 2018, and SPP would retain 11 of the 23 staff members (i.e. 12 staff would voluntarily leave). This assumption was for budgeting purposes only and did not negate the possibility of retaining all 23 staff members if necessary, as SPP committed to the continued employment for all remaining RE staff. The total number of RE staff absorbed by the RTO is 7, which is 4 less than the budget assumption of 11. Of the 7 positions transferring to the RTO, 5 new positions were added to augment compliance and interregional affairs functions, 1 was placed in Human Resources, and 1 was placed in Communications. In addition, 7 RE staff transferred to fill open requisitions within the RTO.

As of August 31st, the RE was dissolved with no remaining staff associated with the RE.

Capital Spending Review
September 30, 2018

Prepared by: Accounting Department

SPP Southwest Power Pool

Project and Foundation Investments as of September 30, 2018

Note: Dollar amounts presented throughout the report are in $000s

Projects	Budget*	Forecast*	Variance
Settlement Systems Replacement	$ 5,301	$ 5,290	$ 11
Training and Testing Simulated Environment (TTSE)	3,268	2,578	690
Voltage Security Assessment Tool (VSAT)	1,438	967	471
Transient Stability Tool (TSAT)	1,415	663	752
IT Service Management Tool Upgrade	1,048	847	201
Identity and Access Management (IAM)	479	503	(24)
Data Lake Phase 3	350	350	-
Project Management Tool Replacement	390	390	-
Circuit Redesign	163	248	(85)
Replicated Data Server Upgrade	-	46	(46)
Total Projects	**$ 13,852**	**$ 11,883**	**$ 1,969**
Foundation - 2018 **	**Budget**	**Forecast**	**Variance**
Information Technology	$ 8,100	$ 8,666	$ (566)
IT - Other Departments	1,206	779	427
Operations	2,414	2,367	47
Settlements	250	-	250
Facilities	216	335	(119)
Total Foundation - 2018	**$ 12,186**	**$ 12,146**	**$ 39**

** Budget amounts are per the 2018 capital projects budget approved by the board. Forecast includes capital spending only.*

** * Foundation projects are reforecast annually. Unused funds do not carry over to the following year.*

Multi-Year Capital Projects Over $1 Million

Settlement Systems Replacement

- The project began in April 2017 and the first milestone was completed in July 2017 with the successful delivery and implementation of the formula builder.
- Development of the settlement calculations within the formula builder had begun with Milestone 2 and will run through the end of Milestone 4 which is expected to be completed by the end of October 2018.

- Milestone 2 (core calculation engine development – the largest of all five milestones) concluded with the delivery of the core calculation engine in March 2018.
- Milestone 3 was completed in June 2018 which included the user interface functionality required to support day-to-day settlement operations.
- Milestone 4 is focused on workflow and audit processes of the new system and is targeted to be finished by October 31, 2018, completing the build phase. The project team has recently experienced delays in vendor deliverables but has taken steps to mitigate the risk by re-aligning priorities and resources.
- Milestone 5 includes internal testing and defect fixes which will end in January 2019, at which point the transition from the vendor to internal staff will take place. Market participant testing will run from January through April.

	Budget	2017	2018	2019	Total Forecast	Variance
Capital Expense	$ 5,301 *	$ 1,967	$ 3,118	$ 205	$ 5,290	$ 11
Operating Expense (Inception Workshop)	$ -	$ 26	$ -	$ -	$ 26	$ (26)

** Original budget for the project as approved in the 2017 budget was $5.1M.*

Training and Testing Simulated Environment (TTSE)

- Phase 1 which included expanding the Maumelle training facilities, enhancing the dispatcher training simulator (DTS), and creating an operations-dedicated DTS environment was completed in 2016 at a cost of $0.2M.
- Phase 2 involves the addition of a stand-alone interactive market simulator and contains two components:
    - Phase 2A: Assembly of market simulation hardware and environment. Higher priority assignments had initially impeded the progress on this phase. However, IT staff was able to complete the work necessary to close out this phase during 3Q'18.
    - Phase 2B: Build and integrate market simulation software. This phase has been submitted for consideration in the 2019-2021 budget cycle at a cost of $2.2M. An impact assessment was completed by the vendor in February to be utilized for the 2019 budget cycle which resulted in a $0.7M decrease from earlier estimates and accounts for most of the favorable budget variance shown in the table below.
- Phase 3 includes the addition of visualization tools mimicking the screens available in the control center and is being performed entirely by internal staff. During 3Q'18, testing was completed in the development environment. During 4Q'18, testing and implementation of the tools are expected to take place.

Phase 3
Key Completion Dates
Build: 9/2018
Testing: 11/2018
Implementation: 12/2018

	Budget	2016 2017	2018	2019	Total Forecast	Variance
Capital Expense	$ 3,268	$ 228	$ 163	$ 2,187	$ 2,578	$ 690

Voltage Security Assessment Tool (VSAT)

Phase 2
Key Completion Dates
Build: 6/2018
Testing: 7/2018
Implementation: 7/2018

- This project was on a two-phase schedule to implement the real-time mode first, followed by look-ahead and study modes.
- Activities in 2017 included the installation of VSAT software and hardware, testing and training on the tool and validation of data in the QA environment.
- Installation of the real-time mode in the Electronic Security Perimeter (ESP), was completed in 2Q'18. Implementation of study and look-ahead modes occurred in 3Q'18.
- The original project budget assumed certain hardware and software costs that were ultimately covered by IT Foundation, resulting in an overall favorable variance to budget.

	Budget	2016 2017	$ 2,018	Total Forecast	Variance
Capital Expense	$ 1,438	$ 924	$ 43	$ 967	$ 471

Transient Security Assessment Tool (TSAT)

- After the successful completion of VSAT (real-time mode) earlier this year, the TSAT project was launched.
- In May 2018, the vendor began making enhancements to the existing Market Operating System (MOS) and Energy Management System (EMS) that were required prior to the build and implementation of the TSAT software. The enhancements were completed in June 2018 and released to SPP for testing.

Key Completion Dates
Build: 12/2018
Testing: 3/2019
Implementation: 3/2019

- During 3Q'18, the TSAT software vendor began working on software installation and scenario development. The project is currently tracking on time and under budget.

- Factors contributing to the favorable variance include: cost savings from bundling a very large hardware order, use of virtual hardware where possible, and negotiated savings with the software vendor.

	Budget	Forecast 2018	Variance
Capital Expense	$ 1,415	$ 663	$ 752

IT Service Management Tool Upgrade

This project is comprised of two phases:

- Phase 1: Existing IT service management tool, Remedy, reached end of life for vendor support and the decision was made during 2Q'18 to upgrade to the latest version. The decision to upgrade versus purchasing a new tool resulted in savings which accounts for the favorable variance to budget.
- In 3Q'18, re-baselining of the project became necessary due to internal resource constraints resulting in the implementation date being moved from November to January.

Key Completion Dates

Phase 1
Build: 10/2018
Training: 1/2019
Implementation: 1/2019

Phase 2
Build: 1/2019
Implementation: 2/2019

- The environment build is currently taking place and expected to be completed in 4Q'18.
- Phase 2: This phase consists of the implementation of an IT environment performance management and monitoring solution. Phase 2 has a dependency for the Remedy upgrade to be in production before the implementation could be completed.

	Budget	Forecast 2018	Variance
Capital Expense	$ 1,048	$ 847	$ 201

Capital Projects Less Than $1 Million

	Budget	2017	2018	2019	Forecast	Variance
Identity and Access Management (IAM)	$ 479	$ 111	$ 392	$ -	$ 503	$ (24)
Circuit Redesign	$ 163	$ 231	$ 17	$ -	$ 248	$ (85)
Data Lake Phase 3	$ 350	$ -	$ -	$ 350	$ 350	$ -
Project Management Tool Replacement	$ 390	$ -	$ -	$ 390	$ 390	$ -
Replicated Data Server Upgrade	$ -	$ -	$ 46	$ -	$ 46	$ (46)

Identity and Access Management (IAM)

Phase 1 of this project, consisting of requirements gathering and the purchase of the software solution, was completed in 2017. Phase 2 includes implementation of the solution with consulting and development services to be provided by an outside vendor. Resource constraints resulting in an estimated six-week delay were followed by product issues that led to further delays. Current re-baselining efforts point to a proposed go-live date of February 2019, pending approval by the Project Review and Prioritization Committee (PRPC) in December 2018.

Key Completion Dates
(tentative, pending approval)
Build: 10/2018
Training: 11/2018
Implementation: 2/2019

$.01M of operating expense was spent for the requirements gathering effort during 2017 (not included in the capital spending amount shown for the project above).

Circuit Redesign

The new Circuit is live. Staff was given access to the site on May 31st.

Data Lake Phase 3

The direction of this project is being reevaluated. There will be no capital spend in 2018.

Project Management Tool Replacement

Project is targeted to be completed in two phases. Phase 1, which includes discovery and analysis, is underway and a vendor is expected to be chosen in early 4Q'18. Phase 2 was submitted for consideration in the 2019-2021 budget cycle with an estimated cost of $0.5M. If approved, it would be expected to begin in 2019.

Replicated Data Server Upgrade

During the 2018 budget cycle, this project was considered to be contingent upon the MWTG decision to participate in SPP; therefore, no funds were allocated to this project in the 2018 budget (listed as a "deferred" project at a cost of $210k). The Operations Reliability Working Group (ORWG) later chose to pursue the project for existing SPP members. In 3Q'18, the project was approved to move forward at an out-of-budget cost of $.05M. Requirements gathering and design phases of the project were completed in 3Q'18. The vendor will release the upgrade in October 2018 with planned go-live in December 2018.

Deferred Projects

The following are the projects that were flagged as "deferred/contingent" in the 2018 budget and no budget funds were allocated for these projects due to uncertainty about regulatory requirements, timelines, solution, etc. The budget amounts shown below are the cost estimates per the 2018 budget document.

	Projected cost per 2018 Budget
Distributed Generation Functionality	$ 200
Freeze Date Replacement	$ 200
Replicated Data Server Upgrade*	$ 210

** Project status explained in previous selection.*

Distributed Generation Functionality

FERC has issued a notice of proposed rulemaking regarding this functionality and a final order detailing the requirements for compliance was issued in February with an implementation deadline of December 2019. This functionality will require enhancements to the markets system to allow participation by distributed generation resources and storage devices. This project is being submitted for consideration in the 2019-2021 budget cycle as "FERC Order 841 – Electric Storage" with an estimated cost of $0.4M.

Freeze Date Replacement

The project will update the process that calculates firm rights used in real-time congestion processes in accordance with new rules and requirements agreed upon by CMP (SPP, MISO, PJM, TVA, AECI, MHEB, LGEE) members. This project is being submitted for consideration in the 2019-2021 budget cycle with an estimated cost of $0.3M.

Foundation Capital Expenditures

The following sections discuss foundational capital expenditures for information technology, operations, settlements, and facilities for the current year. Although foundational spend is presented for the upcoming three years during each annual budget cycle, foundational budgets are re-forecast every budget cycle for the upcoming year. The following table shows the 3-year projection for foundation capital spend that was presented in the 2018 budget.

2018 Budget	2018	2019	2020	Total
Information Technology	$ 8,100	$ 8,650	$ 9,500	$ 26,250
IT - Other Departments	$ 1,206	$ 770	$ 770	$ 2,746
Total IT Foundation	*$ 9,306*	*$ 9,420*	*$ 10,270*	*$ 28,996*
Operations	$ 2,414	$ 2,344	$ 2,287	$ 7,045
Settlements	$ 250	$ 100	$ 100	$ 450
Facilities	$ 216	$ 285	$ 325	$ 826
Total	**$ 12,186**	**$ 12,149**	**$ 12,982**	**$ 37,317**

Foundation Expenditures: Information Technology

The budget for IT Foundation for 2018 is $8.1M, which is relatively flat compared to the 2017 budget of $7.9M. The IT Foundation budget captures corporate-wide hardware and software requirements to support SPP's business applications and systems and is managed in two broad categories:

- **Infrastructure Refresh:** This category includes upgrades and/or replacements of existing infrastructure to support the ongoing requirements of existing systems and services.
- **New Initiatives:** This category is for incremental hardware, software, and/or development services to support new IT and/or Corporate projects and services.

IT Foundation (excludes non-IT)	2018 Budget	2018 Forecast	Variance	2018 YTD Spend
Infrastructure Refresh	$ 6,337	$ 6,851	$ (514)	$ 3,965
New Initiatives	$ 1,763	$ 1,815	$ (52)	$ 137
Total	**$ 8,100**	**$ 8,666**	**$ (566)**	**$ 4,102**

The forecasted amount of $8.66M includes $450k of spend from late-2017 that was received/recorded as capex in early 2018.

The total spend during 3Q'18 was $1.0M, which included the following primary expenditures:

- Replacement of 23 aged servers that support SPP's Settlement System, Settlements databases, and Baseline Management Solution ($0.6M) – *Infrastructure Refresh*
- Additional storage to meet the needs of SPP's data retention and long-term archival policies ($0.3M) - *Infrastructure Refresh*
- Software licenses to monitor servers and applications ($0.1M) - *Infrastructure Refresh*

Aside from the IT Foundation budget, a separate budget of $1.2M exists to support capital requirements for approximately 12 departments (Engineering, H/R, Legal, etc.). Of the 2018 budgeted amount of $1.2M, there were capital costs of $0.2M during the third quarter which included the following:

- Additional servers (2) for Engineering Operational and Planning group, which will aid and enhance the numerous studies on reliability and efficiency of the Bulk Electric System – (<$0.1M)

- A milestone payment for Auction Revenue Requirement (ARR) enhancements within the Congestion Management TC Integrated Market System – ($0.2M)

IT - Other Departments	2018 Budget	2018 Forecast	Variance	2018 YTD Spend
Infrastructure Refresh	$ 1,206	$ 779	$ 427	$ 430

Foundation Expenditures: Operations, Facilities & Settlements

The following foundation budgets reflect capital spend for enhancements to operations, marketplace, and settlements systems, and for various upgrades/improvements to SPP's physical facilities.

Other Foundation	2018 Budget	2018 Forecast	Variance	2018 YTD Spend
Operations - MOS Enhancements	$ 2,000	$ 2,000	$ -	$ 1,512
Operations - Legacy Systems	$ 414	$ 367	$ 47	$ 168
Settlements	$ 250	$ -	$ 250	$ -
Facilities	$ 216	$ 335	$ (119)	$ 110

Operations Marketplace Enhancements

Total spend during 3Q'18 was $0.6M, which primarily included the following:

- Coding was completed for RR231 – Mitigation of Locally Committed Resources.
- Coding was completed for RR252 – Out of Merit Energy (OOME) Enhancement.
- Coding was completed for RR253 – DVER Regulation Enhancement.
- Coding was completed for RR266 – JOU Combined Single Resource Modeling Post Settlement Share Allocation
- Market Operator Interface (MOI) and Market User Interface (MUI) enhancements.

A primary focus for 4Q'18 is Market Release 1.27 – which includes:

- Completion of RR210 Contingency Reserve Deployment (CRD) Test Support
- Dynamic Line Ratings

Operations Legacy System Enhancements include energy management system (EMS), control-room operations window (CROW), open access same-time information system (OASIS), dispatch training simulator (DTS), centralized modeling tool (CMT) and various other applications supporting the operations division. The total spend in 3Q'18 was $0.1M which was primarily updates to the CMT and EMS system.

Unbudgeted Report
2018 YTD
As of October 17, 2018

PO Number	Project Name	Vendor Name	Scope of Work/Item Description	Total Amount	Budgeted	Unbudgeted	Notes
PO2018-1530	RC West Implementation	CDW Direct, LLC	Servers, Licenses, HW/SW Support for OSIsoft PI System	$154,504	-	$154,504	(A)

(A) This hardware was included in the original RC West project estimates and is within the proposed project budget for both the capital and operating components. While the project budget has been approved by the SPP Finance Committee, this purchase was submitted as an "out-of-budget" request prior to formal approval by the Board, who will review the budget at their October meeting.

F.1.1. Admin Fee Measurement

SPP Administrative Fee, NRR & Billing Determinants Metric
FY Forecast vs. Budget Variance
(millions)

	FY Forecast vs. Budget Variance as of:		
	Jul-18	Aug-18	Sep-18
Gross Revenue Requirement (GRR)	$5.2	$4.5	$4.3
Net Revenue Requirement (NRR)	$9.8	$9.2	$9.1
Admin Fee Revenue Collected	$0.9	$1.0	$1.2
Over/(Under) Recovery	$10.7	$10.2	$10.3
Billing Determinants (MWh)	2.1	2.4	2.1

F.1.2. Admin Fee Measurement

SPP Administrative Fee, Net Revenue Requirement & Load Metric
FY Forecast as of September 30, 2018
(millions)

	2018 Fcst	2018 Budget	Fav /(Unfav)	
Gross Revenue Requirement (GRR)	$163.6	$167.9	$4.3	■
Net Revenue Requirement (NRR)	$154.9	$164.0	$9.1	■
Admin Fee Revenue Collected	$165.2	$164.0	$1.2	■
Over/(Under) Recovery	$10.3	($0.0)	$10.3	■
Billing Determinants (MWh)	384.2	382.1	2.1	■

Legend

	NRR	MWh	Admin Fee
2018 Budget	$164.0	382.1	$0.43
1¢ Unfavorable NRR/Load Threshold	$166.3	377.0	$0.44
1¢ Unfavorable Impact Factor	($2.3)	(5.1)	($0.01)

NRR

Red	■	> = $2.3 unfavorable
Yellow	■	between $1.1 and $2.2 unfavorable
Green	■	< = $1.0 unfavorable

Billing Determinants (MWh)

Red	■	> = 5.1 unfavorable
Yellow	■	between 3.1 and 5.0 unfavorable
Green	■	< = 3.0 unfavorable

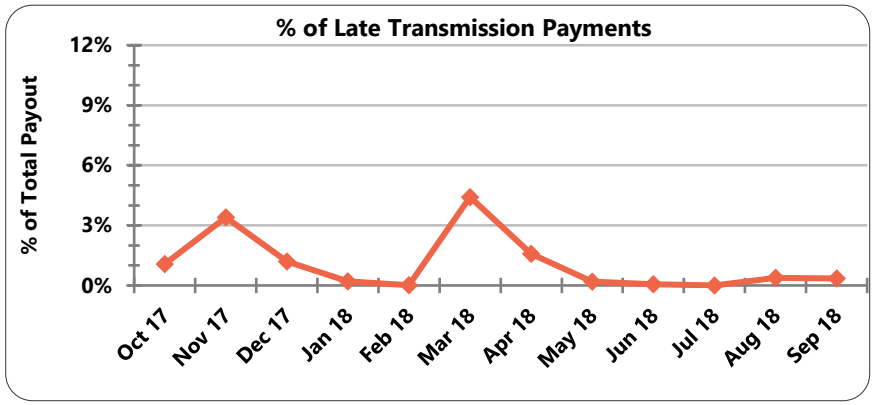
F.1.3. Admin Fee Measurement

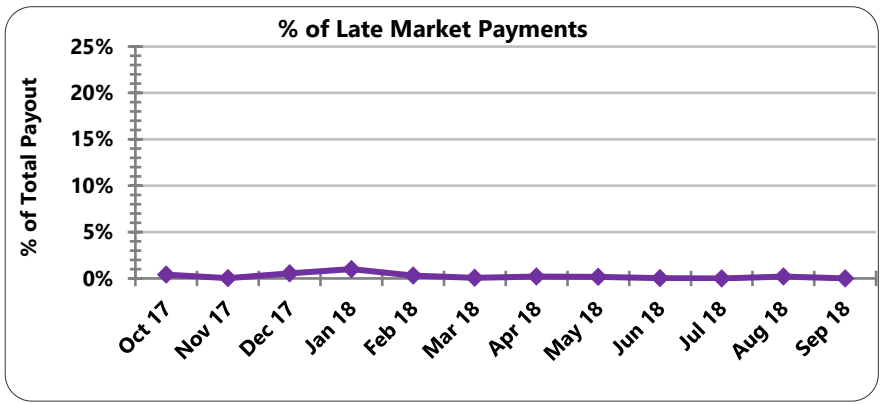
SPP Administrative Fee Performance

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Approved Budget										
Net Revenue Required (millions)	$56.5	$68.4	$78.6	$89.6	$121.8	$132.6	$141.2	$150.5	$160.5	$164.0
MWh Load (millions)	331.3	333.5	343.0	353.5	360.9	348.2	363.5	407.2	383.0	382.1
NRR / Billing Determinants (MWh millions)	$0.170	$0.205	$0.229	$0.253	$0.338	$0.381	$0.389	$0.370	$0.419	$0.429
Approved Admin Fee	$0.170	$0.195	$0.210	$0.255	$0.315	$0.381	$0.390	$0.370	$0.419	$0.429
Actual/Forecast										
Net Revenue Required (millions)	$59.8	$63.5	$80.8	$84.8	$123.3	$137.0	$142.6	$151.6	$159.6	$154.9
MWh Load (millions)	328.2	331.6	341.4	361.7	357.5	351.0	373.6	394.5	388.6	384.2
NRR / Billing Determinants (MWh millions)	$0.182	$0.191	$0.237	$0.234	$0.345	$0.390	$0.382	$0.384	$0.411	$0.403
Calcuated Rate Over/(Under) Budget	$0.012	($0.014)	$0.008	($0.019)	$0.007	$0.009	($0.008)	$0.015	($0.008)	($0.026)
Billing Determinants Growth	10.82%	1.05%	2.96%	5.93%	(1.15%)	(1.83%)	6.46%	5.59%	(1.50%)	*(2.63%)*
NRR (calculated rate times billing determinants)	$59.8	$63.5	$80.8	$84.8	$123.3	$137.0	$142.6	$151.6	$159.6	$154.9
Admin fee collected *	$55.3	$64.3	$71.7	$92.2	$112.6	$133.7	$145.7	$146.0	$162.8	$165.2
Difference Over/(Under)	($4.5)	$0.8	($9.1)	$7.5	($10.7)	($3.2)	$3.1	($5.7)	$3.3	$10.3

* Admin fee collected excludes adjustments for monthly assessment refunds to reflect actual billing determinants for 2015 and 2016.

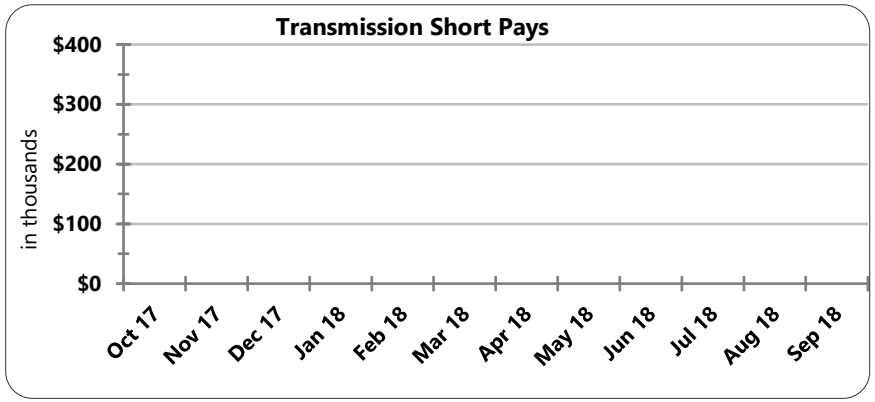
F.2. Credit

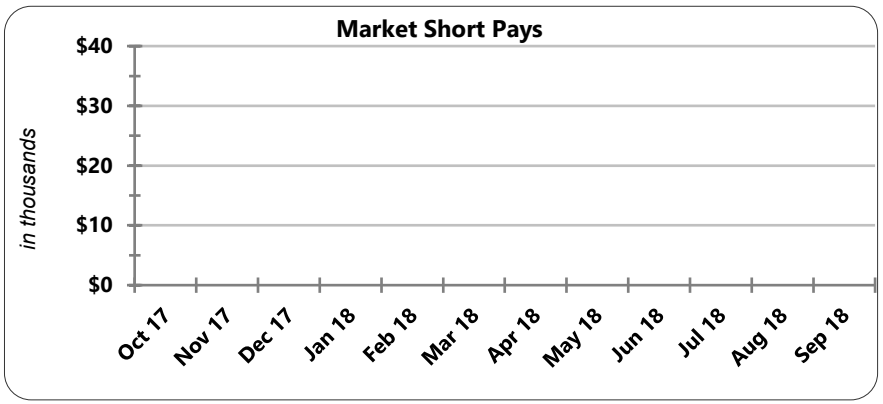




Transmission ($000s)	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	12 mo
Late Payments	$534	$1,745	$552	$98	$8	$2,199	$798	$92	$33	$0	$206	$184	$6,450
Total Payments	$49,987	$51,403	$46,057	$46,572	$47,918	$49,788	$50,333	$50,394	$53,951	$53,565	$54,159	$53,515	$607,641
% Late Payments	1%	3%	1%	0%	0%	4%	2%	0%	0%	0%	0%	0%	1%

Market ($000s)	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	12 mo
Late Payments	$340	$13	$463	$960	$231	$58	$186	$134	$13	$8	$152	$2	$2,561
Total Payments	$84,790	$68,822	$82,220	$95,379	$72,756	$70,780	$93,632	$86,671	$74,929	$117,544	$78,359	$70,340	$996,223
% Late Payments	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

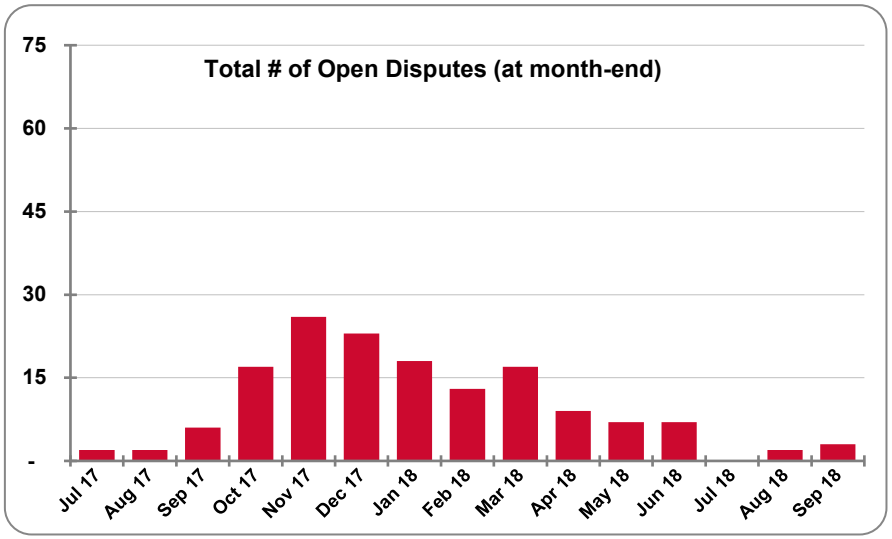


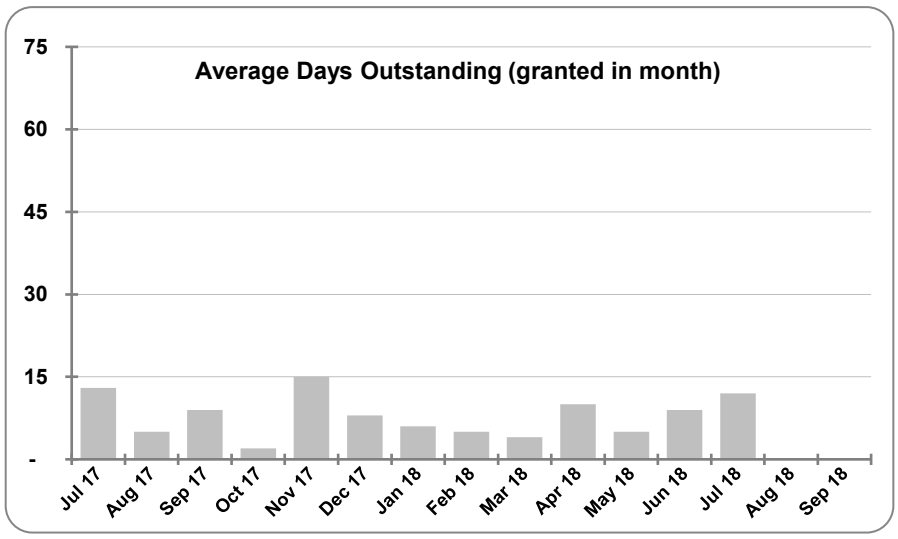


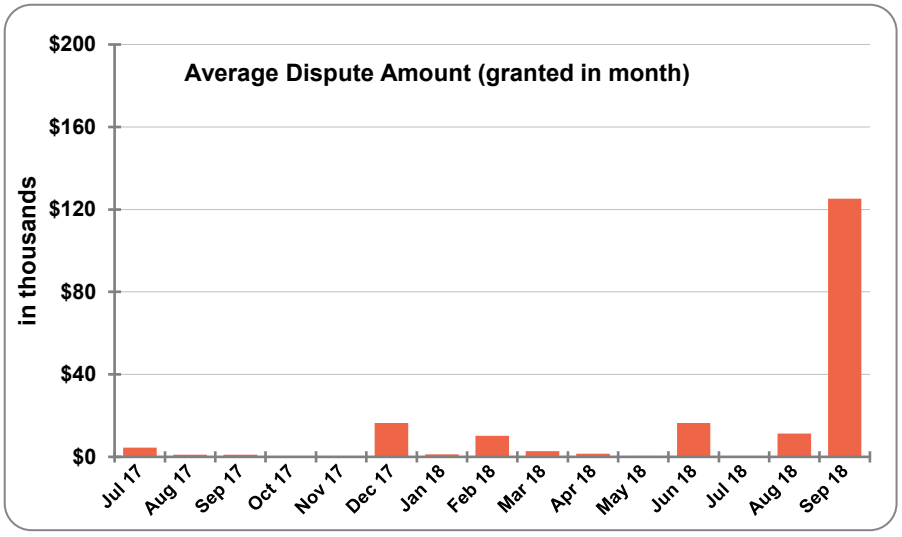
Short Pays ($000s)	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	12 mo
Transmission	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Market	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

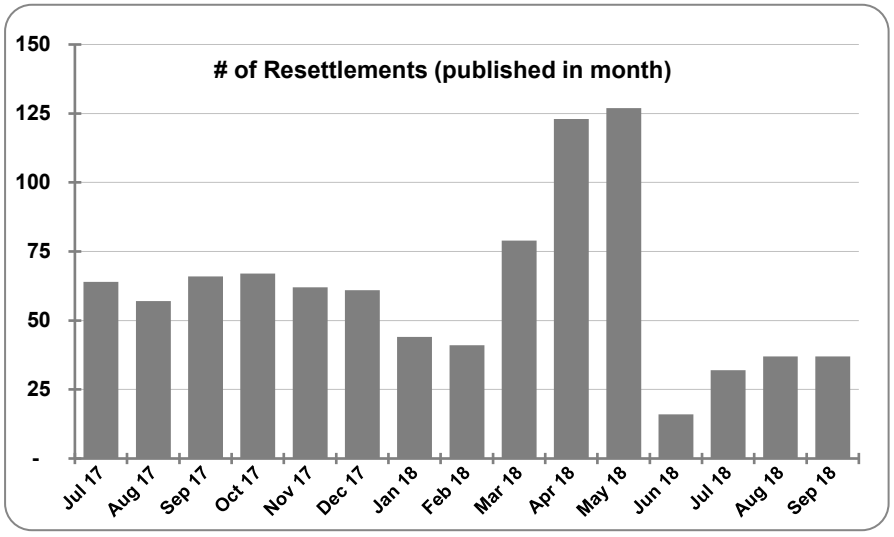
Uncollectible ($000s)	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	12 mo
Transmission	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Market	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

F.3. Settlement Disputes









	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18
Total # of Open Disputes (at month-end)	2	2	6	17	26	23	18	13	17	9	7	7	-	2	3
Average Days Outstanding (granted in month)	13	5	9	2	15	8	6	5	4	10	5	9	12	-	-
Average Dispute Amount (granted in month)	$4.5	$1.1	$1.0	$0.0	$0.0	$16.4	$1.2	$10.2	$2.7	$1.5	$0.5	$16.5	$0.1	$11.3	$125.3
# of Resettlements (published in month)	64	57	66	67	62	61	44	41	79	123	127	16	32	37	37

Southwest Power Pool, Inc. - Finance Committee Project Dashboard

1 - Reliability Assurance	2 - Maintain An Economical, Optimized Transmission System	3 - Enhance and Optimize Interdependent Systems	4 - Enhance Member Value and Affordability

Project Name ---------- Linkage to Strategic Plan	Project Description	SPP Owning Officer	Approved Budget ---------- Est. Cost at Completion	Remaining Milestones	Comments
ACTIVE PROJECTS					
Identity and Access Management Phase 2 ---------- 1	Automation of identity and access system to ensure CIP Compliance	Sugg	$0.5M ---------- $0.5M	Re-baselining in progress; milestone dates TBD	Spend to date: $0.3M.
Online VSAT ---------- 1	The On-Line Voltage Security Assessment Tool (VSAT) software provides SPP comprehensive analyses for predicting and preventing voltage insecurity problems.	Rew	$1.4M ---------- $1.0M	Close – 10/12/18	On schedule and on budget Phased approach for Real Time mode first, followed by Study and Look Ahead modes.
Online TSAT ---------- 1	Transient Security Assessment Tool (TSAT) will be used to ensure power transfers do not cause a voltage collapse event or blackout.	Rew	$1.4M ---------- $0.7M	Build – 12/3/18 Test - 3/1/19 Training – 3/1/19 Implementation – 3/15/19 Close – 4/12/19	Under budget from software and hardware savings from original estimates.
TTSE DTS Upgrade Project - Phase 3 ---------- 1	Enhancement to the current DTS to incorporate virtualization tools mimicking those available in the control center.	Rew	$0.1M ---------- $0.1M	Build - 9/29/18 Test - 11/30/18	Internal project to develop visualization tools for the training simulator that mimic the production environment. The $90K covers software license costs.
Settlements Replacement ---------- 1	Replacement of the current Market and Transmission Settlement Systems with a custom designed single high performance scalable system solution.	Dunn	$5.3M ---------- $5.3M	Build – 10/31/18 Test – 3/29/19 Implementation – 5/1/19	Project in Yellow status due to risk to interim milestones. Project on budget.
ITSM Tool Upgrade ---------- 1	**Phase 1** - Remedy Upgrade (Incident, Problem, Change, Asset, etc.) Current Remedy Version is at end of life for Vendor support. **Phase 2** - Implement Upgrade of BPPM -Performance Manager (monitoring software)	Sugg	$1.0M ---------- $0.8M	**Phase 1** Build - 09/14/18 Training - 01/18/19 Implementation - 01/21/19 **Phase 2** Build - 1/18/2019 Test - 02/01/2019 Implementation - 03/02/2019	Phase 2 has a dependency for phase 1 to be in production before Phase 2 can complete the cutover.

Southwest Power Pool, Inc. - Finance Committee Project Dashboard

1 - Reliability Assurance	2 - Maintain An Economical, Optimized Transmission System	3 - Enhance and Optimize Interdependent Systems	4 - Enhance Member Value and Affordability

Project Name ---------- Linkage to Strategic Plan	Project Description	SPP Owning Officer	Approved Budget ---------- Est. Cost at Completion	Remaining Milestones	Comments
Reliability Communication Tool ---------- 1	Project would create an application to facilitate the systematic issuance, receipt, and auditable documentation of operating instructions.	Rew	$0.0M ---------- $0.0M	Member Testing - 12/19/18 Implementation - 2/27/19	Decision was made to use internal staff for the development; therefore, no capital expenditures. Execution is well under way, with member testing set to begin 11/5.
Replicated Data Server ---------- 1	The replicated data server gives SPP transmission operators and transmission owners a near real time view of SPP's real time models, substation one line drawings, CADA measurements, Powerflow solution results, and real time contingency analysis warnings and violations.	Rew	$0.04M ---------- $0.04M	Requirements - 8/1/18 Build – 10/22/18 Test – 12/3/18 Implementation – 12/18/18 Close – 1/15/19	Design complete. Build started with vendor.

Southwest Power Pool, Inc. - Finance Committee Project Dashboard

1 - Reliability Assurance	2 - Maintain An Economical, Optimized Transmission System	3 - Enhance and Optimize Interdependent Systems	4 - Enhance Member Value and Affordability

Project Name ---------- Linkage to Strategic Plan	Project Description	SPP Owning Officer	Approved Budget ---------- Est. Cost at Completion	Remaining Milestones	Comments
DEFERRED, CONTINGENT OR DECLINED PROJECTS					
Distributed Generation Functionality	Enhancement to SPP's markets to allow participation by distributed generation resources and storage devices.	Rew	Deferred Project: Budget Not Approved	TBD	Not Started. ---------- FERC has determined that more information is needed before taking action. This ruling has been deferred and a technical conference has been scheduled for early April.
Freeze Date Replacement	The project will update the process that calculates firm rights used in real time congestion processes in accordance with new rules and requirements agreed upon by CMP (SPP, MISO, PJM, TVA, AECI, MHEB, LGEE) members.	Rew	Deferred Project: Budget Not Approved	TBD	Not Started.
Completed Projects					
The Circuit Redesign ---------- 4	Update to SPP's employee intranet: improved functionality, enhanced ability to find information, and an improved design to drive greater employee collaboration.	Ross	$0.2M ---------- $0.3M	Closed – 6/30/18	The Circuit went live 5/31/18. This project is complete.
GRC Tool Project ---------- 1	Implementation of a governance, risk, and compliance (GRC) system.	Desselle	$1M ---------- $0.3M	Closeout - 02/17/18	This project is complete.
Engineering Hub ---------- 3	Development of an internal web-based front end that provides engineering data review and editing capability.	Nickell	$0.8M ---------- $0.5M	Closed – 1/19/18	This project is complete.

Status	Project Phase	Impacting/Facing
Green	PREP	Yes - Facing
Yellow	Initiating	Yes - Impacting
Red	Planning	No
	Executing	
	Closing	

Memorandum

To: **Tom Dunn**

From: **Jared Barker**

CC: **Scott Smith**

Date: **10/19/19**

Re: **Credit Practices Working Group Third Quarter 2018 Activities**

During the third quarter of 2018, the Credit Practices Working Group (CPWG) addressed the following issues:

- TCR Reference Prices and TCR Exposure - The CPWG has been discussing the recent GreenHat TCR/FTR default at PJM. During these discussions, the CPWG has reviewed current SPP TCR transaction history to determine if there are any potential GreenHat scenarios present in the SPP TCR market. The CPWG will continue to review the Credit Policy and present any proposed enhancements to the Finance Committee.

- Surety Bonds - The CPWG has been discussing the acceptance of Surety Bonds as collateral. This topic was requested by Westar in the spring of 2018 and during these discussions the CPWG has review potential Surety Bond formats as used by NYISO and ERCOT. These discussions will continue at future meetings.

SPP Southwest Power Pool

Memorandum

To: **Finance Committee Members**

From: **Tom Dunn**

CC: **Shaun Scott**

Date: **November 1, 2018**

Re: **2019 Meeting Schedule**

Detailed below is a schedule for meetings of the Finance Committee for 2019 along with suggested agenda items to be covered at the meetings.

Meeting Date	Time	Location	Agenda
Jan 28, 2019	8 – 11:30	New Orleans	Liability Insurance, Actuary Assumptions
Apr 29, 2019	8 – 11:30	Tulsa	2018 Financial Audit, Benefit Plan Funding, Auditor Engagement
Jul 15, 2019	10 – 3:30	Des Moines	Mid-year Review, 2020 Operating Plan
Oct 14, 2019	10 – 5:00	Little Rock	2020 Operating and Capital Budgets