

Southwest Power Pool
SCHEDULE 1A TASK FORCE MEETING
November 9, 2018
Teleconference

• M I N U T E S •

Administrative Items

Chair John Olsen called the meeting to order at 10:00 AM. The following individuals participated in the meeting:

John Olsen	Evergy
Jason Mazigian	Basin Electric
David Mindham	ITC Holdings
Tim Hall	Southern Power
John Varnell	Tenaska
Robert Tallman	OG&E
Wes Berger	SPS/Xcel Energy
Greg Garst	OPPD
Heather Starnes	Missouri Joint Municipal Elec Utility Commission
Alfred Busbee	GDS Associates/ETEC
Joel Dagerman	NPPD
David Erkin	AEP
Dennis Reed	Midwest Regulatory Consulting, LLC
Chris Lyons	Customized Energy Solutions
Christi Nicolay	Macquarie Energy, LLC
Don Frerking	Evergy
Seth Cochran	DC Energy
Mike Riley	SPP
Scott Smith	SPP
Patti Kelly	SPP
Brent Wilcox	SPP
Steve Davis	SPP
David Daniels	SPP
Ty Mitchell	SPP
Micha Bailey	SPP
Zeynep Vural	SPP
Dianne Branch	SPP

Minutes from the October 15, 2018 meeting were reviewed. Jason Mazigian motioned to approve the minutes. The motion was seconded by Greg Garst. The minutes were unanimously approved by voice vote.

The following proxies were in effect for the meeting – Heather Starnes for Rob Janssen, David Erkin for Jim Jacoby, and Dennis Reed for Ray Bergmeier (see attachments).

Update on Action Items from 10/15/18 Meeting

Action items resulted primarily from the discussion of the various market charge types and are summarized below by charge type.

Import Export Schedules

- **Action Item 1** – Further investigate how dynamic schedules are settled within the import/export charge types.

UPDATE: In summary, David Daniels (SPP Settlements) explained that dynamic schedules are processed through settlements the same as all other import/export tags. The tag is updated via WebTrans and the updated quantity is sent and processed through settlements.

Demand Response

- **Action Item 2** – Further investigate how demand response should be used to allocate SPP Costs. Additionally, determine whether the MWhs would also be recognized in RT generation or RT load.

UPDATE: In summary, David Daniels indicated that any demand response would be recognized under generation/load meter submittal.

Virtual Energy

- **Action Item 3a** - Investigate and report on how other RTOs (PJM, MISO, ISO-NE) charge market participants for virtual transactions. Are they allocated based upon MWhs or bid/offer submission? Submitted and/or cleared?

UPDATE: Mike Riley provided an update under agenda item #3.

- **Action Item 3b** - What is the basis of the other RTOs' charge for virtual fees (i.e. is it cost based or only recovering for incremental activity?)

UPDATE: Slide summarizing this data was included in the published materials and was presented after Mike Riley's update in agenda item #3.

- **Action Item 3c** - What is SPP's cost for supporting the virtual market?

UPDATE: Staff reported there are no identifiable, incremental costs that can be uniquely associated with facilitating the virtual markets.

- **Action Item 3d** - What are the annual MWhs and bid/offer submissions volumes associated with virtual transactions (cleared and submitted)?

UPDATE: Slide summarizing this data was included in the published materials and was presented during the discussion of agenda item #5.

Operating Reserves

- **Action Item 4** - Verify that operating reserves would not be double-charged when deployed (i.e. also in RT generation).

UPDATE: Given the task force had previously voted to exclude any determinant related to operating reserves, the answer to this question was deemed no longer relevant.

Transmission Congestion Rights/Auction Revenue Rights

- **Action Item 5** - Provide additional analysis on possible TCR allocations. Analysis should include SPP's TCR costs, including overheads, and different scenarios of ARR and TCR combinations. Additionally, the following data should be quantified- number and MWhs for submitted TCRs and MWhs only for cleared TCRs.

UPDATE: Slide summarizing this data was included in the published materials and was presented during the discussion of agenda item #5.

Update on RTO/ISO Filings for Virtual Rates

Mike Riley provided an overview of the initial filings for PJM, MISO, and ISO-NE relative to their virtual energy market. Mike highlighted pertinent facts associated with their filings as well as made special mention of any noteworthy considerations that ultimately supported the proposed methodology. Dianne Branch then walked through the specifics of the rate mechanisms utilized by each of the three entities to recover costs associated with virtual transactions, including the current rates being charged by each entity. There was a brief discussion and some general questions that were addressed by staff.

Q & A on Expenses by FERC Category

Dianne Branch provided general comments regarding the exhibit included with the meeting materials, which provided more granular detail for the expense components underlying each prescribed FERC reporting category. There were a few general questions regarding the schedule that were addressed by SPP staff.

Discussion on Virtuals/TCRs

Bid/offer metrics for TCR and Virtual activity were reviewed by the task force. Questions around the underlying assumptions for the metrics were fielded by SPP staff. There was a lengthy discussion on 1) various possibilities for allocating the TCR costs (as summarized in separate meeting exhibit) utilizing the numerous metrics provided as well as 2) the merit of charging virtual participants based on either a submitted and/or cleared, transactional/ volume basis. No firm decision was made on either TCR or Virtual transactions.

Action Items

- 1- Staff to prepare strawman proposals for allocating administrative costs, incorporating assumptions agreed upon in previous task force meetings. Proposals should include a separate charge for the recovery of TCR costs.
- 2- Staff to prepare a comparative analysis of TCR costs as recovered by other RTO/ISOs.

Future Meetings

Tuesday, November 27th 8AM-3PM – Dallas, TX AEP
Tuesday, December 18th 1-4PM - Teleconference

There being no further business, John Olsen adjourned the meeting at 12:00 PM.

Respectfully Submitted,

Dianne Branch
Secretary



Southwest Power Pool, Inc.
SCHEDULE 1A TASK FORCE MEETING
November 9, 2018
Teleconference

• A G E N D A •

10AM – Noon CST

1. Administrative Items (10 minutes)
 - a. Call to Order.....John Olsen
 - b. Attendance.....Dianne Branch
 - c. Review of Agenda.....John Olsen
 - d. Approve Meeting Minutes.....John Olsen
2. Update on Action Items (10 minutes) Dianne Branch
3. Update on RTO/ISO Filings for Virtual Rates (20 minutes)Mike Riley
4. Q & A on Expenses by FERC Category (20 minutes).....Dianne Branch/Others
5. Discussion on Virtuals/TCRs (50 minutes)..... John Olsen
6. Closing Items (10 minutes).....Dianne Branch
 - a. Summary of Action Items
 - b. Future meetings

Antitrust: SPP strictly prohibits use of participation in SPP activities as a forum for engaging in practices or communications that violate the antitrust laws. Please avoid discussion of topics or behavior that would result in anti-competitive behavior, including but not limited to, agreements between or among competitors regarding prices, bid and offer practices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that might unreasonably restrain competition.

Dianne Branch

From: Jacoby, Jim
Sent: Friday, November 09, 2018 9:46 AM
To: Olsen, John; Dianne Branch
Cc: David Erkin
Subject: **External Email** Proxy

Please give my proxy to David Erkin. Thanks

Jim Jacoby

Dianne Branch

From: Rob Janssen <rob.janssen@kelsonenergy.com>
Sent: Friday, November 09, 2018 8:50 AM
To: Olsen, John; Dianne Branch; Starnes, Heather
Subject: **External Email** Proxy for 1ATF Call Today

John,

I have some conflicts that have come up today with the 1ATF call. If I am not able to participate, I would like Heather Starnes to have my proxy.

Thanks,
Rob

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Dogwood Energy
6700 Alexander Bell Drive, Suite 360
Columbia, MD 21046
443-542-5125

Dianne Branch

From: Bergmeier, Ray
Sent: Monday, November 05, 2018 9:01 AM
To: Dianne Branch
Cc: Olsen, John; Reed, Dennis
Subject: ****External Email**** Nov. 9th S1ATF - Ray Proxy to Dennis Reed

Dianne,

Dennis Reed will have my proxy for the November 9, 2018, Schedule 1A Task Force meeting. Thanks.

Ray Bergmeier | Transmission Policy Affairs Director

Sunflower Electric Power Corporation | PO Box 1020, Hays, Kansas 67601-1020
785.623.3317 | RBergmeier@sunflower.net

Southwest Power Pool
SCHEDULE 1A TASK FORCE MEETING
October 15, 2018
SPP Corporate Center – Little Rock, Arkansas

• M I N U T E S •

Administrative Items

Chair John Olsen called the meeting to order at 1:00 PM. The following individuals participated in the meeting:

John Olsen	Evergy
Jason Mazigian	Basin Electric
David Mindham	ITC Holdings
John Varnell	Tenaska
Tim Hall	Southern Power
Robert Tallman	OG&E
Joel Dagerman	NPPD
Heather Starnes	Missouri Joint Municipal Electric Utility Commission
Ray Bergmeier	Sunflower Electric
Jim Jacoby	AEP-Public Service Company of Oklahoma
Bill Grant	Xcel/SPS
Mike Wise	Golden Spread
Shawnee Claiborn Pinto	Public Utility Commission of Texas
Cindy Ireland	Arkansas Public Service Commission
Dennis Reed	Midwest Regulatory Consulting, LLC
Tom Dunn	SPP
Scott Smith	SPP
Micha Bailey	SPP
Brent Wilcox	SPP
David Daniels	SPP
Patti Kelly	SPP
Mike Riley	SPP
Dianne Branch	SPP

Those participating by phone were as follows:

Alfred Busbee	GDS Associates/ETEC
Rob Janssen	Dogwood Energy
Don Frerking	Evergy
Ronald Chartier	Sunflower Electric
Lee Elliot	SPP
Tony Alexander	SPP
Richard Dillon	SPP

Minutes from the October 4, 2018 teleconference meeting were reviewed. Jason Mazigian motioned to approve the minutes. The motion was seconded by Heather Starnes. The minutes were unanimously approved by voice vote.

The following proxies were in effect for the meeting – Bill Grant for Wes Berger and Heather Starnes for Rob Janssen (see attachments).

Review of Energy Billing Determinants

David Daniels (SPP Settlements) walked through all energy charge types as presented in the first exhibit included in the meeting materials. Micha Bailey (SPP Congestion Hedging) facilitated the discussion on TCRs and ARR. There was a significant amount of discussion and related follow-up questions for staff. After the walkthrough and extended discussion of all the charge types, the task force voted on what billing determinants would be included in the denominator of any energy-based charge.

Motion #1 (Made by Ray Bergmeier, seconded by Heather Starnes)

To include, but not limited to, all megawatts associated with Real-Time Generation and Real-Time Load settlements, including Energy Imports and Energy Exports but excluding Bilateral Transaction settlements, in the denominator of any energy-based charge.

Motion passed unanimously by voice vote

Motion #2 (Made by John Varnell, seconded by Heather Starnes)

To exclude all megawatts associated with Operating Reserve transactions from the denominator of any energy-based charge.

The motion passed by voice vote with an abstention from OG&E

Motion #3 (Made by Bill Grant, seconded by Heather Starnes)

To include all megawatts associated with Demand Response transactions, from real-time metered data, in the denominator of any energy-based charge.

The motion passed by voice vote with an abstention from Tenaska

Motion #4 – (Made by Joel Dagerman, seconded by Jim Jacoby)

To exclude all megawatts associated with Grand-Fathered Agreements from the denominator of any energy-based charge.

The motion passed by voice vote with an abstention from Xcel Energy

Motion #5 (Made by Bill Grant, Seconded by Tim Hall)

To exclude all megawatts associated with Pseudo-Tie transactions from the denominator of any energy-based charge.

The motion passed by voice vote with an abstention from OG&E

There was no consensus reached on potential billing determinants associated with the Virtual Energy and TCR/ARR charge types. Additional data and analysis is needed. The additional items are listed under the respective headings in the recap of Action Items below.

Action Items

Based on the lengthy discussion of market charge types facilitated by SPP staff, the following action items were noted (arranged by the market charge type to which the action item related).

Import Export Schedules

- **Action Item 1** – Further investigate how Dynamic Schedules are settled within the Import/Export charge types.

Demand Response

- **Action Item 2** – Further investigate how Demand Response should be used to allocate SPP Costs. Additionally, determine whether the MWhs would also be recognized in RT Generation or RT Load.

Virtual Energy

- **Action Item 3a** - Investigate and report on how other RTOs (PJM, MISO, ISO-NE) charge market participants for virtual transactions. Are they allocated based upon MWhs or bid/offer submission? Submitted and/or cleared?
- **Action Item 3b** - What is the basis of the other RTOs' charge for virtual fees (i.e. is it cost based or only recovering for incremental activity?)
- **Action Item 3c** - What is SPP's cost for supporting the virtual market?
- **Action Item 3d** - What are the annual MWhs and bid/offer submissions volumes associated with virtual transactions (cleared and submitted)?

Operating Reserves

- **Action Item 4** - Verify that Operating Reserves would not be double-charged when deployed (i.e. also in RT Generation).

Transmission Congestion Rights/Auction Revenue Rights

- **Action Item 5** - Provide additional analysis on possible TCR allocations. Analysis should include SPP's TCR costs, including overheads, and different scenarios of ARR and TCR combinations. Additionally, the following data should be quantified- number and MWhs for submitted TCRs and MWhs only for cleared TCRs.

The Agenda items for Cost Assignment and Fee Structure Development were deferred until the next scheduled meeting.

Future Meetings

Friday, November 9th 10-Noon – Teleconference
Tuesday, November 27th 8AM-3PM – Dallas, TX AEP Offices
Tuesday, December 18th 1-4PM - Teleconference

There being no further business, John Olsen adjourned the meeting at 5:30 PM.

Respectfully Submitted,

Dianne Branch
Secretary



Summary of RTO/ISO Filings

Allocation of Administrative Costs to Virtual Transactions

November 9, 2018

1A Task Force Teleconference

Virtual Transactions: PJM

RTO	FERC DOCKET	SUMMARY OF PROPOSAL	BASIS
PJM	ER04-548	<p>Proposal to change how PJM recovered the costs of administering the trading of FTRs and Market Support Services on its system from solely a recovery based on MWhs physically inputted into the system and physically delivered on the system to a recovery partially based on all transactions.</p> <p>Additional billing determinants were proposed to recover a portion of FTR and Market Support administrative costs, based upon bidding activity.</p>	<p>The amount of virtual bids submitted to PJM increased to become a substantial amount of the volume in the day ahead energy market. PJM asserted that whether or not the bids resulted in settled transactions, they impose significant demands on PJM's administrative resources.</p> <p>The performance of PJM's systems was being degraded by the volume of bidding activity. Temporary measures were taken by PJM to avoid system crashes.</p> <p>The percentage of total Market Support costs to be billed per transaction (1.3%) was much less than what PJM calculated (17.8% of the MS operating expenses and 9% of MS capital expense), was proposed and accepted, based on stakeholder compromise.</p>

Virtual Transactions: ISO-NE

RTO	FERC DOCKET	SUMMARY OF PROPOSAL	BASIS
ISO-NE	ER04-121	<p>In 2003, ISO-NE was operating under an approved settlement agreement rate design where 85% of its Energy Administration Services (Schedule 2) costs were charged based on MWhs used, and 15% of these costs were charged based on the number and duration of customer transactions in the energy market.</p> <p>In October 2003, ISO-NE proposed to include submitted (as opposed to cleared) virtual trading transactions as billing determinants in its Schedule 2 charges.</p> <p>FERC ordered a technical conference to be conducted to consider ISO-NE's proposal. In comments filed after the technical conference,, ISO-NE submitted three other alternative cost-allocation options for FERC to consider.</p> <p>FERC accepted a 3 tiered rate design whereby virtual bids and offers were charged for each submission and then charged for each cleared transaction. Physical traders were charged for each cleared transaction.</p>	<p>ISO-NE asserted that if its full market infrastructure did not exist and was not available to virtual traders, they could not trade and could not generate profits. As such, ISO-NE stated that some level of cost contribution should be required from virtual traders and that the methodology it proposed to collect these costs is reasonable because it treats all bidding activity the same for rate purposes, whether the activity is physical or virtual.</p> <p>In accepting the 3 tiered approach, FERC noted that the rates exist principally on the existence of cleared bids since the charge for submitted virtual transactions was nominal, which "will discourage frivolous bidding and allow the virtual traders to pay their fair share of ISO-NE's expenses since they benefit from the existence of the market infrastructure."</p>

Initial Filings to Allocate Administrative Costs

RTO	FERC DOCKET	SUMMARY OF PROPOSAL	BASIS
MISO	ER02-2595	<p>In September 2002, MISO proposed the inclusion of MWh associated with virtual bids and offers that settle in the day ahead market, to be included as billing determinants for its Energy Market Support Administrative Service Cost Recovery Adder in its Schedule 17.</p> <p>This filing was the initial filing proposing Schedule 17 of MISO's tariff.</p>	<p>MISO stated that this its method of cost allocation was appropriate because both generators and load will benefit from Energy Markets because the market provides both an energy and transmission service.</p> <p>MISO provided testimony that the segregation of market-related costs from transmission operation costs collected under its Schedule 10 was in keeping with FERC's trend toward unbundling and would permit greater transparency in the cost of its operations.</p> <p>FERC conditionally accepted Schedules 16 and 17, directed MISO to file an informational report, and set the docket to a paper hearing to allow more information to be presented to allow FERC to make a determination.</p> <p>MISO opposed the allocation of Schedules 16 or 17 costs recovered on a transaction fee basis because they introduce greater complexity into operations and thus increase costs and may deter trading in the market and create unwarranted basis in favor of bilateral transactions.</p>

Virtual Rate Comparisons

November 9, 2018

1A Task Force Teleconference



SouthwestPowerPool



SPPorg



southwest-power-pool

Virtual Rate Comparisons

MISO, PJM, and ISO-NE

	Separate Rate	Per Bid/Offer Charge	Per Bid/Offer Rate	MWh Cleared Charge	MWh Rate	Additional Information
MISO	No	N/A	N/A	Yes	0.0864/MWhs	No separate charge for virtual transactions. Virtuals are charged at the same market admin rate for the cleared day ahead volumes. Rate changes monthly.
PJM	Yes	Yes	\$.0693 per cleared bid/offer	Yes	\$0.0463/MWh	MWh charge is the same rate used for all cleared market activity.
ISO-NE	Yes	Yes	\$0.005 per submitted bid/offer \$0.06 per cleared offer/bid	No	N/A	Rate has not changed since introduction in 2004

575.7 - Market Facilitation, Monitoring & Compliance (in \$000)		
	2018 Budget	Description of Cost Included
Markets Department in Operations	\$4,012	Director: Philip Bruich (Bruce Rew- VP Operations). Includes staff compensation and benefits, travel, and outside services (\$50k related to PMU training/support). Staff includes two managers (Day Ahead Market and Tariff Admin), two supervisors (Real-time Markets and Operations Support) and 15 staff employees.
Market Monitoring Unit	\$3,035	Director: Keith Collins. Includes staff compensation and benefits, travel, publications/subscriptions (data services), maintenance (\$65k cost allocation for sw and hw utilized by the MMU), and outside services (\$250k for various consulting and legal services). Staff included a director, a manager, two supervisors and 12 staff employees.
Dedicated IT resources (23 FTEs - allocation)	\$2,737	23 FTE from IT Applications (Director Jerry Wild) were assumed to be dedicated to market operations per staff estimates. Assumed \$85k salary plus benefits and taxes.
Network Communications Infrastructure (allocation)	\$2,505	56% of total communications costs were assumed to be related to market operations based on staff estimates representing allocation mainly for data and voice circuits.
Settlements Department Resources (allocation)	\$2,260	80% of staff costs (salary, benefits and taxes) of the Settlements Department (under Don Shipley) were allocated to market operations.
Software Maintenance Expenses	\$1,919	Software maintenance and production support costs for the market system.
Market Support and Analysis Department in Ops Support	\$1,772	Director: Bert Bressers (Bruce Rew-VP Operations). Includes staff compensation and benefits, and travel. Current staff includes one manager, one supervisor (Market Forensics), and 12 staff employees.
Operators (two per desk, total 12 FTEs - allocation)	\$1,763	Costs of two operators (salary, benefits and taxes) from each of the six operations desks were allocated to markets operations.
Customer Relations resources (allocation)	\$890	80% of staff costs (salary, benefits and taxes) of the Customer Relations Department (under Russell Quattlebaum) were allocated to market operations.
Market Design Department	\$789	Director: David Kelley (reports to Carl Monroe). Costs include staff compensation and benefits, and travel. Staff included one manager and five staff employees.
Congestion Hedging Department	\$776	Director: Jay Caspary (Lanny Nickell - VP Engineering). Congestion Hedging is a separate group under Manager, Transmission Services. Includes staff compensation and benefits. Staff includes one supervisor and five staff employees.
Credit Department resources (allocation)	\$599	90% of staff costs (salary, benefits and taxes) of the Credit Department (under Director Scott Smith) were allocated to market operations.
Customer Training Resources (allocation)	\$391	Various percentages for five specific customer training staff were applied to staff costs (salary, benefits and taxes) of these resources based on their involvement with markets-related training.
OATI Wrap Agreement Charges (allocation)	\$379	SPP utilizes OATI's integrated webTrans system of solutions for transmission and reliability operations. The system includes various modules and functionality to automate and integrate scheduling, e-Tag and Transmission Service Request (TSR) validation, congestion management, outage management, and OASIS posting requirements. 25% of such charges are allocated to market operations based on staff's estimate of utilization by respective functions.
SOC 1 Controls Audit	\$362	SPP is required to have an annual audit of its internal controls (SOC 1 audit) which is performed by a major accounting/consulting firm.
Debt: Principal and Interest	\$24,661	SPP had obtained separate borrowings to fund the Integrated Marketplace, the principal and interest for which is shown here as a direct charge to markets operations. These senior notes mature by 2025.
Corporate Support Allocation	\$45,956	57.8% of total corporate support costs is allocated to markets operations.
Total	\$94,807	

561.4 - Scheduling, Sys Control & Dispatch (in \$000)		
	2018 Budget	Description of Cost Included
Systems Operations Department	\$8,168	Director: CJ Brown (Bruce Rew-VP Operations). Includes staff compensation and benefits, and travel. Current staff includes six operations desks with a shift supervisor assigned to each desk and a total of 52 staff members under manager of system operations (the cost of 12 of the 52 staff members is allocated to markets operations). A manager for balancing authority with six staff employees is also currently included in this department.
Operations Support Department	\$6,425	Director: Bert Bressers (Bruce Rew-VP Operations). Includes staff compensation and benefits, travel, and outside services (\$250k for renewable generation integration study). Staff included one director, two managers (modeling & data integrity, engineering analysis & support), three supervisors (real-time support, seams and AFC support, operational plan), and a staff of 41 employees.
Dedicated IT resources (18 FTEs - allocation)	\$2,142	Per staff estimates, 18 FTEs from IT Applications (Director- Jerry Wild) were assumed to be dedicated to scheduling, systems control and dispatch operations. Assumed \$85k salary plus benefits and taxes.
Software Maintenance Expenses	\$1,436	Software maintenance and production support costs for systems related to transmission and reliability coordination.
OATI Wrap Agreement Charges (allocation)	\$1,136	SPP utilizes OATI's integrated webTrans system of solutions for transmission and reliability operations. The system includes various modules and functionality to automate and integrate scheduling, e-Tag and Transmission Service Request (TSR) validation, congestion management, outage management, and OASIS posting requirements. 75% of such charges are allocated to scheduling, systems control and dispatch operations based on assumed utilization of these services.
Wind forecasting services and IDC Fee (a)	\$1,055	Interchange Distribution Calculator, a secure information management system, operated by OATI in the Eastern Interconnection is utilized solely for reliability coordination purposes.
Outside Services related to IT/CIP Security	\$1,040	Outside services costs to ensure safe and secure operation of SPP's critical infrastructure. Among the costs included are Cyber Risk Information Program (CRISP), vulnerability assessment services, identity and access management consulting services, security monitoring, and distributed denial of service tool.
Ops Analysis & Performance Support Department	\$992	Director: CJ Brown (Bruce Rew-VP Operations). Includes staff compensation and benefits. Current staff includes a manager and 6 staff employees. This team is mainly involved in providing training support to the operators.
Network Communications Infrastructure (allocation)	\$582	13% of total communications costs were assumed to be related to scheduling and dispatch operations based on staff estimates representing allocation mainly for data and voice circuits.
Interregional Affairs Department	\$515	Director: Charles Yeung (Michael Desselle-Process Integrity). Includes staff compensation and benefits, and travel. 2018 budget included a director and one staff employee.
Customer Relations resources (allocation)	\$111	10% of staff costs (salary, benefits and taxes) of the Customer Relations Department (under Russell Quattlebaum) were allocated to scheduling and dispatch operations.
Corporate Support Allocation	\$22,203	27.9% of total corporate support costs is allocated to markets operations.
Total	\$45,804	

561.8 - Reliability Planning & Standards Dev (in \$000)		
	2018 Budget	Description of Cost Included
Engineering Planning Department	\$5,235	Director: Antoine Lucas (Lanny Nickell-VP Engineering). Includes staff compensation and benefits, travel, and outside services (\$85k consulting and staff augmentation related to the ITP process and TPL studies). Staff included one director, four managers (reliability planning, economic planning, modeling, compliance studies) and 32 staff employees.
Engineering R&D and Tariff Services Department	\$5,227	Director: Jay Caspary (Lanny Nickell- VP Engineering). Includes staff compensation and benefits, travel, membership dues for and contributions towards R&D activities at various research institutions (approx. \$540k), and outside services (\$1.7M for supplemental research, consulting for tariff improvements, staff augmentation and contractors for various engineering studies). Staff included one director, two managers (transmission services and generation interconnection studies), 17 staff employees. Supervisor of congestion hedging and staff of five employees are embedded within this group but their costs are allocated to markets operations.
Engineering Support Department	\$2,435	This department reports up to Lanny Nickell (VP Engineering) and includes one manager, two supervisors (program administration and support services), and 14 staff employees. Costs include staff compensation and benefits, travel, and outside services (\$250k for staff augmentation providing support to generation interconnection studies, consulting for engineering project management improvements, consulting/staff aug. for DPP cost estimation).
Network Communications Infrastructure (allocation)	\$582	Based on staff estimates, 13% of total communications costs were assumed to be related to planning activities representing allocation mainly for data and voice circuits.
Interregional Relations Department	\$518	Director: David Kelley (reports to Carl Monroe). Includes staff compensation and benefits, and travel. 2018 budget included one director and two staff employees.
Software Maintenance Expenses	\$453	Software maintenance and production support costs for systems related to transmission planning.
Regional State Committee	\$381	Reimbursement of travel costs for RSC members and staff.
Dedicated IT resources (2 FTEs - allocation)	\$238	Per staff estimates, 2 FTEs from IT Applications (Director Jerry Wild) were assumed to be dedicated in support of planning activities. Assumed \$85k salary plus benefits and taxes.
Customer Relations resources (allocation)	\$111	10% of staff costs (salary, benefits and taxes) of the Customer Relations Department (under Russell Quattlebaum) were allocated to planning activities.
Credit Department resources (allocation)	\$67	10% of staff costs (salary, benefits and taxes) of the Credit Department (under Director Scott Smith) were allocated to planning for credit and collection activities related to engineering study customers.
Corporate Support Allocation	\$11,337	14.3% of total corporate support costs is allocated to markets operations.
Less: Engineering Studies Revenues	(\$3,194)	Customers participating in various engineering studies pay for the costs of such studies which include internal staff time and outside service costs (contractors and consultants who support SPP staff's work).
Total	\$23,389	

Corporate Support (in \$000)		
	2018 Budget	Description of Cost Included
Information Technology Department	\$31,409	This is the entire IT division under Barbara Sugg and includes four departments (sourcing & strategy, IT applications, IT technology and services, cybersecurity and controls), six directors, six managers, and 13 supervisors. Per the 2018 budget, the total headcount for the IT department was 164. Included in this line item are staff compensation and benefits, travel, outside services (\$1.1M for data center services, consulting for key projects and initiatives, vendor support, staff augmentation, vendor security and testing services), and annual maintenance and support costs for software, hardware, and systems (\$13.1M). Note that certain IT staff, software maintenance, and outside service expenses that are considered to be dedicated to a specific function were allocated to markets, scheduling, and planning functions and presented within the costs of those specific functions.
Officers Department	\$9,216	Compensation and benefits, travel, certain administrative expenses (\$197k for individual and organizational membership dues, charitable contributions and donations), and outside services (\$1.6M - mainly for board of directors related expenses) are included in this line item.
Administration Department	\$8,285	There is no headcount in this department. This line item is mainly comprised of retirement benefit costs (pension and retiree healthcare) as well as enterprise insurance costs. This line item also includes capex reserves of \$3.6M.
Corporate Services Department	\$8,060	This department is under VP Malinda See and includes two managers (HR, facilities) and two supervisors (meetings & admin support, corp training and professional development) and 26 staff employees. Costs include staff compensation and benefits, certain company-wide staff benefit expenses (employee events and conferences, wellness initiatives, educational reimbursement program), office expenses, utilities, meeting expenses (board of directors and working group meetings), facilities maintenance costs, and outside services (consulting and various services for HR and benefits, facilities, campus security).
Legal, Regulatory, and Market Policy Departments	\$6,394	These departments are under VP Paul Suskie and currently includes four directors (regulatory policy, associate general counsel, transmission policy, market policy), three managers (managing attorney, regulatory policy, regulatory processes), and a staff of 20 employees. Costs include staff compensation and benefits, travel, and outside services (\$1.9M for outside legal counsel mostly on FERC-specific matters).
Compliance Department	\$2,843	Director: Carl Stelly (Michael Desselle - VP Process Integrity). 2018 budget included one manager and 12 staff employees. Costs include staff compensation and benefits, travel, and outside services (\$450k for consulting for CIP audit, compliance review, governance and compliance tool support).
Project Management Office	\$1,953	Director: Russell Quattlebaum (Michael Desselle - VP Process Integrity). 2018 budget included one manager and 11 staff employees. Costs include staff compensation and benefits, travel, and outside services (\$200k mainly for staff augmentation for temporary project management needs).
Accounting Department	\$1,578	Director: Dianne Branch (Tom Dunn - VP Finance). 2018 budget included one director (controller), two managers (accounting, purchasing) and 8 staff employees. Costs include staff compensation and benefits, and outside services (\$160k for annual financial and benefit plan audits, travel expense management tool).
Customer Training Department	\$1,381	Director: Russell Quattlebaum (Michael Desselle - VP Process Integrity). 2018 budget included one manager and 9 staff employees. Costs include staff compensation and benefits, travel, external meeting/training expenses (\$84k) and outside services (\$75k to support NERC-required documentation and compliance requirements).
Internal Audit Department	\$871	Director: Lauren Krigbaum (Michael Desselle - VP Process Integrity). 2018 budget included one director and 5 staff employees. Costs include staff compensation and benefits.
Network Communications Infrastructure (allocation)	\$805	This line is comprised of remaining communication costs not allocated to a specific function and includes services such as conferencing and cellular phones.
Settlements Department	\$597	Director: Don Shipley (Tom Dunn - VP Finance). 2018 budget included one director, two managers, and 19 staff employees. Costs mainly include staff compensation and benefits.
Communications and Government Affairs Department	\$905	Reports up to Mike Ross (VP Government Affairs and PR). Staff included one manager (government affairs and PR), one supervisor (communications) and 5 staff employees. Costs are comprised of staff compensation and benefits, travel and external meetings, and outside services (\$56k for audio, video, media, printing, web hosting services).
Credit Department	\$102	This line item represents credit rating and credit information services costs. Credit department staff costs are allocated to the markets and planning functions.
Customer Service Department	\$21	Customer service staff costs are allocated to the specific functions and this line item represents the residual costs for travel, dues etc.
Debt: Principal and Interest	\$7,903	Principal repayments and interest expense on various borrowings obtained to fund capital projects (other than the Integrated Marketplace included in markets facilitation costs) as well as SPP's main campus and the backup data center.
Less: Revenues other than Admin Fees	(\$2,824)	Revenues other than SPP's annual admin fee and engineering studies (shown as a direct reduction of costs allocated to the Reliability Planning category), such as annual member fees and contract service revenues are included in this line item.
Total	\$79,496	

TCR Cost Overview

November 9, 2018

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Transmission Congestion Right (TCR) Estimated Cost of Services

(in \$0,000s)

Staff Expense	
Congesting Hedging Department	\$ 776 (includes 1 manager and 5 staff)
IT Staff Support	280 (estimated at 2 FTEs)
Total Staff Expense	1,056
Maintenance Expense	
Annual Maintenance on I-Hedge System	730 (Nexant)
Annual Maintenance on TCR Transfer Tool	15 (GE/Alstom)
Total Maintenance Expense	745
Estimated Annual Operating Cost for TCR Services	1,801
Approximate Cost of Annual Debt Service	450
(Based on Original Asset plus Major Enhancements)	
Allocation of Corporate Overhead	2,118
Projected Total Annual Cost of TCR Services	\$ 4,369

TCRs and Virtuals Bid/Offer Data

November 9, 2018

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TCRs and Virtuals – Bid/Offer Data

Transmission Congestion Rights	2017
# TCR Bids/Offers Credit Approved	592,136
# TCR Bids/Offers Credit Disapproved	260,058
# TCR Bids/Offers Submitted in iHedge	852,194
# TCR Bids/Offers Awarded in Simultaneous Feasibility Testing	198,523
Virtual Transactions	
# Virtual Bids/Offers Submitted to Marketplace	7,531,319
# Virtual Bids/Offers Cleared by Marketplace	4,139,984

Note: MWhs cannot be determined on submissions since they are derived from bid/offer curves containing multiple MWh points.