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.

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

Southwest Power Pool, Inc.

FINANCE COMMITTEE MEETING

September 25, 2018

AEP Office – Dallas, TX

• A G E N D A •

8:30 a.m. – 3:00 p.m.

1. Administrative Items (*15 minutes*) ..... Bruce Scherr
2. Schedule 1A Task Force Update (*15 minutes*) ..... John Olsen
3. Organizational Group Scope Review and Annual Self-Assessment (*30 minutes*) ..... All
4. Western Interconnection RC Services Budget (*60 minutes*) ..... Bruce Rew
5. 2019 SPP Operating Plan (*240 minutes*) ..... Tom Dunn
6. 2019 Meeting Schedule (*30 minutes*) ..... All
7. Written Reports .....
    a. July 2018 Financials
8. Future Meetings .....

Southwest Power Pool

FINANCE COMMITTEE MEETING

July 16, 2018

Omaha, NE

• M I N U T E S •

Administrative Items

Vice Chair Larry Altenbaumer called the meeting to order at 8:00 a.m. The following individuals participated in the meeting.

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

Others attending included:

Traci Bender (phone)	NPPD
Ray Bergmeier	Sunflower Electric
Phyllis Bernard	SPP Director
Michael Desselle	SPP
Nick Brown	SPP
Denise Buffington	Evergy
Jason Humphrey	Evergy
Holly Carias	NextEra Energy Resources
Julian Brix	SPP Director
Jim Eckelberger	SPP Director
Dustan Daniel	Lincoln Electric
Jim Jacoby	AEP
Rob Janssen	Dogwood Energy
Carl Monroe	SPP
Cliff Lewis	Traversa Consulting
Walt Shumate	Consultant
Dennis Reed	Consultant
Malinda See	SPP
Joshua Phillips	SPP
Brent Baker	Liberty Utilities
Mike Risan	Basin Electric
Lanny Nickell	SPP
Harry Skilton	SPP Director
John Krajewski	Nebraska Power Review Board
Steve Gaw	Wind Coalition
Heather Starnes	Missouri Joint Municipal Electric Utility Commission
Mark Hollar	Tenaska

Minutes from the April 9, 2018 meetings were reviewed. Jerry Peace motioned to approve the minutes. The motion was seconded by Sandra Bennett and approved by unanimous voice vote.

TCR Final Reference Price Calculation

Mark Hollar, chair of the SPP Credit Practices Working Group, discussed a recommendation from the SPP Credit Practices Working Group that would change the methodology employed to calculate TCR Final Reference Prices. The proposed change would be expected to reduce the amount of security required for the acquisition and holding of certain TCRs.

The Committee choose not to act on this recommendation presently due to an announced default in transmission right products in other markets; preferring to wait and see if any broader directive regarding collateralization of transmission rights products would be issued by the Federal Energy Regulatory Commission. It was recommended

to have the SPP Credit Practices Working Group discuss this proposal with SPP's Markets and Operation Policy Committee to gain broader stakeholder input into the proposal.

2018 Benefit Plan Funding

Malinda See, SPP's VP of Corporate Services, and Julian Brix, SPP Board of Director member and chair of the SPP Human Resources Committee, lead a discussion of the efforts of the SPP Human Resources Committee in oversight of SPP's compensation and benefit plans. Key take-aways included, but were not limited to, the following:

- SPP conducts periodic compensation and benefit plan surveys conducted by an independent third party
- SPP's compensation and benefit plan structure targets the 50th percentile of the survey results
- SPP's retirement plan consists of defined contribution and defined benefit plans which are designed to attract and retain career employees
- The SPP Human Resources Committee has overseen plan changes which have reduced the cost by of operating the benefit program by over $500,000 since 2016.
- The SPP Human Resources Committee will receive a report from its benefit plan survey provider in August which evaluates several alternative retirement plan structures. The initial evaluation indicates any change will increase the near-term cost of the programs.

- The Committee encouraged the SPP Human Resources Committee to review long-term costs of the existing program versus alternative retirement programs and also to include analysis across several economic assumptions

Business Process Improvement/Efficiency

The Committee participated in a development session to take a detailed look into improvement and efficiency. The development session included presentations from SPP, AEP, and Evergy as well as commentary from Traversa Consulting. Members of the SPP Board of Directors and SPP Members Committee were invited to participate in the meeting as well to share their insights into this topic.

A meaningful step in the evolutionary process is to move away from using continuous improvement to address "pain points" and instead create a cohesive focus of improvement opportunities with the organization's strategic goals.

Three areas where SPP may improve are 1) messaging and communication of improvement efforts and results; 2) alignment of Improvement/Efficiency initiatives to Strategic Plan Initiatives; and 3) incorporation into SPP processes best practices associated with Westar/AEP process improvement programs.

Future Meetings

The next meeting of the Finance Committee was scheduled for September 25, 2018 in Dallas, TX. This meeting will include the SPP Strategic Planning Committee members as SPP staff discusses its 2019 operating plan.

There being no further business, Bruce Scherr adjourned the meeting at 3:30pm.

Respectfully Submitted,

Thomas P. Dunn
Secretary

Schedule 1A Task Force Update

Finance Committee Meeting

September 25, 2018

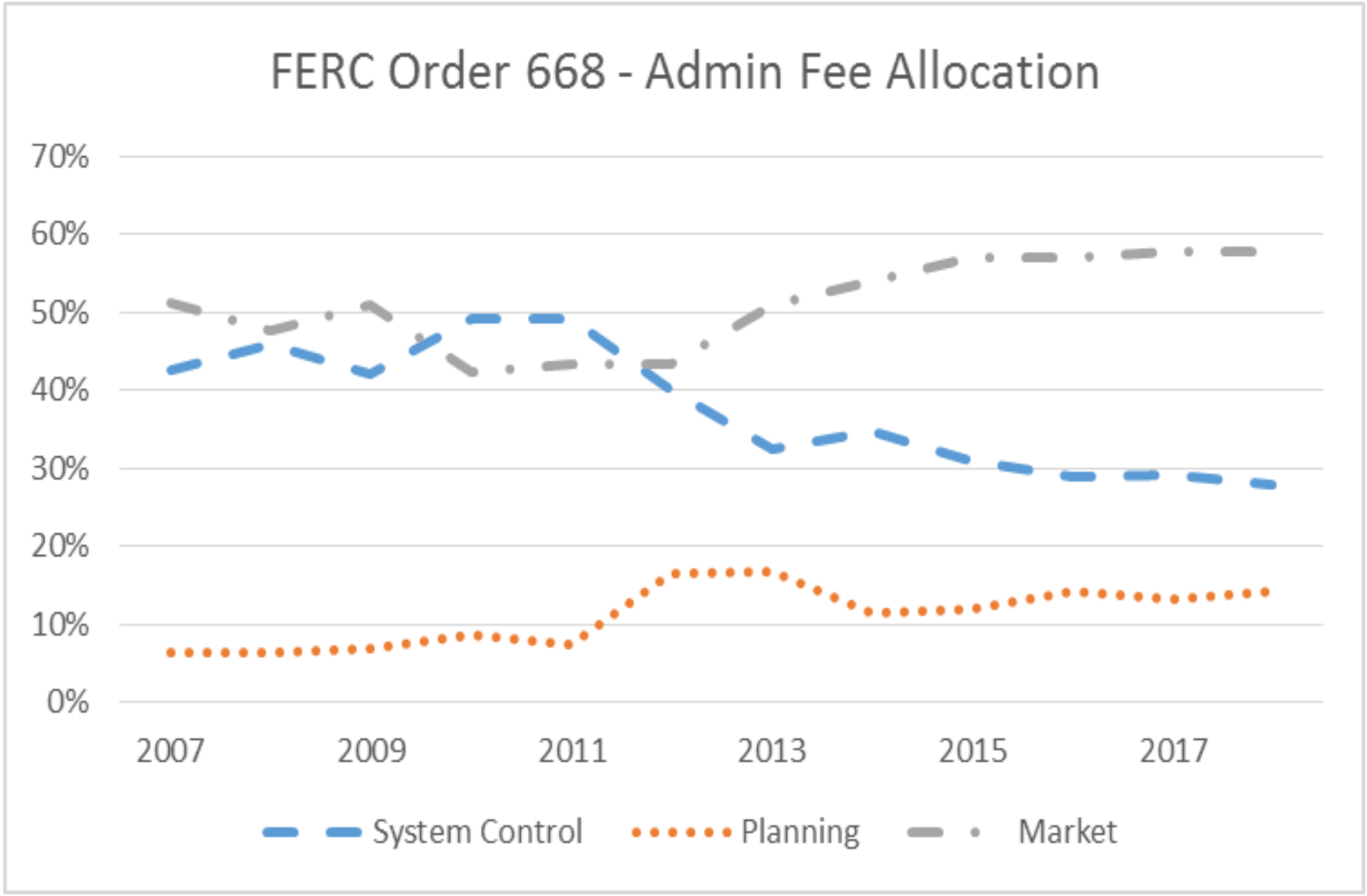
Activities To Date

- Approved Charter
- Performed in depth review of the classification of costs by FERC category
- Reviewed billing methodologies utilized by other RTO/ISOs, including allocation between FERC categories
- Reviewed current processes and underlying methodologies for billing schedule 1A -
  - Network, PTP, Monthly Assessments
- Reviewed 3 year trend analysis for Schedule 1A billing components
- Reviewed 3 year trend analysis for potential billing units for market services

2018 Admin Fee Allocation

Admin Fee Allocation Summary (in $000)					
	2018 Budget	**Allocation**	**Total Budget**	**%**	**Admin Fee**
Market Facilitation	$48,851	$45,956	$94,807	57.8%	24.8¢
Scheduling and Dispatch	$23,602	$22,203	$45,804	27.9%	11.98¢
Planning	$12,052	$11,337	$23,389	14.3%	6.12¢
Corporate Support	$79,496	($79,496)	-	-	-
Total	**$164,001**	**-**	**$164,001**	**100.0%**	**42.9¢**

Schedule 1A Charge Categories -
% of total (2007-2017)



General Direction

- Agree costs as classified in FERC expense categories should be basis for allocation
- Agree method should not be overly complicated but must be supported by substantive rationale
- Majority prefer a demand and energy mix for cost recovery
- Majority prefer market costs recovered through energy flow
- Majority agree planning costs should be recovered through demand
- Current highly contested issues are:
  - Scheduling & dispatch costs
  - Billing determinants

Analysis in Process

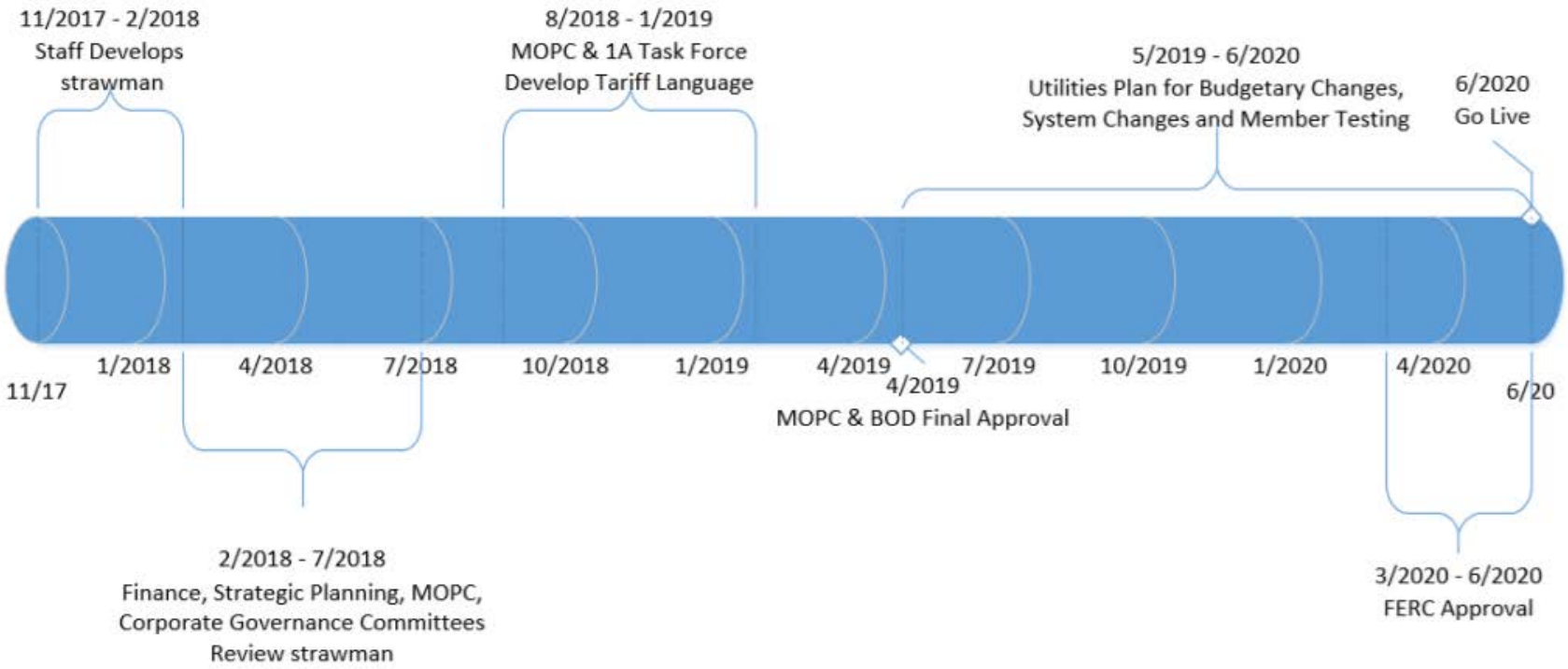
- Staff currently preparing high level strawman proposal for two primary scenarios –

  1) Market Facilitation - energy flow (generation/load)*
  Scheduling & Dispatch, Reliability Planning – demand

  2) Market Facilitation - energy flow (generation/load)*
  Scheduling & Dispatch – energy flow and demand
  Reliability Planning – demand

*Additional scenarios will also be prepared to illustrate the impact of alternative billing units (+TCRs, virtuals, etc.)

Original Timeline



Upcoming Meetings

- October 4, 2018 – Teleconference
- October 15, 2018 – Meeting in Little Rock
- October 16, 2018 - MOPC

SPP Organizational Group Self-Evaluation/Assessment
(August 2017 – July 2018)

GROUP NAME: **Finance Committee**

CHARTER/SCOPE UPDATE: Attached Charter/Scope has been reviewed: **Yes**

MEMBER ROSTER/ATTENDANCE:

Member	Company	Sector	# Present	# Absent
Altenbaumer, Larry	Director	N/A	6	0
Bennett, Sandra	American Electric Power	Investor-owned (TO)	5	1
*Harrison, Kelly	Westar Energy, Inc.	Investor-owned (TO)	5	0
Kapustka, Laura	Lincoln Electric	Municipal (TU)	4	2
*Peace, Jerry	Oklahoma Gas & Electric Company	Investor-owned (TO)	1	0
Scherr, Bruce (C)	Director	N/A	6	0
Wise, Mike	Golden Spread Electric	Cooperative (TU)	6	0
Dunn, Tom	Staff Secretary		6	0

*Only on Committee for part of the assessment period.

List the number of members represented in the following areas:

Transmission/Owners	Transmission/Users	Director(s)
3	2	2

Sectors									
Investor Owned Utility	Cooperative	Municipal	State	Federal	Independent Power Producer/ Marketer	Independent Transmission Company	Alt Power/ Public Interest	Large Retail	Small Retail
3	1	1							

AVERAGE OVERALL ATTENDANCE (INCLUDING NON-GROUP MEMBERS): **25**

MEETINGS HELD DURING ASSESSMENT PERIOD: Live: **5** Teleconference: **1**

AVERAGE LENTH OF MEETINGS: **5:30 Hours**

NUMBER OF VOTES TAKEN: **17**

MEETING COST(S): **$50,607.23**

*Meeting costs include hotel expenses (room rental, A/V, food and beverage), estimate of teleconference expenses, and Director fees for attendance.

MAJOR ACCOMPLISHMENTS/ISSUES ADDRESSED BY THE GROUP:

1. Established guiding principles for changes to SPP's administrative fee recovery process.
2. Mitigated risk by consolidating ERISA fiduciary liability with a single committee.
3. Oversight of addition of cyber liability insurance to SPP's suite of corporate liability policies without increasing premiums
4. Approved issuance of $80MM in new credit facilities to fund corporate capital expenditures for next five years.

MAJOR PENDING ISSUES BEFORE THE GROUP:

1. Implementing change to administrative fee recovery process.

Southwest Power Pool
FINANCE COMMITTEE
Organizational Group Scope Statement
December 5, 2017

Purpose:
The purpose of the Finance Committee is to oversee all aspects of SPP's finances and financial operations, primarily insuring appropriate controls, policies and procedures are documented and adhered to allowing SPP to report accurate financial reports, access external capital as required, while not exposing the company or its membership to undue risks.

Scope of Activities:
The Committee, in discharging its oversight role, is empowered to study or investigate any matter of interest or concern that the Committee deems appropriate. In this regard, the Committee shall have the authority to retain outside legal, accounting or other advisors for this purpose, including the authority to approve the fees payable to such advisors and any other terms of retention. The Committee is directly responsible for oversight of the work (including both audit and non-audit services) of the independent financial and benefit plan auditors The Committee will recommend engagement and compensation of the independent auditors to the SPP Board of Directors. The Committee shall be given full access to the corporation's accounting staff, Board of Directors, corporate executives and independent accountants as necessary to carry out these responsibilities.

The Committee will have responsibility to approve, monitor/review, recommend, and report, as follows:

Approve:

- Annually, significant financial and compliance policies which fall under the purview of the Committee
- Annually, the basic assumptions used by SPP's actuary to determine the financial status and funding requirements of SPP's pension and post-retirement healthcare plans. These basic assumptions include, but are not limited to, discount rate, investment rate of return, rate of compensation change, and mortality tables utilized**.** The Committee will report these assumptions to the SPP Board of Directors.

Review/Monitor:

- The methodology of cost recovery to insure continuing equity for Members
- Any legal matter that could have a significant impact on the corporation's financial statements
- The adequacy of internal financial controls and the resolution of any identified material weaknesses or reportable conditions. Independent Board of Director members of the Finance Committee will be expected to attend meetings of the Oversight Committee when the Oversight Committee receives audit reports from the external controls auditor.
- The corporation's guidelines and policies with respect to risk assessment and risk management focusing on the corporation's major financial risk exposures and the steps management has taken to monitor and control such exposures
- The structure of the Company's corporate liability insurance program, including review of retentions, insurance limits and exceptions, quality of underwriters, and activities of the broker(s) engaged to represent the Company to the insurance markets
- Annually, the investment performance of the pension and/or post-retirement healthcare plan assets and compliance with the approved Investment Policy Statements for the plans
- Policies for management of the company's capitalization, financing and long-term contracts

- At least annually, the performance of the Committee and its members, including reviewing the compliance of the Committee with this Charter
- Changes to the Investment Policy Statements for the Company's retirement plan and post-retirement healthcare plan as approved by the SPP Administrative Committee

For clarification, the review of the investment performance and the investment policy statement for Company's retirement plan shall be for information purposes only, it being understood that all discretion with respect to SPP Retirement Plan investments shall reside with the SPP Administrative Committee.

Recommend to the Board of Directors:

- Annually, an operating budget, capital budget and each special budget for the upcoming fiscal year
- Annually, rates to be charged under Schedule 1A and for the assessment of members
- Annually, the corporation's audited financial statements as the corporate record of financial results for the prior fiscal year. The Committee shall review and discuss with management and the independent auditors, prior to public dissemination, the corporation's annual audited financial statements with primary focus on the quality and integrity of the statements
- Annually, the engagement of independent auditors to audit the corporation's annual financial statements, benefit plan financial statements, and controls environments.
- Annually, contributions to SPP's pension and post-retirement healthcare plans
- As needed, issuance of notes to fund capital expenditures, liquidity, and other general corporate purpose

Report to the Board of Directors:

- All actions taken by the Committee
- Any issues regarding the quality or integrity of the corporation's financial statements, compliance with legal or regulatory requirements, or the performance and independence of the corporation's independent financial and controls auditors
- Financial results with comparisons to budget
- Any other matters relevant to the Committee's discharge of its responsibilities

The Committee is not responsible for certifying the corporation's financial statements or guaranteeing the auditor's report. The fundamental responsibility for the corporation's financial statements and disclosures rests with management.

Representation:

The Finance Committee shall be comprised of up to six members. Two representatives shall be members of the Board of Directors and one of these will be the chairperson. Two representatives from the Transmission Owning Member sector as nominated by the Corporate Governance Committee and two representatives from the Transmission Using Member sector as nominated by the Corporate Governance Committee The Board of Directors shall appoint their representatives at the regular meeting of the Board of Directors immediately following the Annual Meeting of Members. Persons designated as representatives on the Finance Committee will continue to serve until their successors have been appointed. Where a vacancy occurs, the Corporate Governance Committee will fill the vacancy in accordance with SPP Bylaws.

Duration:

The Finance Committee is a permanent committee. The Committee shall meet a minimum of two times per fiscal year and at other times as called by the Chair. A quorum will constitute at least half of the members of the Committee but no less than three members. Proxies are allowed if reported to the Chair

prior to the meeting. All meetings of the Finance Committee shall be open to all interested parties unless closed by the Chair of the Committee.

Reporting:
The Finance Committee reports directly to the Board of Directors.

Southwest Power Pool, Inc.
Recommendation to the Finance Committee
September 19, 2018
RC West Implementation

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

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.

Analysis

SPP expects an implementation period of approximately 15 months beginning in fourth quarter 2018 with service beginning around January 2020. These services will generate approximately $5.5MM in revenues annually for an initial term of five years. These annual contract revenues will fund both the implementation costs and the annual operating and financing expenses. Staff has developed a budgetary estimation of the operating and capital costs required for the successful implementation and production of RC services for its contractual commitments.

Millions of Dollars	2019	2020	2021	2022	2023	2024	TOTAL
Contract Services Revenues	$0.0	$5.5	$5.6	$5.7	$5.8	$5.9	$28.4
Salary & Benefits	$2.6	$2.8	$2.8	$2.9	$3.0	$3.1	$17.3
System and Administrative	$1.9	$1.0	$1.1	$1.1	$1.1	$1.1	$7.3
Interest on Financing	$0.1	$0.2	$0.1	$0.1	$0.0	$0.0	$0.5
Total Expenses	$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
Principal Payments		$1.1	$1.1	$1.1	$1.1	$0.0	$4.5
Cash Flows		$0.4	$0.4	$0.5	$0.5	$1.6	$3.4

The contracts 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. Payments will be made prior to each production year and the agreement will be in force for a minimum of five years.

Recommendation

Staff recommends the Finance Committee approves the budget for RC services implementation and production.

Approved: SPP Finance Committee

Action Requested: Approve Recommendation

BUDGET REQUEST

For the Implementation of Reliability Coordination Services in the Western Interconnection

September 19, 2018

By Southwest Power Pool Staff

EXECUTIVE SUMMARY

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. SPP expects an implementation period of approximately 15 months beginning in fourth quarter 2018 with service beginning around January 2020. These services will generate approximately $5.5MM in revenues annually for an initial term of five years. These annual contract revenues will fund both the implementation costs and the annual operating and financing expenses.

Millions of Dollars	2019	2020	2021	2022	2023	2024	TOTAL
Contract Services Revenues	$0.0	$5.5	$5.6	$5.7	$5.8	$5.9	$28.4
Salary & Benefits	$2.6	$2.8	$2.8	$2.9	$3.0	$3.1	$17.3
System and Administrative	$1.9	$1.0	$1.1	$1.1	$1.1	$1.1	$7.3
Interest on Financing	$0.1	$0.2	$0.1	$0.1	$0.0	$0.0	$0.5
Total Expenses	$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
Principal Payments	$0.0	$1.1	$1.1	$1.1	$1.1	$0.0	$4.5
Cash Flows		$0.4	$0.4	$0.5	$0.5	$1.6	$3.4

The contracts 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. Payments will be made prior to each production year and the agreement will be in force for a minimum of five years. Costs incurred by SPP during the fifteen month implementation will be financed by SPP and reimbursed by the utilities over the five year production period. SPP will utilize a newly acquired financing arrangement in which monthly implementation costs will be funded from a revolving credit line then converted to a four year term note upon RC go-live. The service rate will be adjusted annually to compensate for variations in actual implementation and production costs as compared to estimated budgeted costs.

The contract provides rights for each party to terminate the agreement. If a utility were to exercise its right to terminate participation in the contractual agreement, that utility would be required to prepay their remaining portion of the implementation costs and provide an 18 month notification for which it would be assessed for its annual fees. SPP's failure to receive or maintain NERC certification as a reliability coordinator would terminate the agreement and require the utilities to pay for implementation costs incurred to date. SPP can terminate the agreement with a 24 month notice to the contracting utilities. Regulatory fines and fees associated with performance of the contract services will be assessable to the western utilities to the extent they can be determined as exclusive to western operations. Otherwise they will be shared with eastern and western operations.

Western Interconnection reliability practices and procedures will be governed, in part, by the Western Reliability Executive Committee ("WREC") and the Western Reliability Working Group ("WRWG"). Creation of these two stakeholder groups will provide a forum for SPP and the contract utilities to engage in strategic and tactical discussions as they relate to western grid reliability. Utility members will fill chair and vice-chair leadership roles, and SPP staff will provide facilitation through staff secretary roles.

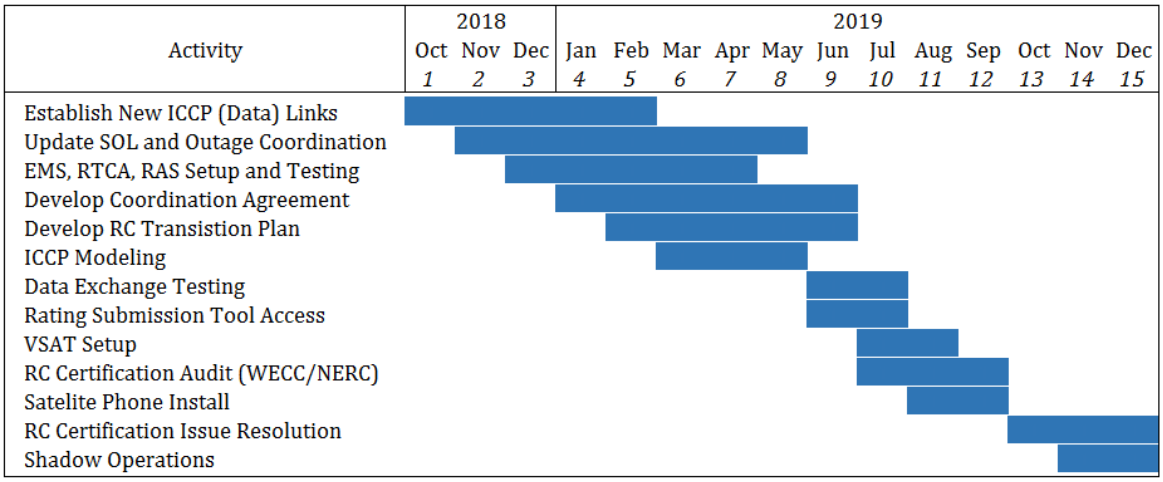
SPP staff has developed a budgetary estimation of the operating and capital costs required for the successful implementation and production of RC services for its contractual commitments. Upon implementation, SPP would be the first reliability coordinator to provide RC services in both the Western and Eastern Interconnections.

IMPLEMENTATION & PRODUCTION

IMPLEMENTATION STRATEGY

SPP has named Bruce Rew, Vice President, Operations, as the executive sponsor of the RC West implementation program. CJ Brown, Director, System Operations, will serve as the implementation project owner. SPP's Project Management Organization ("PMO") will provide program management services and has developed an implementation plan identifying all material system and process changes required to provide RC functionality to the Western Interconnection.

The implementation plan spans a fifteen month development, testing, and integration period which commenced shortly after SPP and the individual RC customer utilities executed the service contracts. The PMO will coordinate with each utilities' project managers to ensure an efficient implementation for all parties. The chart below is a high-level project plan with estimated completion dates. Due to the dissolution of the sole Western Interconnection RC provider, it is possible this timeline gets compressed in order for SPP to provide services as early as fourth quarter 2019.



SYSTEM ENHANCEMENTS

Enhancements to reliability systems consists primarily of the expansion of SPP's Energy Management System ("EMS"), congestion/outage management, and situational awareness systems to accommodate the western utilities' reliability needs. SPP will expand the existing reliability coordination desks within its operations facilities in order to perform dedicated RC functions for the western utilities. SPP will become responsible for certain reliability compliance obligations once it begins performing these services in the Western Interconnection. System enhancements must be made such that SPP can continue to provide evidence of its compliance for each applicable NERC standard.

Millions of Dollars	Implementation Costs	Annual Production Costs
Equipment & Software Enhancements	$1.3	$0.0
Maintenance & Communications	$0.5	$0.1
Total	$1.8	$0.1

The western utilities' systems represents an approximate 36% increase to SPP's existing RC footprint with respect to net energy for load. This increase can roughly be equated to incremental data needs and will require SPP to utilize both highly-available and long-term storage solutions as well as incremental database licenses and associated maintenance. Additionally, SPP will install dedicated primary and backup data circuits and routers at each of the Western Interconnection utilities' operations centers. These circuits will provide secure connectivity between SPP and each of the contract utilities for the transfer of transmission data and instructions. Maintenance contracts typically accompany all hardware purchases and software enhancements and allow SPP to receive updated functionality and security enhancements provided by the vendor throughout the hardware/software lifecycle.

INCREMENTAL STAFFING

Twenty incremental operations staff will be added to perform the RC functions for Western Interconnection utilities. The primary business drivers for the incremental staff recommendation are: 1) the physical separation of the western utilities, 2) the additional modeling and operations data requirements for the Western Interconnection, and 3) the corresponding requirements to provide reliable and compliant services. All operations staff will reside in SPP's existing facilities and no other SPP departments will need to hire incremental staff at this time.

SPP will seek potential candidates who have knowledge of the Western Interconnection and the appropriate engineering/operations certifications. SPP's operations managers have already received interest from potential candidates with these qualifications. SPP will look to hire operations staff during the implementation phase so that they may be appropriately trained on SPP's systems and procedures and assist with the implementation effort. This will allow for a more seamless transition and will reduce the risk of SPP's inability to appropriately respond to an event upon production.

The table below shows a breakdown of salaries and benefits by operations staffing group. Implementation Costs reflect the staggered hiring of incremental staff over the fifteen month implementation period while the annual production costs assume full year salaries and benefits. SPP's directors and executive management will continue to validate that these resources are necessary to the ongoing operations during all subsequent annual budgeting exercises.

Millions of Dollars	# Staff	Implementation Costs	Annual Production Costs
Shift Operations & Support	10.0	$1.7	$1.7
Outage Coordination & Modeling	7.0	$0.6	$0.8
System Visualization & Compliance	3.0	$0.3	$0.3
Total	20.0	$2.6	$2.8

Expansion into the Western Interconnection will require the establishment of a new 24/7 operator shift and associated operations support staff. Six reliability coordinators will be hired to provide real-time coordination exclusively for western operations. An additional four staff will provide functional coordination within the operations group, contingency engineering support, and dispatch training and performance support. These 10 shift operations and support staff will provide services exclusively for the western utilities and will be funded through RC contract revenues.

Outage coordination and modeling efforts will require seven incremental staff to support Western Interconnection activities. SPP's western RC footprint will contain over 200 more generation resources in a physical footprint roughly equal to the size of SPP's eastern responsibilities. In addition, SPP's various system and network models will be required to simulate the majority of the entire Western Interconnection. This equates to approximately 10,000 substations and 120,000 circuit miles of transmission. These seven staff will coordinate efforts with other utilities and reliability coordinators in the Western Interconnect and will be funded through RC contract revenues.

Highly-available visibility of the bulk electric system is a significant concern of any reliability coordinator and the subject of numerous compliance standards from both NERC and the Western Electricity Coordinating Council ("WECC"). WECC is the NERC-designated regional entity in the Western Interconnect and has a notable number of specific standards applicable to western utilities and reliability coordinators. SPP will hire three staff dedicated to perform these visualization functions and compliance requirements for the Western Interconnection which will be funded through RC contract revenues.

PROJECT FINANCING

SPP will finance RC implementation costs, which are deemed incremental to the RTO budget, with proceeds from the issuance of debt. The Company will then recover those principal and interest payments through annual production revenues collected from the contract utilities beginning in 2020. SPP will utilize a newly acquired financing arrangement in which monthly implementation costs will be funded from a revolving credit line then converted to a four year term note upon RC go-live. This financing arrangement eliminates the need to fund all implementation costs prior to project start, reducing the amount of interest expense incurred.

Southwest Power Pool, Inc.

FINANCE COMMITTEE

STRATEGIC PLANNING COMMITTEE

Recommendation to the Board of Directors

October 30, 2018

2019 Operating Plan

Organizational Roster

The following persons are members of the Finance and Strategic Planning Committees:

Larry Altenbaumer *	SPP Director
Bruce Scherr	SPP Director
Jerry Peace	OG&E
Laura Kapustka	Lincoln Electric
Sandra Bennett	AEP
Mike Wise *	Golden Spread
Jim Eckelberger	SPP Director
Graham Edwards	SPP Director
Marc Crisson	SPP Director
Dennis Florom	Lincoln Electric
John Olsen	Evergy Companies
Ray Wahle	Missouri River Energy
Traci Bender	NPPD
Bill Grant	Xcel/SPS
Mike Risan	Basin
Les Evans	Kansas Electric Power Coop
Rob Janssen	Dogwood Energy
Richard Ross	AEP

* On both Board Committees

Background

SPP annually documents an Operating Plan (Plan) detailing significant aspects of its planned work for the upcoming calendar year. This Plan document is vetted and reviewed by the SPP Finance Committee in a joint meeting held in conjunction with the SPP Strategic Planning Committee.

Analysis

SPP's 2019 Operating Plan describes high level objectives and initiatives planned by SPP for 2019. Noteworthy focuses are:

- Reliability – new tools and processes to operate a grid amid shifting generating resources
- Cyber security – maintaining secure systems in compliance with national standards and best practices
- Market enhancements – evaluate and implement additional market capabilities to enhance the efficiency and effectiveness of the market

Recommendation

The Finance and Strategic Planning Committees recommend the SPP Board of Directors accept in its entirety the 2019 SPP Operating Plan.

Approved: SPP Finance Committee

SPP Strategic Planning Committee

Action Requested: Approve Recommendation

2019 OPERATING PLAN

Published September 18, 2018

By the SPP Finance Department

CONTENTS

BACKGROUND INFORMATION

PURPOSE OF SPP

SPP's mission is "Helping our members work together to keep the lights on ... today and in the future." All of SPP's services are provided on a regional basis, independently, focused on reliability and cost effectiveness. The benefits of SPP are derived from this mission and the diligence to bring value to SPP members and their customers. SPP administers reliability coordination, transmission services and wholesale markets for the benefit of all electric utility operations in the region SPP serves. 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. All changes to the SPP regional tariff must be filed with and approved by FERC prior to implementation. Failure by SPP 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:

- Tariff administration services, including scheduling
- Ancillary service provisions
- Market operations
- Balancing authority operations
- Settlement of all transactions under the OATT
- Administration of credit services for OATT customers
- Complete system impact studies
- Completion of the 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 (MA)

The MA is an agreement between SPP and each of its members. The MA obligates SPP to perform the services outlined, including those in the OATT. Additionally, the MA describes other significant duties which include, but are 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 the organizational operation of SPP, specifically 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 first, referred to as the governance structure (see Appendix A: Group Organizational Chart), begins with the board of directors and cascades into board-level committees and then to working groups. This organizational structure is populated largely with representatives from SPP's member companies. Generally, the output of this structure is directives on the work SPP is expected to accomplish.

The second organizational structure, the internal staff (see Appendix B: SPP Organizational Chart), illustrates reporting relationships between 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. This structure receives the directives from the external structure and then goes forward in acting on the 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 are inclusive of scheduled principal and interest

payments on its outstanding debt but are exclusive of depreciation and amortization expenses incurred. 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 is charging 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 our 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 we need 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.

2018 OPERATING PLAN BY CATEGORY

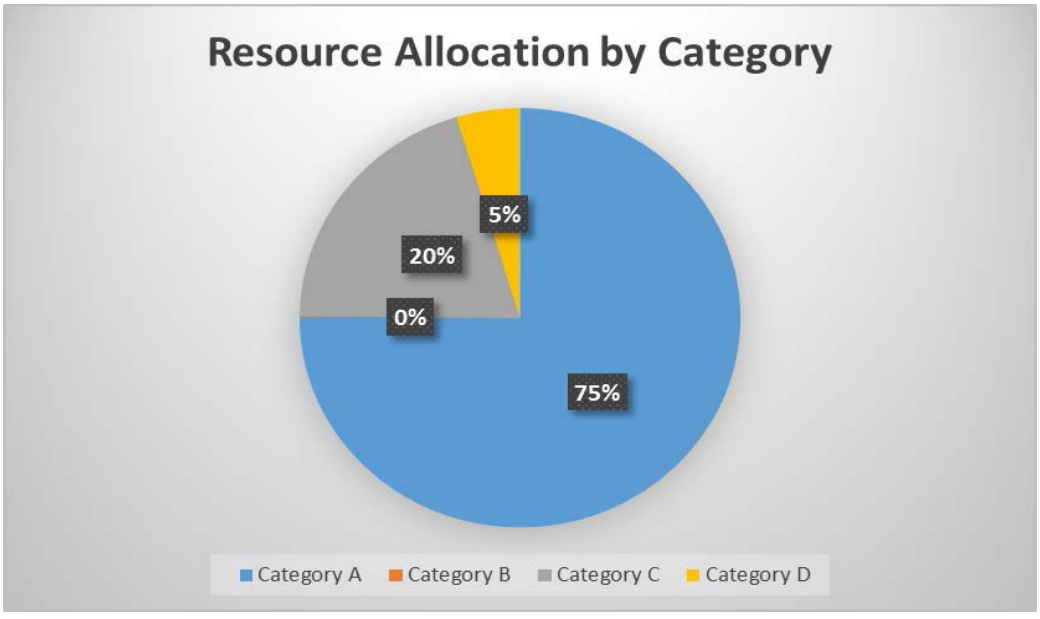
2019 SPP OPERATING PLAN ORGANIZATION

Senior SPP staff met in late July 2018 with the leadership of the SPP Markets and Operations Policy Committee, SPP Strategic Planning Committee and the SPP Finance Committee to discuss how to best ensure coordination and communication of the 2019 Operating Plan. The group determined SPP should communicate its operating plan by aligning functional performance, resource allocation and outcomes within four broad categories, as follows:

Category A	Contains all things SPP is required to do per its tariff, regulatory and reliability standards, legal requirements and sound business requirements. The operating plan considers activities in these areas to be required and thereby non-negotiable.
Category B	Contains new and incremental efforts in areas that generally fall under Category A activities. These have been separated out of Category A to shine additional transparency on these activities.
Category C	Contains activities not required by tariff, regulatory, legal, etc., but have been requested by stakeholders or are overseen by a stakeholder group.
Category D	Contains activities that do not fall under the prior three categories. Generally, these are activities deemed reasonable and prudent by SPP staff/board.

For clarity, the identification of an activity in category A should not be construed to mean that activity is any more or less important than activities identified in categories B-D. The category identifiers are included to simplify the identification process.

The following pie chart illustrates the relative allocation of resources by category. As one would expect, categories A and C account for 95 percent of SPP's resource allocation. Category B resource allocation is anticipated to be relatively minor in 2019 due to a lack of significant regulatory driven changes.



CATEGORY A

Activities in this category represent the majority of SPP's expected effort and resource allocations. Significant among these are the Operations department functions which encompass administration of the transmission and market tariff services, the Engineering department functions which encompass performance of long-term transmission planning, transmission service and generation interconnection studies, and the Information Technology department which provides the technical resources and support that make our systems run.

A

Required by Tariff, Membership Agreement, Bylaws, Industry, NERC, Law, etc.		$	
	FTE	O&M	CapEx
Accounting	11	1.2	
Settlements	22	2.1	0.2
Risk	5	0.7	
HR	10	1.3	
Employee Benefits and Taxes	-	10.9	
Facility Management	6	3.5	1.0
Engineering	76	9.4	
IT	162	43.6	8.2
MMU	16	2.5	
Operations	161	17.8	0.6
Legal/Regulatory	27	5.4	
Property Taxes		0.7	
Principal and Interest Payments		32.0	
	496	$ 131.2	$ 10.0

OPERATIONS

Enhanced Reliability Capabilities

SPP must maintain reliability excellence to be able to operate the changing landscape of the bulk electric system. 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 current generation interconnection queue consists of about 65 GW wind, about 20 GW solar, about 3 GW batteries, along with a single gas plant. With the generation fuel mix changing today and in the future, notably wind farms located where load is not, coupled with traditional fossil generation retiring electrically close to the load centers, large transfers of variable fueled energy has increased across the SPP footprint. Fuel-mix dispatch changes and the new generation technologies impact operational issues that have traditionally not manifested in real-time based on their unique characteristics, such as voltage and transient instability. Operational efforts needed to meet this goal will be focused around the initiatives described below:

- **Voltage stability assessment tool (VSAT)** allows the SPP reliability coordinator function to perform studies, to provide warnings to the reliability coordinator and transmission operator that potential voltage instabilities may exist in real time or up to four hours out. This allows the operators to take possible 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 benefit is enhanced visibility and reliability of the bulk electric system by mitigating voltage collapses before they occur.

- **Transient stability assessment tool (TSAT)** allows the SPP reliability coordinator function to perform stability studies to determine the transient response upon simulated faults, which a operator is not able to detect with current tools. This tool is scheduled to be placed into production the first quarter of 2019. The primary benefit is enhanced visibility and

reliability, 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 use phasor and frequency estimation algorithms to calculate the voltage magnitude, phase angle and frequency of voltage signals. Benefits include more robust model accuracy verification and post-event analysis; however, the real-time benefit will include feeding the measurements into existing operations tools for more accurate real-time situational awareness. A benefit is reducing potential risk to load by providing more accurate study results. Benefits to generators include identifying sources of oscillations to prevent equipment damage and reduce unit trips. Additional benefits come from identifying issues that are not visible with traditional supervisory control and data acquisition (SCADA) real-time measurements.

- **R-COMM** is a SPP-developed communications tool that has been member requested since 2015. The purpose of the tool is to provide a robust forum of communications for reliability coordinator to transmission operators/balancing areas specific to SPP's business functions and processes that are not appropriate for email or phone call communications. This new tool will improve the efficiency of operators and reduces the risk of human error by automating and removing the need for operators to make phone calls during load-shed events, flowgate activation and deactivation, and other general messaging needs.

- **Primary Frequency Response (PFR) & System Inertia** Both of these are ancillary services required to maintain reliability in the operation of an alternating current grid. SPP participates with other ISO/RTOs, as well as NERC, to assess the need of the Eastern Interconnection grid operators to provide or require this service. The effort to determine SPP's requirements of PFR and System Inertia is the primary scope of the PFR Task Force, which reports to SPP's Operating Reliability Working Group. The first goal is to identify the ongoing requirement of this service for SPP's footprint. The second goal will be to determine whether SPP develops tariff requirements for generation to provide the services or create a market for capable generation to offer the service for payment.

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 without changes could be difficult to manage. Our specific geographic location, the vastness of our footprint and the fuel mix that has been developed make the SPP situation unique when compared to other RTO/ISO's. SPP's previous focus on transmission expansion is successful in unlocking generation that was otherwise might not have been built or 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 today, and with many more being interconnected, SPP requires efforts to constantly assess what we do not know and mitigate forecasted problems. At this time, SPP has 65 GW of wind and 20 GW of solar in the generation interconnection queue. The real-time challenges that are being managed and the new challenges that are expected to come are a significant change and potentially put both SPP's reliability and resiliency at risk. Recently, two major studies have been completed that have solely focused on reliability and have helped justify speeding up transmission builds (now complete) and the need to run online voltage and transient stability software in real-time (mixture of completed and in-progress work). While these targeted studies have led to insights that were greatly needed, SPP has not recently surveyed the landscape of the grid as a whole

from a combined reliability and economic perspective. Given the plethora of issues facing the grid (retirement of coal, addition of renewables, short-term capacity needs, energy storage, generator profitability) a more holistic look at the current situation needs to be studied. Actions targeted for 2019 are:

- **2019 SPP Market and Reliability Study for Renewable Resource Resiliency and a Long-Term Committable Market Study (RRIMS):** A coordinated and comprehensive study to evaluate both a) what the SPP footprint needs from a reliability perspective and, b) what market products would best fulfill those needs. This includes helping 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 the operational and market needs that may be met with market-design changes in the near-term (less than five years from 2019). The Markets and Operations Policy Committee (MOPC), Holistic Integrated Tariff Team (HITT), Economic Studies Working Group (ESWG), Market Working Group (MWG), Operating Reliability Working Group (ORWG), Transmission Working Group (TWG) and the Supply Adequacy Working Group (SAWG) will or have been involved in the scoping of the study as of September 2018. 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 prior two years, unique and unforeseen issues have occurred that require additional attention and effort. These include the day-ahead market chooses to run short-lead resources and taking away SPP operation's ability to mitigate variances in wind/load. The study above supports this effort and will lead to a robust market solution. However, this particular goal is to address reliability needs now via operational procedures, quick enhancements to determine uncertainty via in-house tools and committing more long-lead resources in the Multi-Day Reliability Assessment (MDRA) process.

- **FERC Order 841 (Energy Storage Resources):** This is a FERC order, which will be implemented into production December 2019. The benefit of this project will 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. Energy Storage Resources provide fast ramping capabilities and are able to store excess energy when load does not require it, which are two attributes that our new grid requires with our fuel mix.

- **Ramp Product:** This is a member-requested product where the objective is to develop a market-based approach for ramp management that leverages existing operational experiences to manage variances associated with system net obligation and the intermittency of variable energy resources. This product also will allow the market to value resource flexibility through a product that could be indicative of the value to build resources that are capable of offering such product to the market.

  A ramping product allows for two things that SPP does not currently employ in its reliability-based economic approach. The first is a systematic way to "hold back" resources that have available ramp capability for situations where the need would arise. This is particularly useful in ramping events where cheap, fast-moving generation has been dispatched to its max leaving only slower-moving generation online to manage the ramp. The second piece is the calculation and systematic procurement of an amount of ramping capability that accounts for the potential error in load and renewable energy forecasts. The excess ramping capability that is procured would be insurance against the issues that occur when SPP under-forecasts ramping capability. This will increase both the security of the grid as well as allow for fewer pricing excursions.

Additionally, SPP would be able to transparently price these megawatts and 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 forecast of generation commitments to the individual market participants who are responsible for those generation assets. This benefits market participants by having more information on whether SPP would indeed commitment those assets, thereby allowing them to reduce risk, possibly make better offers, procure fuel, etc. The second phase, which SPP staff currently does not in support, would be a multiday clearing, similar to a day-ahead of the day-ahead market. The initial assessment of the multi-day clearing is the efforts to perform outweigh the perceived benefits.

- **Decommitment:** This is a member-requested enhancement. At times, SPP believes that there are too many long-lead (base) resources online. During these times, the price for energy may be lower if SPP could chose to turn them off (de-commitment). This is a very complex issue to resolve, as it is not merely assessing the cost of that resource for that period of time and shutting it off. SPP would need to understand what day-ahead positions the resource has, as well as have a robust and trusted time-coupled solution to prove shutting the resource off is both more economic and does not introduce reliability risk. This effort is an exploratory phase with the Market Working Group.

- **Generation Retirement:** Fossil-fueled generation is retiring and the rate of retirements is increasing year-over-year. The goal of this initiative is to have a single process for member-driven and desired generation retirements, assess their impacts quickly, and if needed, prior to any new or planned upgrades, maintain the resource via tariff and market constructs. Compensation mechanisms would keep the generation operator whole in the event the resource is necessary to maintain the reliability of the BES prior to any upgrades.

Staff Training

The operations staff is the primary key to mission success, as such, the goal of keeping them up to date and trained in a changing operational environment is paramount. Staff training is an ongoing effort to maintain effective daily operations and is a required counterpart to previously mentioned goals that will further enhance our operations.

- ***Dispatcher Training Simulator (DTS)/Training and Testing Simulation Environment (TTSE)***
  SPP has had a multiyear project to upgrade its dispatcher training simulator to increase its 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 work in earnest on this component in the second half of 2019 and complete the work in 2020 with a nearly $2.2 million in capital investment.

- ***New Tools Integration into Operations (VSAT, TSAT, PMU, R-COMM)***
  New stand-alone training is being developed (or acquired) to assist the operations staff in using the new reliability tools discussed above and ensuring they have appropriate situational awareness to deal with situations arising on the bulk electric system due to the different generation resource capabilities and system impacts.

- ***Cross-training***
  This is an ongoing effort to increase not only depth of subject matter, but breadth and flexibility for managers to be able to maintain critical and crucial coverage over a variety of SPP functional roles, including their engineering/regulatory impacts.

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.

- Mitigation of any issue identified from NERC's audit of SPP's CIP compliance in mid-2018. SPP expects the final audit report will be issued in late 2018 and will contain several findings of deficiencies versus standards. The effort will include three parallel paths that pursue accessible quick-fix, 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 as appropriate.

- Implement a software solution known as "Application Whitelisting," which 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, which is considerably more effective and secure. This solution should be deployed to key systems supporting operation of the bulk electric system by the end of 2019.

- Implement "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.

- SPP plans to implement several new functions during 2019 within its existing product sets to improve SPP's cyber posture. SPP also will implement "static code analysis" on vendor application code to identify potential vulnerabilities prior to implementation into production. The static code effort will require external vendor assistance for vendor-owned applications, as well as internal SPP resources to scan programs where SPP has access to the source code.

Increase Operational Efficiency: The volume of requests and requisite work for the IT staff continues to expand, resulting in 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 respective areas, the 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, an area of focus will be on high-touch, repeatable administrative activities that carry a high risk of manual errors such as ongoing CIP processes and server/application patching processes.

- The goal of this initiative 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 there are currently seven automation initiatives in the queue for 2019.

- SPP has an extensive software portfolio with many tools that provide similar functionality in the area 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 with the objective of utilizing a common platform and reducing 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, with vendor offerings entering the market at a rapid pace containing new functionality and potential economic benefits. The IT division 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, thereby reducing 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 with satisfactory performance, as well as 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. Focus in 2019 will be on initial development of a unified data governance program that will ultimately eliminate unnecessary data and improve data life-cycle management.

Keep the Lights on

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 million-$40 million of capital inventory. Importantly, these physical assets must be replaced on a periodic basis due to multiple drivers, including 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 also are devoted to the daily care and upkeep of both physical technology assets and software assets. In addition to the setup and installation of assets, SPP 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 Go-live

The multiyear project to replace and upgrade SPP's settlements system is slated to move into production in May 2019. 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 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. Currently, this project is progressing on time and on budget.

ENGINEERING

Integrated Transmission Planning (ITP)

The SPP stakeholders and Board of Directors 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 of Directors.

Generation Interconnection (GI) Process:

SPP will be implementing improvements to the GI process which were recommended by the GI Improvement Task Force and further approved in the MOPC. Significant among these are the elimination of the single source study process, determined not to contribute significant benefit to the entire process, and establishment of the three-stage process with escalating levels of financial commitment from study participants.

Resource Adequacy Process:

SPP will implement new provisions added to its tariff that were approved by FERC in 2018. Foremost among these will be the new enforcement process and the enhanced data collection and monitoring provisions that ensure sufficient resource capacity is being planned by load responsible entities.

CATEGORY B

Activities in this category represent new work required of SPP from its regulators, legislatures or other authoritative agencies.

B			
New requirements to meet regulatory/compliance standards		$	
	FTE	O&M	CapEx
FERC Order 841 - Storage			**0.4**
Supply Chain Management	***1***	**0.1**	
	1	$ 0.1	$ 0.4

FERC ORDER 841: ELECTRIC STORAGE PARTICIPATION IN MARKETS OPERATED BY ISO/RTOS

The order requires each RTO and ISO to revise its tariff to establish a participation model consisting of market rules that, recognizing the physical and operational characteristics of electric storage resources, facilitates their participation in the RTO/ISO markets (See discussion above also). 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	MWG 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 required NERC to develop standards to address supply chain risk management for industrial control system hardware, software and computing and networking services (see discussion above). FERC proposed to approve the standard developed by NERC in January 2018 with the requirement that NERC also include electronic access control and monitoring systems within the scope of the standard and evaluate the risks presented by physical access controls and protected cyber assets as part of a study already proposed by the NERC board.

Managing supply chain risk and complying with CIP-013 will result in significant additional workload including, but not limited to, the following items: (1) managing contracts with vendors and negotiating additional terms and conditions, (2) evaluating vendors' risk management and security processes, (3) additional rigor in place to evaluate ALL software that is introduced into SPP, (4) having tools and

running analyses on all hardware prior to installing into an SPP environment, and (5) developing and administering additional processes and controls related to acquisition of software and hardware while ensuring appropriate evidence to ensure compliance.

CATEGORY C

Activities in this category represent work that has a direct tie to the work in and approval in the SPP stakeholder process. Generally, these activities will be decision items from a stakeholder group and/or has clear oversight from a stakeholder group.

C			
Management/Oversight by stakeholder groups		$	
	FTE	O&M	CapEx
Employee Benefits (perf comp, retire)	-	21.2	
Stakeholder Process	11	6.5	
Seams & Market Design	7	1.0	
Customer Training	10	1.3	
Internal Audit	6	1.0	
Compliance	18	2.6	
Corporate Insurance		1.3	
System Enhancements/RR			2.0
Regional State Committee		0.34	
EMBC	***1***	**0.1**	
	53	$35.3	$ 2.0

HUMAN RESOURCES COMMITTEE

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

Additionally, as is its common practice, the committee has commissioned a salary survey to be conducted by a third party that will be used to ensure SPP's salary structure and job slotting within the structure are at the 50th percentile of the peer group.

MARKETS AND OPERATIONS POLICY COMMITTEE

MOPC is evaluating alternatives to SPP's current cost recovery methodology. A recommendation is expected to be delivered to the SPP board of directors in early 2019 with implementation anticipated in mid-2020.

The MOPC also is charged with reviewing and approving revisions to SPP's Integrated Marketplace. As of July 2018, there were eight revision requests that had been approved by the committee that would require approximately $1.6 million in capital investment to place into production. 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

Additionally, there are another 7 revision requests representing $0.6MM in financial impacts working through the stakeholder process. Finally, there are another 52 revision requests that do not require financial resources to be implemented that are active within the stakeholder process. Annually, SPP receives 60-70 revision requests to be evaluated and acted upon.

OVERSIGHT COMMITTEE

The Oversight Committee is driving meaningful improvements to SPP's emergency management and business continuity processes. SPP's growth in terms of transactions settled under the tariff has significantly outpaced the maturity of SPP's business continuity processes. Under the oversight of the committee, 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 of directors are refocusing on the strategic direction of the company. 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)

Created by the SPP board of directors in March 2018, the HITT is expected to deliver recommendations for improvement to the SPP board of directors 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 GI queue; aggregate studies; Energy Resource Interconnection Service (ERIS) and Network Resource Interconnection Service (NRIS); 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.
- While recommendations are expected from the HITT report in April 2019, this operating plan does not contain any specific activities or allocation of resources to address the recommendations due to the uncertainty these recommendations may entail.

CATEGORY D

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 company's success, even though they may lack a direct tie to a stakeholder group and/or operations aspect of the business.

D			
Managed by staff		$	
	FTE	O&M	CapEx
Corp. Training & Prof. Dev	5	0.9	
Admin Support	10	0.7	
Engineer R&D	3	1.5	
IT Sourcing & Strategy	5	0.9	
Corp Comm, Gov't Affairs, PR	8	0.9	
Interregional Affairs	2	0.6	
Community Relations		0.2	
Customer Relations	9	0.7	
PMO	12	1.5	
DTS Market Simulation		**0.1**	**2.2**
PMO Tool Refresh		***0.1***	***0.5***
	54	$ 8.1	$ 2.7

Dispatcher Training Simulator (DTS) 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.

In 2016, a multiyear project to upgrade SPP's simulation training systems was launched. Implementing phase 2B of this project 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. GE provided an updated budget to perform this work on Feb. 26, 2018. Recommendations from SPP's March 2018 North American Transmission Forum Peer Review reaffirmed the need as an RTO operating a market 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.

PMO Tool Replacement

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

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

This project is focused on evaluating and selecting the best solution that provides the functionality we have in place to date, as well as, inclusion of the functionality listed above 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 and to serve as a resource management system for engineering's billing process. PWA is nearing the end of support from Microsoft. As business demands have evolved to include the desire to streamline project submission and review and develop a functional pipeline for all capitalized projects, it is essential that we upgrade or replace our project management system. It is essential that the replacement meet the business needs for budget, program and portfolio/pipeline management processes. In addition to the growing demands to improve our processes and develop a management pipeline of work, an upgrade to our existing system or a replacement system is needed to address several challenges facing SPP's PMO. Those challenges include:

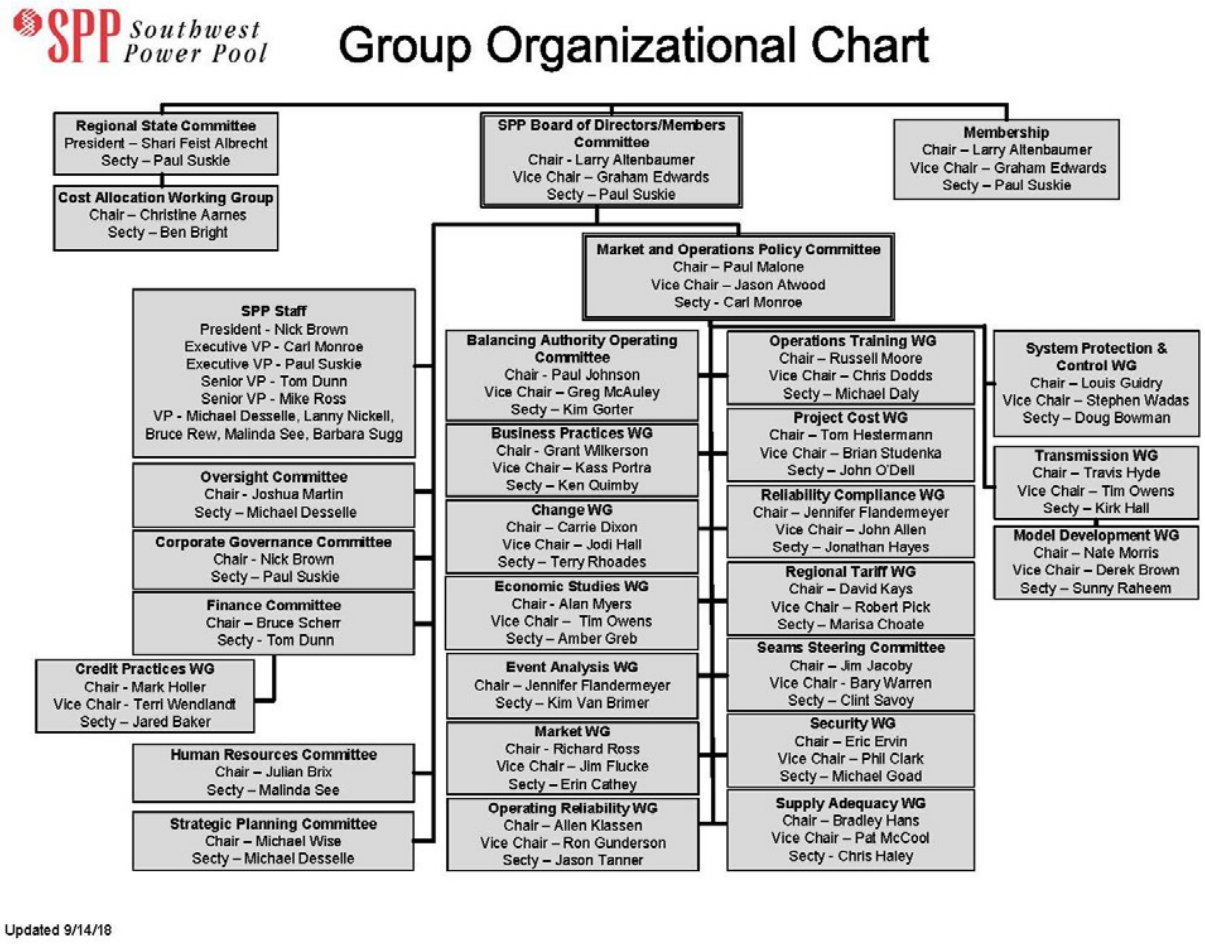
- The ability to programmatically create displays and dashboards for various audiences including internal stakeholders, external stakeholders, the Finance Committee (dashboard), the Project Review and Prioritization Committee (PRPC) and the Stakeholder Prioritization Quarterly Meeting (SPQM).

- The ability to easily and accurately track time against project tasks related to deferred assets, time reporting and metrics, as well as resource forecasting and planning.

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

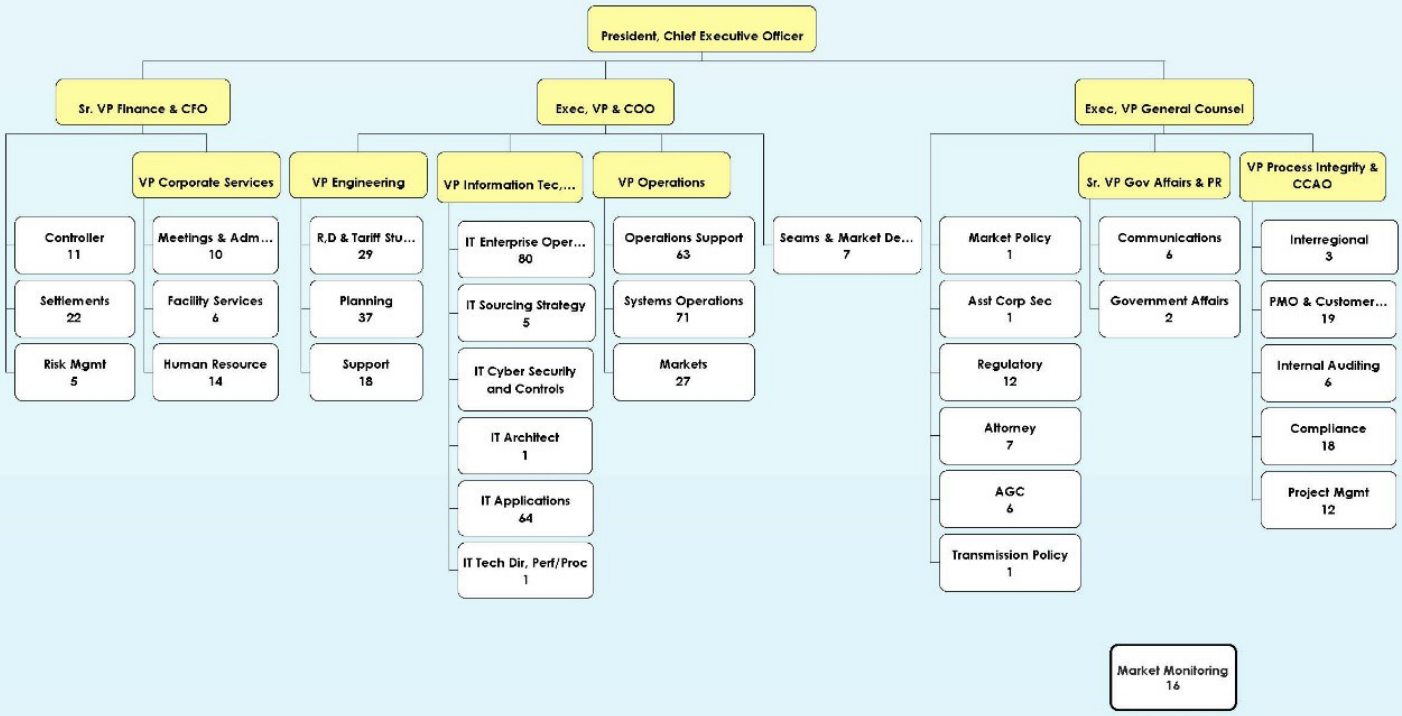
The major benefit of the project is risk avoidance. SPP stakeholders expect operations staff performing SPP's critical real-time functions to be well-trained. Existing capabilities do not contemplate market solutions and impacts, resulting in the unrealistic simulations.

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 Organizational Chart
Officers with detailed headcount
Full Headcount 607



SPP Southwest Power Pool

2019 Operating Plan

2019 Expected Business Environment

Cybersecurity

Electrification
Energy Efficiency
Demand Response

Western markets & services

Changing generation mix

Regulatory

SPP Strategic Plan

Member Value

Optimize Interdependent Systems

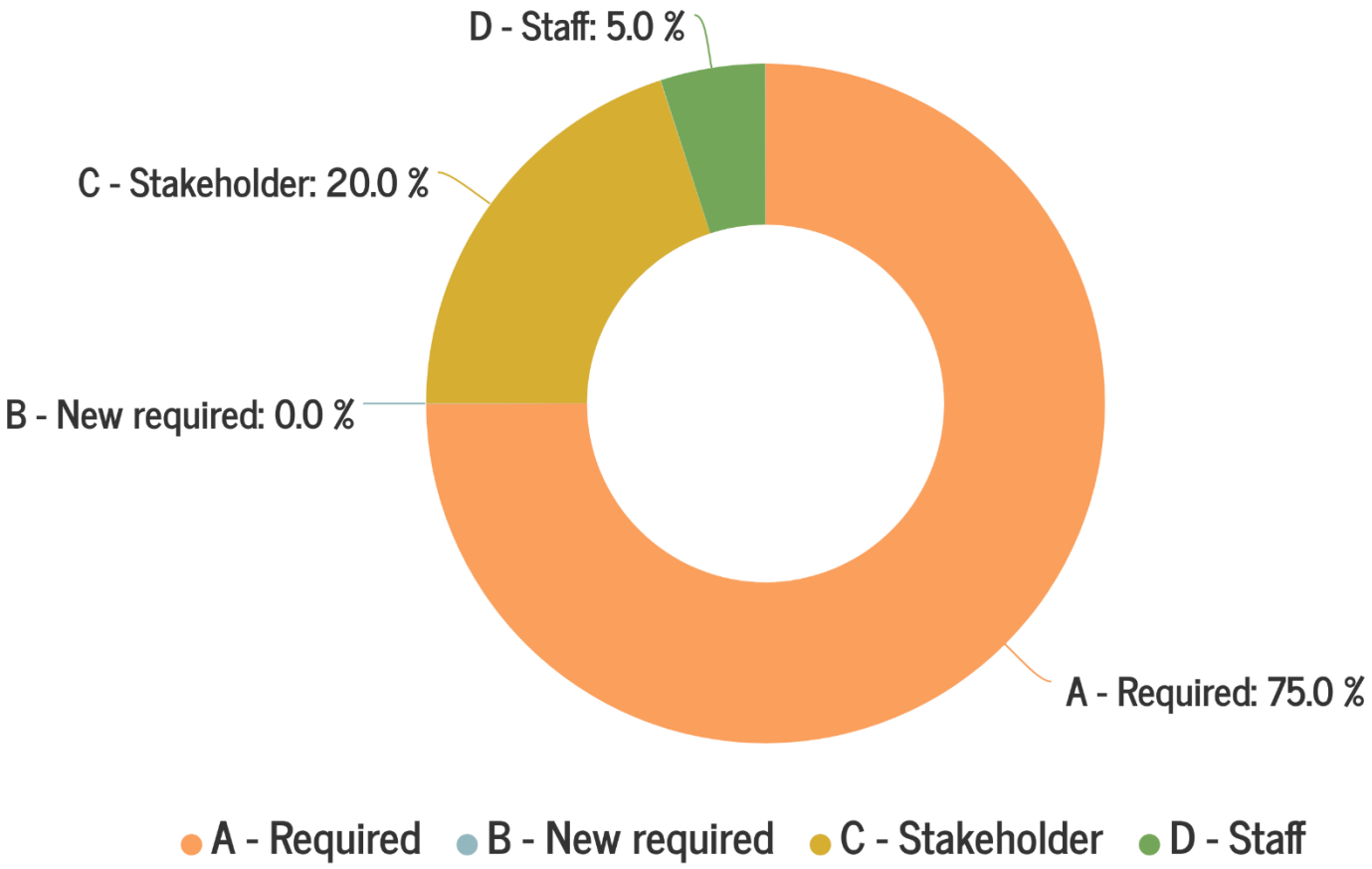
Economized Transmission

Reliability Assurance

2019 SPP Operating Plan

SPP's operating plan aligns functional performance, resource allocation and outcomes within four broad categories:

Resource allocation by category



A
Required per tariff, legal, standards

Operations

Enhanced Reliability Capabilities

- Voltage Stability Assessment Tool (VSAT)
- Transient Stability Assessment Tool (TSAT)
- Phasor Measurement Units (PMU)
- R-COMM
- Primary Frequency Response (PFR) & System Inertia

A
Required per tariff, legal, standards

Operations

Expand & Improve Market Functionality

- 2019 SPP Market and Reliability Study for Renewable Resource Resiliency and a Long-Term Committable Market Study (RRIMS)
- Addressing short-term capacity needs
- FERC Order 841 (energy storage resources)
- Ramp product
- Multi-day economic commitment
- Decommitment
- Generation retirement

A
Required per tariff, legal, standards

Operations

Staff Training

- Dispatcher training simulator (DTS) / training and testing simulation environment (TTSE)
- New tools integration into operations (VSAT, TSAT, PMU, R-COMM)
- Cross-training

A
Required per tariff, legal, standards

Information Technology

- CIP standards and security
- Increase operational efficiency
- Evaluate & leverage emerging technologies
- Keep the lights on

A
Required per tariff, legal, standards

Engineering

- Integrated transmission planning (ITP)

- Generation interconnection process (GI)

- Resource Adequacy

Settlements

- Settlements system go-live


B
New required work
FERC Order 841
Supply Chain Management

C

Stakeholder requests

HR Committee

- Retirement plan and salary survey

MOPC

- Cost recovery methodology
- Revision requests

C

Stakeholder requests

Oversight

- Emergency management & business continuity

Board of Directors

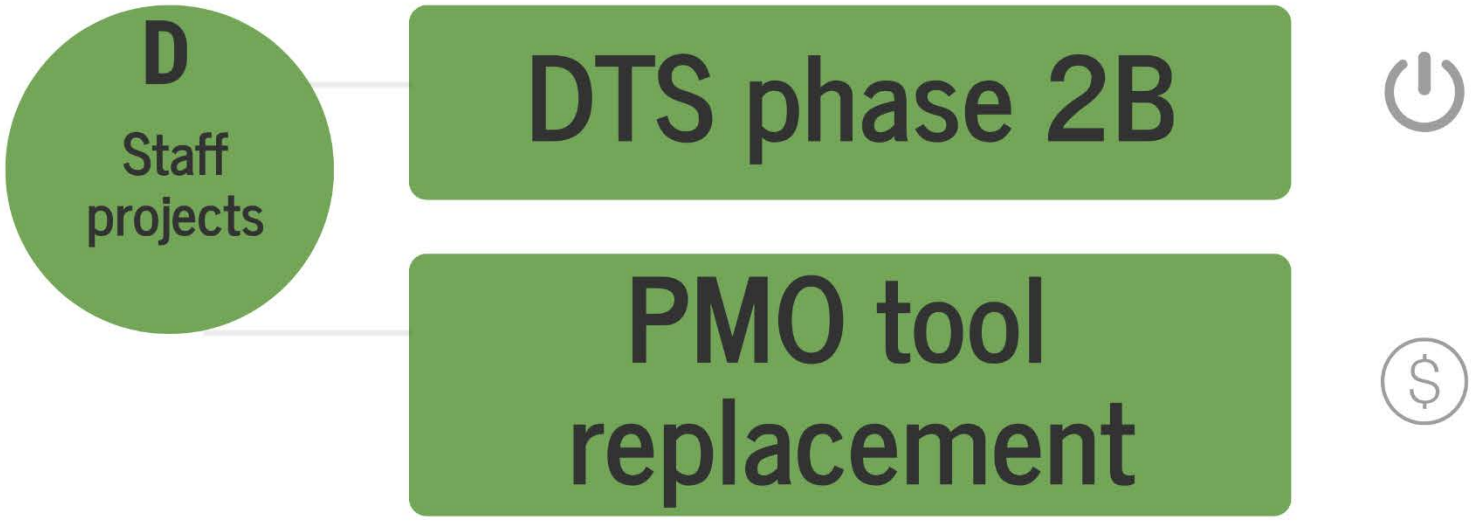
- Strategic direction

C

Stakeholder requests

HITT

- Transmission planning processes
- Cost allocation issues
- Market impacts from changing resource mix, lower cost generation, etc.
- Disconnects & potential synergies between transmission planning & operations


D
Staff projects
DTS phase 2B
PMO tool replacement

2019 SPP Operating Plan

SPP's operating plan aligns functional performance, resource allocation and outcomes within four broad categories:

Memorandum

To: **Finance Committee Members**

From: **Tom Dunn**

CC: **Shaun Scott**

Date: **October 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, A Auditor Engagement
Jul 29, 2019	8 – 11:30	Des Moines	Mid-year Review
Oct 14, 2019	10 – 5:00	Little Rock	2020 Operating and Capital Budgets

Monthly Financial Reporting Package
July 2018

SPP Southwest Power Pool

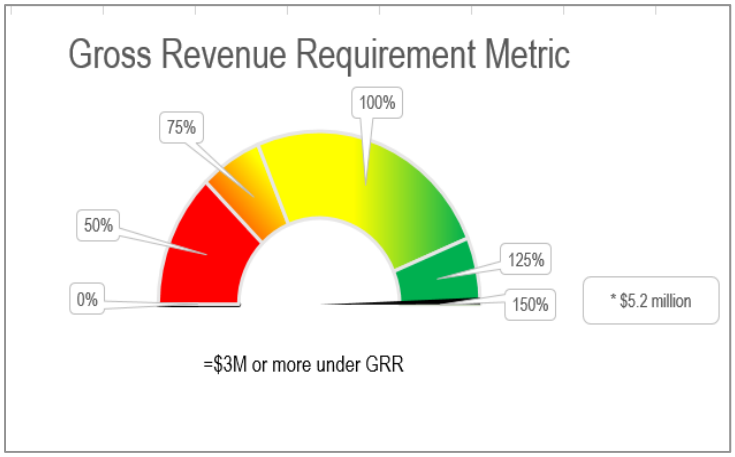
SPP Executive Summary – July

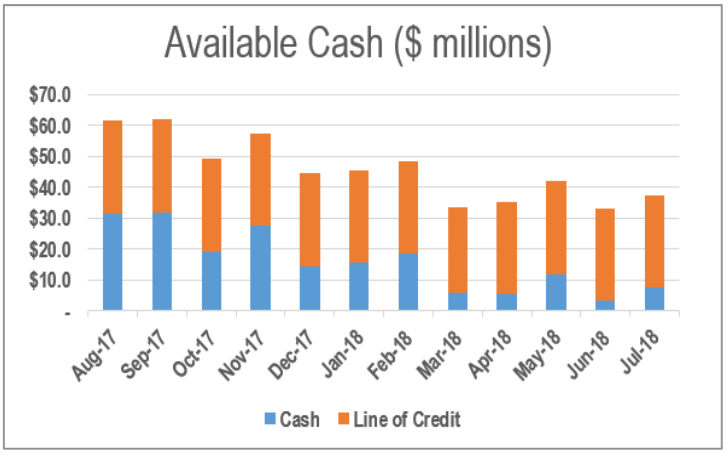
2018 Over / (Under) Recovery

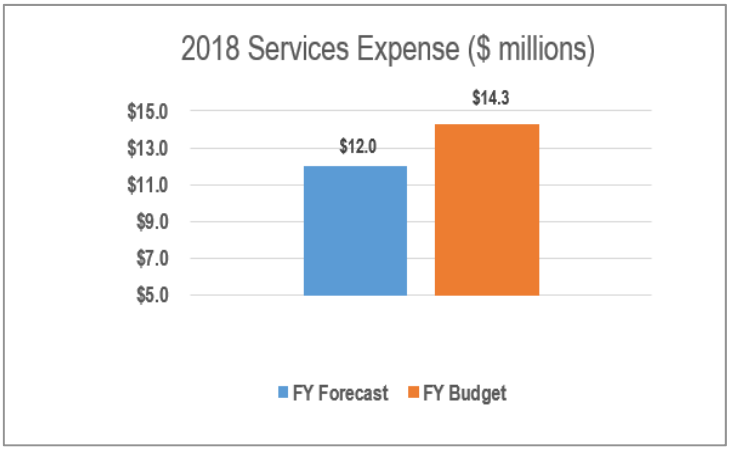
Cost Recovery ($ millions)	2018 Fcst	2018 Budget	Fav/ (Unfav)
Gross Revenue Requirement (GRR) *	$162.7	$167.9	$5.2
Net Revenue Requirement (NRR)	154.2	164.0	9.8
Admin Fee Revenue	164.9	164.0	0.9
Over / (Under) Recovery	$10.7	($0.0)	$10.7

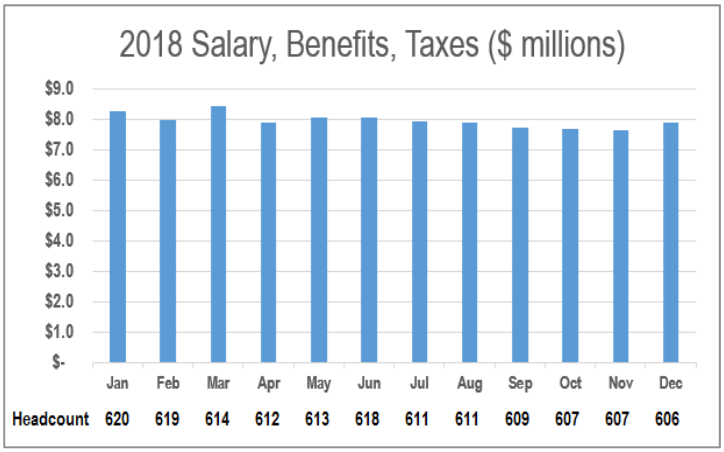
* GRR for HR metric excludes FERC fees and Regional Entity expenses

GRR & Available Cash, Compensation and Outside Services Expenses









Southwest Power Pool
2018 Financial Commentary
July 31, 2018
(in thousands)

Summary

	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Revenues	$197,580	$194,212	$3,368	1.7%
Expenses	183,499	190,752	7,253	3.8%
Net Income/(Loss)	$14,081	$3,460	$10,621	(306.9%)

Revenue

	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Tariff Administration Service	$164,910	$164,001	$909	0.6%
FERC Fees & Assessments	20,986	20,769	217	1.0%
NERC ERO Regional Entity Revenue	5,081	4,724	357	7.6%
Miscellaneous Income	5,216	3,963	1,253	31.6%
Contract Services Revenue	812	156	656	421.3%
Annual Non-Load Dues	576	600	(24)	(4.0%)
Total Revenue	$197,580	$194,212	$3,368	1.7%

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.

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 the to favorable revenue variance.

Southwest Power Pool
2018 Financial Commentary
July 31, 2018
(in thousands)

Expense

	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Salary & Benefits	$95,350	$96,056	$705	0.7%
Assessments & Fees	21,060	20,269	(791)	(3.9%)
Communications	4,000	4,474	474	10.6%
Maintenance	17,621	18,366	744	4.1%
Outside Services (Including RSC)	12,180	14,588	2,408	16.5%
Administrative	4,820	5,210	390	7.5%
Travel & Meetings	2,908	3,097	189	6.1%
Depreciation	18,180	19,390	1,211	6.2%
Other Expenses	7,381	9,302	1,921	20.7%
Total Expense	$183,499	$190,752	$7,253	3.8%

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 overall immaterial variances in various benefit accounts .

SPP received the annual assessment invoice from FERC in June and the forecast has been updated to reflect 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, 4) decrease in legal services required for FERC matters, and 5) 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
July 31, 2018
(in thousands)

	Actual Jan-18	Actual Feb-18	Actual Mar-18	Actual Apr-18	Actual May-18	Actual Jun-18	Actual Jul-18	Forecast Aug-18	Forecast 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	$14,014	$13,573	$13,990	$13,573	$13,990	$164,910	$164,001	$909	$162,847	$2,063
Fees & Assessments	2,565	2,795	2,456	2,301	2,176	2,570	2,210	2,393	1,933	1,755	1,606	1,881	26,643	26,093	550	27,496	(853)
Contract Services Revenue	44	44	44	44	44	47	46	277	55	55	55	55	812	156	656	533	279
Miscellaneous Income	492	417	395	420	584	387	480	392	402	402	440	402	5,216	3,963	1,253	5,745	(529)
Total Income	17,372	15,740	16,669	16,336	16,931	16,543	16,744	17,077	15,963	16,203	15,674	16,329	197,580	194,212	3,368	196,621	960
Expense																	
Salary	5,283	5,265	5,471	5,244	5,226	5,283	5,165	5,186	5,023	5,027	5,027	5,031	62,231	61,331	(900)	61,172	(1,059)
Benefits & Taxes	2,924	2,647	2,909	2,611	2,737	2,728	2,725	2,643	2,624	2,579	2,545	2,823	32,495	33,942	1,447	33,007	512
Continuing Education	44	46	58	28	87	18	46	68	62	70	53	43	624	783	159	471	(153)
Salary & Benefits	8,251	7,958	8,438	7,884	8,050	8,030	7,936	7,896	7,710	7,675	7,625	7,897	95,350	96,056	705	94,650	(700)
Employee Travel	127	171	151	198	196	159	129	164	180	180	168	158	1,982	2,168	186	2,023	42
Administrative	195	420	276	568	265	473	334	467	289	811	369	354	4,820	5,210	390	4,656	(164)
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	97	51	98	75	47	926	929	3	1,040	114
Communications	258	287	293	308	353	362	327	338	368	368	368	368	4,000	4,474	474	3,504	(496)
Maintenance	1,115	1,387	1,328	1,507	1,566	1,434	1,322	1,419	1,501	1,824	1,637	1,580	17,621	18,366	744	16,099	(1,523)
Services	826	1,224	792	877	998	828	1,081	905	857	1,241	1,184	1,176	11,989	14,257	2,268	12,417	428
Regional State Committee	8	25	13	11	21	9	11	23	15	15	23	15	191	331	140	202	12
Depreciation	1,831	1,691	1,354	1,551	1,460	1,396	1,396	1,500	1,500	1,500	1,500	1,500	18,180	19,390	1,211	27,716	9,537
Total Expense	14,372	14,918	14,404	14,751	14,677	14,775	14,357	14,575	14,237	15,479	14,714	14,861	176,118	181,450	5,332	183,971	7,853
Other Income/(Expense)																	
Investment Income	5	5	46	6	7	49	7	-	-	-	-	-	125	-	125	165	(40)
Interest Expense	(811)	(802)	(812)	(804)	(786)	(791)	(771)	(770)	(770)	(754)	(753)	(752)	(9,377)	(9,424)	48	(10,227)	850
Capitalized Interest	-	-	19	-	-	26	-	-	35	-	-	43	122	122	()	63	59
Change in Valuation of Swap	-	-	547	-	-	269	-	-	-	-	-	-	816	-	816	789	26
Other Income/Expense	165	(60)	10	35	71	87	155	-	-	-	-	-	462	-	462	(1,414)	1,876
Unrealized Gain on Investment	512	(355)	(261)	13	218	9	334	-	-	-	-	-	471	-	471	1,499	(1,029)
Chg in Emp Benefit Plan Funded Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,434	(6,434)
Net Other Income (Expense)	(129)	(1,212)	(452)	(749)	(491)	(351)	(275)	(770)	(735)	(754)	(753)	(710)	(7,381)	(9,302)	1,921	(2,691)	(4,691)
Net Income (Loss)	$2,871	($391)	$1,814	$835	$1,763	$1,418	$2,112	$1,733	$990	($30)	$208	$759	$14,081	$3,460	$10,621	$9,959	$4,122
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	592	592	592	594	594	594			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%	3%	3%	2%	2%	2%	2%	3%			
NRR Over / (Under) Recovery	$4,526	$998	($2,402)	$2,430	$2,560	($2,556)	$2,902	$2,337	($2,994)	$1,481	$1,336	($3,178)	$10,728			$3,288	

Southwest Power Pool
Current Month Financial Overview
July 31, 2018
(in thousands)

	Current Month Compared to Forecast			YTD Actual Compared to YTD Budget			FY Forecast Compared to FY Budget		
	Jul-2018 Actual	Jul-2018 Forecast	Variance Fav/(Unfav)	Jul-2018 Actual	Jul-2018 Budget	Variance Fav/(Unfav)	FY 2018 Forecast	FY 2018 Budget	Variance Fav/(Unfav)
Income									
Tariff Administrative Service	$14,008	$13,984	$25	$95,770	$95,816	($46)	$164,910	$164,001	$909
Fees & Assessments	2,210	1,709	500	17,074	16,782	292	26,643	26,093	550
Contract Services Revenue	46	44	1	315	143	172	812	156	656
Miscellaneous Income	480	454	26	3,176	2,312	864	5,216	3,963	1,253
Total Income	16,744	16,192	552	116,334	115,052	1,281	197,580	194,212	3,368
Expense									
Salary	5,165	5,177	12	36,937	36,006	(931)	62,231	61,331	(900)
Benefits & Taxes	2,725	2,643	(82)	19,281	20,643	1,362	32,495	33,942	1,447
Continuing Education	46	56	10	328	462	134	624	783	159
Salary & Benefits	7,936	7,876	(60)	56,547	57,111	564	95,350	96,056	705
Employee Travel	129	163	34	1,131	1,359	228	1,982	2,168	186
Administrative	334	417	84	2,531	2,855	325	4,820	5,210	390
Assessments & Fees	1,765	1,765	-	12,233	11,824	(409)	21,060	20,269	(791)
Meetings	54	91	37	559	634	75	926	929	3
Communications	327	410	84	2,189	2,610	421	4,000	4,474	474
Maintenance	1,322	1,459	136	9,660	10,854	1,194	17,621	18,366	744
Services	1,081	1,129	48	6,627	8,880	2,254	11,989	14,257	2,268
Regional State Committee	11	23	12	98	193	95	191	331	140
Depreciation	1,396	1,593	196	10,680	11,338	658	18,180	19,390	1,211
Total Expense	14,357	14,929	572	102,253	107,658	5,404	176,118	181,450	5,332
Other Income/(Expense)									
Investment Income	7	-	7	125	-	125	125	-	125
Interest Expense	(771)	(772)	1	(5,578)	(5,497)	(80)	(9,377)	(9,424)	48
Capitalized Interest	-	-	-	45	45	()	122	122	()
Change in Valuation of Swap	-	-	-	816	-	816	816	-	816
Other Income/Expense	155	-	155	462	-	462	462	-	462
Unrealized Gain on Investment	334	-	334	471	-	471	471	-	471
Net Other Income (Expense)	(275)	(772)	497	(3,659)	(5,453)	1,793	(7,381)	(9,302)	1,921
Net Income (Loss)	$2,112	$491	$1,621	$10,421	$1,942	$8,479	$14,081	$3,460	$10,621
Headcount	592	597	(5)	592	609	(17)	606	609	(3)

Southwest Power Pool
Balance Sheet
July 31, 2018
(in thousands)

	7/31/2018	12/31/2017	Net Change
ASSETS			
Current Assets			
Cash & Equivalents	$51,050	$100,496	($49,446)
Restricted Cash Deposits	360,612	340,612	20,000
Accounts Receivable (net)	31,359	74,391	(43,032)
Other Current Assets	18,053	8,539	9,514
Total Current Assets	$461,074	$524,038	(62,963)
Total Fixed Assets	76,674	79,774	(3,100)
Total Other Assets	2,795	5,499	(2,704)
Investments	15,413	24,456	(9,043)
Total Assets	$555,956	$633,767	($77,811)
LIABILITIES & EQUITY			
Liabilities			
Current Liabilities			
Accounts Payable (net)	$23,309	$75,844	(52,534)
Customer Deposits	360,842	340,612	20,230
Current Maturities of LT Debt	23,427	23,359	68
Other Current Liabilities	57,013	98,801	(41,788)
Deferred Revenue	1,898	3,928	(2,030)
Total Current Liabilities	466,489	542,544	(76,055)
Long Term Liabilities			
Long-Term Debt	202,974	213,677	(10,702)
Capital Lease Obligation	993	1,966	(973)
Other Long Term Liabilities	31,799	32,301	(502)
Total Long Term Liabilities	235,767	247,944	(12,177)
Net Income	10,421	9,959	462
Members' Equity	(156,721)	(166,680)	9,959
Total Members' Equity	(146,299)	(156,721)	10,421
TOTAL LIABILITIES & EQUITY	$555,956	$633,767	(77,811)

Southwest Power Pool
Headcount Analysis
July 31, 2018

	Current Month Actual vs. Budget			Year End Forecast vs. Budget		
	Actual Jul-18	Budget Jul-18	Over/(Under) Budget	2018 Forecast	2018 Budget	Over/(Under) Budget
Information Technology	159	164	(5)	167	164	3
Operations	160	162	(2)	161	162	(1)
Engineering	81	80	1	83	80	3
Process Integrity	55	54	1	58	54	4
Administration	49	49	0	49	49	0
Corporate Services	28	30	(2)	30	30	0
Regulatory Policy & General Counsel	26	27	(1)	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	4	11	(7)	0	11	(11)
Total Positions	592	609	(17)	606	609	(3)
Vacancy Estimate				(12)	(18)	6
Headcount Including Vacancy Est.				594	591	3

Headcount changes *	
2018 Beginning Positions (RTO and 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.

As of July 2018, total RE staff remaining was 4. The forecast reflects three resignations / retirements during August and one final transfer to the RTO in September. 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, 6 new positions were added to augment compliance and interregional affairs functions and one was placed in Human Resources.

Unbudgeted Report
2018 YTD
As of September 18, 2018

PO Number	Project Name	Vendor Name	Scope of Work/Item Description	Total Amount	Budgeted	Unbudgeted	Notes
PO2018-1298	2018 Foundation General	Quanta Technology, LLC	Work Order 9- 2018 Study Estimate Development	$350,000	100,000	$250,000	(A)

(A) The $350,000 represents the highest estimated total of cost estimates that may be required if all analyzed projects were competitive. It is not expected that SPP will need cost estimates greater than the budgeted amount for the ITP studies in 2018, but additional amounts may be required to cover special studies as directed by the SPP Board.