



Southwest Power Pool
FINANCE COMMITTEE MEETING
December 5, 2016
Little Rock, Arkansas

• M I N U T E S •

Administrative Items

SPP Chair Harry Skilton called the meeting to order at 2:00 p.m. The following members of the Finance Committee participated:

Harry Skilton	SPP Director
Larry Altenbaumer	SPP Director
Kelly Harrison (phone)	Westar Energy
Sandra Bennett (phone)	AEP
Laura Kapustka (phone)	Lincoln Electric
Mike Wise	Golden Spread Electric Cooperative
Tom Dunn	SPP

Others attending included:

Jason Fortek (phone)	Lincoln Electric
Traci Bender (phone)	NPPD
Jerry Peace	OG&E
Josh Martin	SPP Director
Bruce Scherr	SPP Director
Phyllis Bernard	SPP Director
Julian Brix (phone)	SPP Director
Graham Edwards	SPP Director
Carl Monroe	SPP
Michael Desselle	SPP
Richard Dillon	SPP
Jim Gunnell	SPP
Scott Smith	SPP
Jared Barker	SPP
Lauren Krigbaum	SPP
Stan Payne	Stephens Insurance
Kevin McBride	Stephens Insurance
Matt Jones	Stephens Insurance
Barrett Breeding	BKD, LLC
Eddie Holt (phone)	KPMG
Chin Modha (phone)	KPMG

Minutes from the November 10, 2016 meeting were reviewed. Kelly Harrison motioned to approve the minutes. The motion was seconded by Mike Wise and approved by unanimous voice vote.

SPP staff reviewed the status of the Action Items list and provided the Committee with presentations covering two issues:

- 1) Credit Practice Working Group re-review of the appropriateness of allowing netting between TCR positions to create a net exposure. The Credit Practice Working Group determined continuation of this practice was appropriate due to the conservative methodology used to determine potential TCR exposure.
- 2) SPP Market Design department analysis of the value provided to SPP's market by financial only market participants. The analysis performed was unable to document any consistent value

provided to SPP's markets by financial only participants. SPP will discuss this report with peers within the ISO/RTO council.

Harry Skilton briefly reviewed the Finance Committee data from the SPP Organizational Group survey. The Finance Committee's overall effectiveness score dropped from the prior year and Mr. Skilton encouraged all members and stakeholders to reach out to him to share any insights they have on how to improve the Committee's effectiveness.

Continuous Improvement Review

Michael Desselle, SPP's Vice President of Process Integrity and Chief Compliance Officer, and Jim Gunnell, SPP's Director of Stakeholder Services, reported on SPP's business process improvement program results for the year-to-date 2016 period. In general, SPP continues to see benefits of the formalized process, though 2016 was less productive than prior years due to focus on rectifying compliance shortfalls and staff turnover. SPP staff will make an annual report to the Committee going forward.

Corporate Liability Insurance Stewardship Report

Representatives from Stephens Insurance, LLC provided an overview of the property & casualty, professional liability and Director and Officer insurance markets. In general, the marketplace has generally been experiencing premium reductions with isolated areas of premium increases in executive liability and excess liability products. Stephens indicated SPP could expect flat to low/single digit increases in premiums for all lines except Errors and Omissions and Directors and Officer coverage; on both of those lines Stephens is projecting up to 7% increase in premiums.

Stephens provided a briefing on they cyber liability insurance marketplace. Presently, SPP's excess liability policies seem to provide some protection against third party claims. First party claims (damage to SPP assets or data) fall under SPP's property coverages and only has minimal protection.

2016 Financial Audit

Barrett Breeding of BKD, LLC presented the 2016 financial audit plan identifying significant focus areas for the audit and seeking input from the Committee on other areas which the Committee would like audited.

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

2016 Controls Audit

Representatives from KPMG presented the results of SPP's SSAE 16 Controls Audit completed as of October 31, 2016 covering the period November 1, 2015 through October 31, 2016. The audit report will be issued with an unqualified opinion and no noted exceptions.

Pension Assumptions

SPP staff discussed its recommendations for the four primary assumptions required for pension accounting and valuation: i) discount rate – staff recommended a discount rate of 5.00% in accordance with SPP's process for determining the discount rate assumption; ii) investment rate of return – staff recommends remaining at 7.00% long-term rate of return; iii) rate of compensation change – staff recommends remaining at 4.00% iv) staff recommended utilizing the current IRS mortality tables in accordance with Finance Committee directives from December 2015.

Finance Committee
December 5, 2016

Future Meetings

The next meeting of the Finance Committee is scheduled for February 24, 2017 at the Plantation Club in Ponte Vedra Beach, FL beginning at 8:00 a.m. and ending at 2:00 p.m.

There being no further business, Harry Skilton adjourned the meeting at 5:53 p.m.

Respectfully Submitted,

Thomas P. Dunn
Secretary



Southwest Power Pool, Inc.

FINANCE COMMITTEE

Action Items Status Report
December 7, 2015

	Action Item	Date Originated	Status	Comments
1.	Establish a scorecard for presentation to MOPC, SPC, and BOD indicating costs associated with member required projects/services.	10/11/2012	incomplete	Present at March 11, 2016 meeting
2.	Create checklist of committee duties	7/09/2015	incomplete	Present at March 11, 2016 meeting
3.	Prepare document outlining capital expenditures and funding options	7/17/2015	incomplete	
4.	Revisit SPP's rate design	11/10/2015	New	
5.	Full review of corporate liability insurance	12/07/2015	New	
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				



**Southwest Power Pool, Inc.
FINANCE COMMITTEE MEETING
December 5, 2016
SPP Corporate Campus
Little Rock, AR**

2:00p.m. – 6:00 p.m.

Auditorium A

1. Administrative (30 minutes) Harry Skilton
 - a. Meeting Minutes (5 minutes).....
 - b. Review of Action Items Tom Dunn
 - i. TCR Collateral (25 minutes)Scott Smith
2. Continuous Improvement Review (90 minutes)Michael Desselle
3. Corporate Liability Insurance Stewardship Report (30 minutes)..... Stan Payne – Stephens Insurance
4. 2016 Financial Audit – Pre-audit meeting (30 minutes)Barrett Breeding – BKD,LLC
5. 2016 SSAE 16 Controls Audit (30 minutes)Eddie Holt - KPMG
6. Pension Assumptions (30 minutes)..... Tom Dunn
7. Written Reports:
 - a. October 2016 Financial Report
 - b. SPP Portfolio Report
 - c. Finance, Settlements, & Credit Metrics
8. Adjourn Harry Skilton



Southwest Power Pool
FINANCE COMMITTEE MEETING
November 10, 2016
Dallas, TX

• M I N U T E S •

Administrative Items

SPP Chair Harry Skilton called the meeting to order at 7:30 a.m. The following members of the Finance Committee participated:

Harry Skilton	SPP Director
Larry Altenbaumer	SPP Director
Kelly Harrison	Westar Energy
Sandra Bennett	AEP
Laura Kapustka (phone)	Lincoln Electric
Mike Wise	Golden Spread Electric Cooperative
Tom Dunn	SPP
Others attending included:	
Jim Eckelberger	SPP Director
Graham Edwards (phone)	SPP Director
Jerry Peace	OG&E
Denise Buffington (phone)	KCPL
Barbara Sugg	SPP
Carson Hampson	SPP
Nick Brown	SPP
Dianne Branch (phone)	SPP
Zeynep Vural (phone)	SPP
Sheri Dunn (phone)	SPP

Minutes from the July 6, 2016, September 27, 2016, and October 25, 2016 meetings were reviewed. Kelly Harrison motioned to approve the minutes. The motion was seconded by Sandra Bennett and approved by unanimous voice vote.

The Committee reviewed and adjusted its meeting schedule for 2017. The final schedule is included with these minutes.

2017 Budget and Administrative Fee Rate

SPP staff provided an in-depth review of SPP's Information Technology department. The review started with a detailed discussion of the scope and responsibilities of the department and was followed by information on the processes and theory utilized in making spending decisions in the department and factors outside the department that also drive expenditures.

SPP staff provided a summary of the major components of the 2017 budget and administrative fee including; i) salary and benefit expenses; ii) capital expenditure projects; iii) outside services expense; and iv) load assumptions.

Comments from Committee members and other participants were directed at i) ROI analysis (or lack thereof, on capital spending; ii) opportunities to more efficiently purchase weather forecasting services region wide; and iii) additional presentation details (clearly identifying project phases and commitments, "foundation" capital expenditures).

Larry Altenbaumer made a motion for the Committee to recommend the 2017 Budget to the SPP Board of Directors for approval and to establish a 2017 administrative fee rate of 41.9¢/MWh. The 2017 budget consists of total expenses of \$196.6 million, debt repayment of \$23.2 million, and capital expenditures of \$19.5 million. The motion was seconded by Harry Skilton and approved by unanimous voice vote.

Finance Committee
November 10, 2016

The Committee would like to re-focus on cost reduction initiatives during the first quarter of 2017 if SPP does not have positive momentum on its membership expansion efforts.

Future Meetings

The next meeting of the Finance Committee is scheduled for December 5, 2016 at the SPP Corporate Office in Little Rock, AR beginning at 2:00 p.m. and ending at 6:00 p.m.

There being no further business, Harry Skilton adjourned the meeting at 3:15 p.m.

Respectfully Submitted,

Thomas P. Dunn
Secretary



Southwest Power Pool, Inc.
FINANCE COMMITTEE
Action Items Status Report
November 10, 2016

	Action Item	Date Originated	Status	Comments
1.	Quantify liquidity provided to Integrated Marketplace by virtual transactions	July 6, 2016	New	SPP Market Design group working on
2.	Evaluate inclusion of credit process controls in SSAE 16 audit scope	July 6, 2016	New	
3.	Investigate how SPP member utilities insure against cyber liabilities	July 6, 2016	New	
4.	Engage firm to review work of actuary on benefit plans	April 5, 2016	New	
5.	Direct Credit Practice Working Group to reevaluate practice of using positive value TCR as collateral for TCR portfolio	April 5, 2016	New	To be discussed at December 5, 2016 meeting
6.	Investigate alternative metrics to use in allocating SPP's costs to the region	July 6, 2016	New	In process
7.	Full review of corporate liability insurance	12/07/2015	Complete	Presented at July 7, 2016 meeting
8.	Prepare a graph of historical member deficit	April 5, 2016	Complete	Presented at July 7, 2016 meeting
9.	Report each meeting on significant legal issues	April 5, 2016	Complete	Presented at July 7, 2016 meeting
10.	Determine requirement for SPP to fund RSC	April 5, 2016	Complete	Presented at July 7, 2016 meeting
11.	Review description of RE function in financial audit footnotes	April 5, 2016	Complete	Removed any mention of RE from footnotes
12.	Provide documentation of control activities on credit security refunds	April 5, 2016	Complete	Presented at July 7, 2016 meeting
13.	Re-review controls on approving invoices for payment	April 5, 2016	Complete	Presented at July 7, 2016 meeting
14.	Document value added by financial only market participants compared to profits earned by those participants in SPP markets	April 5, 2016	Complete	Presented at July 7, 2016 meeting
15.	Illustrate impact of charging NITS based on energy and PtP based on reserved capacity	April 5, 2016	Complete	Presented at July 7, 2016 meeting
16.	Provide information on December 2015 settlement dispute activity	April 5, 2016	Complete	Description sent on afternoon of April 5, 2016

17.	Add Settlement and Credit metrics to Committee materials	3/11/2016	Complete	Scheduled for April 2016 meeting
18.	Revisit SPP's rate design	11/10/2015	Complete	Scheduled for April 2016 meeting
19.	Prepare document outlining capital expenditures and funding options	7/17/2015	Complete	Scheduled for April 2016 meeting
20.	Establish a scorecard for presentation to MOPC, SPC, and BOD indicating costs associated with member required projects/services.	10/11/2012	Complete	Presented at March 11, 2016 meeting
21.	Create checklist of committee duties	7/09/2015	Complete	Presented at March 11, 2016 meeting



Appropriateness of Using TCRs as Collateral

Action Item from FC



Southwest Power Pool, Inc.
FINANCE COMMITTEE
Action Items Status Report
July 6, 2016

	Action Item	Date Originated	Status	Comments
1.	Quantify liquidity provided to Integrated Marketplace by virtual transactions	July 6, 2016	New	
2.	Evaluate inclusion of credit process controls in SSAE 16 audit scope	July 6, 2016	New	
3.	Investigate how SPP member utilities insure against cyber liabilities	July 6, 2016	New	To be discussed at December 2016 meeting
4.	Engage firm to review work of actuary on benefit plans	April 5, 2016	New	
5.	Direct Credit Practice Working Group to reevaluate practice of using positive value TCR as collateral for TCR portfolio	April 5, 2016	New	



Credit Practices Working Group

- Discussed issue in October and November
- Credit Policy designed to allow “netting” of positive and negative TCRs under certain conditions



FERC Order 741

Docket No. RM10-13-000

- 38 -

participants and their business model should exempt those participants from this aspect of the Final Rule, the Commission addresses this issue below.

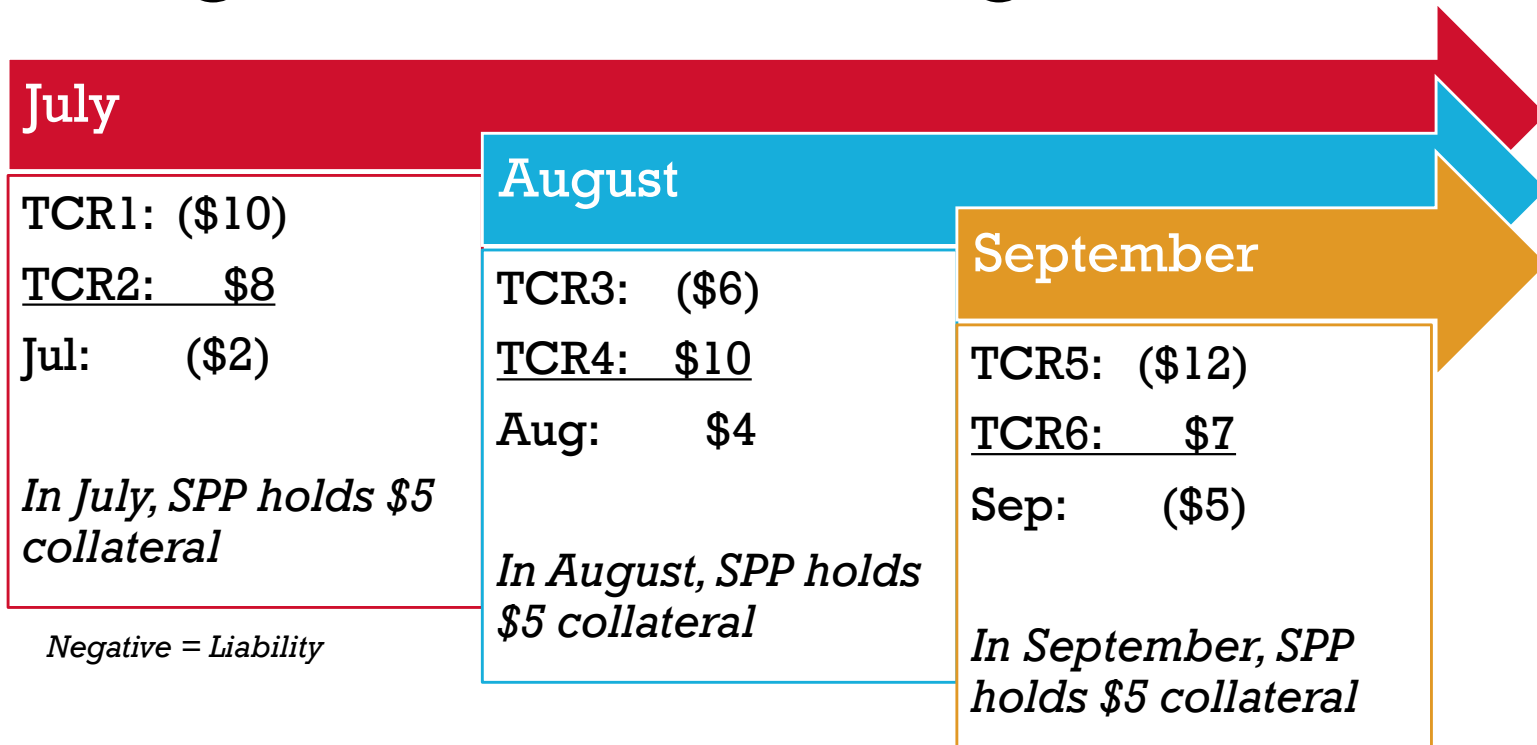
75. Thus, the Commission directs each ISO and RTO to submit a compliance filing that includes tariff revisions to eliminate the use of unsecured credit in its FTR, or FTR-equivalent, markets. This compliance filing must be submitted by June 30, 2011, and the tariff revisions will take effect October 1, 2011.

- Also disallows “netting of credit requirements between FTR and non-FTR activity”

Credit Risk and Mitigations

- SPP disallows “netting of credit requirements between FTR and non-FTR activity”
 - FERC Order 741
- Other ISO/RTO credit policies are designed with similar netting concepts
- Estimation of an MP’s entire portfolio
 - For like TCR products in a portfolio
 - Never results in “positive” exposure
- Conservative nature of TCR Reference Prices

Mitigation: Estimating Portfolio



- Regardless of any other Marketplace position, SPP holds \$5 in collateral in July
- August exposure does not offset other TCR products
- Disallowing netting would result in SPP holding \$28 in July

Risk Mitigations: TCR Ref Prices

- **TCR Ref Price = Mean Price – Stress Test Price**
 - Typically, more than doubles collateral requirement for historically negative paths
 - Reduces the impact of netting positive paths
 - Historically negative paths use 90th percentile stress test
 - Captures additional volatility of historical MCCs in risk assessment
 - Historically positive paths use 75th percentile stress test

	Historically Positive Path	Historically Negative Path
Mean Price	\$10	(\$10)
- Stress Test Price *	(\$5)	\$15
Final TCR Ref Price	\$10	(\$25)

** Not allowed to increase value of positive path*





Value of Financial-Only Market Participants

December 5, 2106

Market Design

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Executive Summary

The Finance Committee requested that staff review and report back to the committee regarding market benefits from Financial-Only Market Participants (FOMP): participants that do not have physical assets (generators or load) in the SPP Integrated Marketplace. Benefits commonly identified for FOMPs in organized wholesale electricity markets are:

- 1) Providing market liquidity
- 2) Minimize production cost in the day-ahead market
- 3) Converging energy prices between the day-ahead and real-time markets
- 4) Converging congestion prices between the day-ahead and real-time markets

These benefits are expected to accrue to asset-owning participants.

SPP’s Market Design department performed the review with observation by the SPP Market Monitoring Unit using actual scenarios and statistical analysis to determine if the benefits listed above could be demonstrated. A summary of the results appears in Table 1 below.

Table 1: Summary of Results

Benefit	Benefit Demonstrated?
Providing Market Liquidity	No
Minimize Production Costs in Day-Ahead Market	No
Converge Day-Ahead and Real-Time Market Energy Prices	No
Converge Day-Ahead and Real-Time Market Congestion Prices	No

Market Design Staff did not find consistent demonstration of benefits in any of the categories. Since the Integrated Marketplace launched in March 2014, the net settlement with FOMPs was a payment to the entities of approximately \$26 million.

Background

FOMPs are entities with no physical assets (generators or load) that participate in SPP’s Integrated Marketplace by taking financial positions in the congestion hedging market or day-ahead market (DAMKT). FOMPs participate in the congestion hedging market via transmission congestion rights (TCR) and auction revenue rights (ARR), and they submit virtual generation and virtual load in the DAMKT. Virtual generation and load are not physical assets and are financial positions in the DAMKT.

It is theorized FOMPs benefit the market by:

- 1) Providing market liquidity
- 2) Minimizing production cost of the DAMKT

- 3) Converging locational marginal prices (LMP) between the DAMKT and real-time balancing market (RTBM)
- 4) Converging congestion prices between DAMKT and RTBM, called or marginal congestion component (MCC)

Increasing liquidity in a market increases the number of buyers and sellers transacting which increases competition. This should prevent exceedingly high selling prices and exceedingly low buying prices, and liquidity should also show significant engagement with physical asset-owning market participants (MP) rather than trading among FOMPs.

Minimizing production cost — the total cost to the market to serve load — facilitates efficient operations of generators and reduces the amount load pays for generation. The DAMKT is a hedge that offsets RTBM volatility. The closer that hourly LMP and MCC prices in the DAMKT are to hourly RTBM prices, the better the DAMKT hedge.

SPP's market design department analyzed two years of historical market data to determine if FOMPs provided the above benefits to asset-owning Integrated Marketplace participants as a whole, realizing the outcome will vary over individual intervals, MPs, assets, locations, etc.

Analysis

Virtual Generation and Virtual Load

There are two kinds of FOMPs: financial institutions and marketers. Marketers are entities that transact energy between load-serving entities and generation (i.e., brokers). Since the March 2014 implementation of the Integrated Marketplace, total profit from virtual transactions is approximately \$25 million. Financial institutions have profited \$18.3 million, and marketers have profited \$7.5 million, while physical asset-owners have paid or lost just under \$1 million.

The losses of physical asset-owners are due mostly to one market participant. This participant's loss is more than six times the next biggest loss, and without it physical asset owners would have netted a profit just under \$2 million. Since the launch of the Integrated Marketplace, 87 percent of financial institutions, 70 percent of marketers and 46 percent of physical asset owners have been profitable.

Market design staff identified 26 DAMKT intervals that represent:

- High and low generation since market go-live
- High and low virtual offers since market go-live
- High and low virtual bids since market go-live
- High and low virtual activity since market go-live
- Average LMP and MCC since market go-live
- Average LMP and MCC over the last year

These intervals included varying months, seasons and time of day and represent a small sampling of more than two years of available data. For each interval analysts removed the virtual generation and virtual load from FOMPs and reran DAMKT cases to determine how the market would have cleared

without the FOMPs. Staff also analyzed overall profits and losses for the virtual market from March 2014 market go-live through September 2016.

Congestion Hedging

To determine if FOMPs improve the congestion hedges of asset-owning entities, staff used results of the 2016 auction period (June 1, 2015 to May 31, 2016) to analyze the quantity of congestion hedges awarded in the ARR auction and TCR market and profits and losses by participant type.

Results

Virtual Generation and Virtual Load

Liquidity

In this report, liquidity refers to the degree to which asset-owning entities have choices they would not have otherwise had. Regarding the DAMKT, liquidity would result from allowing virtual generation to exert downward pressure on physical generation while allowing hedging of the load position through more choices.

To determine whether virtual activity increased asset-owning entities' opportunities, staff removed virtual activity and determined the impact on physical generation commitment. In all cases the mix of physical generation changed, but net physical generation decreased. This demonstrates that virtual activity resulted in more physical generation being committed than was necessary to serve physical load. Since physical load in the DAMKT is approximately the same aggregate amount as real-time load this surplus generation increases economic inefficiency.

Production Cost

Production cost is the cost of generation without regard to payment into the market by load¹. Production cost without FO's were compared to production cost with FOs, and neither the magnitude of the value nor the sign (increase or decrease) correlated with the removal of FO activity, and no patterns were observed.

Price Convergence

If DAMKT prices (LMP and MCC) moved further from RTBM prices with the removal of FOMP activities, then it could imply FO virtuals improve the DAMKT hedge. To determine if the change case diverged DAMKT and RTBM prices, staff compared the differences between average prices in the DAMKT and RTBM to the difference between DAMKT change case and RTBM. The analysis considered both total energy price and congestion price at all settlement locations. Convergence between the DAMKT and RTBM changed, but some settlement locations improved, while others worsened. For the overall market, FOMP activities' impact on convergence was inconsistent and showed no pattern.

¹ Production Cost = Energy Cost + Start-Up + No-Load Cost + Operating Reserve + Import Cost. This may or may not include Virtual Generation Cost depending on the application.

Variable energy resources (VER) — e.g., wind-, solar- and hydro-powered generators — typically participate less in the DAMKT than generators with traditional fuel sources due to the risk their fuel supply may not be present in real-time. One claim for FO virtuals is that they converge prices particularly for VERs by submitting virtuals at VER-locations so the position is represented in DAMKT and thus more like real-time generation. Staff performed the same price-convergence analysis for VER locations only, and neither energy nor congestion prices consistently converged or diverged.

Congestion Hedging

Liquidity

Regarding the congestion rights market, liquidity results from allowing asset-owning entities to acquire valuable congestion rights in the transmission congestion rights (TCR) auction that are not otherwise available.

To determine whether FOMPs allowed asset-owning entities to acquire additional TCRs, the review examined results of the 2016 annual auction. Findings showed the auction increased TCR MWs granted by 19 million MWs, of which 894,000 MWs were for asset-owning participants. These increases represent 126 percent growth over the ARR process, of which 6 percent was for asset-owning entities.

Price Convergence

Total value of congestion hedging in the DAMKT in the last, complete operational year was \$178.3 million (excluding the cost of congestion). Financial institutions account for \$6.4 million (3.6%), marketers for \$7.5 million (4.2%) and physical asset owners for \$164.4 million (92.2%). When cost of congestion is considered, physical asset owners received \$20.7 million more than the cost of congestion. If FOMPs did not participate in the congestion hedging market, physical asset owners may have profited less.

As discussed above, staff evaluated the impact of FO activity by removing their virtual activity from the DAMKT to determine if the MCC of LMP convergence with the RTBM MCC was impacted. Convergence between DAMKT and RTBM MCC changed, but some settlement locations improved, while others worsened. For the overall market, FO activities' impact on convergence was inconsistent and showed no pattern.

Conclusions

Virtual Generation and Virtual Load

While FO virtuals provide more market activity to physical asset owners, production cost did not consistently move up or down with the removal of FO virtuals. Additionally, reduction in physical generation commitment in the DAMKT and physical load equivalency between the DAMKT and RTBM suggests FO activity may result in unneeded decisions. Furthermore, neither DAMKT energy prices' nor DAMKT congestion prices' convergences were consistently impacted at all settlement locations or at VER locations only. In the small data sample staff analyzed, they found no consistent benefit of FO virtual activities.

Congestion Hedging

Without simulating the congestion hedging market there is no way to know how profitability would have changed. Furthermore, without removing FOMPs there is no way to know how hedging strategies would have changed. However, in this analysis the physical asset owners were categorically able to cover their hedge with profit left over. FOMPs' congestion rights resulted in \$13 million payment from the market to the FOMP without exposure to any congestion cost. Additionally, inconsistency of MCC impact does not support a contention that FOMP activity improves the hedge for asset-owning entities. The ratio of TCRs issued to FOMPs versus asset-owning entities in the TCR auction calls into question the liquidity benefit (19,000,000 MW versus 894,000 MW, respectively).

Finance Committee Update – Business Process Improvement

December 5, 2016



Helping our members
work together to
keep the lights on...
today and in the future

Discuss

- Organizational shift in responsibilities
- Where we are (current state)
- Why we had to shift our focus
- Why it's not bad to be where we are
- How organizational unit accountability manifested itself in a healthy culture of continuous improvement: Highlights from 2016
- Applying the basic strategy of process improvement to our process improvement program
- Using lessons from 2016 to inform our direction in 2017

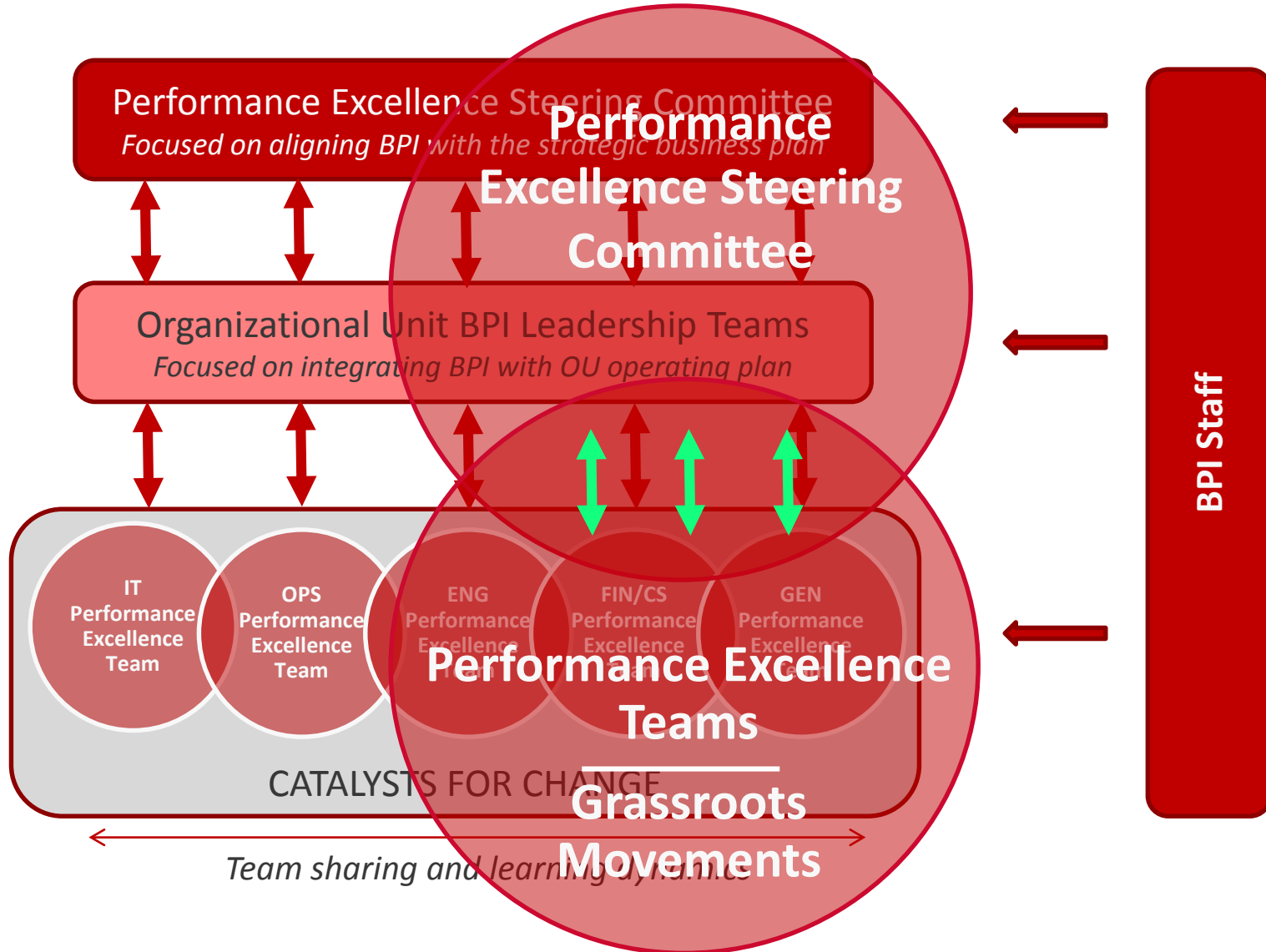
ORGANIZATIONAL SHIFT IN RESPONSIBILITIES

Process Improvement Responsibilities

- Jim Gunnell, Director Stakeholder Services, has been given the responsibilities of facilitating, monitoring, measuring and documenting process improvements across the organization

WHERE WE ARE (CURRENT STATE)

Organizational Unit and Individual Accountability



Distributed Model- PEX Teams (2016) Update

Engineering

- File sharing: Moving from TrueShare to GlobalScape
 - » Member concerns that TrueShare is not highly reliable and that it takes too long to get access to needed folders
 - » Did it add value or reduce waste? Only time will tell; we do not yet have an implementation timeline
 - » The benefits to our members are not easy to quantify – reduced risk of security threats, improved usability and reliability
- Establishing SLAs between engineering departments

Distributed Model- PEX Teams (2016) Update

Finance and Corporate Services

- Brainstormed and identified these potential improvements
 - Rates & Revenue Requirements file
 - Coordination of meeting space

Distributed Model- PEX Teams (2016) Update

IT*

- Asset Management and Internal Controls
- Improvement of processes within the IT Architecture Working Group

* The IT PEX team was mobilized to address CIP V5 compliance

Distributed Model- PEX Teams (2016) Update

Operations

- Business initiative: Fix wholesale rerating process to include notification/lead time, reasoning for the re-rate, when the element driving the re-rate will be fixed.
- Improves ability to track and report on transmission facilities for which ratings have changed and determine why and how long the rating changes are in effect so that we have certainty around how to allocate any resulting costs for upgrades.

Distributed Model- PEX Teams (2016) Update

- **Planning meeting scheduled with PEX teams for November 30th to discuss 2017 goals and objectives**
- **Develop action plans**
 - Collecting baseline data
 - Value stream mapping
 - Success metrics
 - Determining methods for quantification

WHY WE HAD TO SHIFT OUR FOCUS

Why We Had to Shift Our Focus

Simply, the focus of the BPI resource along with personnel from all impacted departments was shifted to CIP compliance efforts

WHY IT'S NOT BAD TO BE WHERE WE ARE

Positive Outcomes from Focus on Culture of Compliance – Self-Reports

- **21** Compliance self-reports submitted to SERC in 2016
- **14** Compliance self-reports still open (this means that they've been submitted to SERC and are still being worked/mitigated/etc.)

Positive Outcomes from Focus on Culture of Compliance – Self-Reports

Compliance Monitoring and Enforcement Program

- Self-Reports are encouraged at the time a Registered Entity becomes aware that it has, or may have, violated a Reliability Standard, or the Violation Severity Level of a previously reported violation has changed.
- Self-Reports of a violation of a Reliability Standard are encouraged regardless of whether the Reliability Standard requires reporting on a pre-defined schedule in the Compliance Program or whether the violation is determined outside the pre-defined reporting schedule.

Positive Outcomes from Focus on Culture of Compliance

- Developed a formalized risk assessment
- Efforts resulted in a reduction in compliance and security risks
- Leveraged RE resources
- Reorganized in order to have a cradle-to-grave process from standards development, to interpretation, to implementation through organized collaboration
- Cyber Security department was formalized within IT
- Building internal knowledge base to avoid consultant costs

Positive Outcomes from Focus on Culture of Compliance

- Processes were documented. This was a huge effort and a huge success.
- 113 documents were created or revised in 2016
- This effort represents approximately 18,000 man-hours (which is a conservative estimate)
- The work of documentation was absorbed by existing staff and the addition of the IT Quality Control team in July 2016, which consisted of three FTEs

Positive Outcomes from Focus on Culture of Compliance

Man-hours Associated with Document Creation and Revision

100 hrs	Per document creation	Industry standard; 4 hrs per document page, average 25 pages per document; includes document creation, edits, reviews, management; does not include associated training
20 hrs	Per document revision	Industry standard is 50 hrs per revision or ½ of creation time; 20 hrs is conservative); does not include associated training
113	Total documents	
11,300 hrs	Total hours for document creation (113 docs x 100 hours)	
6,780 hrs	Total hours for document revisions (113 docs x 3 revisions x 20 hours/revision) Assumes 3 revisions per document (conservative)	
18,080 hrs	Total number of hours for documentation	Resources across IT, Facilities, Compliance, Human Resources, Legal (IT heavy)

Positive Outcomes from Focus on Culture of Compliance – Good Catch for Compliance

- Processes and heightened awareness allowed us to catch things that might not have been noticed before
 - **39** Good Catch items submitted for Compliance in 2016
 - **1** Good Catch item submitted for Compliance/Tariff in 2016
 - **8** Good Catch compliance items were entered as self-reports to SERC (part of the 21 self-reports mentioned on slide 15)

Positive Outcomes from Focus on Culture of Compliance – Good Catch for Compliance

- For the remaining 32 Good Catch compliance items, the Good Catch Council has:
 - 11 approved for self-report
 - 6 that are still being investigated, and
 - 3 that were found during the NERC Assist Team visit and will be fast-tracked to a self-report
- This leaves 12 Good Catch items that were deemed to NOT be self-reports

Positive Outcomes from Focus on Culture of Compliance – Good Catch for Tariff

- **13** Good Catch items for Tariff in 2016
 - 4 FERC Self-Reports
 - 3 Pending FERC Action
 - 1 Closed by FERC – no action
 - 5 closed by SPP – no Tariff impact
 - 4 open – SPP Investigation

Positive Outcomes from Focus on Culture of Compliance

- The rigor of the CIP preparation has increased the health in the Compliance Program and our corporate culture of compliance
- Moving forward, CIP processes along with findings from Internal Audit will become inputs into our process improvement efforts

**HOW ORGANIZATIONAL UNIT
ACCOUNTABILITY MANIFESTED ITSELF
IN A HEALTHY CULTURE OF
CONTINUOUS IMPROVEMENT:
HIGHLIGHTS FROM 2016**

Culture of Continuous Improvement (Settlements)

- SPP Transmission Market absolute value of transaction settled \$3.4 billion
- Implementation of Integrated marketplace and Consolidated Balancing Authority began in 2011
- Due to this implementation, SPP staff had limited focus on the SPP Transmission Market improvement
- 2nd Quarter 2016 Directors initiated **Transmission Market Improvement** effort

Culture of Continuous Improvement (Settlements)

- 27 improvement initiatives identified by cross-departmental team
- 5 short-term initiatives expected to be implemented by end of first quarter 2017
- Team will continue to develop the additional 22 improvement initiatives in 2017
- These 22 initiatives are longer term improvements and will require stakeholder interaction

Culture of Continuous Improvement (Operations)

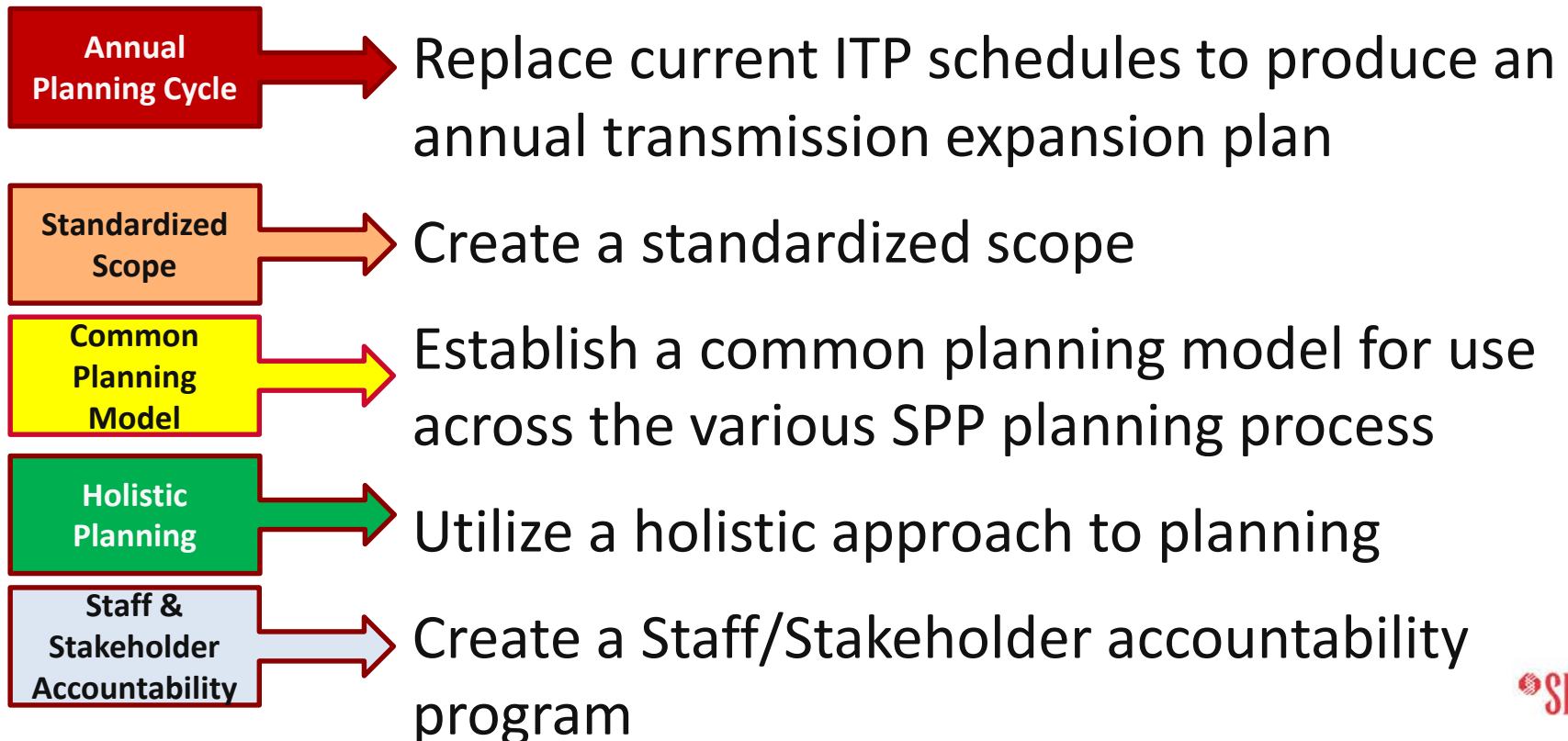
- **Implementation of the Macomber Map (MMap)**, replacing GE's eTerra-Vision (ETV), for operator wide-area awareness
 - Increased situational awareness
 - Decreased human errors
 - Decreased risk
- Automation of PI Asset Framework (AF) modeling for historical EMS and Market data
- Deployments of new and improved operator displays and tools

Culture of Continuous Improvement (Engineering Planning)

- **Transmission Planning Process Improvements**
 - The Transmission Planning Improvement Task Force (TPITF) was assembled by the SPP Strategic Planning Committee (SPC) and the Markets and Operations Policy Committee (MOPC)
 - TPITF is responsible for developing recommendations that will improve the regional planning processes

Culture of Continuous Improvement (Engineering Planning)

The TPITF developed a set of five recommendations and is moving towards implementation.



Culture of Continuous Improvement (Engineering)

- **EnFuzion Enhancement**

- Resulted in elimination of an estimated \$20,000 in expense in the FY2017 budget
- Expanded computing capacity for studies in anticipation of increased demands (TPITF, other)
- Expanded computing power from 60 to 114 nodes
- Configured existing setup to avoid expense of adding licenses
- Switched from 1-core nodes to mostly 4-core
- Significant reductions in processing times, but haven't quantified this yet

Culture of Continuous Improvement (IT Sourcing and Strategy)

- During 2015-2016, the IT Sourcing team developed numerous strategies and implemented supporting underlying processes for managing IT vendors, with a focus on maximizing the value of IT expenditures

Culture of Continuous Improvement (IT Sourcing and Strategy)

- Five key processes/areas that have resulted in financial/productivity benefits include:
 1. Multi-year maintenance agreements
 2. Improved negotiations through analytical data, research and timing
 3. RFQ Management
 4. Volume Rebate Program
 5. Productivity improvements

Culture of Continuous Improvement (IT Sourcing and Strategy)

1. Multi-year maintenance agreements
 - a. Since June '14, roughly **235** maintenance agreements were executed
 - b. **160** were negotiated as **multi-year agreements** (determined to be cost beneficial)
 - c. Financial benefit/savings of roughly **\$3.4M** over three-year period. The \$3.4M of savings spans across a date range from '14 to '19, depending on timing of the agreement.
- NPV analysis is performed for due diligence on prepaid contracts

Culture of Continuous Improvement (IT Sourcing and Strategy)

2. Negotiated Savings – IT Acquisitions
 - a. Multi-step process for negotiating with vendors
 - b. Approximately **\$3.3M** lower spend via “tiered” process
 - c. Based on IT transactions (Capital and Operating) since June '14 of roughly **\$45M**

Culture of Continuous Improvement (IT Sourcing and Strategy)

3. RFQ Management

- a. 32 RFQ's extended since June '14 (commodity products)
- b. Lowest bid benefit/savings: **\$1.25M to \$1.85M**

Reseller Rebates

Rebate



Annual Sales Levels	Rebate (% of Sales)
\$1 but less than \$500,000	.25%
\$500,000 but less than \$1,000,000	.50%
\$1,000,000 but less than \$1,500,000	1.25%
\$1,500,000 but less than \$2,000,000	1.50%
\$2,000,000 but less than \$2,500,000	2.25%
\$2,500,000 but less than \$3,000,000	2.50%
\$3,000,000 and Above	3.00%

(\$190k)

2016 1H SPP Spend Credit



From	To	% Rebate
\$1,000,000.00	\$1,500,000.00	0.50%
\$1,500,001.00	\$2,000,000.00	1.00%
\$2,000,001.00	\$3,000,000.00	1.50%
\$3,000,001.00	\$10,000,000.00	2.00%

(\$165k)



Quarterly Non-MSFT Spend	Quarterly SHI Credits
\$50,000 - \$100,000	1.5% back
\$100,001 - \$250,000	2% back
\$250,001 - \$500,000	2.5% back
\$500,001+	3.5% back

(\$45k)

Total rebates (credits for future spend) of **\$400k** since '14

Culture of Continuous Improvement (IT Sourcing and Strategy)

Productivity Analysis

Based on a review of the 160 “multi-year” contracts, the following breakout is applicable:

Type	VM Team hrs	Other SPP Staff hrs	Total hrs	Hrs saved in MY agreement (2 of 3 yrs)	Qty of Agreements per type	Hrs Saved	Cost / hr	Dollar benefit
Simple	5	5	10	20	15	300	40	\$ 12,000
Average	15	10	25	50	65	3250	40	\$ 130,000
Complex	25	15	40	80	80	6400	40	\$ 256,000
								\$ 398,000

Net: We estimate roughly 10,000 hours that will be saved from agreements that were executed during the past 2 years, and roughly \$400k of equivalent employee cost. The reduced hours/benefit will span from 2015 to 2018, depending on the timing of the original agreement.

Culture of Continuous Improvement (IT Sourcing and Strategy)

- **How were the 10,000 hours spent?**
 - Negotiating new capital (hardware and software) purchases
 - Negotiating new maintenance agreements (on new products)
 - Identifying “waste” (e.g., licenses that are not used any longer, or are assigned to employees that have transferred, etc.) and the eliminating costs on these licenses.
 - Working on items in the queue

Culture of Continuous Improvement

- For additional information about improvement projects throughout the organization, please refer to the Word document titled “*2016 Process Improvements*” in the background materials

APPLYING THE BASIC STRATEGY OF PROCESS IMPROVEMENT TO OUR PROCESS IMPROVEMENT PROGRAM

Adapt As We Go

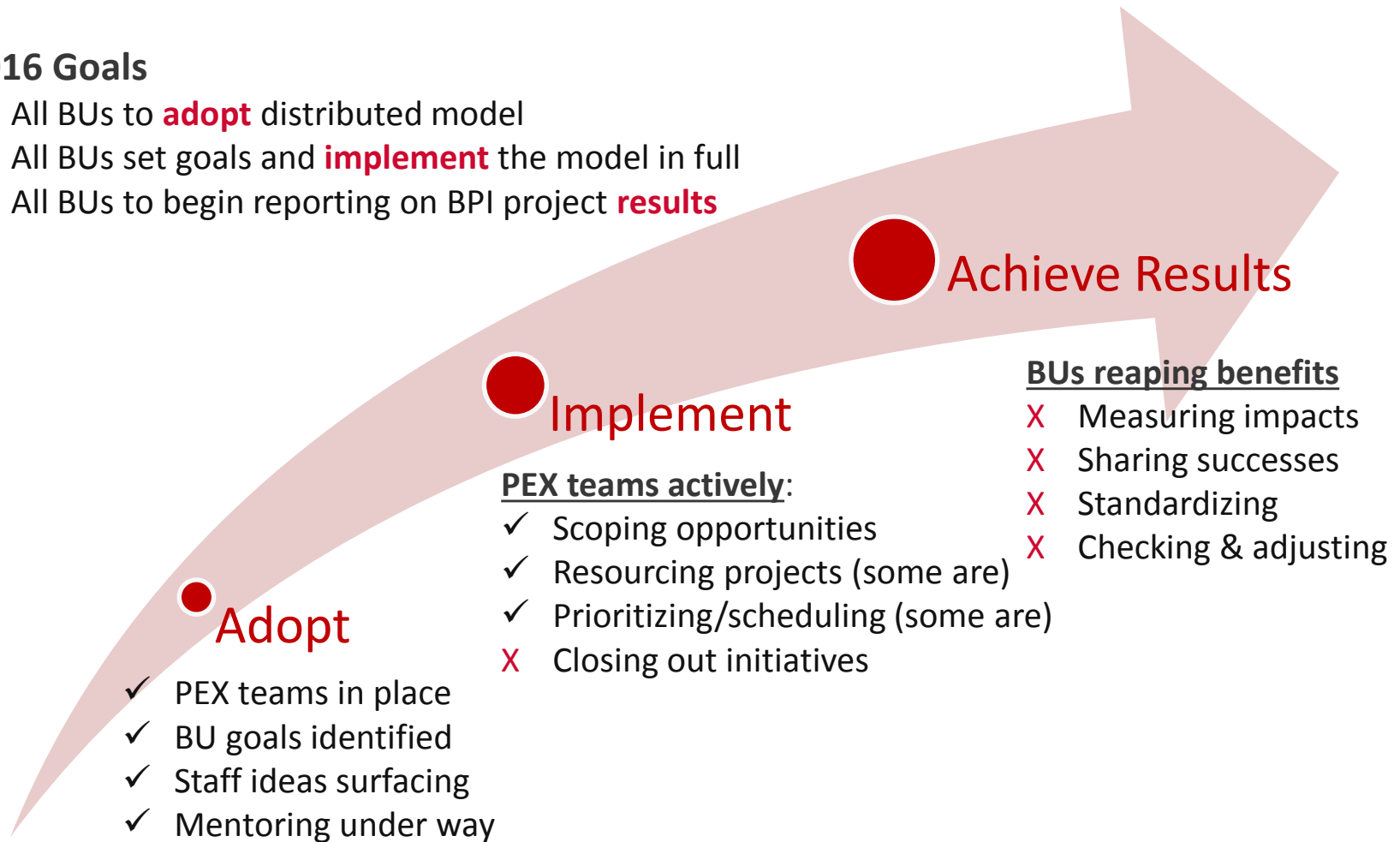
- We have executive-level support for BU ownership and accountability
- PI is focusing on goal-setting and results measurement with PEX teams
- Implementing bidirectional idea-sharing



Assessing Distributed Model Success

2016 Goals

- ✓ All BUs to **adopt** distributed model
- X All BUs set goals and **implement** the model in full
- X All BUs to begin reporting on BPI project **results**



Monitoring and Measuring Our Success

This is where we have to
do a better job.

Metrics! Metrics!
Metrics!

★ Achieve Results

					
Clarity	Cost	Satisfaction	Quality	Risk	Staff Impact
Big-picture view of end-to-end process (internal and external)	Improved productivity and/or capacity creation	Improved experience, greater transparency	Improved outputs, increased reliability	Improved risk identification and mitigation (SPP, members)	Empowered, engaged employees

USING LESSONS FROM 2016 TO INFORM OUR DIRECTION IN 2017

Direction for 2017

- Continue to promote distributed model with ideas coming from the top down and the bottom up
- Create a risk-tolerant environment that encourages process improvement and innovation
- Provide training to cultivate continuous improvement behaviors
- Establish performance expectations focused on implementing and measuring the benefits of process improvements

Direction for 2017

- Motivate process improvement and innovation via reward and recognition
- Design a crowdsourcing platform where employees can submit solutions to some of our toughest problems
- Be realistic; aim for lots of small improvements
- METRICS! METRICS! METRICS!

Crowdsourcing Process Improvement

SPP Process Improvement Lab

What is the SPP Process Improvement Lab?

A place where collective brainpower from across the enterprise can be harnessed to create solutions which drive continuous improvement.

- Home
- Seekers
- Solvers
- Challenge Center

OPEN CHALLENGES

Show Newest Challenges ▾ [View all Challenges »](#)

Situational Awareness Tools from PMU Event Analysis	22 active solvers	Deadline – March 1, 2017
Simplifying Z2 Credit Stacking	5 active solvers	Deadline – May 1, 2016
Predictive Data Analysis Using PMUs	10 active solvers	Deadline – October 15, 2016

Winning Solvers

[View all Winning Solvers »](#)

 Read Bio Dara Solomon View Challenge	 Read Bio Derek Wingfield View Challenge
---	--

FEATURED CHALLENGE **CHALLENGE CENTER**

Gas-Electric Interface

 Seeking solvers for solutions to address the reliability risks associated with the gas/electric interface . [Learn More »](#)

6 active solvers Deadline – August 1, 2015

One Last Question...

Which one of these two employees do you think feels good about their job and is excited about coming to work every day?

Employee 1: “I am an average person working within brilliant processes producing excellent results.”

Employee 2: “I am a brilliant person working within broken processes producing mediocre results.”

We asked our employees this question, and 100% of them responded that they wanted to work within brilliant processes and produce excellent results.

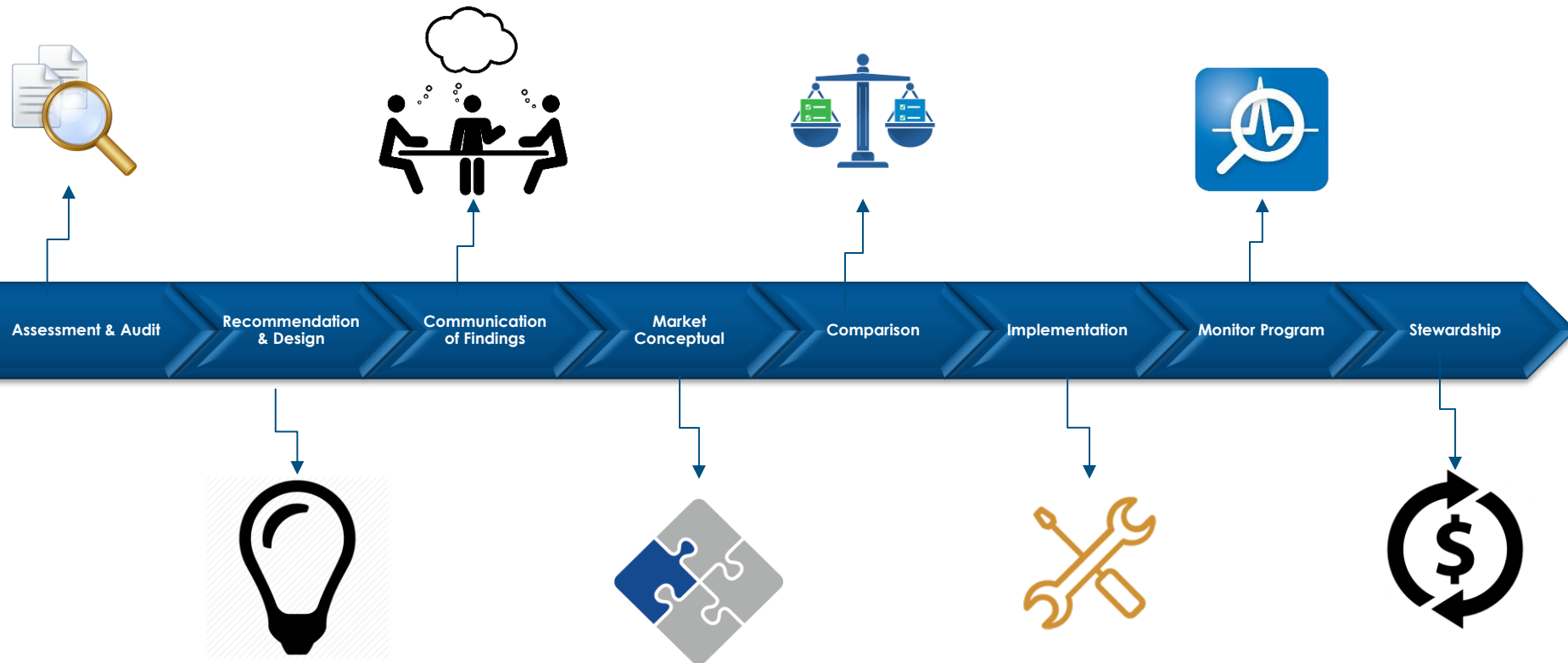
This is our vision for 2017 and beyond.

QUESTIONS OR COMMENTS?

Stephens

Stephens Insurance, LLC

OUR PROCESS



EXECUTIVE SUMMARY



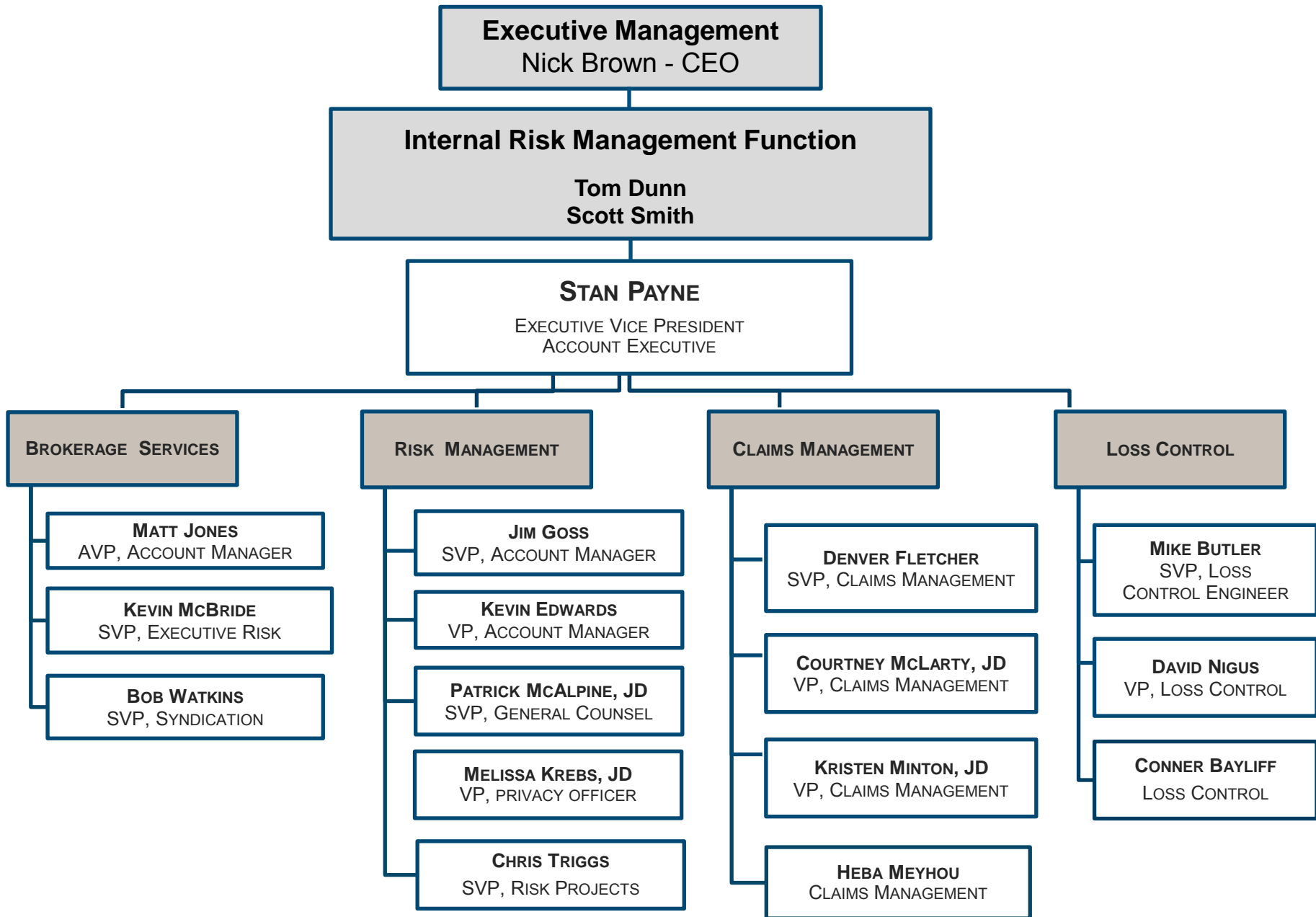
EXECUTIVE SUMMARY

Stephens Insurance would like to thank Southwest Power Pool for the opportunity to partner with you as respects your Property/Casualty Insurance and Risk Management initiatives. As part of our overall process we present our annual Stewardship Report which will cover in detail the following subjects:

- Stephens Insurance 2015 Results
- Stephens Contacts
- State of the Insurance Market
- Activities & Accomplishments
- Insurance Program Overview
- Claim Summaries
- Benchmarks
- Discussion items/Renewal Planning

We invite your questions and comments throughout this presentation and appreciate your feedback as to how we can potentially improve the services and resources shared with your company. Again thank you for your commitment to Stephens and our team.

STEPHENS INSURANCE ACCOUNT TEAM



ACTIVITIES & ACCOMPLISHMENTS

ACTIVITIES & ACCOMPLISHMENTS

Stephens appreciates the opportunity to continue to serve Southwest Power Pool in the role of insurance and risk management advisor. 2015-16 major projects included:

Overall

- GL, Auto, Work Comp, and Lead Umbrella lines of business written with Everest/Torus, resulting in 42% rate reduction over expiring.
- Property renewal rate reduction of 12% over expiring, before deductible changes.
- Increased EDP “Expense to Extract Computer Viruses” and “Unauthorized Computer Access” sub-limits from \$50,000 to \$250,000.
- Liability Case Study and report presented in June
- July Meeting with Finance Committee in Dallas. Review of Insurance program coverages, including cyber.

Risk Management

- Loss Control review and evaluation of building replacement cost values by Stephens.

Property & Casualty

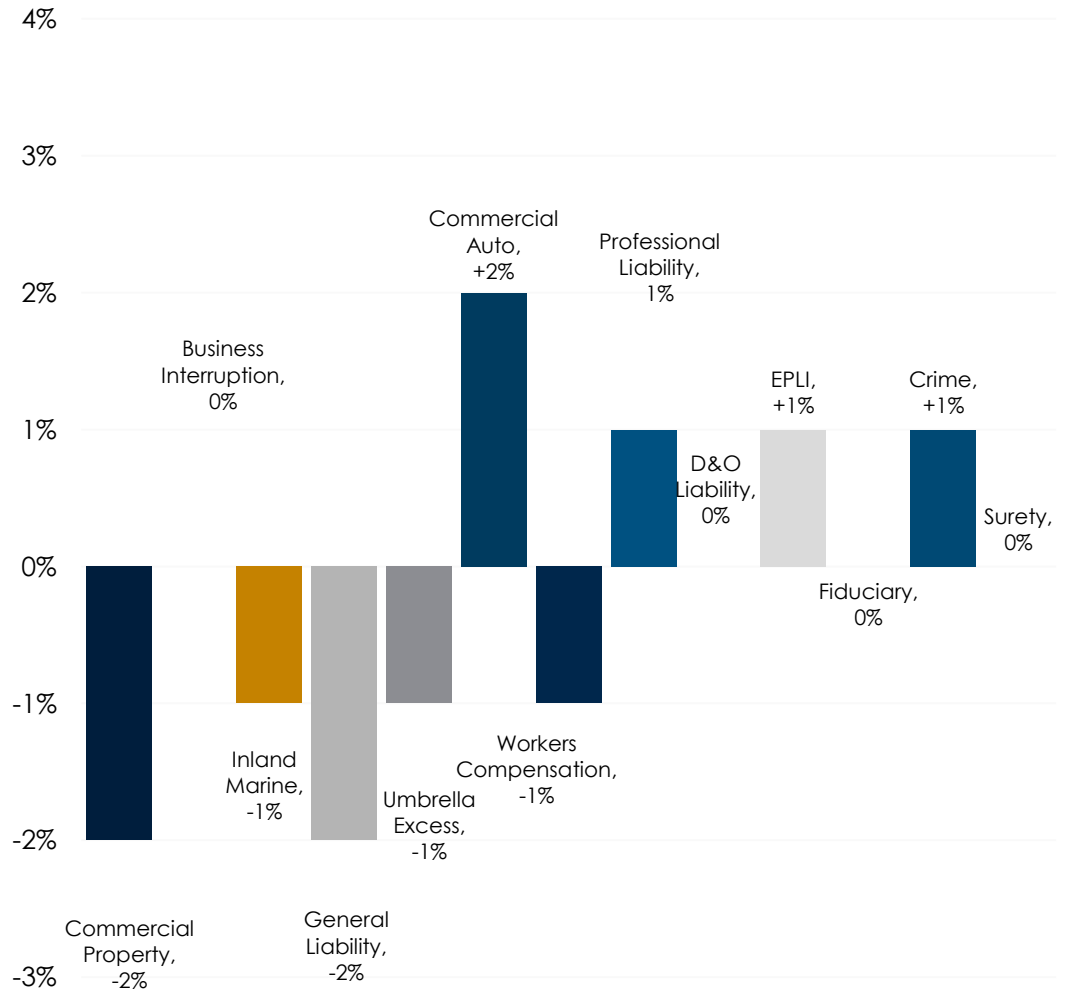
MARKET SUMMARY

INSURANCE MARKET UPDATE

Premium Trends by Coverage Class

- Commercial Property Down 2%
- Business Interruption Flat
- Inland Marine Down 1%
- General Liability Down 2%
- Umbrella /Excess Down 1%
- Commercial Automobile Up 2%
- Workers Compensation Down 1%
- Professional Liability Up 1%
- D&O Liability Flat
- EPLI Up 1%
- Fiduciary Flat
- Crime Up 1%
- Surety Flat

Premium Trends By Coverage Class October 2016



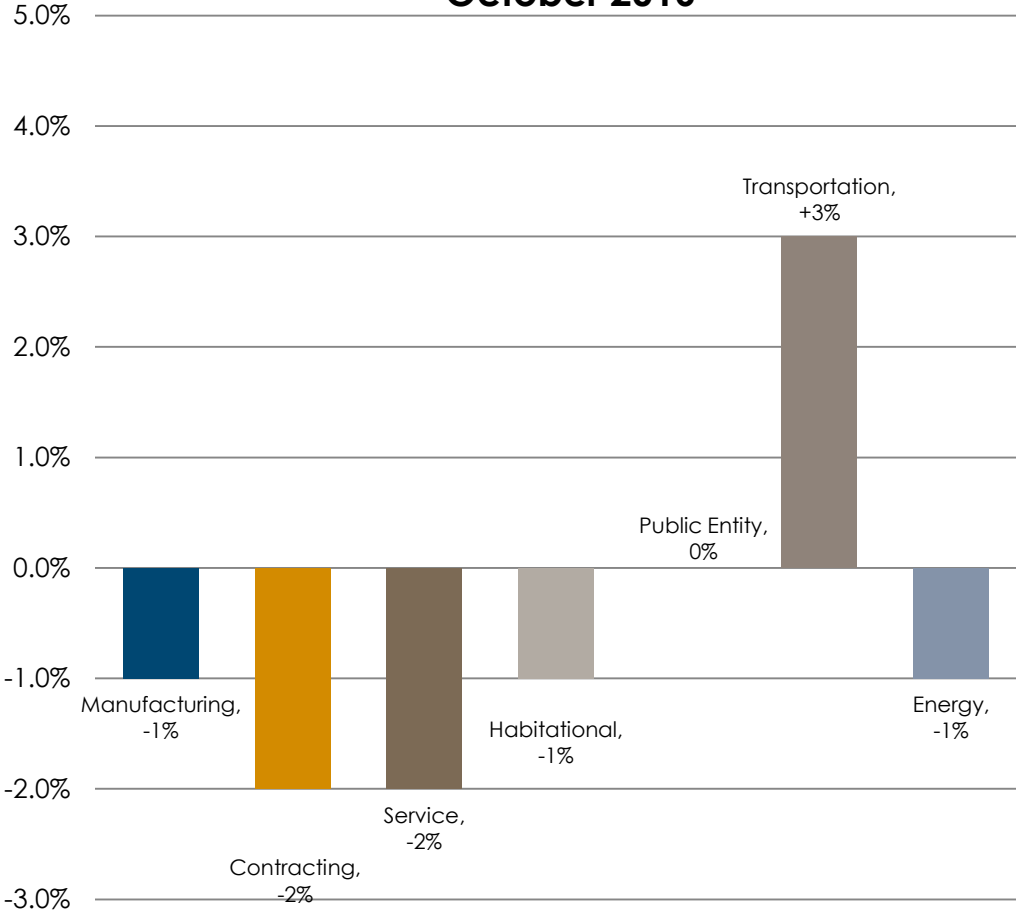
Source: Market Scout

INSURANCE MARKET UPDATE

Premium Trends by Industry Class

- Manufacturing Down 1%
- Contracting Down 2%
- Service Down 2%
- Habitational Down 1%
- Public Entity Flat
- Transportation Up 3%
- Energy Down 1%

Premium Trends By Industry Class October 2016

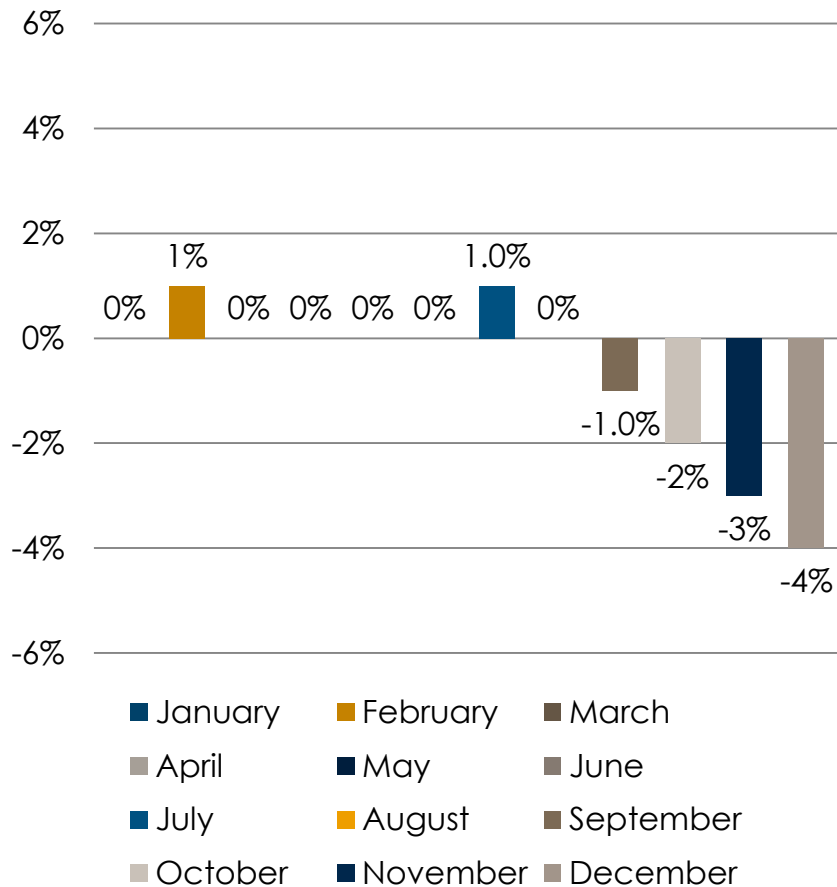


Source: Market Scout

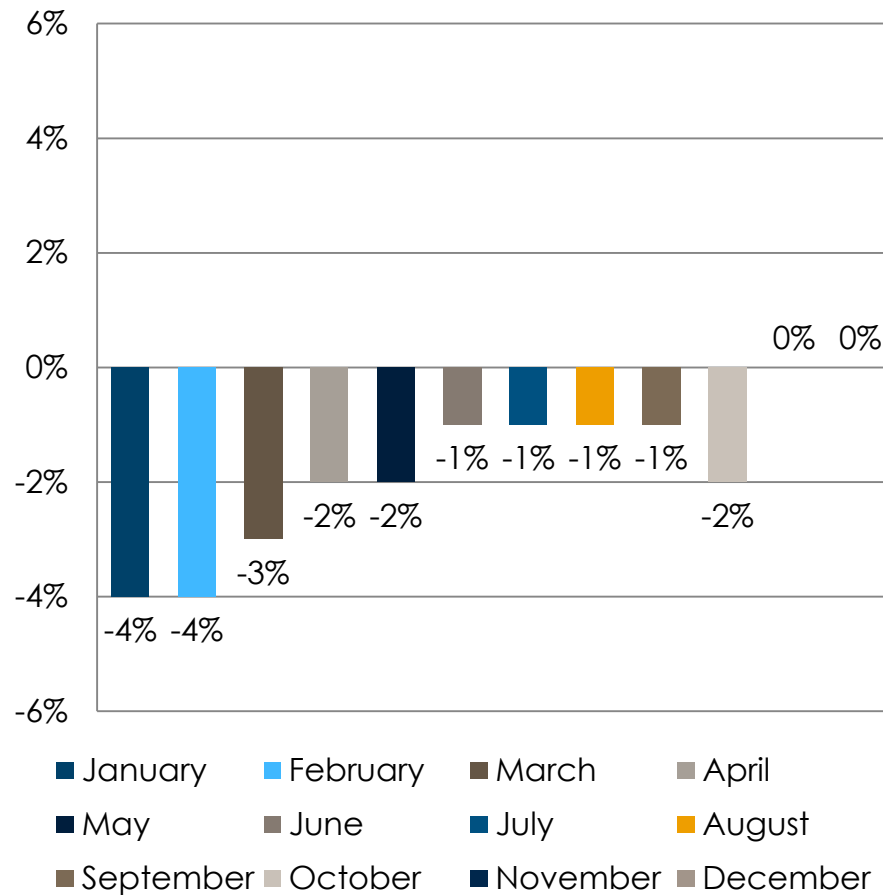
INSURANCE MARKET UPDATE

Average Rate Change by Month Year Over Year

Year 2015



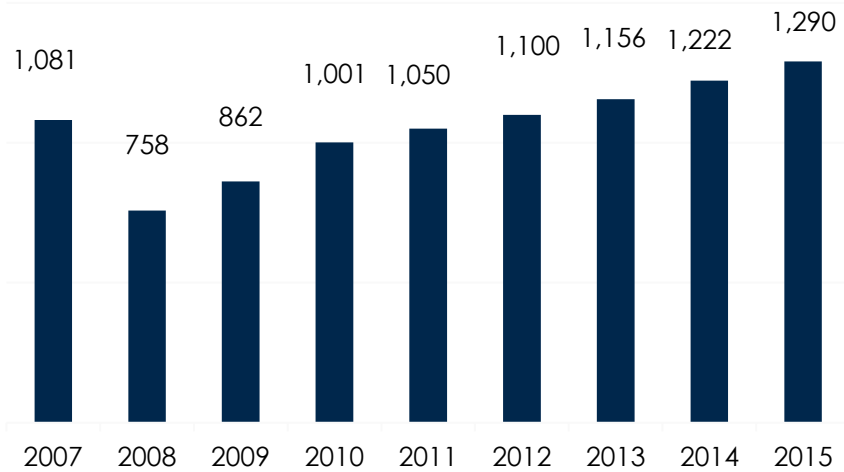
Year 2016



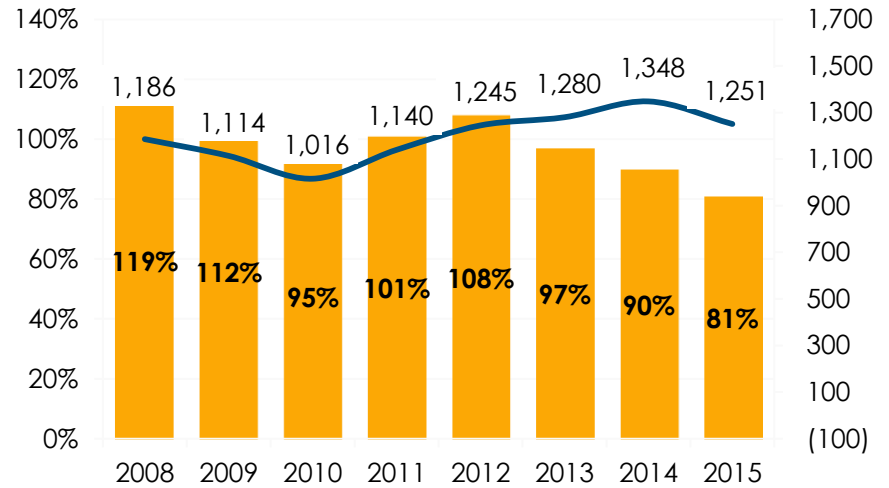
Source: Market Scout

AEGIS 2015 FINANCIALS

Total Surplus
December 31 (millions of U.S. Dollars)



Gross Premiums Written and Combined Ratio
For the years ended December 31 (millions of U.S. dollars)



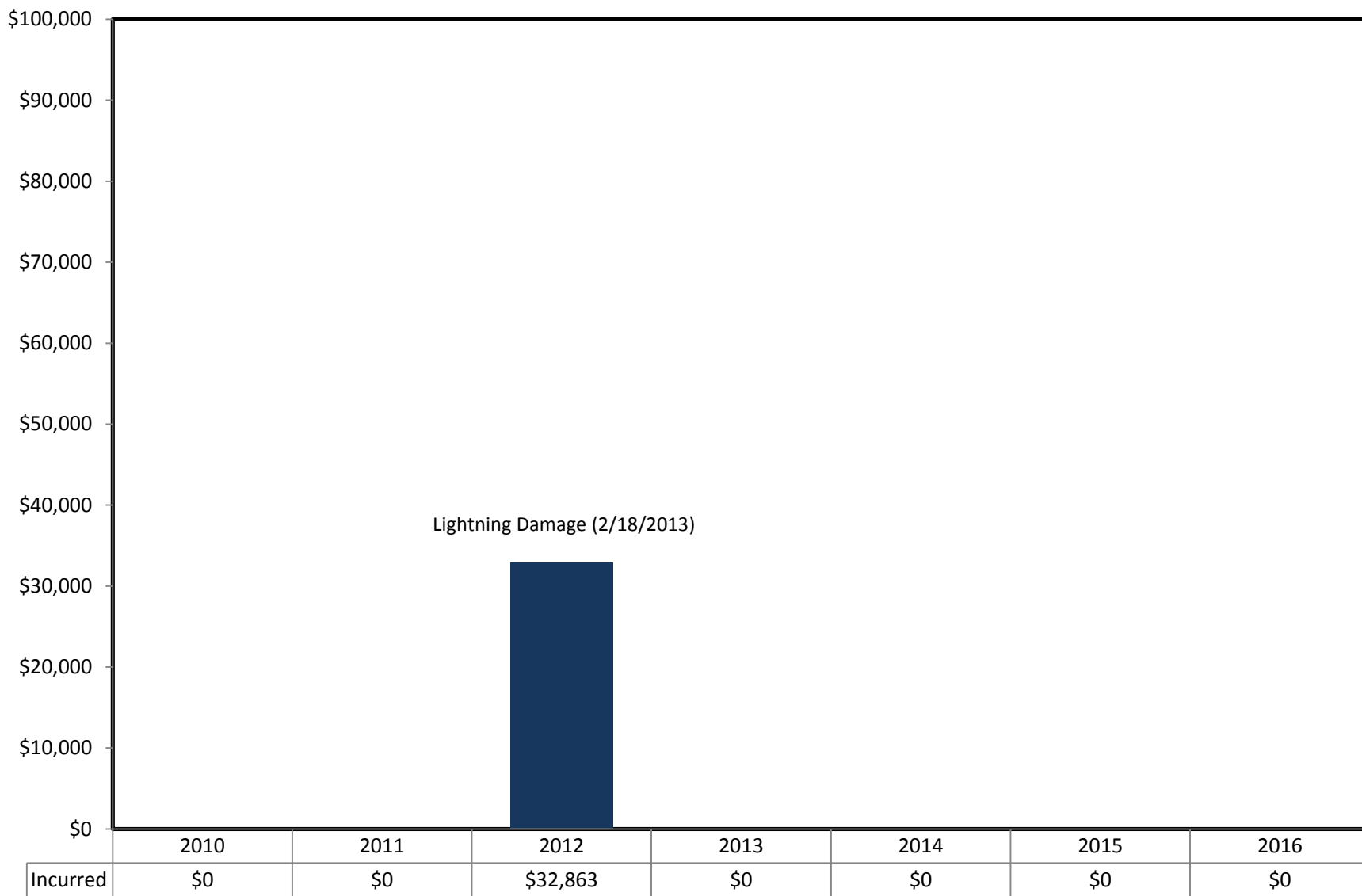
Continuity Credit declared by AEGIS in April of 2016 effective 7-1-2016

Property & Casualty

CLAIMS SUMMARY

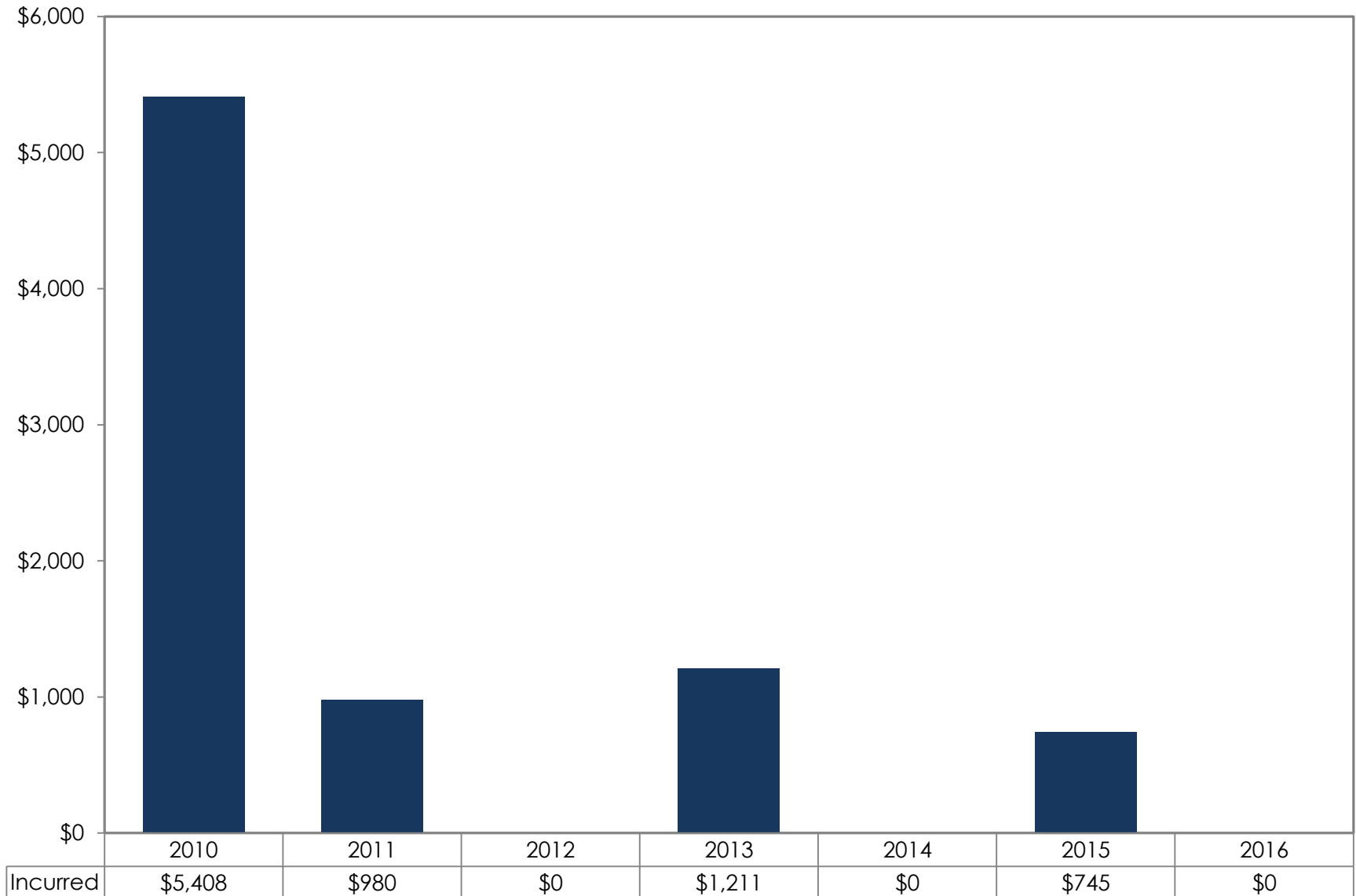
PROPERTY CLAIM SUMMARY

LOSSES VALUED 11/15



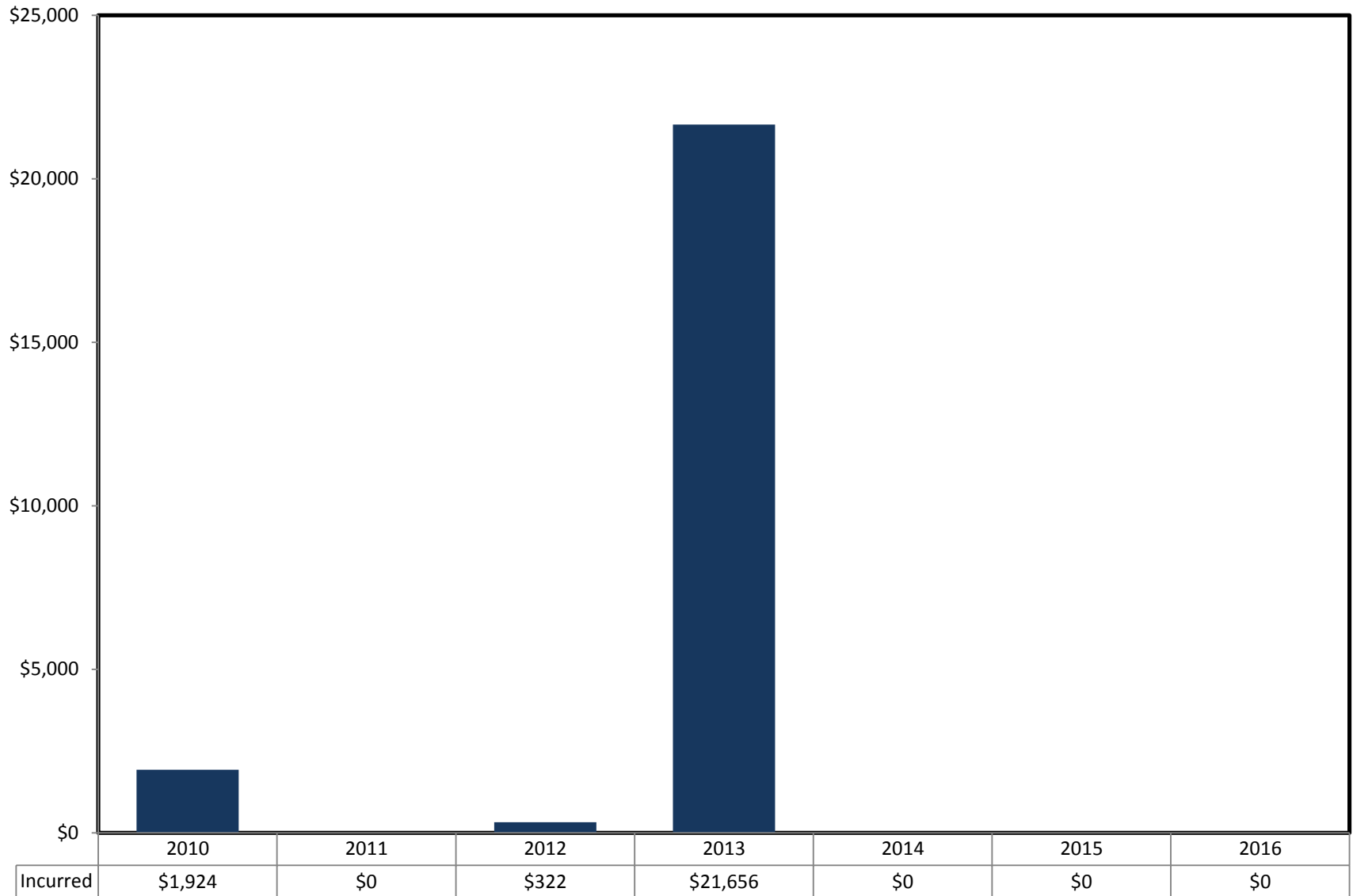
WORKERS' COMPENSATION CLAIM SUMMARY

LOSSES VALUED 11/15



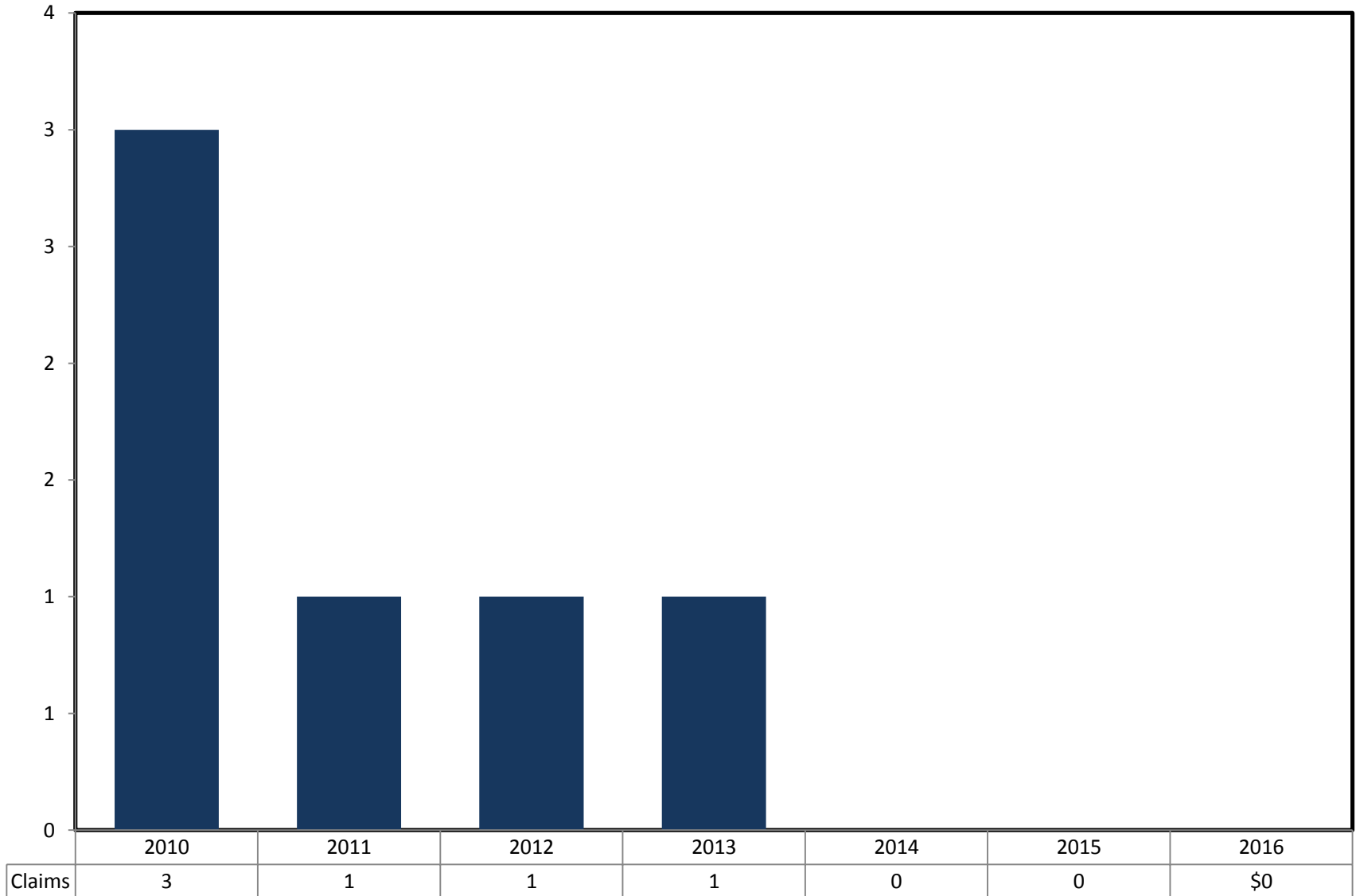
COMMERCIAL AUTO CLAIM SUMMARY

LOSSES VALUED 11/15

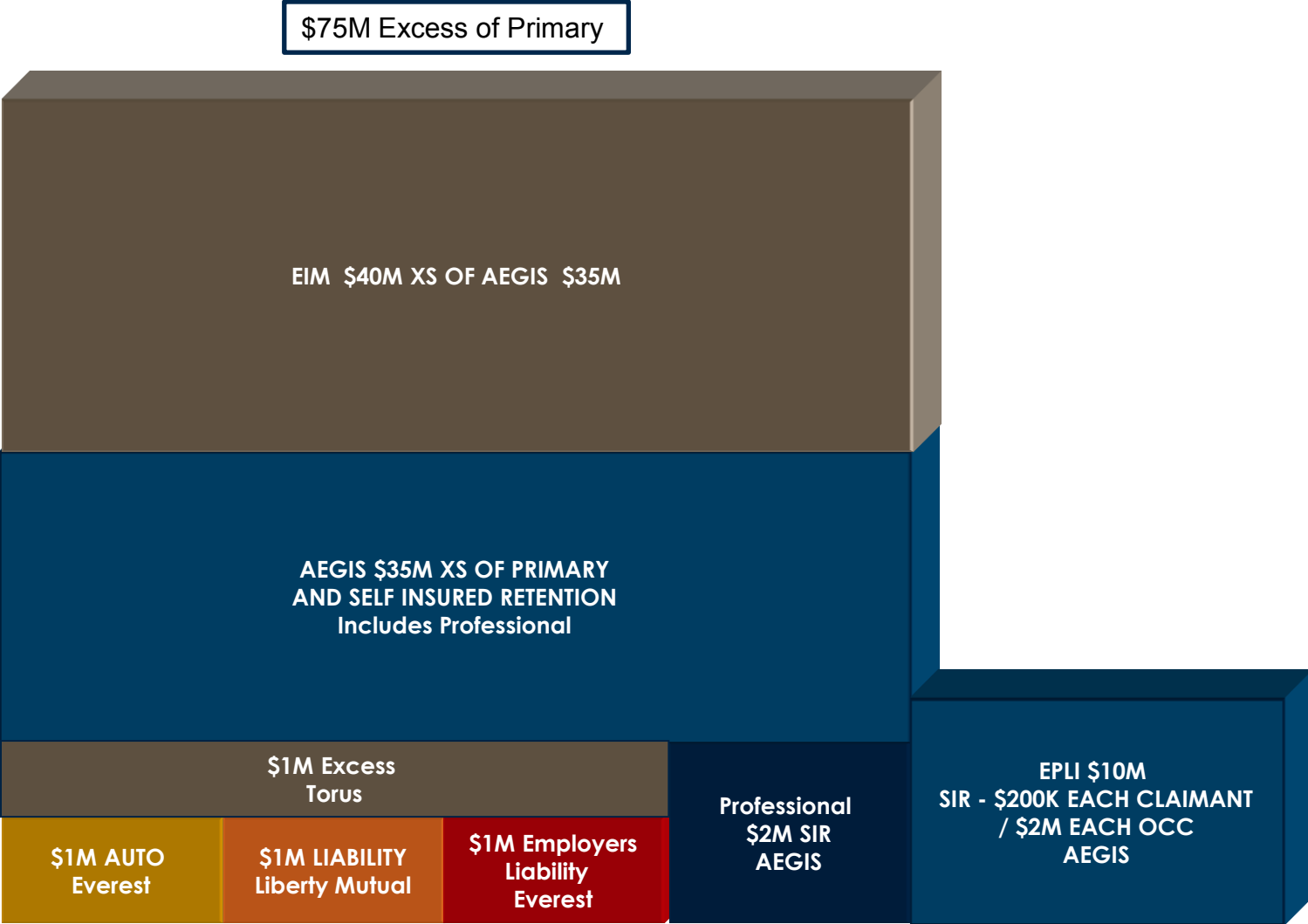


EMPLOYMENT PRACTICES LIABILITY CLAIMS (NUMBER)

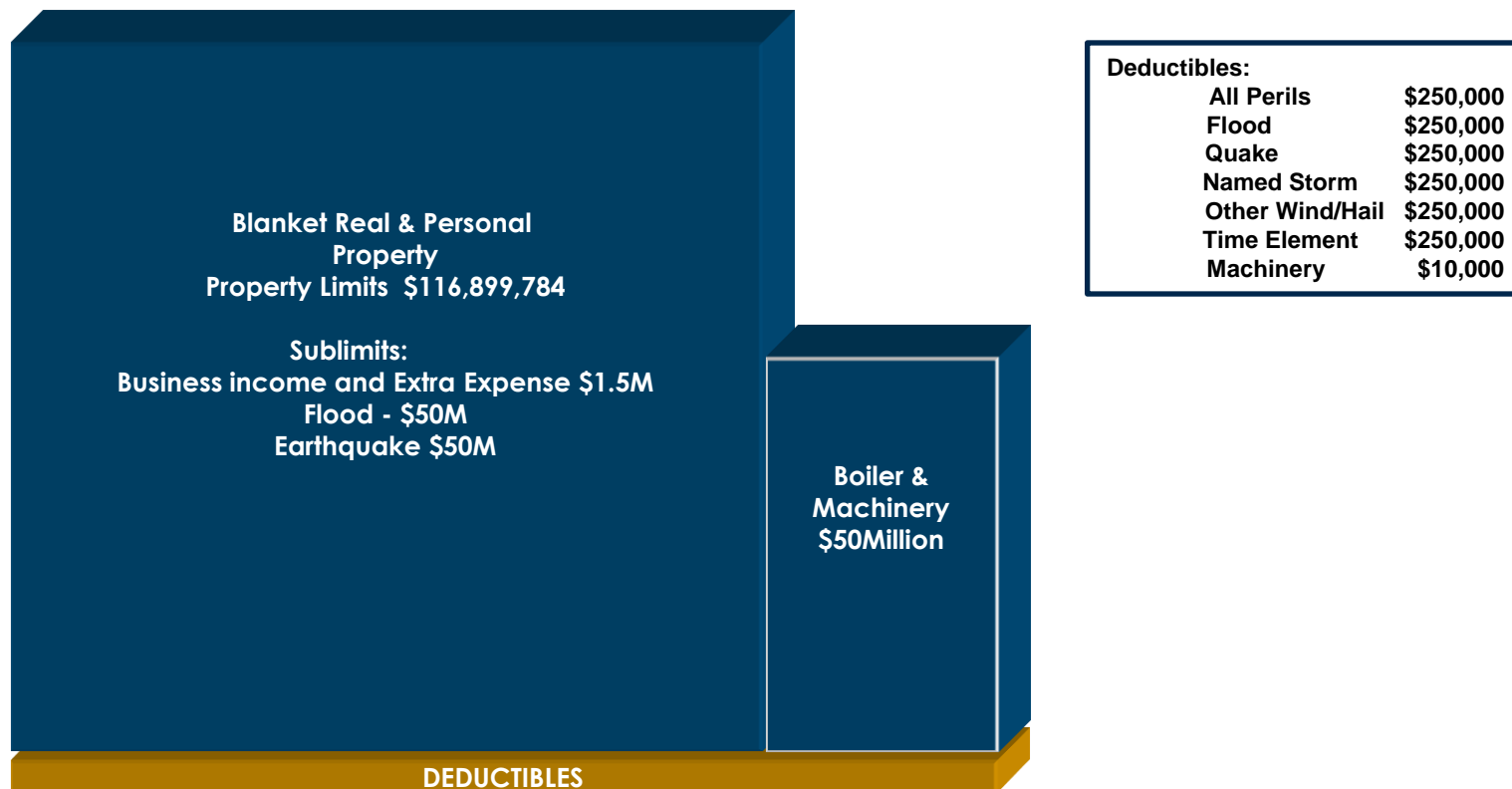
LOSSES VALUED 11/15



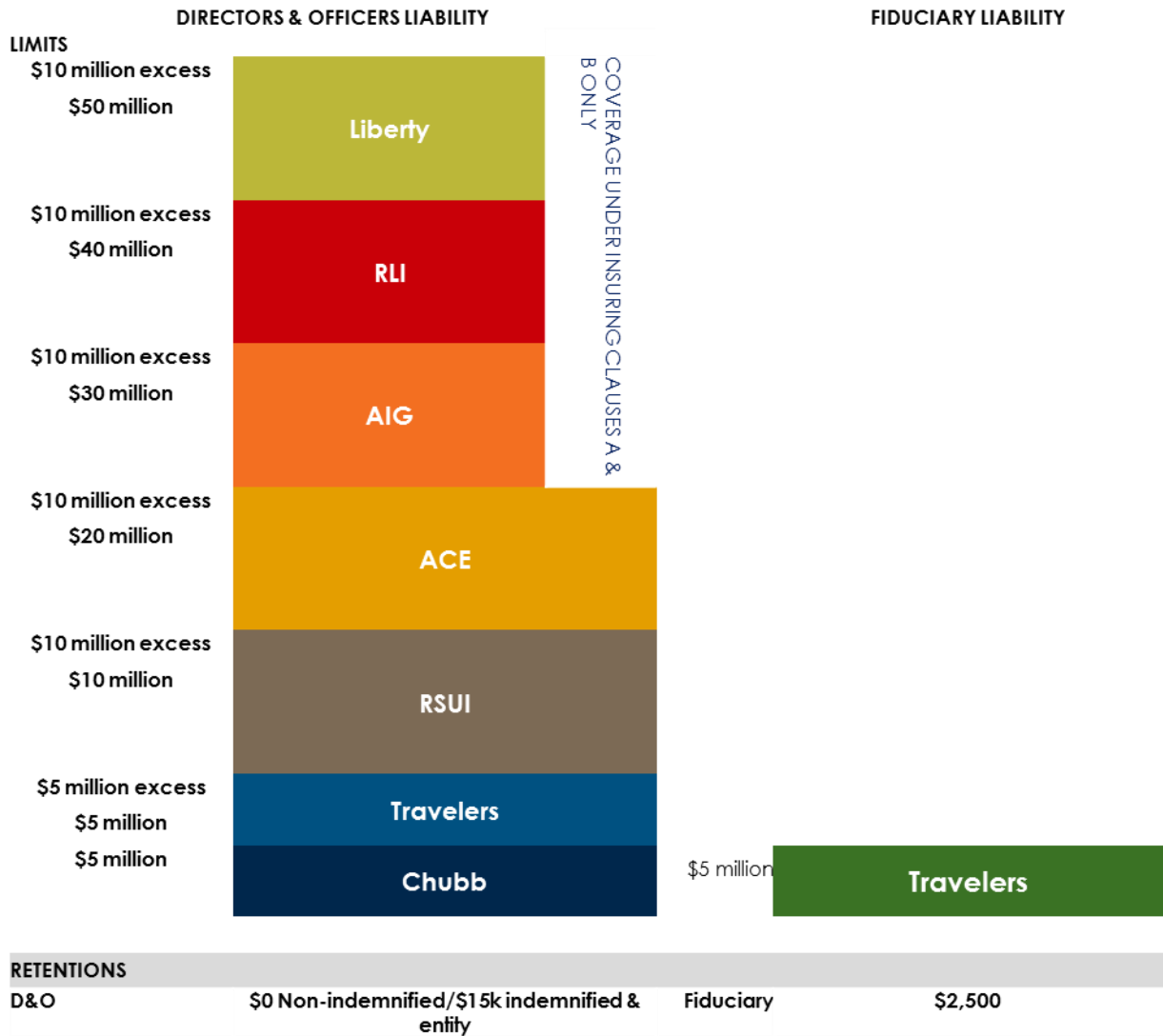
LIABILITY LIMITS



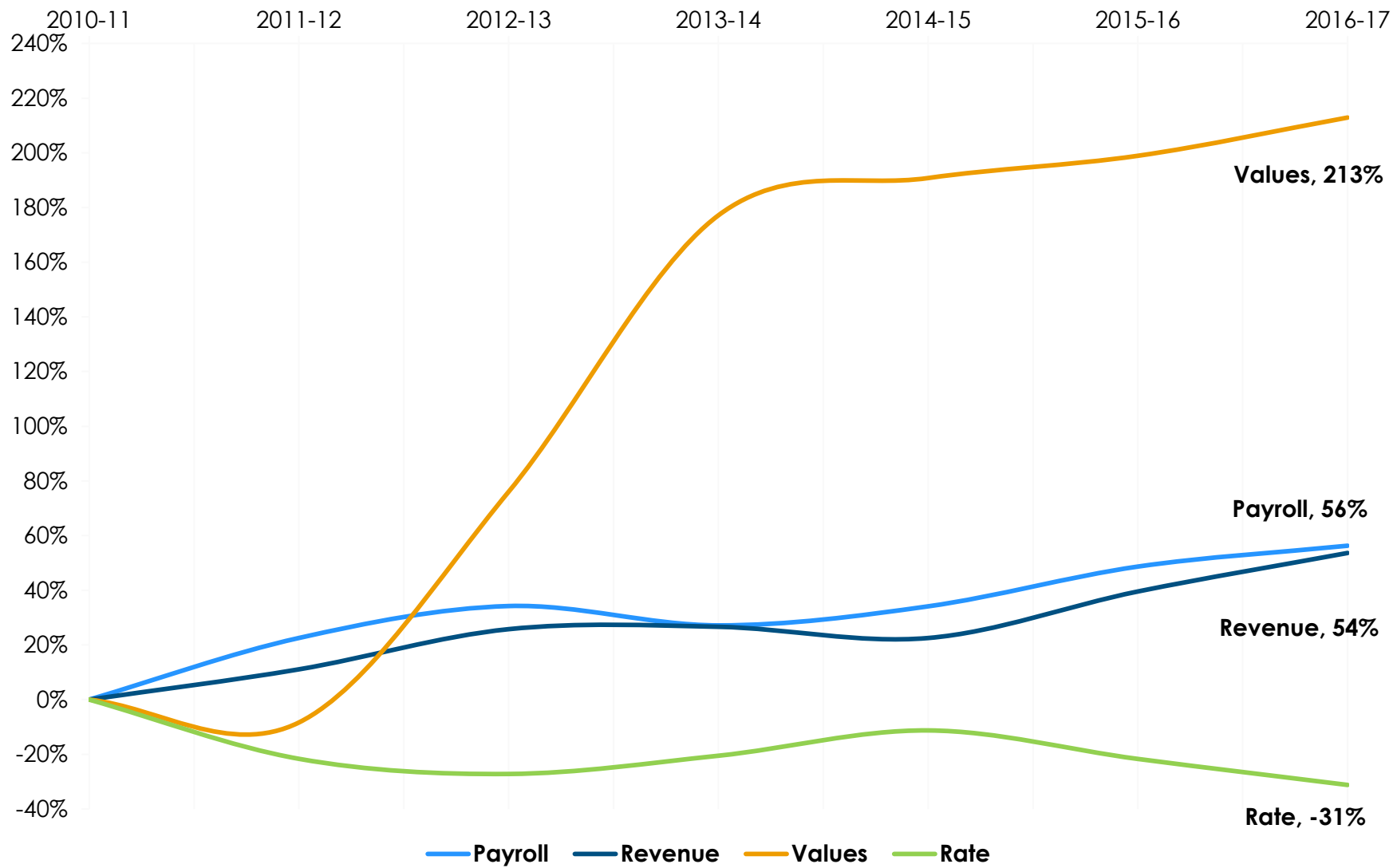
PROPERTY LIMITS



MANAGEMENT & FINANCIAL PRODUCTS



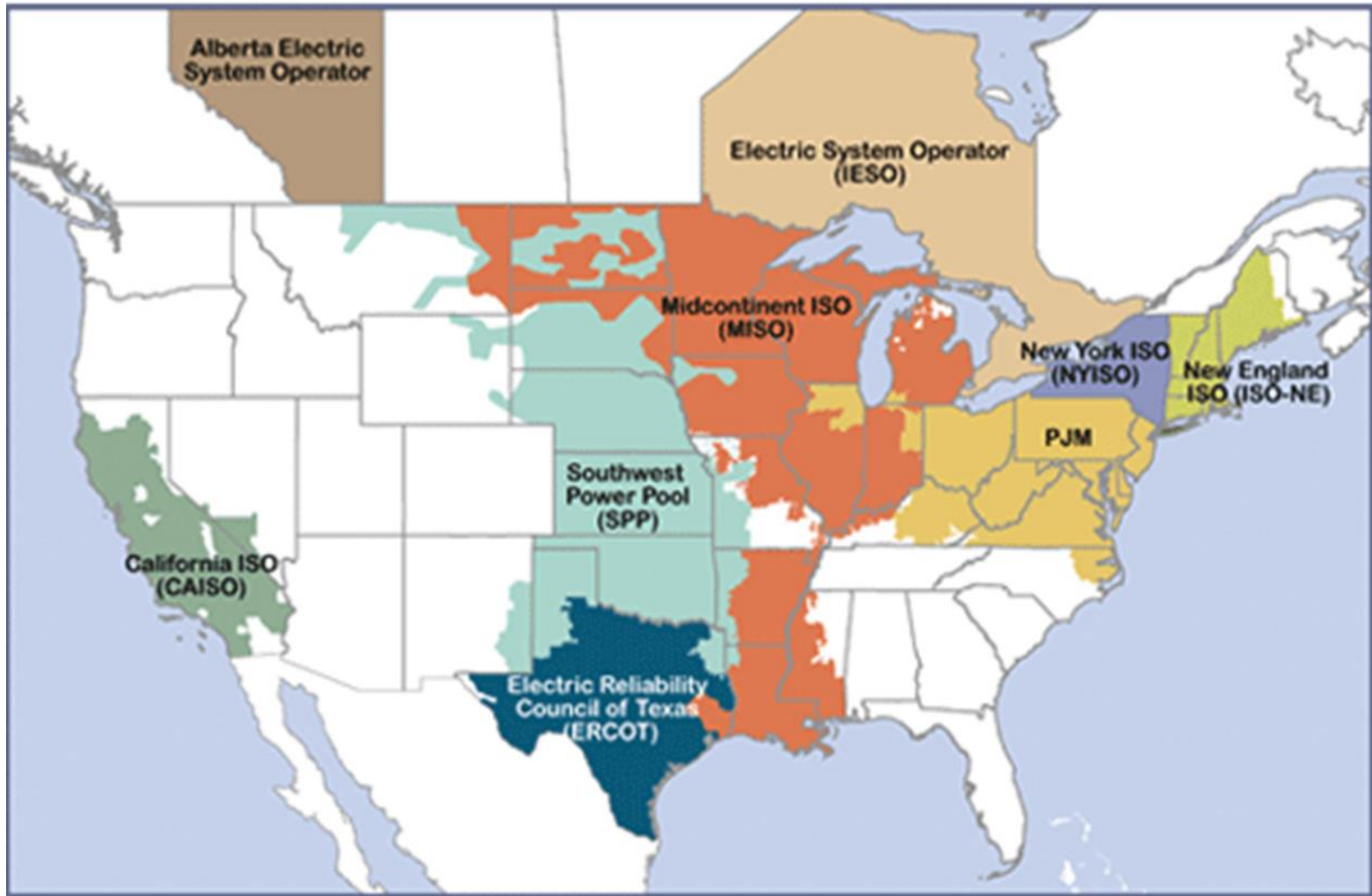
PREMIUM BASE RATE VERSUS RATE CHANGE

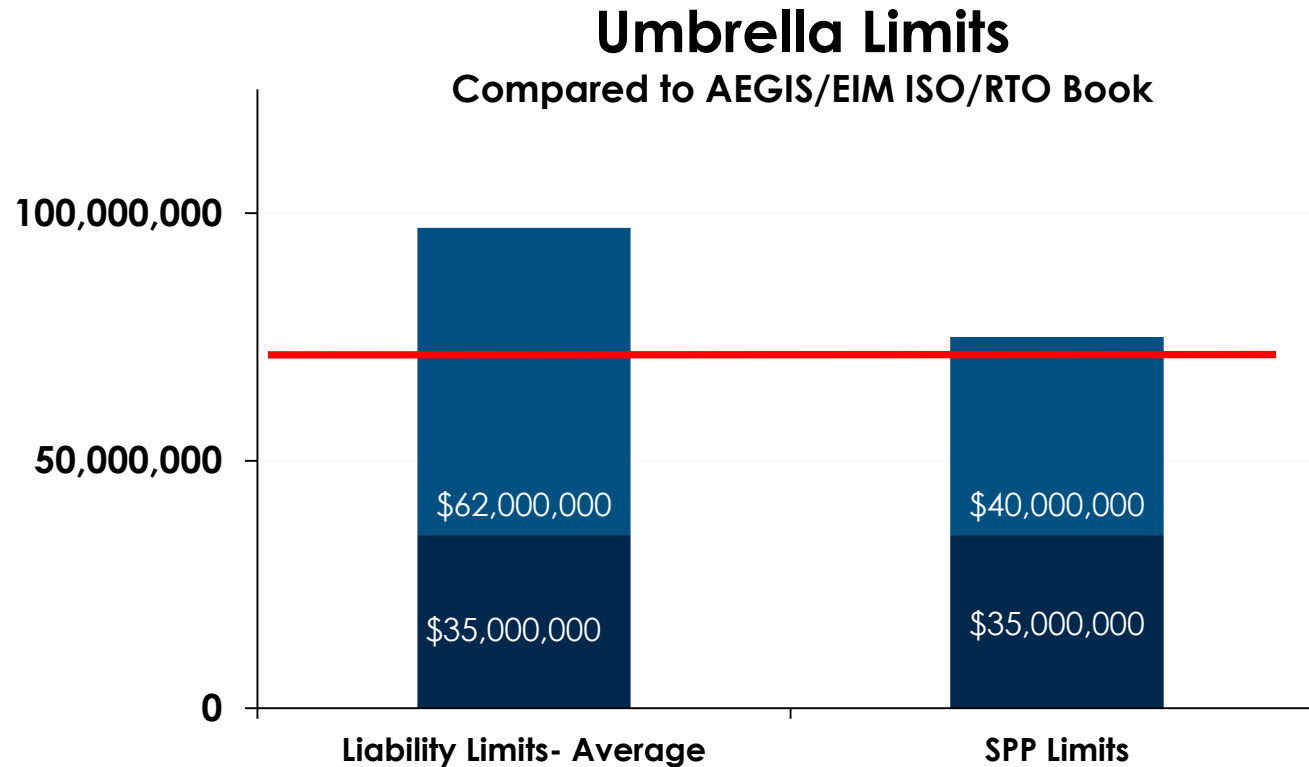


Rate Per \$1,000 Revenue

BENCHMARKS

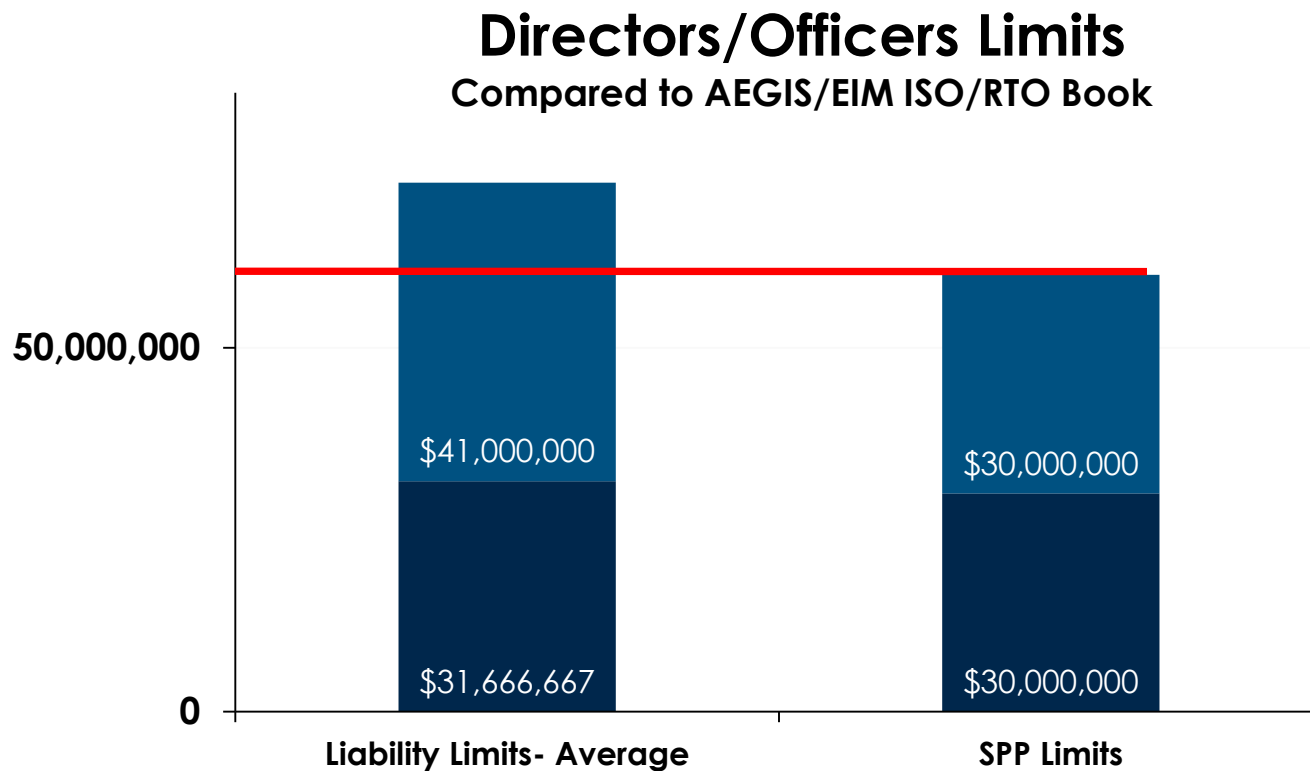
REGIONAL TRANSMISSIONS ORGANIZATIONS





AEGIS insures nine RTO/ISO's. All carry \$35M limits (primary GL/Professional).

EIM insures eight RTO/ISO's. Limits carried vary from \$15M to \$100M. The average carried is \$62M



AEGIS insures three RTO/ISO's. Two buy \$35M in limits and one buys \$25M.

EIM insures five RTO/ISO's. Limits carried vary from \$25M to \$50M. The average carried is \$41M.

AEGIS has also advised that of the three RTO's that they insured, two have received cyber liability quotes from AEGIS, but neither has purchased it.

2017 PLANNING & DISCUSSION

- **Renewal expectations for SPP**
 - ❑ **Workers Compensation – Flat**
 - ❑ **Casualty - Flat**
 - ❑ **Umbrella/Excess +5%**
 - ❑ **Property – Flat**
 - ❑ **Management Liability - Flat to +7%**
 - ❑ **Deliver Primary Proposal by March 1, 2017**

- **Other Cover Discussion**
 - ❑ **Cyber Risk Assessment/ Cyber liability**
 - ❑ **Punitive Wrap**
 - ❑ **Crime**
 - ❑ **Traditional coverage, beyond just ERISA**
 - ❑ **Workplace Violence**
 - ❑ **Social Engineering Fraud**
 - ❑ **Stand alone Terrorism + Active Shooter**

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BOARD BRIEF

Topic: Cyber & Privacy Liability Insurance



What is Cyber & Privacy Liability (CPL) Insurance?

Financial protection for liability and expenses arising from the theft or loss of data, privacy violations, infringement of certain IP and associated loss costs.

What are the principle exposures?

3rd Party Liability

- Information Security/Breach of Network
 - unauthorized use of data
 - transmission of malicious code
 - denial of service
- Content Liability
 - infringement of IP
 - disparagement/defamation/ misappropriation
- Privacy Liability
 - Personal Identifiable Information
 - Privacy Laws
 - SEC disclosure recommendations
 - Corporate non-public information

1st Party Expenses

- Fraud
- Lost Data
- Business Interruption
- Extortion
- Expenses (**see note at end of brief**)
 - set up a call center following the breach;
 - notify each person affected;
 - monitor their credit for 1 year;
 - purchase identity theft insurance for them;
 - pay the costs required to restore stolen identities resulting from the breach;
 - pay actual losses sustained from the theft of the individuals identities
 - hire a computer security/forensics company to investigate the source of the breach and recommend measures to prevent further disclosures of records;
 - engage the services of a public relations firm;
 - defend a class action suit brought against the organization by individuals whose records were compromised;
 - pay various fines levied by regulators;
 - hire a so-called breach coach, typically an attorney, who will walk the insured, on a start-to finish basis, through the entire process of responding to the situation

Some statistics

Per Privacy Rights Clearinghouse (www.privacyrights.org/data-breaches):

- 5,150 Data Breaches have been made public since 2005 which have affected 900.8 million records

Per NetDiligence 2016 Cyber Claims Study:

- There was insider involvement in 30% of the breach incidents
- Hackers caused 23% of the breach incidents; Malware/Virus 21%; Staff mistakes 9%; Rogue Employees 7%
- Third Parties (vendors) accounted for 13% of the breach incidents

Per the Ponemon Institute 2016 Cost of Data Breach Study (www.ponemon.org):

- Average organizational cost for a data breach is \$4 million, as reported by 383 companies participating in 2016 research study
- Average costs per compromised record was \$158; Healthcare \$355; Education \$246
- 48% of the breaches were caused by a malicious or criminal attack; 25% of breaches were cause by Human error
- The biggest financial consequence to organizations that experienced a data breach is lost business.

Some statistics continued

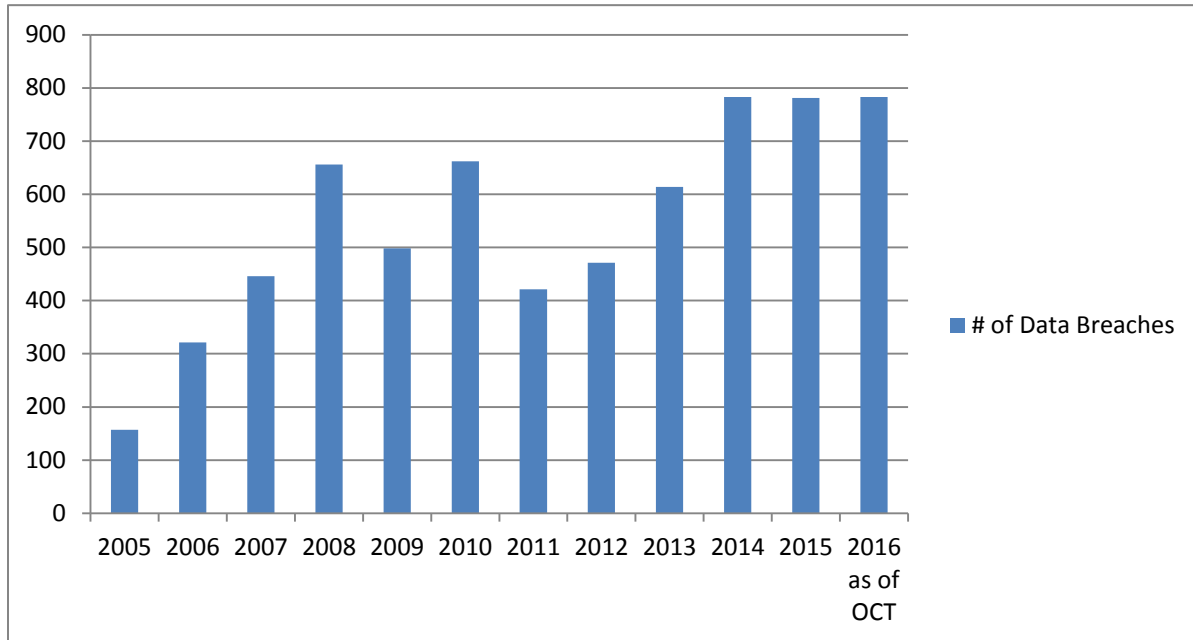
Per the Verizon 2016 Data Breach Report (<http://www.verizonenterprise.com/DBIR/2016/>):

- 3,141 data breaches were confirmed from over 100,000 incidents
- Over 80% of breaches are committed by outsiders
- 89% of breaches had a financial or espionage motive

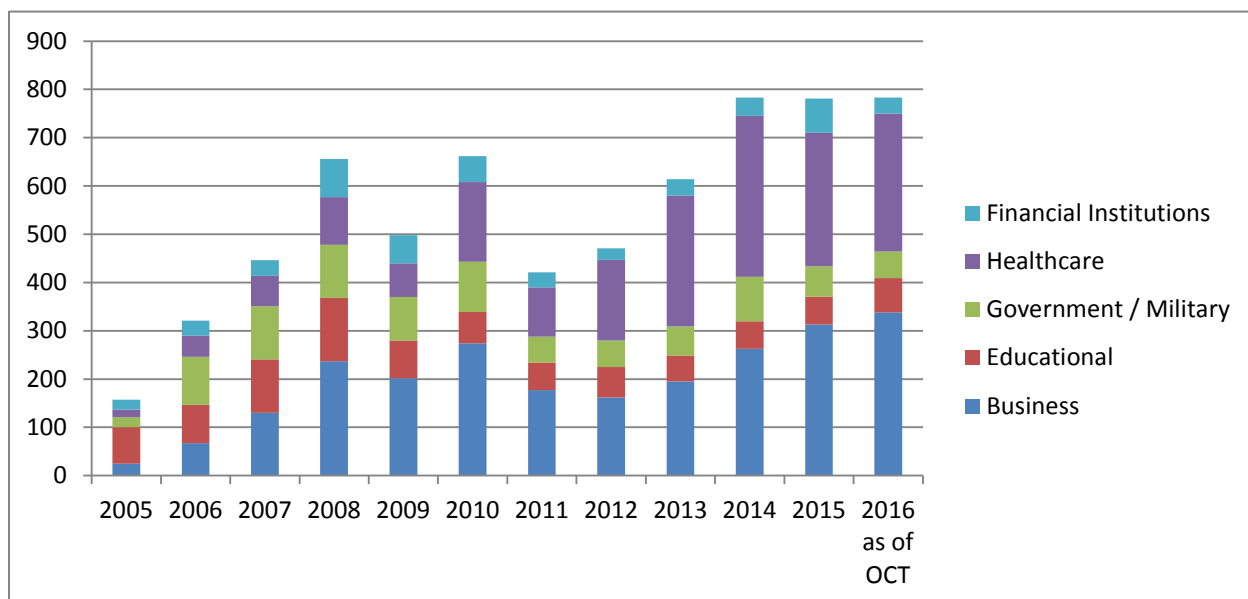
Per the Evolution of the Verizon Data Breach Investigations Report (<http://www.verizonenterprise.com/verizon-insights-lab/dbir/>):

- 80% of incidents had a financial motive
- 63% of 2,260 confirmed breaches leverage weak, default or stolen passwords

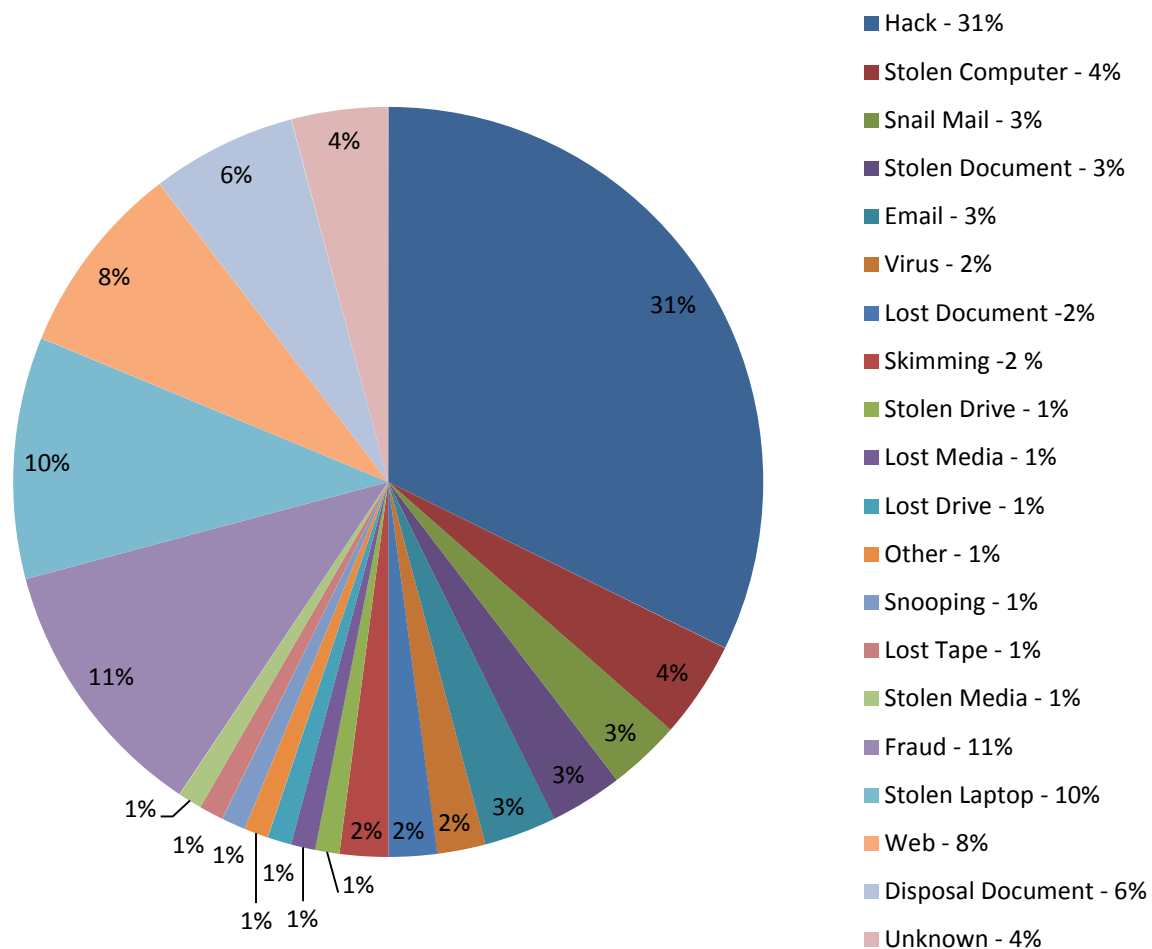
of Data Breaches



Breaches by Segment



Incidents by Breach Type / 2006 to 2015



Source: idtheftcenter.org & DataLossDB.org

What are the underwriting considerations?

Premium is based on revenue, number of records held and exposure classification (manufacturing, financial services, healthcare, etc)

Significant underwriting components include:

- Network security measures (Encryption/Intrusion detection system/Incident Response Plan)
- Type of data collected
- Website & content exposure
- Contractual risk transfer
- Internal policies & procedures
- Number of records maintained
- Loss history

What is important to know about the insurance policies?

Each carrier has their own form. No two policies are the same but most are “duty to defend”, which means the insurer will be controlling the loss. All of the policies have multiple Insuring Clauses (and separate limits for each) that allow you to tailor the product to your needs, but the policy is subject to a single aggregate limit of liability.

Typical Insuring Clauses:

- Technology and Internet E&O
- Electronic Media Activities
- Network Security Liability
- Network Extortion
- Privacy Liability
- Data Breach Fund
- Misc. Professional Services
- Business Interruption

Common exclusions:

- Criminal, Fraudulent, Intentional Acts
- Employment Related Claims
- Insured vs Insured
- Contractual Liability
- Unfair Trade Practices
- Unlawful Collection of Personal Identifiable Information
- Bodily Injury/Property Damage
- Unencrypted Laptops & Other Portable Devices
- Patent, Software Copyright Infringement
- Mechanical/Electrical Failure
- Broadcasting, Publishing, Advertising

How much insurance should you buy?

It really depends on your operations. Retail, healthcare, financial services and education all hold large volumes of personal information of non-employees, the primary target of fraudsters. Firms in these industries typically carry much higher limits than manufacturing, energy, general industrial and business. Utilities and other critical infrastructure organizations present an entirely different risk profile and tend to purchase significant limits, or none at all.

All firms have exposure to cyber extortion, disgruntled former employees and hackers that target firms for non-monetary reasons. Having adequate first party limits (and a breach response team) is important to deal with these situations.

Who are the likely insurers?

For utilities and related, principle carriers are AEGIS and London (via CAP program). In general, AIG, Chubb, Travelers, OneBeacon, Axis, Beazley, CNA, Liberty, Berkley, AWAC, Hiscox, Zurich, Hartford

An additional comment on 1st party Expenses

Once data has been exposed or a breach is suspected, several action items need to occur immediately and simultaneously. Attached to this brief is one firm’s graphical depiction of all the moving parts associated with responding to a network breach. The resources that need to be in place include:

- breach coach – an attorney who answers the legal question of “is it a breach”; manages the investigation, contracts and costs of breach response vendors; and ensures response is legally compliant
- forensic investigation – to mitigate, locate and terminate the breach
- public relations firm – to operate call center, monitor credit, restore stolen identities, comply with legal notification requirements and provide accountability to management for response

Most, if not all of these expenses will be covered under a CPL policy. Given that most policies are “duty to defend” it is preferable to place this insurance with an insurer that has an established data breach response team. Further, it is preferred that the Insured have choices within the breach response team and the opportunity to vet those service providers prior to an event.

YourResponse™

Trusted Breach Resolution Method.



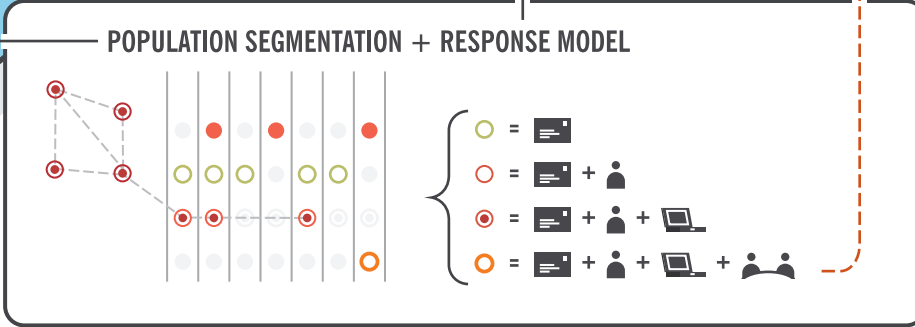
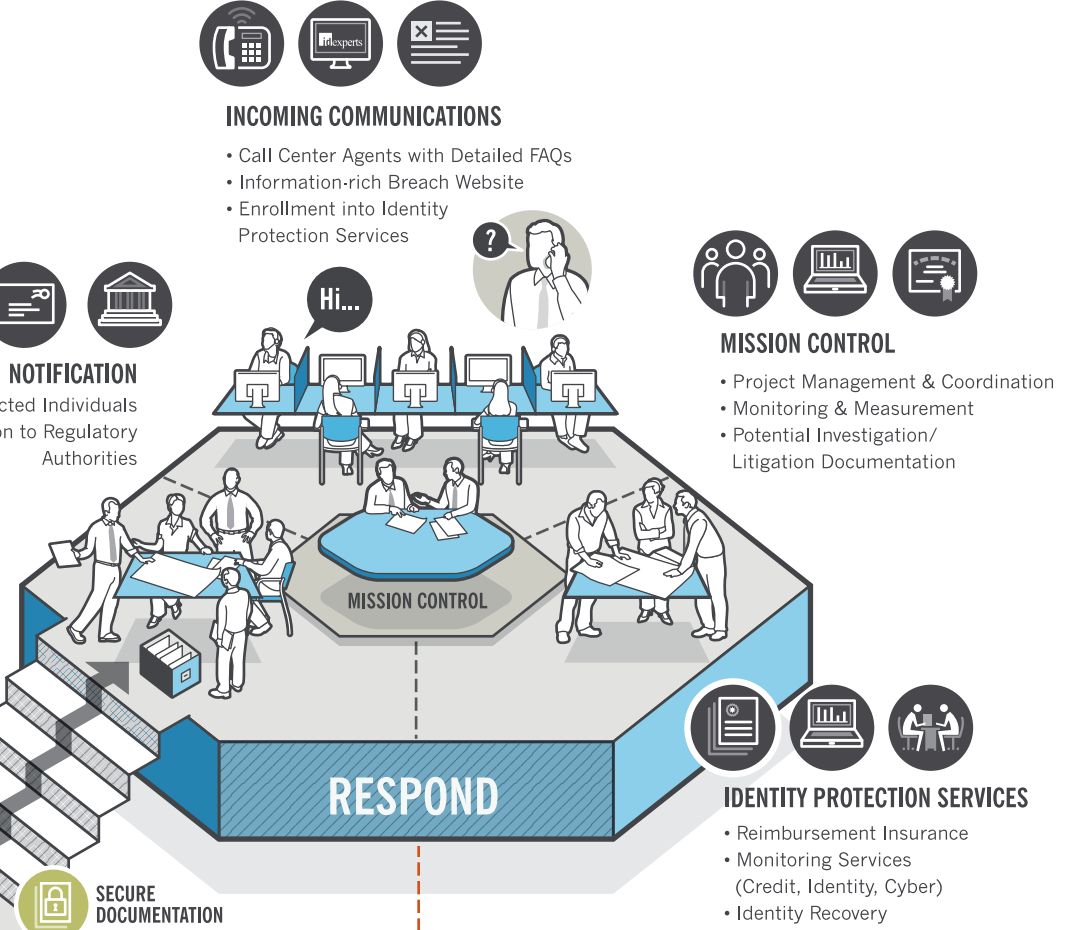
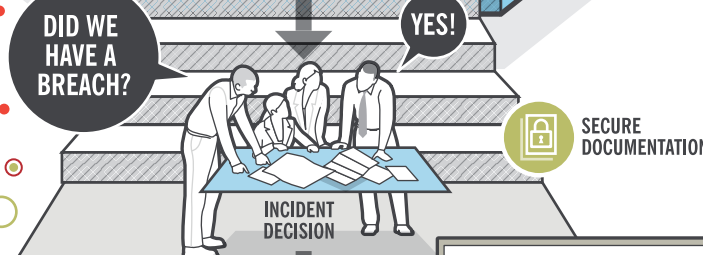
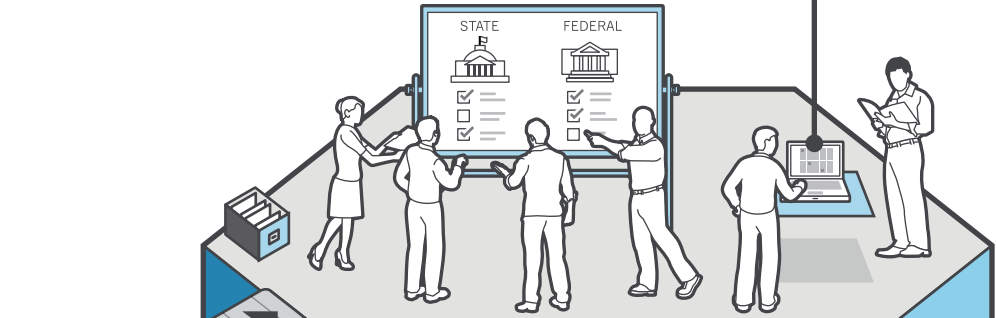
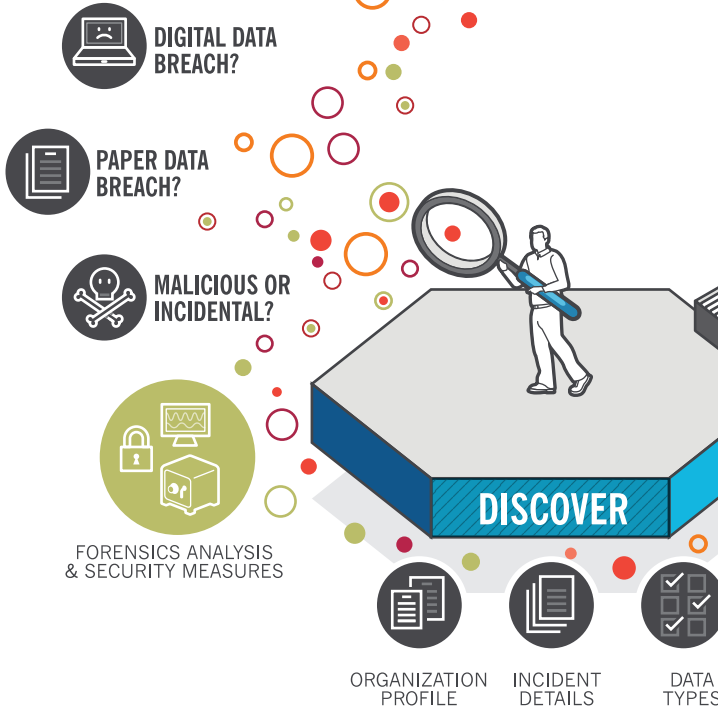
INCIDENT ASSESSMENT

- Data Sensitivity
- Incident Severity
- Regulatory Obligations

RISK SCORE & REGULATORY OBLIGATIONS

Federal & State(s) Specific:

- Safe Harbors Evaluation
- Harm Tests Evaluation
- Regulation Specific Risk Scores
- Reporting Thresholds And Obligations





Southwest Power Pool, Inc.

Finance Committee Meeting
2016 SOC1 Report - Debrief

December 5, 2016

kpmg.com

Today's agenda

Topics	Page
KPMG Engagement Team	3
2016 Report Highlights and SOC 1 Scope	4
Other Matters	6
Changes for 2017	7
Appendix – SOC 1 Objectives and KPMG SOC 1 Approach	9

KPMG Engagement Team

Core SOC 1 Engagement Team

- Eddie Holt, Engagement Lead Partner
- John Boucher, Concurring Review Partner
- Schoen Hertell, Engagement Director
- Chin Modha, Engagement Director
- Tom Bagley, Lead Senior Associate
- Lachie Beatty, Industry Specialist
- Nic Mansson, Information Technology Specialist

Additional Specialists supporting SOC 1 activities

- Michael Piotrowski, Director Industry Specialist
- Kirk-Patrick Caron, Manager Industry Specialist

2016 Report Highlights and SOC 1 Scope

Report Highlights

- 31 control objectives, 110 controls
- Unqualified audit opinion, no test exceptions noted in the report
- Report date November 21, 2016
- Report issued on November 30, 2016

SOC 1 Scope

The scope of the SOC 1 examination covers the control objectives and control activities related to the Integrated Marketplace and Transmission Service Settlements system during the period 11/1/15 through 10/31/16, grouped as follows:

- Integrated Marketplace and Transmission Service Settlements
- Information Technology

Integrated Marketplace and Transmission Service Settlements

- Registration and Modeling
- Local Security Administration
- Day-Ahead Market System
- Real-Time Balancing Market (RTBM)
- Market Solutions
- Day-Ahead Market Must-Offer Requirement
- Market-to-Market
- Transmission Congestion Right Markets Process
- Annual Long-Term Congestion Rights (LTCR) Allocation
- Annual Auction Revenue Right (ARR) Allocation
- Market Settlements
- Transmission Settlements
- Cash Clearance – Integrated Marketplace
- Cash Clearance – Transmission Service
- Invoicing – Transmission Service
- Market Settlements and Transmission Settlements Collection Activity

2016 Report Highlights and SOC 1 Scope (continued)

Information Technology

- Physical Security
- Logical Security
- Program Change
- Software Development Life Cycle
- Computer Operations
- Problem Management

Excluded Processes (No Changes From Prior Year)

- **Reliability related processes** – Operational activities and controls in place with the primary objective of maintaining, enhancing system reliability, and/or maintaining compliance with reliability oversight bodies such as NERC.
- **Operational judgments** – Decisions made by control room operators necessary to effectively maintain reliability of the system and to respond to observations and recommendations of the Southwest Power Pool, Inc. Market Monitoring Unit (MMU).
- **Participant dispute decisions** – The process to analyze, interpret, and ultimately award or deny disputes raised by market participants that may have financial or operational implications to participants.
- **LMP, other market pricing and clearing engine algorithms** – Mathematical formulations, software, or testing protocols used to determine market based values (such as marginal prices, congestion values, and clearing prices for ancillary services) and market feasibility tests (Simultaneous Feasibility Test) that are verified or tested by an outside consultant.
- **Power system, dispatch and State Estimator models** – Mathematical formulations, telemetry, and software used to dispatch resources, respond to operator requests or in general maintain system reliability of real time operations.

Other Matters

Matters SPP Finance Committee should be made aware of:

- No illegal acts have come to our attention during the course of our examination which would have a material effect on the Integrated Marketplace and Transmission Settlements system and related controls.
- We did not have any disagreements with management that should be reported to the SPP Finance Committee.
- We did not encounter any unusual difficulties in performing our examination.
- We have received the full cooperation of SPP personnel in planning and performing our examination.
- Collaboration and coordination between management and personnel of the Internal Audit Department, the IT Organization and Business Process Owners were instrumental in timely completing the SOC 1 examination.

Matters KPMG should be made aware of:

- Significant changes in controls that have occurred.
- Illegal acts, fraud or uncorrected errors attributable to SPP's management or employees that may affect one or more user organizations.
- Design deficiencies in the controls and all instances in which controls have not operated with sufficient effectiveness.
- Current events for the reporting period that would have a significant effect on user entities.
- Internal/external audit reports or regulatory investigations covering/impacting the Integrated Marketplace and Transmission Settlements system.

Changes for 2017

Z2 Crediting Process - Overview

In accordance with the SPP Open Access Transmission Tariff (OATT) Attachment Z2 revenue crediting for upgrades, the Z2 crediting process was established to identify creditable upgrades, and distribute revenue credits to upgrade sponsors.

Impact to SOC1 Report

- 1 additional control objective
- New control activities
- Systems supporting the Z2 credit processing added to IT scope
- Changes to existing settlement process

Additional Discussion Topics

- KPMG has performed a walkthrough of the new Z2 process with management on October 28, 2016
- Amended Engagement Letter

Changes for 2017 (continued)

SSAE18

In April 2016, the American Institute of Certified Public Accountants (AICPA) Auditing Standards Board (ASB) issued the Statement on Standards for Attestation Engagements (SSAE) No. 18, Attestation Standards: Clarification and Recodification

Impact on SOC1 Reporting

- Complementary sub-service organization controls
- Completeness and accuracy of information produced by the service organization
- Complementary user entity controls (CUECs)
- Review of internal audit reports and regulatory examinations
- Managements assessment over the design of controls

Appendix – SOC 1 Objectives

Objectives are, in all material respects, based on the criteria described in SPP’s assertion, to determine whether:

- SPP’s description fairly presents the Integrated Marketplace and Transmission Settlements system that is designed and implemented throughout the period;
- The controls related to the control objectives stated in the description are suitably designed to provide reasonable assurance that the control objectives would be achieved if the controls operated effectively throughout the period and user entities applied the complementary controls contemplated in the design of SPP’s controls throughout the period; and
- The controls tested, which together with the complementary user entity controls necessary to provide reasonable assurance that the control objectives stated in the description are achieved, operated effectively throughout the period.

Appendix - KPMG SOC 1 Approach

Overall Approach

- The examination of the control activities is performed in accordance with AICPA Attestation Standards (SSAE 16).
- We consider SPP's control environment for the purpose of establishing a basis for determining the nature, timing and extent of examination procedures necessary to express our opinion.
- KPMG evaluates results of internal audits and external reviews to determine the impact on the SOC 1 examination.
- SPP uses subservice organizations for processing certain aspects of the Integrated Marketplace and Transmission Service market functions, including all processing of data associated with transmission service requests, electronic tagging, scheduling, reserve sharing, flowgate calculations, and to perform shadow settlements processing of the market settlements systems to independently calculate settlements and market rule implementation. SPP also relies on Market Participants to perform meter data collection and follow-up activities, and provide revenue-quality metering information to SPP on a timely basis for settlement purposes. Our examination does not extend to controls of the subservice organizations.

Nature of Procedures

- We use a combination of Inquiry, Observation, Inspection of documents, Re-performance, and Analysis of System Records and Queries.
- Process level automated controls are identified and tested as application controls, helping reduce manual repetitive testing.

Appendix – KPMG SOC 1 Approach (continued)

Timing of Procedures

- Timing of each field visit is coordinated between Internal Audit and Business Process owners to reduce impact on SPP personnel.
- There are two site visits to reduce impact on SPP personnel.
- First site visit – Focuses on the test of design and operating effectiveness of the manual and automated controls.
- Second site visit – Focuses on the remaining tests of operating effectiveness for all the control objectives, as well as the reporting phase of our work.

Progress Reporting

- During the field visits, we hold status meetings with Internal Audit and include key management as appropriate to raise and resolve items for discussion on a timely basis.
- Every two weeks, meetings are held with Internal Audit during off-site periods to maintain continuity, as necessary.

SPP's Responsibilities

SPP assists KPMG with:

- Making personnel available to support the examination process;
- Scheduling meetings during the field visits; and
- Maintaining the master copy of the report and making appropriate updates/changes.



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The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

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Memorandum

To: SPP Finance Committee
From: Tom Dunn
CC:
Date: December 5, 2016
Re: Actuarial Assumptions for Pension Valuation

The SPP Finance Committee, at its April 2013 meeting, requested SPP staff provide an early look at assumptions utilized in valuation of SPP's pension plan and post-retirement healthcare plan. This memo provides that look at the four major assumptions: discount rate, long-term rate of return, compensation change rate, and mortality tables.

Discount Rate: The SPP Finance Committee, at its April 2008 meeting, concurred on a process to set the discount rate used in valuing pension liabilities. In general, the method used to set the discount rate follows the framework described in the Pension Protection Act of 2006. Section 102 of Title I of the Pension Protection Act of 2006 defines interest rates for determining the funding targets of covered plans. These interest rates are based on the Corporate Bond Yield Curve prescribed by the U.S. Treasury Department and reflect the twenty four month average of investment grade corporate bonds (the top three rating tranches).

Also described in the Pension Protection Act of 2006 are three Segment Rates that can be used for the purpose of assigning a discount rate. These rates are differentiated based on the maturities of the corporate bonds underlying the yield curves used to determine each rate. The segments are broken down as follows:

1. First – zero through five years
2. Two – six through fifteen years and
3. Three – greater than fifteen years

The final issue to address is the selection of a Segment Rate for the SPP plan. One of the most pertinent demographic points to consider here is that the average age of the participants in the SPP retirement plan is less than 45 years. This would indicate that major distributions from the plan should not begin occurring, on average, for another twenty years.

The Moving Ahead for Progress in the 21st Century Act (MAP-21), a funding and authorization bill to govern U.S. federal surface transportation spending, contained a pension stabilization feature which reduced required contributions for single-employer pension plans substantially, especially for plan years 2012 and 2013. Unless interest rates rise, however, required contributions will return to pre-MAP-21 levels in a few years.

MAP-21 allows plan sponsors to measure pension liability using the 25-year average of segment rates plus or minus a corridor. The corridor started at plus or minus 10% for 2012, and increases by 5% each year until it reaches plus or minus 30% for 2016 and later. This will increase segment interest rates by 100 – 320 basis points, which will significantly lower plan liabilities and thus required contributions for plan years 2012 to 2016. Over time, the pension funding stabilization effect will decline as projected segment rates fall within the corridors.

On August 8, 2014, the Highway and Transportation Funding Act of 2014 ("HAFTA") was signed into law. HAFTA adjusted the pension smoothing timeline whereby the 25 year average segment rate plus or minus the 10% corridor would be in effect through 2017, thereafter the corridor rates would adjust 5% per year.

The Internal Revenue Service publishes periodic updates to segment rates throughout the year. The most recent update, published November 13, 2015 indicated 24-month average segment rates of 1.53%/3.76%/4.74% and adjusted rates consistent



with the MAP-21 and HAFTA directives of 4.16%/5.72%/6.48%. SPP used a discount rate of 5.00% in 2015. **SPP staff recommends a discount rate to 5.00% going forward, in line with the 3rd segment discount rate**

Long-term Rate of Return: The SPP Finance Committee, at its April 2008 meeting, concurred on a process to set the long-term rate of return used in pension valuation. The method used by SPP to assign the long-term rate of return is based upon an analysis of the long-term returns of widely recognized benchmark investments similar in asset allocation to the investments held in the pension plan trust. The benchmark returns are weighted based on SPP’s desired asset allocation described in the Investment Policy Statement.

The Russell 3000 Index measures the performance of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market. The Russell 3000 Index is constructed to provide a comprehensive, unbiased, and stable barometer of the broad market and is completely reconstituted annually to ensure new and growing equities are reflected. The Barclays Government/Credit Bond Index is a non-securitized component of the Barclays U.S. Aggregate Index. The U.S. Government/Credit Index includes U.S. Treasury with remaining maturities of more than one year, U.S. government-related issues (agency, sovereign, local authority, supranational) and corporate issues.

	<u>Russell 3000</u>	<u>Barclays Gov't/Credit Ind ex</u>
15 Year Return (11/1/2001 – 10/31/2016)	7.28%	4.65%
Target Allocation	70%	30%
Weighted Avg. Return	5.10%	1.40%
Historical Expected Portfolio Return	6.50%	

SPP used a long-term rate of return assumption of 7.00% in 2016. **SPP staff recommends retaining the long-term rate of return at 7.00%**

Compensation Change Rate: SPP’s year over year growth rate in compensation has significantly exceeded the long-term growth rate of 4% SPP has used in its pension valuation. SPP expects compensation growth to slow absent unforeseen growth in total staffing levels. A 4% long-term growth rate is consistent with that used by many of SPP’s members in their pension plan evaluations and is consistent with the compensation changes for 2017 approved by the SPP Human Resources Committee (3% increase in base compensation and 0.75% funding for non-standard and promotion increases). **SPP will use the 4.00% compensation rate change for the upcoming valuation.**

Pension Mortality Table: The SPP Finance Committee, at its December 7, 2015 meeting, determined a preference to maintain the mortality table consistent with the table used by the U.S. Internal Revenue Service. The IRS updates its mortality tables annually. SPP utilized the IRS-2016 table for its prior valuation. **SPP will use the IRS-2017 table for the upcoming valuation.**

Monthly Financial Reporting Package
October 2016

SPP Executive Summary – October 2016

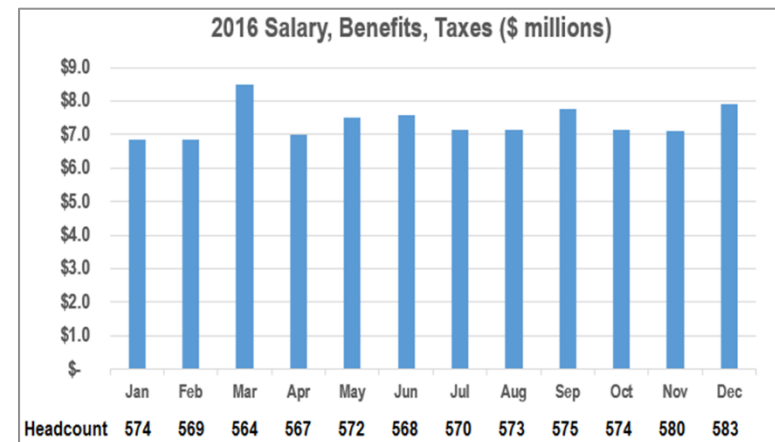
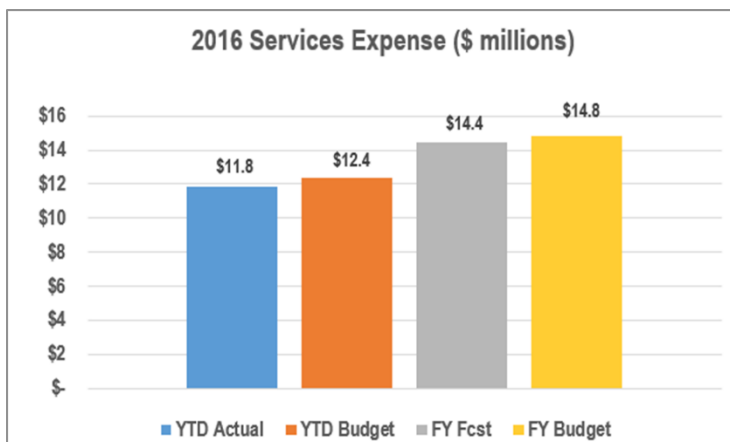
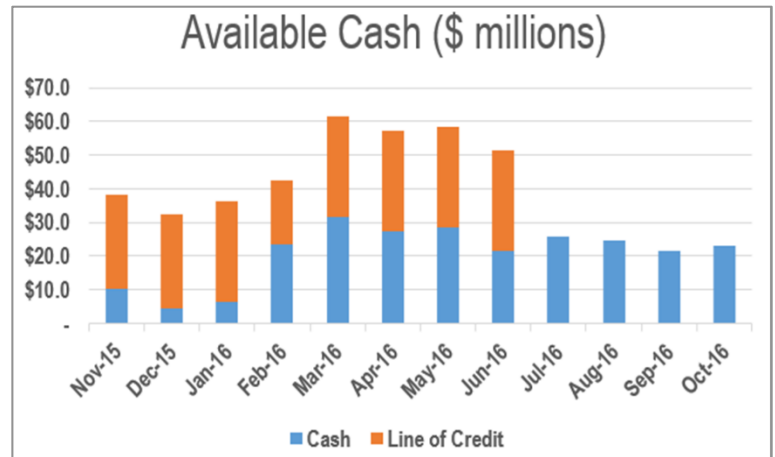
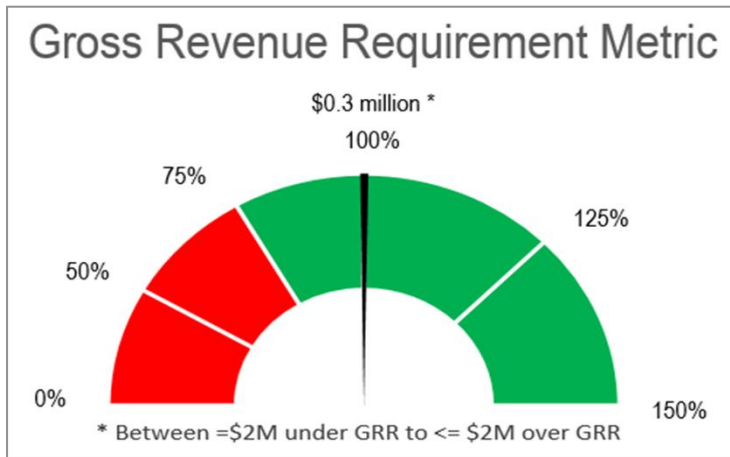
2016 Over / (Under) Recovery and Cash Balances

	2016 Forecast	2016 Budget	Fav/ (Unfav)
<u>Cost Recovery (\$ millions)</u>			
Gross Revenue Requirement (GRR) *	\$156.0	\$155.7	(\$0.3)
Net Revenue Requirement (NRR)	150.3	150.5	0.2
Admin Fee Revenue	144.8	150.7	(5.9)
Over / (Under) Recovery	(\$5.5)	\$0.2	(\$5.7)

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

Note: Material changes from the prior month include forecast adjustments to maintenance and outside services expenses.

GRR & Available Cash, Compensation and Outside Services Expenses



Southwest Power Pool
2016 Financial Commentary
October 31, 2016
(in thousands)

Summary

	2016 FY Forecast	2016 FY Budget	Fav/(Unfav) Variance	
Revenues	\$176,252	\$182,079	(\$5,827)	(3.2%)
Expenses	217,182	217,092	(90)	(0.0%)
Net Income/(Loss)	<u>(\$40,930)</u>	<u>(\$35,013)</u>	<u>(\$5,917)</u>	(16.9%)

Revenue

	2016 FY Forecast	2016 FY Budget	Fav/(Unfav) Variance	
Tariff Administration Service	\$144,802	\$150,660	(\$5,858)	(3.9%)
FERC Fees & Assessments	16,874	16,500	374	2.3%
NERC ERO Regional Entity Rev	9,313	10,432	(1,120)	(10.7%)
Miscellaneous Income	4,176	3,400	776	22.8%
Contract Services Revenue	529	498	31	6.2%
Annual Non-Load Dues	558	588	(30)	(5.1%)
Total Revenue	<u>\$176,252</u>	<u>\$182,079</u>	<u>(\$5,827)</u>	(3.2%)

Tariff Administrative Service trails budget as a result of differences in expected coincident peak load in 2015 for both IS (4.2 million MWh) and SPP legacy utilities (8.8 million MWh). Coincident peak load for 2015 is the basis for 2016 Schedule 1A revenues and was budgeted at 407 million MWh. The load forecast is 394 million MWh and results in an unfavorable revenue variance of \$5.9 million.

NERC ERO Regional Entity revenue is based on Regional Entity (RE) budgeted expenditures and anticipated pass-thru expenses for SPP resources outside the RE. The primary drivers of the variance reside in compensation and outside services. Although the budget assumed the RE would be fully staffed at the beginning of the year, three to four positions have remained vacant throughout most of the year. These vacancies contribute to RE expenses and associated NERC revenues to trail budget. The net impact is \$0.2 million unfavorable.

MISO settlement agreement revenues were budgeted in Tariff Administrative Service account, but are recorded in Miscellaneous Income (\$0.3 million). Engineering studies revenue exceeds budget to date and also contributes to the favorable variance (\$0.5 million).

Southwest Power Pool
2016 Financial Commentary
October 31, 2016
(in thousands)

Expense				
	2016 FY Forecast	2016 FY Budget	Fav/(Unfav) Variance	
Salary & Benefits	\$88,473	\$85,153	(\$3,319)	(3.9%)
Assessments & Fees	18,648	17,000	(1,648)	(9.7%)
Communications	3,937	4,091	153	3.8%
Maintenance	14,903	16,847	1,943	11.5%
Outside Services (Including RSC)	14,646	15,066	421	2.8%
Administrative & Leases	4,811	5,198	386	7.4%
Travel & Meetings	2,940	3,433	492	14.3%
Depreciation & Amortization	58,148	59,736	1,588	2.7%
Other Expenses	10,676	10,569	(106)	(1.0%)
Total Expense	\$217,182	\$217,092	(90)	(0.0%)

As part of SPP's compliance demonstration project, two separate firms were selected to provide independent assessments of SPP's internal compliance program. After careful analysis of the recommendations of each firm, 11 incremental out-of-budget positions were vetted and approved by SPP's officer team for inclusion in the forecast beginning mid-year 2016. Although headcount and compensation were added to the forecast for these positions, a material increase is not visible in Salaries due to an offsetting variance attributable to the vacancy run-rate (6% actual as compared to the budgeted rate of 4%).

The forecast for Pension and Retiree Healthcare Benefits expense was adjusted in early 2016 to reflect the most recent actuarial calculations for pension costs. This represented an increase of \$2.4 million over the budget, which was based on the 2015 actuarial calculations. The actual approved funding for 2016 creates a \$1.9 million unfavorable variance to the cash funding assumed in the budget. Employee healthcare expense is also forecast to exceed budget by \$0.6 million due to several large claims in the current year.

Assessments and Fees is considerably higher than the original budget. SPP received its annual assessment invoice from FERC in June and recognized a true-up for the prior year under-accrual. The 2016 forecast reflects the increased FERC costs expected for the year based on the assumed rate of increase in FERC's charge factor (3%) as well as the expected change in SPP's transmission sales (11%). The increase is driven by the full-year impact of the addition of the Integrated Systems into the SPP footprint.

Procurement of budgeted hardware and software (IT Foundation refresh and various capital projects) has been delayed due to a shift in priorities driven by CIP (critical infrastructure protection) initiatives and the mitigation of compliance findings. As a result, the forecast for the associated Maintenance expense has been reduced in accordance with the revised projected timing of the procurement of these assets.

The variance in Outside Services is the result of various offsetting factors. Favorable variances are related to lower expenses in the Regional Entity and Engineering, plus various other areas which trail budget but are individually immaterial. The Engineering variance is related to delays in the ITP10 project. The Regional Entity variance is attributed to lower consulting costs due to a downward trend in the number of violations. Unfavorable variances are related to additional costs associated with staff augmentation and consulting services in Compliance, IT and PMO departments primarily related to CIP compliance (\$0.8 million).

Travel expenses trail budget across most divisions with the largest variances found in the Regional Entity (\$0.3 million) and Operations (\$0.1 million). The RE variance is partially attributed to higher vacancies and fewer audits early in the year. Hosting of various stakeholder meetings in more economical locations contributes to lower travel costs in Operations and throughout other divisions as well.

Other Income / Expense includes interest expense, capitalized interest, investment income, interest rate swap valuation adjustments, and various other income and expense amounts. Due to the unpredictability of these items, the only amounts budgeted in this category are interest expense and capitalized interest. The current variance is primarily related to unfavorable swap valuation adjustments partially offset by investment income (realized /unrealized) on deposits and investments.

Southwest Power Pool
Monthly Financial Overview
October 31, 2016
(in thousands)

	Actual Jan-16	Actual Feb-16	Actual Mar-16	Actual Apr-16	Actual May-16	Actual Jun-16	Actual Jul-16	Actual Aug-16	Actual Sep-16	Actual Oct-16	Fcst Nov-16	Fcst Dec-16	FY 2016 Fcst	FY 2016 Budget	Variance Fav/(Unfav)	FY 2015 Actual	Variance Fav/(Unfav)
Income																	
Tariff Administrative Service	\$12,294	\$11,208	\$12,035	\$11,792	\$12,229	\$12,273	\$12,167	\$12,087	\$12,001	\$12,252	\$12,227	\$12,239	\$144,802	\$150,660	(\$5,858)	\$143,826	\$976
Fees & Assessments	2,811	2,176	1,995	2,226	1,310	2,177	2,225	2,651	2,403	2,254	2,003	2,514	26,745	27,520	(776)	27,891	(1,146)
Contract Services Revenue	40	40	42	42	42	42	42	62	44	44	44	44	529	498	31	975	(446)
Miscellaneous Income	348	370	369	402	466	320	362	692	133	227	294	194	4,176	3,400	776	6,040	(1,864)
Total Income	15,492	13,794	14,441	14,462	14,046	14,812	14,796	15,491	14,582	14,778	14,568	14,991	176,252	182,079	(5,827)	178,733	(2,481)
Expense																	
Salary & Benefits	6,833	6,856	8,493	7,002	7,521	7,564	7,156	7,136	7,754	7,131	7,116	7,913	88,473	85,153	(3,319)	84,043	(4,430)
Employee Travel	130	139	162	192	190	189	148	150	181	177	169	155	1,983	2,449	466	1,903	(80)
Administrative	187	238	280	560	233	574	194	332	533	1,065	310	306	4,811	5,198	386	4,928	117
Assessments & Fees	1,417	1,417	1,417	1,417	1,417	1,977	2,051	1,507	1,507	1,507	1,507	1,507	18,648	17,000	(1,648)	13,939	(4,709)
Meetings	108	44	61	71	77	93	90	65	68	189	66	26	958	983	26	825	(133)
Communications	324	337	323	317	305	336	330	328	331	332	337	337	3,937	4,091	153	3,758	(179)
Leases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	123	123
Maintenance	1,056	1,067	1,171	1,223	1,163	1,132	1,156	1,274	1,353	1,388	1,255	1,664	14,903	16,847	1,943	13,553	(1,350)
Services	586	1,522	1,347	1,171	1,140	1,261	1,237	1,312	1,142	1,124	1,334	1,242	14,420	14,803	383	12,329	(2,091)
Regional State Committee	10	24	21	20	25	12	21	26	12	12	22	22	226	263	38	200	(25)
Depreciation & Amortization	4,896	4,799	4,747	4,534	5,035	4,950	4,798	4,800	4,902	4,782	5,061	4,844	58,148	59,736	1,588	59,285	1,137
Total Expense	15,547	16,442	18,022	16,507	17,107	18,088	17,181	16,931	17,783	17,706	17,177	18,016	206,506	206,523	16	194,886	(11,620)
Other Income/(Expense)																	
Investment Income	3	3	39	3	4	38	4	4	36	4	-	-	136	-	136	1,768	(1,631)
Interest Expense	(811)	(819)	(817)	(949)	(1,003)	(930)	(903)	(910)	(907)	(887)	(885)	(885)	(10,709)	(10,731)	23	(10,623)	(85)
Capitalized Interest	-	-	-	17	-	26	-	-	36	-	-	59	138	162	(24)	102	36
Change in Valuation of Swap	-	-	(919)	-	-	(213)	-	-	395	-	-	-	(737)	-	(737)	(726)	(11)
Other Income/Expense	(82)	(2)	87	26	37	20	70	12	26	(17)	-	-	175	-	175	(1,097)	1,272
Unrealized Gain on Investment	(303)	(6)	396	26	115	9	256	(1)	(28)	(143)	-	-	321	-	321	(2,011)	2,331
Net Other Income (Expense)	(1,193)	(824)	(1,215)	(878)	(848)	(1,052)	(573)	(896)	(442)	(1,043)	(885)	(826)	(10,676)	(10,569)	(106)	(26,317)	15,642
Net Income (Loss)	(\$1,248)	(\$3,472)	(\$4,796)	(\$2,923)	(\$3,909)	(\$4,328)	(\$2,959)	(\$2,336)	(\$3,643)	(\$3,971)	(\$3,494)	(\$3,851)	(\$40,930)	(\$35,013)	(\$5,917)	(\$42,470)	\$1,540
2016 Headcount																	
Approved Budgeted Positions	600	600	600	600	600	599	599	599	599	599	599	599	599				
Forecast Including Vacancy	574	569	564	567	572	568	570	573	575	574	580	583	583				
Total Forecast Positions	604	605	613	615	612	612	612	611	611	611	610	610	610				
Headcount Vacancy	5%	6%	8%	8%	7%	7%	7%	6%	6%	6%	5%	5%	5%				
NRR Over / (Under) Recovery	\$3,857	\$1,183	(\$5,437)	\$1,390	\$1,553	(\$5,318)	\$1,987	\$1,963	(\$4,669)	\$946	\$1,600	(\$4,580)	(\$5,525)				

Southwest Power Pool
Current Month Financial Overview
October 31, 2016
(in thousands)

	Current Month Compared to Forecast			YTD Actual Compared to YTD Budget			FY Forecast Compared to FY Budget		
	Oct-2016 Actual	Oct-2016 Forecast	Variance Fav/(Unfav)	Oct-2016 Actual	Oct-2016 Budget	Variance Fav/(Unfav)	FY 2016 Forecast	FY 2016 Budget	Variance Fav/(Unfav)
Income									
Tariff Administrative Service	\$12,252	\$12,213	\$39	\$120,337	\$125,550	(\$5,213)	\$144,802	\$150,660	(\$5,858)
Fees & Assessments	2,254	2,102	152	22,228	23,062	(834)	26,745	27,520	(776)
Contract Services Revenue	44	44	(0)	440	415	26	529	498	31
Miscellaneous Income	227	253	(25)	3,689	2,933	756	4,176	3,400	776
Total Income	14,778	14,612	166	146,693	151,960	(5,266)	176,252	182,079	(5,827)
Expense									
Salary	4,725	4,710	(15)	47,089	47,176	87	56,590	56,586	(4)
Benefits & Taxes	2,370	2,429	59	26,024	23,127	(2,897)	31,455	27,879	(3,576)
Continuing Education	35	54	18	331	577	246	427	688	261
Salary & Benefits	7,131	7,193	62	73,444	70,881	(2,563)	88,473	85,153	(3,319)
Employee Travel	177	204	27	1,659	2,047	389	1,983	2,449	466
Administrative	1,065	1,093	28	4,196	4,483	288	4,811	5,198	386
Assessments & Fees	1,507	1,507	-	15,634	14,167	(1,467)	18,648	17,000	(1,648)
Meetings	189	166	(22)	866	876	10	958	983	26
Communications	332	341	10	3,263	3,409	146	3,937	4,091	153
Maintenance	1,388	1,312	(76)	11,985	14,039	2,054	14,903	16,847	1,943
Services	1,124	1,369	245	11,844	12,378	534	14,420	14,803	383
Regional State Committee	12	22	10	182	219	38	226	263	38
Depreciation & Amortization	4,782	5,056	274	48,242	49,830	1,588	58,148	59,736	1,588
Total Expense	17,706	18,264	558	171,314	172,329	1,016	206,506	206,523	16
Other Income/(Expense)									
Investment Income	4	-	4	136	-	136	136	-	136
Interest Expense	(887)	(886)	()	(8,938)	(8,960)	23	(10,709)	(10,731)	23
Capitalized Interest	-	-	-	78	102	(24)	138	162	(24)
Change in Valuation of Swap	-	-	-	(737)	-	(737)	(737)	-	(737)
Other Income/Expense	(17)	-	(17)	175	-	175	175	-	175
Unrealized Gain on Investment	(143)	-	(143)	321	-	321	321	-	321
Net Other Income (Expense)	(1,043)	(886)	(157)	(8,964)	(8,858)	(106)	(10,676)	(10,569)	(106)
Net Income (Loss)	(\$3,971)	(\$4,538)	\$567	(\$33,585)	(\$29,228)	(\$4,357)	(\$40,930)	(\$35,013)	(\$5,917)
Headcount	574	574	-	574	599	(25)	583	599	(16)

Southwest Power Pool
Balance Sheet
October 31, 2016
(in thousands)

	10/31/2016	12/31/2015	Net Change
ASSETS			
Current Assets			
Cash & Equivalents	\$53,520	\$42,003	\$11,518
Restricted Cash Deposits	199,616	196,918	2,698
Accounts Receivable (net)	34,330	39,789	(5,459)
Other Current Assets	12,305	8,420	3,885
Total Current Assets	\$299,772	\$287,131	\$12,641
Total Fixed Assets	98,895	136,480	(37,585)
Total Other Assets	2,684	6,051	(3,368)
Investments	10,059	9,352	707
Total Assets	\$411,410	\$439,014	(\$27,604)
Liabilities & Equity			
Liabilities			
Current Liabilities			
Accounts Payable (net)	\$22,831	\$30,609	(7,778)
Customer Deposits	201,945	196,918	5,027
Current Maturities of LT Debt	22,901	21,944	957
Other Current Liabilities	37,544	44,092	(6,547)
Line of Credit	-	2,000	(2,000)
Deferred Revenue	4,675	5,318	(643)
Total Current Liabilities	289,897	300,881	(10,984)
Long Term Liabilities			
US Bank Mortgage - 2027	2,981	3,135	(154)
4.82% Series-A Senior Notes - 2042	27,611	28,025	(414)
4.82% Series-B Senior Notes - 2042	32,213	32,696	(483)
3.55% Series-C Senior Notes - 2024	45,500	50,750	(5,250)
3.00% Series-D-1 Senior Notes - 2024	32,500	36,250	(3,750)
3.25% Series-D-2 Senior Notes - 2024	35,000	38,750	(3,750)
3.8% Series-E-1 Senior Notes - 2025	37,000	37,000	-
Floating Series Regions Note - 2024	28,500	-	28,500
Capital Lease Obligation	4,317	5,674	(1,356)
Other Long Term Liabilities	38,889	35,267	3,622
Total Long Term Liabilities	284,512	267,548	16,964
Net Income	(33,585)	(42,470)	8,886
Members' Equity	(129,415)	(86,945)	(42,470)
Total Members' Equity	(163,000)	(129,415)	(33,585)
Total Liabilities & Equity	\$411,410	\$439,014	(\$27,604)

**Southwest Power Pool
Headcount Analysis
October 31, 2016**

	<u>Current Month Actual vs. Budget</u>			<u>Year End Forecast vs. Budget</u>		
	<u>Actual</u>	<u>Budget</u>	<u>Over/(Under)</u>	<u>2016</u>	<u>2016</u>	<u>Over/(Under)</u>
	<u>Oct-2016</u>	<u>Oct-2016</u>	<u>Budget</u>	<u>Forecast *</u>	<u>Budget</u>	<u>Budget</u>
Administration	50	50	0	50	50	0
Process Integrity	50	58	(8)	52	58	(6)
Operations	153	161	(8)	154	161	(7)
Information Technology	143	146	(3)	146	146	0
Engineering	73	76	(3)	73	76	(3)
Regulatory Policy & General Counsel	25	25	0	25	25	0
Corporate Services	27	28	(1)	28	28	0
Market Monitoring	13	15	(2)	15	15	0
Market Design	7	7	0	6	7	(1)
Interregional Relations	3	3	0	3	3	0
Communications & Gov't Affairs	6	5	1	6	5	1
SPP Regional Entity	24	28	(4)	25	28	(3)
Total Headcount	<u>574</u>	<u>599</u>	<u>(25)</u>	<u>583</u>	<u>599</u>	<u>(16)</u>
Headcount changes:						
2016 Approved positions	602					
Unidentified positions to be eliminated	(3)					
2016 Budgeted positions	<u>599</u>					
Incremental out-of-budget positions	11					
Remaining unidentified eliminations	2					
Operations reduction (2017)	(2)					
2016 Current total positions	<u>610</u>					
Vacancy factor (open positions)	(27)					
2016 Forecast including vacancy	<u>583</u>					

* The headcount forecast includes vacancy at the department level. The budget included a reduction of 3 unidentified positions by year end; however only one of these positions has been identified to date. Total 2016 forecast positions is 610 as compared to the budget of 599. Operations committed to reducing headcount by 2 positions beginning in 2017 and has identified two of the positions during 2016. This is the result of not backfilling for two positions that moved into other open requisitions and reduced the 2016 headcount to 610. Total positions by year end should be 608 instead of 610 with two 2016 eliminations remaining to be identified through attrition.

**Southwest Power Pool
2016-2018 Capital Project Forecast
October 31, 2016
(in thousands)**

	Prior Year(s)	2015 Actual	2016 Forecast	2017 Forecast	2018 Forecast	Total Forecast	Total Budget	Over / (Under)	
2016 New Projects									
EMS Software & OS Upgrade ⁽¹⁾	\$ -	\$ -	\$ -	\$ 210	\$ -	\$ 210	\$ 5,162	\$ (4,952)	-96%
TTSE Dispatcher Training Simulator ⁽¹⁾			218	426	3,000	3,644	3,817	(173)	-5%
PMU Data Exchange ⁽¹⁾			884	724	1,792	3,400	1,888	1,512	80%
Z2 Crediting P2 and P3 ⁽¹⁾			375	125	-	500	749	(249)	-33%
Identity and Access Management System			30	570	100	700	692	8	1%
Local Reliability Assessment			-	500	-	500	500	-	0%
2-Factor Authentication (Part 2 of 2 - Software Development)			97	97	-	194	194	(0)	0%
FERC 676-H NITS Web Oasis Modification			116	-	-	116	108	7	7%
Liferay Portal Replacement			21	79	-	99	100	(1)	-1%
Circuit Redesign			81	8	8	97	96	1	1%
ICCP Software & OS Upgrade			-	62	-	62	62	(0)	0%
Voltage Stability Tools			7	-	-	7	30	(23)	-76%
ProLaw Upgrade			19	1	1	20	24	(4)	-16%
Total 2016 New Projects	\$ -	\$ -	\$ 1,847	\$ 2,800	\$ 4,901	\$ 9,548	\$ 13,422	\$ (3,873)	
Carryover Projects									
Enhanced Combined Cycle - Gas Day ⁽²⁾	\$ 1,301	\$ 436	\$ 4,220	\$ 570	\$ -	\$ 6,527	\$ 7,708	\$ (1,181)	-15%
Transmission Settlements Upgrade ETSE3 ⁽³⁾	-	-	-	2,043	3,038	5,081	3,836	1,245	32%
Z2 Crediting P1 ⁽⁴⁾	351	1,247	213	-	-	1,812	1,643	168	10%
Total Carryover Projects	\$ 1,652	\$ 1,683	\$ 4,434	\$ 2,613	\$ 3,038	\$ 13,420	\$ 13,188	\$ 232	

Notes:

(1) The 2017 - 2018 forecasts for these multi-year projects have been updated to reflect the proposed forecast during the 2017-2019 budget cycle. Total Budget represents numbers from the 2016 - 2018 budget cycle which were estimates from mid-year 2015. The EMS Software & OS Upgrade was changed to reflect an upgrade for multiple products running on compatible and supported operating systems (EMS/CMT/Markets GE/Alstom e-Terra) and results in significant cost savings over the prior budget estimate for only EMS. The prior year budget estimate included hardware costs that were already included in the IT Foundation budget. The EMS Hardware is now only included in the forecast for server refresh in IT Foundation. The revised PMU project forecast reflects incremental hardware costs in 2019 (included in the 2018 Forecast for this report) for anticipated software upgrades and for CIP and high availability requirements.

(2) A portion of contingency expense was removed from the Enhanced Combined Cycle - Gas Day (ECC) project forecast based on executed SOWs. This change is the main driver in the favorable variance to budget.

(3) During the 2017 - 2019 budget planning process, the Transmission Settlements Upgrade project has been changed to a total replacement of the Settlements systems (market and transmission).

(4) The project for Z2 Crediting P1 was established in early 2012 at an estimated cost of \$295. Ongoing challenges in establishing requirements resulted in an impairment loss (\$351) and additional expense to settle with the previous vendor in 2015. A new vendor was selected to move forward with the project at a total projected cost of approximately \$1.8 million.

**Southwest Power Pool
2016-2018 Capital Project Forecast
October 31, 2016
(in thousands)**

	Prior Year(s)	2015 Actual	2016 Forecast	2017 Forecast	2018 Forecast	Total Forecast	Total Budget	Over / (Under)	
Foundation									
IT Foundation ⁽⁵⁾	\$ -	\$ -	\$ 7,495	\$ 7,900	\$ 13,341	\$ 28,736	\$ 35,160	\$ (6,424)	-18%
Other (Non-IT) Department Foundation ⁽⁶⁾			891	1,232	1,379	3,502	4,560	(1,058)	-23%
Ops Foundation ⁽⁷⁾			1,024	2,358	2,533	5,915	8,494	(2,579)	-30%
Facilities Foundation ⁽⁸⁾			595	486	250	1,331	1,193	138	12%
Settlements Foundation ⁽⁹⁾			95	250	250	595	750	(155)	-21%
Total Foundation	\$ -	\$ -	\$ 10,101	\$ 12,226	\$ 17,753	\$ 40,080	\$ 50,157	\$(10,077)	
Total Capital Project Expense	\$ 1,652	\$ 1,683	\$ 16,382	\$ 17,639	\$ 25,692	\$ 63,048	\$ 76,767	\$(13,719)	-18%

5) The 2017 and 2018 forecasts now reflect additional reductions made for the 2017 - 2019 budget cycle. System refresh costs associated with various systems were re-evaluated and some were either eliminated or delayed until 2018-2019 in efforts to reduce costs during the 2017 budget planning. In addition, capital expense reductions were made to the 2016 forecast related to the deferral of various initiatives due to time constraints, hardware infrastructure review, and review of alternative solutions. Impacted initiatives include refresh of ESX hosts, cloud-based infrastructure, and Netezza racks.

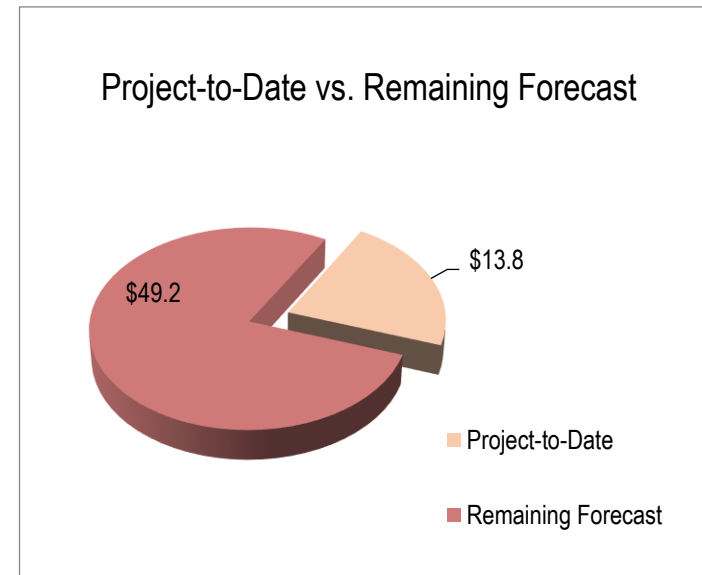
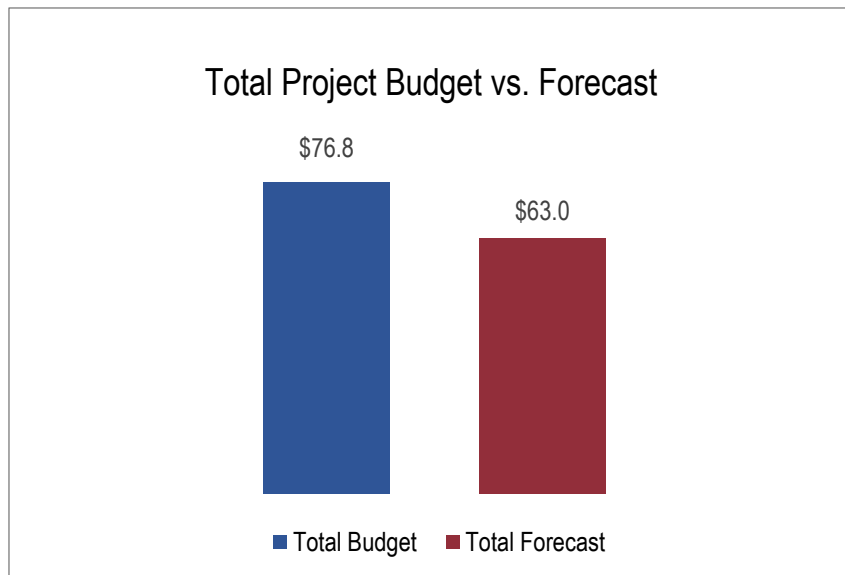
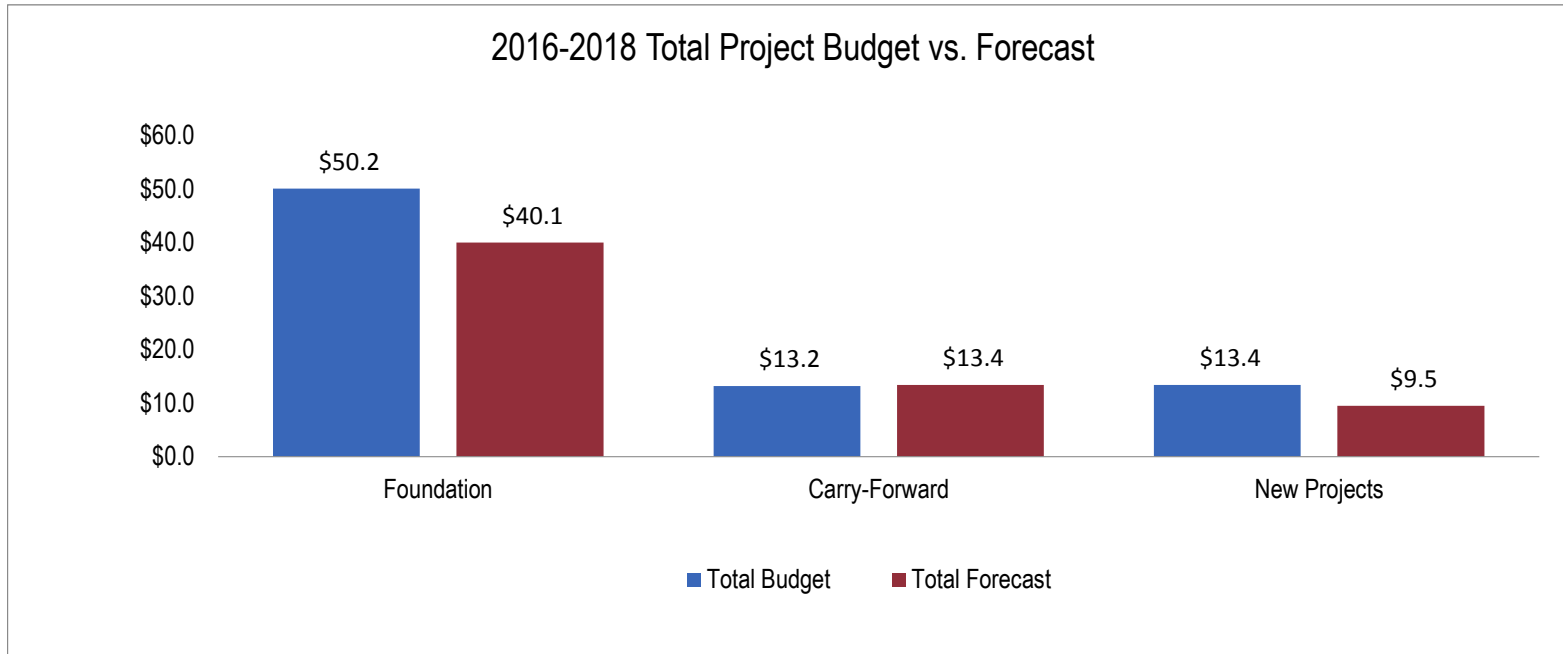
6)) The 2016-2018 Other (Non-IT) Foundation is forecasted under budget due to the deferral, elimination or reduction of several initiatives based on the review of current needs and time constraints. Some examples include reductions in the following areas: HR & Training (new environments utilized with no capital costs involved), Market Monitoring (enhancements eliminated), and Corporate Communications (implemented fixes / small enhancements for SPP.org that were expensed). Additional savings were realized for other items that are projected to come in under budget do to various reasons such as scope changes, more work completed in-house, etc. Examples include the Documentum upgrade, various engineering initiatives, and Splunk (SPP Compliance initiative).

7) Workload for anticipated marketplace enhancements has been delayed due to vendor staffing constraints related to a shift in focus to ECC. This results in a favorable variance in Operations Foundation; however, the ECC project does not reflect the same overage compared to budget because the original ROM budget reflected contingency of \$1.2 million. The 2017 and 2018 forecasts now reflect additional reductions made for the 2017 - 2019 budget cycle.

8) Changes were made to the 2017 and 2018 forecast for additional Facility Foundation improvements as reflected in the 2017 - 2019 budget cycle.

9) A portion of the Settlements Foundation and Operations Foundation is covered by a two-year vendor contract with shared resources. The majority of Settlements enhancements were complete in 2015.

**Southwest Power Pool
2016-2018 Capital Project Forecast
October 31, 2016
(in millions)**





SPP Member-Facing Member-Impacting Portfolio Report Summary

REVISION REQUESTS	CURRENT QUARTER	PREVIOUS QUARTER	CHANGE
In Flight/Current Release	1	3	-2
Pending	10	11	-1
Estimated Cost of Pending Items	\$320,000	\$345,000	-\$25,000
ENHANCEMENT REQUESTS			
In Flight/Current Release	9	20	-11
Pending	116	109	7
Estimated Cost of Pending Items	\$3,745,000	\$3,810,000	-\$65,000
PROJECTS			
In Flight/Current Release	11	15	-4
Pending	2	5	-3
Estimated Cost of Pending Items	\$1,461,000	\$9,139,000	-\$7,678,000
2017 -2019 Projects Pending BOD approval Dec. 2016	7		
Estimated Cost of 2017 -2019 Projects	\$7,300,000		

Notes and Qualifications

- This list is not all inclusive of all SPP planned Revision Requests, enhancement requests or portfolio projects. Specific criteria was used for this report to only include MI and MF items, RRs with system or process changes and large technology projects.

- For any item in flight or in a current release, the cost estimates are not included.
- For any project or RR, any cost estimates given are the internal impact assessment provided (which includes SPP resource estimates as well as external costs).
- For enhancements, any cost estimates given are a high-level estimate in a dollar range and include internal costs.
- Items shaded in blue in the enhancements requests section indicate items that are new since the last quarterly report was published.

Revision Requests - Open

RR#	RR Name	Primary Working Group	Cost Estimate
RR0001_MPRR101, RR0005_MPRR140, RR0112, RR0161	Combined Cycle Enhanced Design Mitigated Transition State Offers ECC Cleanup Commitment Level Cost Recovery and MCR Settlement Design Enhancements	MWG	current release
RR0002_MPRR116	Settlement Area Tie-Line Meter Data	MWG	\$10k - 25k
RR0082	Modification of Make-Whole Payment Grace Period	MWG	\$10k - 25k
RR0088	Release of Unscheduled Firm Timing Modification	BPWG	Up to \$10k
RR0106, RR0184	Outage Deviation	MWG	Up to \$10k
RR0113	Node Connectivity Requirement Enhancement	ORWG	\$10k - 25k
RR0116 RR0142	Quick-Start Real-Time Commitment Quick-Start Multi-Configuration	MWG	\$10k - 25k
RR0127	JOU Combined Option - Aggregate Energy Offer Curve	MWG	\$10k - 25k
RR0130	Commitment Notification Enhancement	MWG	\$25k - 50k
RR0153	Offer Database Roll Forward	MWG	\$10k - 25k
RR0167	TCR EESL Clarification	MWG	Over \$100k

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Recall TSRs entered into webTrans need a reference in Seller comments.	Unplanned C	Low	Up to \$10k	SPP
Return user-friendly "Disapproved" reason from Credit to Markets Markets UI API for Virtual transactions that are not Approved.	Unplanned A	Low	Up to \$10k	SPP Internal
Enable MPs to view their Credit Limit Report from the Portal <=7days before their effective date.	Unplanned C	Medium	\$25k - 50k	SPP
The PPOR Heat Rate curve graph in the MMDD tool is not large enough to show a MW range that is useful for polynomial curves. The size of the graph needs to be increased to provide meaningful value.	Unplanned C	High	Over \$100k	SPP
The MMDD tool should allow multiple submissions of OCC data up until the deadline just like the market systems which allows corrections and changes to be made until the market closes. At midnight the OCC should take the latest submitted values to use in its calculations.	Unplanned C	Unknown	Over \$100k	AEP
Create a read-only user role in the MMDD tool.	Unplanned C	High	Over \$100k	AEP
Settlements & MMU received a request from an MP to breakdown the Day-Ahead Must Offer penalty by Settlement Location.	Unplanned C	Low	Up to \$10k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Programmatic interface to alert members of Repricing Notifications. This would be in lue of the email currently sent out and would be fashioned after the notifications for Settlement Statement publications.</p> <p>Specifically, the intent of the enhancement is to create the following:</p> <ol style="list-style-type: none"> 1. A web service that sends a notification to Market Participant listeners to notify that the repricing data is ready 2. A web service to accept requests and return repricing data to Market Participants 	Unplanned C	High	Up to \$10k	MCG Energy Solutions
Requested enhancement to the Market Systems notification process to also send emails to a specific distribution list when there is a DA market close delay or other related items.	Unplanned A	Low	Up to \$10k	SPSM
Provide a table of SPP generating stations' fuel types broken down by SPP FTR case PSS/E bus numbers	Current Release	Medium	Up to \$10k	XO Energy
Add Resource-Zone Level Load Information	Release +1	Unknown	Up to \$10k	Tungston Power LP
Price Contour Map - Weather and Transmission overlay	Release +1	Medium	Up to \$10k	OGE
Capacity of SPP Footprint by Resource	Release +1	Low	Up to \$10k	OG&E
Expand SPP posting of EMS cases to include 4 cases instead of a single 17:00 case	Release +1	Low	Up to \$10k	Westar Energy
Post hourly Real-time on-line Regulating, Spinning, and Headroom reserves having available ramping capability	Release +1	Low	Up to \$10k	Westar Energy
Transmission POD & SINK Locations Mapping Report	Release +1	Low	Up to \$10k	Tenaska Power Services
Create "Look Ahead" report on day ahead total generation outage.	Release +2	High	Up to \$10k	Trumpet Trading
Post DA & RT public Load data by zone	Release +2	Medium	Up to \$10k	Westar (WRGS)

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Request that wind data be publicly posted in DA and RT markets by zone	Release +2	Medium	Up to \$10k	Westar (WRGS)
For both DA and RTBM markets, require SPP to post hourly load and wind forecasts (DA MTLF and wind forecasts for next day actuals)	Release +2	Low	Up to \$10k	Westar Energy
Replace all GMT and Local timestamp columns with ISO-8601 compliant timestamp	Unplanned A	High	Up to \$10k	SPP
Consolidate Short Term Wind and Short Term Load Forecast files into daily folders	Unplanned A	Medium	Up to \$10k	SPP
Remove "hour/minute" from file names of files representing an entire day	Unplanned A	Low	Up to \$10k	SPP
Revise vendor contract to provide Actual wind resource and Day Ahead forecast wind output by control area	Unplanned A	Low	Up to \$10k	DC Energy Midwest LLC
API to download data published to the Public FTP site	Unplanned A	High	\$10k - 25k	Monterey SW (MOSW_X)
Change file folder structure for hourly data to change "00" named folders to "24"	Unplanned A	Low	Up to \$10k	Monterey SWF LLC
Update "Day-Ahead Wind Forecast" under Operational Data to include the 7 day forecast used for "Forecast vs. Actual"	Unplanned A	Low	Up to \$10k	NRG Power Marketing LLC
Create summary file for market constraint data	Unplanned A	Low	Up to \$10k	AEP
Publish NSI interval data for the following operating day at 0600 of current day	Unplanned A	Low	Up to \$10k	Google Energy, LLC

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: Allow users to use Virtual Bids/Offers post API operations to delete Virtual Bids or Offers . Today, participants must delete Virtual Bids or Offers using a separate API.</p> <p>Requires MP Code Changes: Yes. Participants using the Virtual Service would be required to make code changes.</p> <p>Priority changed to Release +2 on 12/04/2015 based on SPQM discussion.</p>	Current Release	High	\$25k - 50k	XO Energy SW, LP (XOSW)
<p>Summary: Overrides that span multiple days should be returned in the Market Energy Web Service API. The information is displayed correctly in the UI and XML Notifications.</p> <p>Requires MP Code Changes: No.</p>	Current Release	Medium	\$10k - 25k	The Energy Authority (TEA)
<p>Summary: The Markets UI Transaction Log page and associated API operation, should include the endpoint address. In the UI, this column should be added with filtering capabilities.</p> <p>Requires MP Code Changes: Yes. Participants using the TransactionService will be required to make code changes.</p>	Current Release	Medium	\$10k - 25k	Rainbow Energy Marketing Corporation (REMC)

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: Add a unique ID to all Markets XML notifications to provide the ability to determine if duplicate messages are being sent to multiple endpoints.</p> <p>Requires MP Code Changes: Yes. Participants receiving XML notifications would need to modify their code to consume the new element.</p>	Current Release	High	\$25k - 50k	Rainbow Energy Marketing Corporation (REMC)
<p>Summary: The Markets UI should allow users to save preferences such as filtering options (e.g the # of Operating Days) for each tab and not have to reset them every time they log into the Markets UI.</p> <p>Requires MP Code Changes: No.</p> <p>Priority changed to Release +2 on 12/04/2015 based on SPQM discussion.</p>	Current Release	Medium	\$10k - 25k	(SPSM-MP)/American Electric Power (AEP-MP)
<p>Summary: Currently in the Market UI, the messages/filtering options are located at the bottom. Please move messages and filtering options to the top of the display.</p> <p>Requires MP Code Changes: No.</p> <p>Priority changed to Release +2 on 12/04/2015 based on SPQM discussion.</p>	Current Release	Low	Up to \$10k	Southwestern Public Service Company (SPSM-MP)

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: The Markets UI commitment page and corresponding API operation should clearly identify which commitments were a result of the MP Self Commits vs. Market Commitment. The current design does not easily distinguish the difference.</p> <p>Requires MP Code Changes: Yes. Participants using the EnergyService and/or EnergyNotifyService (XML Notification) will be required to make code changes.</p>	Current Release	High	\$25k - 50k	(SPSM-MP)/American Electric Power
<p>The overrides display in Markets UI does not show when an override was entered by an operator. It only shows the intervals that were overridden. If an operator makes an override at 1550 for the current hour and the next 2 hours, the Markets UI only displays that an override was entered for 1500-1800. This is misleading and the display should display a timestamp of when the override occurred.</p>	Release +1	Low	\$10k - 25k	SPP
<p>Summary: Add all Contingency Reserve Deployments to the Markets UI displays, API operations and XML notifications. Currently, there are no CRD specific notifications for spinning and supplemental reserve deployments (only for BDRs).</p> <p>Requires MP Code Changes: Yes. Participants using the ReserveService and/or ReserveNotifyService (XML Notifications) would be required to make code changes.</p> <p>Priority changed to Release +2 on 12/04/2015 based on SPQM discussion.</p>	Release +1	High	\$25k - 50k	Southwestern Public Service Company (SPS)

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: Improve data structure for Overrides in Markets API and Notification to help with parsing data.</p> <p>Currently, resource offer overrides are communicated to participants in a single text field in the API and XML notification. The text field includes multiple pieces of information (e.g. resource name, operating hour, overridden parameter) which cannot easily be parsed programmatically.</p> <p>Requires MP Code Changes: Yes. All participants using the EnergyService and/or EnergyNotifyService (XML Notifications) will be required to make code changes.</p> <p>Priority changed to Release +2 on 12/04/2015 based on SPQM discussion.</p>	Release +1	High	\$25k - 50k	Southwestern Public Service Company (SPSM-MP)
<p>Summary: Add ConstraintType and ContingentFacility to the Binding Limits APIs and Markets UI screens to have it match public data.</p> <p>Requires MP Code Changes: Yes. Participants using the MarketService and MarketNotifyService will be required to make code changes.</p>	Release +1	High	\$25k - 50k	Tenaska Power Services Co. (TNSK)
<p>New business process regarding reason code #1 for contingency reserve & #3 missing or bad resource SCADA under the XmptDev5minFlg.</p>	Release +1	High	\$25k - 50k	SPSM

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Currently the Markets UI/API allows updates to offer parameters of resources that have already been committed for that date(Manual Commitments or Local Commitments). Although the UI/API will accept the change this is not used as an input to the study. This is confusing to MPs that update their DAMKT offers before 11am because they expect the changes to show up in their results. There should be a warning message, similar to overrides, that indicates the offer that was effective at the time of commitment will be used. Adding this functionality would prevent confusion when MPs attempt to update their DAMKT offers.</p>	Release +1	Medium	\$10k - 25k	SPP
<p>This is required in order for the XML upload to continue functioning when the new 2-factor authentication protocol is implemented.</p>	Release +1			
<p>Summary: Add indicator to Emergency Limit notifications, API operations and UI displays to specify whether the minimum or maximum limit will be exercised.</p> <p>Requires MP Code Changes: Yes. Participants using the EnergyService API and/or EnergyNotifyService XML Notification service will be required to make code changes.</p>	Release +2	High	\$25k - 50k	Southwestern Public Service Company (SPS)
<p>Summary: In the Markets UI, add a transaction type column to identify if the transaction is a Submission, Query or Notification. This column should be filterable.</p> <p>Requires MP Code Changes: No.</p>	Release +2	Medium	\$10k - 25k	SPP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: Add new API operations and UI display to provide aggregated wind forecast.</p> <p>Requires MP Code Changes: No. This is a new, optional API operation that does not require MP code changes.</p>	Release +2	Medium	\$10k - 25k	Southwestern Public Service Company (SPSM-MP)
<p>Summary: Create a new XML notification to inform participants their Virtual Bids or Offers have been deleted from the Markets system as the result of Credit Default or Market Monitoring Virtual Block event.</p> <p>Requires MP Code Changes: No. This would be a new, optional Notification that will not require MP code changes.</p>	Release +2	Medium	\$10k - 25k	SPP
<p>Summary: Add reserve zone to the Day-Ahead and Real-Time Cleared Operating Reserve offers in the Markets UI, API and applicable XML notifications.</p> <p>Requires MP Code Changes: Yes. Participants using the ReserveService and/or ReserveNotifyService (XML Notifications) will be required to make system changes.</p>	Release +2	High	\$25k - 50k	Kansas City Power & Light, Co.

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: Allow participants to limit user access to the GetMarketMessageSetbyDay operation and corresponding UI page. Currently there is a possibility that a market operator can send an AO specific message that could be retrieved using the GetMarketMessageSetbyDay operation or UI. Since some vendors are given access to Market webservice to download general market data and should not be privy to any AO specific information, participants need a way to restrict access to this data.</p> <p>Requires MP Code Changes: No. A new role will be created specifically for this operation to allow participants to further restrict access to this information. Participants LSAs would need to grant users access to view the GetMarketMessageSetByDay and UI information.</p>	Release +2	Medium	\$10k - 25k	AEP
<p>Summary: In the Markets UI, provide members with a visual timeline of their commitments.</p> <p>Requires MP Code Changes: No.</p>	Release +2	High	\$25k - 50k	SPP
<p>Summary: Create a Markets UI display and API operation to show SPP defined non-cost resource mitigation parameters in hourly intervals.</p> <p>Requires MP Code Changes: Yes. Participants using the EnergyService API will be required to make code changes.</p>	Release +2	Medium	\$10k - 25k	SPP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: Add effective and termination times to all Resource Offer UI pages</p> <p>Currently, participants are not easily able to determine when a resource offer becomes effective and terminates in the Markets system. Understanding these dates will allow participants to see how far the offer data will roll-forward to future Operating Days/Operating Hours. To address this request, SPP would like the Markets UI resource offer pages listed below to be modified to include the effective and termination dates stored in the Markets system.</p> <p>Requires MP Code Changes: No.</p>	Release +2	Low	\$10k - 25k	SPP
<p>Summary: XML Download (Reports) functionality in the Markets UI needs to support both CSV and XML formats. Currently, the UI only supports XML file format.</p> <p>Requires MP Code Changes: No.</p>	Release +2	Medium	\$10k - 25k	SPP
<p>Summary: In the Markets UI, add Modified Date and User ID of user who made the last change to all Resource Offer screens.</p> <p>Requires MP Code Changes: No.</p>	Release +2	High	\$25k - 50k	Southwestern Public Service Company (SPSM-MP)
<p>Summary: Modify XML download reports available in the Markets UI to include ModifiedBy and ModifiedDate. This will help Market Participants distinguish when an update was made via API submittal versus a manual Markets UI submission.</p> <p>Requires MP Code Changes: No.</p>	Release +2	High	\$25k - 50k	Southwestern Public Service Company (SPS)

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: Enhance Markets UI to allow right click feature to view or edit</p> <p>Requires MP Code Changes: No.</p>	Release +2	Medium	\$10k - 25k	Southwestern Public Service Company (SPS)
<p>Summary: Provide UI page and API operations to retrieve historical Reserve Cap notifications. The goal is to allow participants to review the stream of notifications that may have been delivered in the past.</p> <p>Requires MP Code Changes: No. The new API operations would be optional operations which would not require participant system modifications.</p>	Release +2	High	\$10k - 25k	SPP
<p>Summary: Add a Markets UI page and API operation to show total Real-Time LMP per hour.</p> <p>Requires MP Code Changes: No. There would be new, optional API operations added. Participants would not be required to make code changes.</p>	Release +2	High	\$10k - 25k	Arkansas Electric Cooperative Corporation (AECC)
<p>Summary: Add Advanced filters or "quick pick" list in the Markets UI for frequently used operations. This is needed to reduce the amount of mouse clicks required to navigate to various pages in the UI.</p> <p>Requires MP Code Changes: No.</p>	Release +2	High	\$25k - 50k	American Electric Power (AEPM-MP)
<p>A member requested that historical Markets data be available for more than 7 days via the Market UI/API.</p>	Unplanned A	Low	\$25k - 50k	CRGL

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
An enhancement to the XML notification or other notification methods would be needed to add a reason code for Reliability and Economic deployment when DVER's receive the 'Follow' flag. DVER's are notified of when to 'follow dispatch' but there's no indication about the reason to follow deployment.	Unplanned A	Low	\$25k - 50k	SPP
The following request was made by a participant in regards to freezing the hours column with the information displayed on the screen requires user to scroll to see all the information.	Unplanned A	Low	\$10k - 25k	Carrie Dixon - SPSM
Summary: Create a screen in the Markets UI that lists all of the Settlement Locations that have a Virtual Bid and/or Offer with the ability to link to the Virtual Bid/Offer. Requires MP Code Changes: No. Priority changed to Unplanned B on 03/25/2016 based on SPQM discussion.	Unplanned B	High	\$25k - 50k	Sesco Trading
Summary: Clearly highlight the type of Market case (RTBM, DA, or Mitigation) for which the Market Participant is entering offer curve data so as to be readily visible to the user. Requires MP Code Changes: No. Priority changed to Unplanned C on 03/25/2016 based on SPQM discussion	Unplanned C	Medium	\$10k - 25k	Google Energy, LLC

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Summary: Allow users to submit, delete and query Virtual Bids/Offer within the same API operation. Today, participants must submit, delete and query Virtual Bids separately from Virtual Offers.</p> <p>Requires MP Code Changes: No. This change would result in new, optional API operations which would not require MPs to make code changes.</p>	Unplanned C	High	\$25k - 50k	XO Energy SW, LP (XOSW)
<p>Summary: Create a Markets UI display and API operations to show the total output (Energy+Reg Up/Down+Spin/Supp) of a generation plant.</p> <p>Requires MP Code Changes: No. The new API operations would be added as optional which would not require participant code changes.</p>	Unplanned C	High	\$10k - 25k	Arkansas Electric Cooperative Corporation (AECC)
<p>This change is proposed to enable the Market to handle unit/load contingency constraints in a more accurate manner. The primary member impact will be that if a unit or load is expected to be disconnected during the contingency of the flowgate (based on flowgate definition/modeling), then it will no longer receive a Marginal Congestion Component added to their LMP for that flowgate.</p>	Release +2	Medium	\$25k - 50k	SPP
<p>The two factor authentication project is enhancing the security of Integrated Marketplace Applications by requiring two factor authentication for all externally exposed applications. In addition, some infrastructure updates are being made that apply to all applications (internal and external).</p>	Unplanned C	Medium		

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Why does CROW not show the Implemented and Completed dates/times when you export them to Excel? I would like to use this for Compliance evidence but it only shows the Planned Start/End Date/Time. (submitted via RMS from GRDA on 1/5/2016)</p> <p>Currently the automatic "Export to Gantt" and "Export to Excel" do not include any information regarding the Request Type. I would use those features if it included the Request Type because without that column it is not known if it is a derate or an outage just by looking at the exported reports.</p>	Unplanned C	Low	Up to \$10k	BASIN & GRDA
<p>Westar requests an SPP modeling enhancement to either make CROW line/xfmr names consistent with EMS/TCR comment names for line/xfmrs or vice versa. The line/xfmrs names need to be the consistent between CROW and EMS/TCR .raw comment names.</p>	Unplanned C	Low	Up to \$10k	WRGS
<p>Keep the lower environments of CROW more in line with PROD as far as equipment that is available to submit outages for</p>	Unplanned C	Low	Up to \$10k	KCPL
<p>This functionality is standard in EMP 2.6 with a patch. SPP would like to backport this functionality to its EMP 2.5 system.</p>	Unplanned C	Unknown	Up to \$10k	SPP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>SPP would like a way to more easily control an island's frequency during restoration in DTSPSM.</p> <p>One possibility is to have a way to input a target frequency and have the units in the island respond as needed.</p> <p>SPP would also like more information on the group-funded project for Blackstart Enhancements that has been mentioned in recent Users' Group meetings.</p>	Unplanned C	Unknown	\$10k - 25k	SPP
<p>Currently during restoration drills a unit can generate well over its maximum MW. SPP would like for the DTSPSM to stop adding additional load MW to a generator if it reaches its maximum MW limit.</p> <p>SPP would also like for the DTSPSM solution to respect a unit's MW minimum output. While trying to solve for a high frequency the solution will cause a unit to motor with a negative MW output.</p>	Unplanned C	Unknown	\$10k - 25k	SPP
<p>SPP would like the ability to truly "fix" a unit's MW output with no frequency response. Currently in the DTS when you remove the frequency control of the unit it will still respond to changes in load.</p>	Unplanned C	Unknown	Up to \$10k	SPP
<p>This project will add functionality to enable SPP Operations to calculate the legacy BA actual loads after SPP is the BA. The existing BAs will continue to calculate and submit actual loads for SPP only in the short term, but have requested SPP take this requirement over shortly after Marketplace go-live since it is a function of a BA and SPP will be the BA.</p>	Unplanned C	High	\$50k - 100k	SPP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<ul style="list-style-type: none"> •Reactors in the .raw exports of the EMS model are showing as Loads in PowerWorld •Tertiary winding bus numbers and circuit IDs should be labeled consistently. •Avoid NULL bus numbers in the EMS CIM in order to avoid inconsistent labelling in exported .raw cases. <p>Requested by: Westar (Cliff Franklin & Eric Hayes)</p>	Unplanned C	Unknown	\$10k - 25k	Westar
Could SPP support a website for serving Next-day studies? Other RCs have implemented share space where next -day studies can be posted and reviewed by entity members. Currently, SPP members are emailing studies to other members. If SPP has been established to facilitate collaboration and coordination, a platform for next-day studies would be a step in the right direction.	Unplanned C	Low	\$10k - 25k	NPPD
Would it be possible to automatically export the equipment (lines and transformer) to a file on a regular basis (1 time a week)? There is a need to post this info on a FTP site.	Unplanned C	Unknown	Up to \$10k	AEP
Request for improved planned transmission outage data that includes both the from station and to station of planned transmission outages, using EMS names consistent with models.	Unplanned C	Low	\$25k - 50k	
The Ratings Submission Tool will be updated to allow Transmission Operators (TOPs) to designate the responsibility of submitting rating updates on EMS elements to SPP and NERC Transmission Owners (TOs). Additionally, the work flow will include the required approval of all parties included in a ratings submission (TOs and TOPs) before finally being reviewed, approved, and implemented by Southwest Power Pool.	Release +1	Medium	\$10k - 25k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
In an effort increase security around member-facing systems, SPP is implementing 2-factor authentication. This will involve the use of a username and password in addition to the OATI digital certificate to access the Ratings Submission Tool (and most other SPP systems).	Release +2	Medium	Up to \$10k	
Change to the Bilateral interface to limit the amount of profile data which can be retrieved during one search. Currently, all data is returned if the operating day is null. The changes will include a start and stop date range to restrict the amount of data returned.	Unplanned C	Low	Up to \$10k	ETEC
MP requested enhancement to auto-approve BSS profiles on subsequent re-submissions. Currently only the first submission of a BSS profile set to auto-approve will auto-approve, while subsequent changes require re-approval. Priority Changed to Unplanned A on 3/25/16 based on SPQM discussion.	Unplanned A	Low	Up to \$10k	Tenaska

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>MP submitted multiple enhancement requests to the BSS application and are being tracked in this one request: Enhancements requested include the following:</p> <ul style="list-style-type: none"> - Ability to Confirm/Approve Multiple Days or/and Monthly at a Time Like the RTOs - Drop-down Lists to Select "Locations, Acronyms for Buyer and Seller" in all the Tabs - Move the "Submit Profile Data" Button Elsewhere - Ability to Filter by Date Range, rather Single Date - Filter by "Asset Owner" / Company To Show Data Despite Whether Buyer or Seller for a Particular Operating Day - Profile Revisions for Profile Confirmations Depicting "True" - Ability to Submit Profiles with Constant Volume for "Off peak" and "On Peak" Hours - Ability to Shift Columns Around in the Tabs, not Desired by Users - End Date to Reflect the Actual Last Flow Date, not the Following Date - Custom Option to View Hours by Interval vs AM/PM - Extending Current Header IDs/Contracts to Forward Dates - Daily MW Total Column/Row on All Tabs 	Unplanned C	Medium	\$50k - 100k	TEA
<p>Multiple MPs have requested enhancement to add a date/last updated time stamp to BSS Profiles to assist in determining which profiles need to be validated when multiple profiles have been submitted for a single OD.</p>	Unplanned C	Low	\$10k - 25k	SPSM, PCI, KCPL, KMEA, GRDA, Tenaska

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
In order to prevent typos and assist customers in determining the appropriate acronym for their counter parties, we would like to have an enhancement for BSS to include drop down menus for Buyer and Seller. We have a list we currently are providing to customers located at http://www.spp.org/publications/SMT%20FAQ%2010-1-2013.pdf that can be leveraged to create the dropdown. Model management team will have to provide the updated listing as it is updated.	Unplanned C	Low	Up to \$10k	KCPL
Enhance the current Meter Agent Report Card to work similar to the MP Meter Report to improve performance and usability for the MPs.	Unplanned C	Low	\$10k - 25k	SPP
MP and MA need the ability to see/validate submitted meter data and calibration between Initial and Final meter windows. Currently, the reports are locked and not updated between Initial and Final Meter Windows. Some MPs have requested a way to view what has been submitted and calibration that is continually updated and not stopped, but at a minimum, they need additional time for validation prior to close of Final.	Unplanned C	High	\$50k - 100k	KMEA, WFEC, GRDA, KCPL
Request to update the meter status field whenever the meter file is picked up and processed. Currently, this status is set upon upload of data and is never updated to reflect current status as the settlement system picks them up for processing. Not having this field updated not only makes it confusing (appears that the meter file was not picked up for the final), but makes this field useless to the end user.	Unplanned C	Low	Up to \$10k	MECB
MP request to display summarized data at the hourly interval in the Meter Agent Report Card. Currently, only a detailed display is available.	Unplanned C	Medium	\$25k - 50k	GRDA

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
MP request to add a filter for Meter Locations based on the Meter Agent/MP logged into the Portal. Currently, ALL meter locations for a Meter Agent are displayed and some have around 100.	Unplanned C	Medium	\$25k - 50k	GRDA
Create a report that summarizes the submitted data and indicates when meter data has not been submitted. This report needs to be available to both a Meter Agent Level Role and also a MP/AO Level Role.	Unplanned C	Medium	\$25k - 50k	Westar Energy
Members have requested the ability to know when the last time an OD has been updated for meter processing via the portal. Since the meter process runs every 30 - 60 - minutes, we are requesting that the report show the last time the meter file has processed for that given day to display on report output and if window is open/closed.	Unplanned C	Low	Up to \$10k	WFEC
Adding two new direct assignment charge types that can be used to pass through charges from the Transmission Owner to Transmission Customer. Charge types are as follows: 1) GEN_IMBALANCE_DIRECT_ASSIGNMENT_AMT 2) ENERGY_IMBALANCE_DIRECT_ASSIGNMENT_AMT	Current Release	Medium	\$25k - 50k	SPP/WAPA

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>The transmission settlements (and MVAR upload) still resides in the COS portal. MP would like for API functionality to be added for transmission settlements. Also, we would like to have the ability to assign multiple functions to one certificate (like the current IM; "SPP model" per Annette Holbert).</p> <p>API functions for: Transmission Owner/Customer settlement statements - XML - Daily PTP - Monthly NITS - Schedule 2</p> <p>MVARHr, NITS/CP, Direct Assignment, and Schedule 12 file submissions</p> <p>XML Inputs - Network billing inputs designed to dictate monthly settlement which includes DA, NITS, S12 load designations per specific TSR and / or customer.</p> <p>Prior Year Coincident Peak - Prior Year monthly assessment and net energy load per zone (Schedule 11)</p> <p>Coincident Peak & Prior Year Coincident Peak - Prior Year zonal load for SCH9</p> <p>MVAR Data - Megavahr data for Schedule 2 (reactive compensation)</p>	Unplanned C	Medium	\$50k - 100k	WFEC
<p>Modify existing Network XML to include new tags to identify Schedule 9 and 11 current month NITS loads to be used in the forecasting of Schedule 1A Revenue.</p>	Unplanned B	Unknown	\$25k - 50k	SPP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Market Participant Vendor request to make Settlements notifications smart enough to know when there are multiple runs required for the OD, and only send 1 notification on all associated runs that are posted.	Unplanned C	Medium	\$25k - 50k	MCG Energy Solutions
Settlements notifications are currently the only type of notification from the Marketplace systems that don't include a MP/AO name in the actual message XML. All other notifications that we are aware of have the MP/AO name in the message. For consistency purposes and to make sure that all messages from SPP contain all the information they need for their context, we would like the MP/AO identifier to be added to the Settlements Notification XSD and messages, rather than leaving it to the vendor/MP's system to add that information as metadata when the messages are persisted on our side	Unplanned C	Low	Up to \$10k	Tenaska
<p>The settlement notifications being delivered to the MP's include the settlement type. This causes multiple notifications to be issued at the same time. One for Initial, one for Final, and one for each resettlement.</p> <p>As a consequence, processes that automatically download statements when a notification is received are repeatedly downloading the data.</p> <p>We need a single notification to the MP's when the statement is ready.</p>	Unplanned C	Medium	\$25k - 50k	PCI, MCG Energy Solutions

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
The Two-Factor Authentication project enhances the security infrastructure of Integrated Marketplace. Settlements is one of the systems impacted by these security changes. The Two-Factor Authentication Project MIPO will detail the impacts to Settlements users and the Technical Specifications document will help explain the software related changes necessary for Settlements Users to comply with two-factor authentication.	Unplanned B			
Would it be possible to provide the IM settlements calendar in XML format? Our meter submission is automatic and being able to import the "due dates" to compare against would be very handy, especially during the holiday adjusted schedules. I'm doing this with the Excel version, but due to the nature of Excel, it's a semi-manual process."	Unplanned C	High	\$50k - 100k	WFEC
MP Requested enhancement to provide an additional Meter Report option via the Portal. The request is to provide a calibration summary report to the market participant with the top down load for the Settlement Area.	Unplanned A	Low	\$25k - 50k	NPPD
A report to provide the Market Participants the costs allocated to the market caused by the GFA Carve Outs and the hourly/monthly deviations associated with the GFA Carve Out Schedules'	Unplanned C	Low	\$10k - 25k	SPP
MP requested enhancement to provide a method for MPs to retrieve the weekly invoices in PDF format programmatically. Currently, only the XML version of the invoice is available via the API.	Unplanned C	Medium	\$25k - 50k	Freepoint Commodities (FRPT)

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
The invoice is created by Market Participant and if that MP has more than one Asset Owner there are currently no subtotals by Asset Owner. There is only a Grand Total for the MP. We have to provide these invoice to auditors and regulatory bodies and they would really like to see a subtotal by AO so they don't have to manually add up all the lines to come up with one. We would like that too!	Unplanned C	Medium	\$10k - 25k	KCPL
<p>MP requesting the following data be added to the EQR reports.</p> <p>FERC Tariff reference; Contract service agreement; Transaction unique identifier; Type of rate; Term name; Increment name; Increment Peaking name; Product name; Transaction quantity; Transaction price; Product name;</p> <p>Combined 03-949 with this ticket as the requests were duplicates. 03-949 requested all of the data required by FERC to be included on the EQR report.</p> <p>Internal Design Discussions have started with requirements from the EQR Task Force, however this has not been assigned a release yet.</p>	Unplanned A	High	\$50k - 100k	HQ Energy Services
Request for the FERC EQR data to be a month long, instead of the current 7 days	Unplanned A	High	Up to \$10k	AEP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Market Participant requested the ability for the Settlement Reports - View Settlement Statements role to be specified at the Asset Owner level, as opposed to only the Market Participant level.</p> <p>Priority Grouping of O-Other: Need further explanation of the benefits of this request. This data is already available to AOs in the determinant report. Settlements reaching out to MP to show where this data can be found.</p> <p>Per SPQM 03-25-16, move to Unplanned C if approved by the SUG. 09/12/16: Per multiple MP requests, moved to Unplanned A.</p>	Unplanned A	Medium	\$10k - 25k	Tenaska, TEA

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Make additional market-wide determinants available to Settlement determinant Report. The attributes for Market by Hour for DA and 5 min for RT requested are:</p> <p>DA RegUp Cleared Volume DA RegDn Cleared Volume DA Spin Cleared Volume DA Supp Cleared Volume</p> <p>DA RegUp Distribution Volume DA RegDn Distribution Volume DA Spin Distribution Volume DA Supp Distribution Volume</p> <p>RT RegUp Cleared Volume RT RegDn Cleared Volume RT Spin Cleared Volume RT Supp Cleared Volume</p> <p>RT RegUp Distribution Volume RT RegDn Distribution Volume RT Spin Distribution Volume RT Supp Distribution Volume</p> <p>Action Item from 12/2015 SPQM: Gary Cate Provided XCEL Energy Public Data URLs where to find this information on 12/11/15. SPP followed up on 12/18/15 and 2/3/16 and they have not had time to review the information. This ticket will remain open until they have</p>	Unplanned C	Unknown	\$50k - 100k	SPSM

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Add the ability to the GUI for processing Meter Requests within Soap Envelopes. This would allow the same file to be processed both via API or GUI without any changes. Currently, API requires the envelope and Portal requires it NOT be there. It would be much simpler if the same format could be used for both.</p> <p>Priority Group O - Other: Need further explanation of the benefits of this request. Need to understand the added value, this would only change the way this is currently done. Settlements reaching out to MP to see if this is still needed.</p>	Other	Unknown	Up to \$10k	SPS
<p>Request a change that BSS profiles allow NULL values rather than forcing a value of 0 when no schedule is needed.</p> <p>Having '0' and 'null' is an industry understanding. "0" might actually be a real numerical value; where as "null" is an understanding that there shouldn't be any value for a particular hour or set of hours on a particular BSS. "0" vs "NULL" also can prevent clerical errors from being made since there is a distinguished understanding that nothing is purposely scheduled (ie unit outage), oppose to actually representing purposely a couple potential hours where no flow occurred (ie no load on a particular unit during a couple of off peak hours).</p> <p>Priority Grouping of O-Other: When developing the Market a business decision was made to not allow "NULL" values. If we were to allow "NULL" values we would not know if the Null value was intended or if the MP missed imputing data. Settlements is reaching out to the MP in regards to this request.</p>	Other	Unknown	\$10k - 25k	TEA

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
<p>Currently the settlement billing determinant file is available at the AO level only and we would like to see it also available at the MP level.</p> <p>Priority Grouping of O-Other: This can only be done for the API, Data Volume would be too large through the UI. Settlements reaching out to MP.</p>	Other	Unknown	\$25k - 50k	Tenaska
<p>Currently we only pass through the Auction ID attribute through to the customers on their Bill Determinant Report. In the future we would like to have the Auction Name and the Peak/off peak auction type as attributes on TCR/ARR determinants that currently use the AID attribute.</p> <p>Priority Grouping of O-Other: Need further explanation of the benefits of this request.</p>	Other	Unknown	\$50k - 100k	unknown
<p>Market Participant requests to add GMT offset to the Operating Date and Invoice Date fields in the Settlement Statement Report. Their internal systems operate at GMT the offset is important to parsing of the file.</p> <p>Priority Grouping O-Other: Need further explanation of the benefits of this request. The Invoice date and Operating date are not time specific.</p>	Other	Unknown	\$10k - 25k	APX
<p>Publish nomination caps during Verification period</p> <p>Priority changed to 3-M on 02/05/2016 based on SPQM discussion</p> <p>Changed from member-facing to member-impacting on 06/15/2016, based on design.</p>	Release +2	Medium	\$10k - 25k	SPP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Make Round cap , Round Nomination, and Round allocation information downloadable in the ARR Nomination Editor and via API	Unplanned A	Medium	\$25k - 50k	Customized Energy Solutions
Make the entitlement MW column of the downloadable Nomination Editor file available via API.	Unplanned B	Low	\$10k - 25k	Customized Energy Solutions
Have ARR nomination process directly mirror the TCR bid process (create portfolio, enter nominations, save, and submit portfolio). Priority changed to 4C-H on 02/05/2016 based on SPQM discussion	Unplanned C	High	\$25k - 50k	OGE
In the TCR Markets UI API, make it more intuitive that an LTCR Round 1 portfolio must be saved and submitted.	Unplanned A	Low	Up to \$10k	SPP Internal
Enhance Annual and Monthly Self-Convert Files to aid MPs in quickly determining the activity for a period: A) Include clearing price on all rows. Priority changed to 3-L on 06/28/2016 based on SPQM discussion	Release +2	Low	Up to \$10k	WRGS
The Public Downloads Source sink file truncates participation factors to two decimal places. This report needs to display up to 10 digits after decimal.	Release +2	Low	Up to \$10k	KCPL
The two-factor authentication project is enhancing the security of Integrated Marketplace Applications by requiring two-factor authentication for all externally-exposed applications.	Release +1	Medium	\$10k - 25k	SPP Internal
Addition of a "Submit" button inside the portfolio editor.	Release +2	Low	Up to \$10k	AEPM
Append bus names as a comment in .raw file to facilitate MP processes.	Unplanned B	Medium	\$25k - 50k	Westar Energy, SPS

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
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Legend:

Blue: Items which were not listed on the last Quarterly Portfolio Report

Projects

Project Name	Project Description	Cost Estimate	Targeted Implementation Date
TSS 1.2 New Direct Assignment Charges	Transmission Owners have the ability to pass through charges to their customers by submitting an XML to SPP called DA (Direct Assignment) which is an input to the monthly transmission billing. There are no calculations in the SPP Transmission Settlement System associated with these, they are simply passed through to the TC (Transmission Customer). The applicable TC is charged and the TO is credited the amounts submitted in the files. This release contains 2 additional charge types that have been created to support WAPAs need to pass through additional energy imbalance charges to their customers. SPP is not aware of the need by any other TOs for these charge types however, should any other TOs require them – they will be available to all for use.	In flight	11/17/16
Ratings Submission Tool	SPP Operations has identified a need to formalize the submittal of line rating changes that are submitted by Transmission Owners per NERC standard FAC-008-3. These line ratings are used in SPP's reliability function and the network model used by markets. This project is to create an SPP-hosted tool with a web-based user interface, which will allow the appropriate TOs to submit line ratings.	In flight	12/30/16
Markets Release 1.19	This release includes all remaining ECC functionality as well as member requested enhancements to the User Interfaces and APIs.	In flight	11/15/16
Markets Release 1.20	This release includes ECC Defect fixes but not intended to include major changes. # defects and # enhancements is TBD.	In flight	03/01/17
TCR 2.9 Release	RR167 – EESL & Other defects and enhancements	In flight	01/05/17
Market Monitoring Portal	The MMDD and OCC systems must be replaced using a different vendor. Targeting replacing both by mid-2017.	In flight	06/30/17
Z2 Crediting Process	The Crediting Process project will deliver a process for analyzing the stack list of long-term and short-term transmission service requests that impact creditable facilities/upgrades under the tariff.	In flight	11/25/16

Projects

Project Name	Project Description	Cost Estimate	Targeted Implementation Date
Enhanced Combined Cycle - Gas Day	This project will deliver two large areas of functionality related to Enhanced Combined Cycle (RR1- MPRR101, RR5-MPRR140, and RR112, RR161) and Gas Electric Harmonization (RR100).	In flight	03/01/17
TTSE Dispatcher Training Simulator	Phased approach to develop a more realistic simulator environment dedicated to SPP Operations Training by: Enhancing the current Dispatcher Training Simulator (DTS) Incorporating a Market System & Data Feeds Creating a Training and Testing Simulated Environment (TTSE). Adding Visualization Tools-Genview, Flowgate Explorer, etc.	In flight	12/31/18
FERC 676-H NITS Web Oasis Modification	Change to OATI systems caused by FERC Order 676-H NITS upgrade. The OATI webOASIS and webTrans data modules will be updated to incorporate all necessary structures to represent NITS requests via electronic templates.	In flight	03/03/17
2-Factor Authentication	The Marketplace UIs and APIs use certificate based single factor of authentication mechanism. This project proposes adding a 2nd factor of authentication (like password) to the authentication process. While there is no 100% security, the 2-factor authentication will lower the Marketplace UI and API security vulnerability and reduce the risk to the Marketplace systems. Most of the other ISOs use 2-factor authentication with their UIs and APIs.	In flight	10/02/17
PMU Data Exchange Phase I	SPP has a need to install the applicable components for Synchrophasor (aka Phasor measurement Unit PMU) data exchange and analytics. PMU devices can capture voltage, frequency, current, and angle for the 3 phases at a substation as fast as 60 measurements a second. This granularity of data would greatly enhance our after-the-fact event analysis. Along with event analysis, the data would assist in our real-time situational awareness. While the data could aid in identifying generator trips and island situations, it could also aid in our State Estimator accuracy. This aligns with the Operations strategic plan to expand our operations capabilities in the dynamic evaluation of the real-time operations.	In flight	12/30/16

Projects

Project Name	Project Description	Cost Estimate	Targeted Implementation Date
Identity and Access Management System	This project is to purchase and deploy an automated IAM System and supporting processes. Currently, SPP is incurring significant cyber security and compliance risk as well as reduced efficiency due to continued use of manual Identity and Access Management processes.	\$1,112,000	
Z2 Crediting P2 and P3	The objectives of the Z2 Crediting Tool P2 and P3 project are to implement the priority 2 and 3 functional requirements of the Credit Stacking System to (1) enable SPP to reliably and consistently comply with the provisions of Attachment Z2 of the SPP Tariff, (2) to enhance efficiency and accuracy of the revenue crediting process, and (3) reduce the risk of inaccurate settlements and resulting customer disputes.	\$349,000	7/31/17
Marketplace Portal Redesign	Eliminate the use of Liferay as the Marketplace Portal. Develop an in-house	\$237,000	6/30/17
ICCP SW and OS Upgrade	Upgrade to a supported version of ICCP (Alstom e-terracomm) software running on a compatible and supported operating system in accordance with industry and SPP standards. The 32 bit to 64 bit software upgrade will also allow more permissions to be granted to data items without reaching memory limitations. This upgrade will match the existing architecture of 6 production servers and 4 ITE servers.	\$88,116	6/30/18
EMS, CMT, Markets HW & Software Upgrade	Upgrade to a supported version of EMS software (Alstom e-terraplatform) running on a compatible and supported operating system in accordance with industry and SPP standards. The upgrade will also include server and operating system upgrades.	\$209,988	12/37/17
Settlement Systems Replacement	This project will replace the current market and transmission settlement systems with a custom designed single high performance scalable system solution.	\$5,131,008	Pending BOD approval
Day Ahead FFE Exchange	Design and Implement a DA FFE exchange mechanism	\$344,004	Pending BOD approval

Projects

Project Name	Project Description	Cost Estimate	Targeted Implementation Date
Engineering Hub	This project proposes implementation of an automated Engineering Hub capable of interfacing with other applications within SPP through standard database protocols and allow import and export functionality of model data through a web-based graphical user Interface (GUI).	\$591,000	Pending BOD approval
Enhanced Public Data	Make the data currently posted on the public portal more accessible and usable by the Market Participants. This project is also intended to make the public data portal more robust including improved interaction, visualization, filtering, mobile displays, etc.	\$100,000	Pending BOD approval
Freeze Date Replacement Allocation Calculator		\$321,000	Pending BOD approval
Reliability Communications Tool	Creation of a real-time, web-based, two-way communication tool is needed for Reliability Coordination to relay messages to members and between members.	\$982,992	Pending BOD approval
Coordinated Transaction Scheduling	This project includes implementing a process to provide look ahead pricing across the interface , reviewing and submitting necessary changes to SPPs current scheduling practices, and designing and implementing the Coordinated Transaction Schedule process.	\$354,000	Pending BOD approval
PMU Phase 2	The PMU Data Exchange & Analysis Project is expected to analyze, develop, and implement new capabilities to address key grid operating and planning challenges and improve existing capabilities.	\$330,000	Pending BOD approval
PMU Phase 3	The PMU Data Exchange & Analysis Project is expected to analyze, develop, and implement new capabilities to address key grid operating and planning challenges and improve existing capabilities.	\$1,074,996	Pending BOD approval

How to Read this Report

The SPP Portfolio Report, published quarterly, is a report reflecting the latest available inventory of revision requests, enhancements, defects and projects that are subject to prioritization. Each of these areas are reported on a tab within the report.

Revision Requests: Revisions Requests (RRs) are requests to make additions, edits, deletions, revisions or clarifications to the SPP Market Protocols, SPP Business Practices, SPP Criteria, or SPP Open Access Transmission Tariff, except for Appendix F of the Market Protocols. The Portfolio Report includes all system and/or process-impacting revision requests which have been approved by the primary working group and are not yet implemented. The report does not include those RRs which are postponed, held, rejected, withdrawn, or other status which is not subject to prioritization. A complete list of RRs regardless of status is available on SPP.org here:

[SPP Revision Requests - RR Master List](#)

Enhancements: The items on the Enhancement tabs are requests for new or changed system functionality that do not require updates to SPP Market Protocols, SPP Business Practices, SPP Criteria, or SPP Open Access Transmission Tariff. The tab marked “**Open Enhancements-New**” reflects any enhancements that have been requested since the last quarterly report was published. The tab marked “**Open Enhancements-All**” includes both the new enhancement requests and the enhancements that were existing on the last quarterly report.

Defects: A defect is a deviation between the expected and actual results of a system component, service component, or approved artifact. The SPP Portfolio Report includes both stakeholder and staff-reported member-facing and member-impacting defects.

Projects: The items on this tab are a list of active and planned projects that are Member-facing, Member-Impacting or Major Technology projects.

Summary

Items included in the SPP Portfolio Report are evaluated with consideration for several key factors. For Revision Requests and Enhancements, the “Priority Grouping” for an item (defined below), is determined based on Cost Estimates, Level of Complexity and Severity. Other factors including resource availability, Tariff/FERC status, other areas impacted, and correlation to other work may be considered in prioritization. For Projects, prioritization is reflected via “Priority”. The priority of a project is similarly determined based on factors such as a score calculated using the SPP Scoring Tool and a cost estimate. And as with other items, other factors may be considered in prioritization. For more information on the Stakeholder Prioritization process and quarterly meeting process, please see the SPP Stakeholder Prioritization Process document located in the Stakeholder Center of SPP.org.

[SPP Stakeholder Prioritization Process Document](#)

How to Submit a Comment

Comments may be submitted for any: **Revision Request, Enhancement or Project**

To submit comments on Projects, Enhancements, RRs, please use RMS with the “Quarterly Stakeholder Prioritization Feedback” Quick Pick.

[SPP's Request management System](#)

Glossary

Revision Requests Report

Column Header

Purpose

Filter Key Points/Notes

RR #	Tracking number assigned for the Revision Request. Each Rr is assigned a unique number by the Primary Working Group staff secretary.	Use filter to locate revision requests by RR#
RR Name	Revision Request Title	Use filter to locate revision requests by Title
Primary Working Group	The working group owing overall responsibility for the document impacted by the RR. <ul style="list-style-type: none"> • MWG – Market Protocols • RTWG – Tariff • ORWG – Criteria • BPWG – Business Practices 	Use filter to locate revision requests by Primary Working Group
Priority Grouping	Assessment by SPP Staff of the priority group: <ul style="list-style-type: none"> • Current Release – Those items for which system changes or process/procedure changes are in progress. The in-service date will vary depending on the length of development and implementation effort <ul style="list-style-type: none"> • Release+1 – Items that are planned for inclusion in upcoming release(s). Release+1 may also include items with a longer-term implementation date due to their complexity, which are being worked as a higher priority. • Release+2 – Items that are planned for inclusion in the next release after Release+1 items. • Unplanned-A, B or C – Items in the queue not yet planned for a specific release. The sub-classification of A, B or C indicates priority within Unplanned, A being the higher, B being middle and C being the lowest priority of the Unplanned items. • Other – Items which a) need clarification, b) need further explanation of the benefits of the request, or c) cannot be placed in the queue for another reason. 	Use to filter by Priority grouping
Level of Complexity	Staff's assessment of how complex the item is to implement, taking all factors into consideration (High, Medium, Low or Unknown)	Use to filter by Level of Complexity
Severity (Ranked by Primary WG)	Defines the criticality, according to a scale. <ul style="list-style-type: none"> • Critical • High • Medium • Low 	Use to sort by urgency, critical to low or low to critical
Cost Estimate	High-level cost estimation of work	Use filter to locate RR by RR cost estimate
Targeted Implementation Date	If known, the date the revision request is expected to be implemented	
Enhancement and Defect Reports		

Column Header	Purpose	Filter Key Points
Enhancement/Issue ID#	Tracking number assigned for the enhancement or defect	Use filter to locate enhancements/defects by IDR#
Primary Functional Area	SPP Business/System most impacted by the requested enhancement or defect.	Use to filter by functional area to view issues by SPP business areas and/or major systems.
Component	System and/or component of the system affected.	Use to filter by system component. The Component field may be blank if the solution has not been determined.
Enhancement/Defect Description	Brief description of the enhancement request or defect.	
Priority Grouping	<p>Assessment by SPP Staff of the priority group:</p> <ul style="list-style-type: none"> • Current Release – Those items for which system changes or process/procedure changes are in progress. The in-service date will vary depending on the length of development and implementation effort • Release+1 – Items that are planned for inclusion in upcoming release(s). Release+1 may also include items with a longer-term implementation date due to their complexity, which are being worked as a higher priority. • Release+2 – Items that are planned for inclusion in the next release after Release+1 items. • Unplanned-A,B or C – Items in the queue not yet planned for a specific release. The sub-classification of A, B or C indicates priority within Unplanned, A being the higher, B being middle and C being the lowest priority of the Unplanned items. • Other – Items which a) need clarification, b) need further explanation of the benefits of the request, or c) cannot be placed in the queue for another reason. 	Use to filter by Priority grouping
Level of Complexity	Staff's assessment of how complex the item is to implement, taking all factors into consideration (High, Medium, Low or Unknown)	Use to filter by Level of Complexity
Severity	<p>Defines the criticality, according to the scale.</p> <ul style="list-style-type: none"> • Critical • High • Medium • Low 	Use to sort by severity, critical to low or low to critical
Cost Estimate	High-level estimated cost of work based on internal and external man hours	Use filter to locate projects by projected cost estimate

Targeted Release ID	ID associated with the system release, patch, or change that is expected to contain the issue fix.	Filter by all, omitting "blanks", to view all issues that are expected in a planned (future) release. Blank Release ID fields indicate the issue has not yet been associated with a planned release.
Associated ID	Any identifier external to SPP's issue tracking ID, which is the originator of the issue, (e.g. MPRR, MCRR, RMS...).	Filter to view issues that originated from an RMS inquiry, MPRR, MCRR, etc. Use this filter to view data previously provided on the Revision Requests report by selecting all MPRR options in the filter.
Requesting/Identifying Party	Name of company (or companies) submitting the request/identifying the issue.	Filter to view items based on requesting party.
Issue Description	Describes the enhancement from the Market Participant's point of view.	
Date Created	Date on which the issue was opened in SPP's issue tracking system.	
Notes	Text field for any additional information about the issue.	
Project Report		
Column Header	Purpose	Filter Options
Project Number	Project ID within the SPP project portfolio for project identification and tracking	Use filter to locate projects by number
Project Category	The type of project (Marketplace systems, Major Membership Expansion, Major Technology, Other)	Use to filter by project category
Project Description	Brief description of the scope of the work in business terms	Use filter to locate projects by project description/name
Status	Status of the project, as defined by SPP's PMO: <ul style="list-style-type: none"> • Active: Initiated, • Pending: Awaiting Initiation • Suspended: Put on hold • Closed: Completed/delivered 	Use filter to view projects by status
Phase	Current Phase of project: Example, Planning, Execution, Closing	Use filter to view projects by project phase
Priority	Priority for the project. Initial priority (High, Medium, Low, TBD) set by SPP Staff	Use filter to sort by priority
Score	Scores are calculated using the SPP Scoring Tool, which considers alignment with foundational strategies and strategic initiatives defined by the 2014 SPP Strategic Plan, as well as operational and technical efficiencies. (Initial priority score set by SPP Staff)	Use filter to locate projects by score
Cost Estimate	High-level estimated cost of work based on internal and external man hours, as well as other line item costs	Use filter to locate projects by projected cost estimate
Targeted Implementation Date	Planned implementation date	Use filter to locate projects by date range

F.1.1. Admin Fee Measurement

SPP Administrative Fee, Net Revenue Requirement & Load Metric
 FY Forecast vs. Budget Variance
(millions)

	FY Forecast vs. Budget Variance as of:		
	Jul-2016	Aug-2016	Sep-2016
Gross Revenue Requirement (GRR)	(\$2.5) ■	(\$0.9) ■	(\$0.4) ■
Net Revenue Requirement (NRR)	(\$2.4) ■	(\$0.6) ■	(\$0.1) ■
Admin Fee Revenue Collected	(\$5.6) ■	(\$5.3) ■	(\$5.9) ■
Over/(Under) Recovery	(\$7.8) ■	(\$6.0) ■	(\$6.0) ■
MWh Load	(15.0) ■	(14.4) ■	(13.7) ■

F.1.2. Admin Fee Measurement

SPP Administrative Fee, Net Revenue Requirement & Load Metric
FY Forecast as of September 30, 2016

(millions)

	2016 Forecast	2016 Budget	Fav /(Unfav)	
Gross Revenue Requirement (GRR)	\$164.9	\$164.6	(\$0.4)	■
Net Revenue Requirement (NRR)	\$150.6	\$150.5	(\$0.1)	■
Admin Fee Revenue Collected	\$144.8	\$150.7	(\$5.9)	■
Over/(Under) Recovery	(\$5.9)	\$0.2	(\$6.0)	■
MWh Load	393.5	407.2	(13.7)	■

Legend

	NRR	MWh	Admin Fee
2016 Budget	\$150.5	407.2	\$0.37
1¢ Unfavorable NRR Threshold	\$152.8	407.2	\$0.38
1¢ Unfavorable Load Threshold	\$150.5	401.3	\$0.38
1¢ Unfavorable Impact Factor	(\$2.3)	(5.9)	(\$0.01)

Revenues

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

MWh Load

Red	■	> = 5.9 unfavorable
Yellow	■	between 3.1 and 5.8 unfavorable
Green	■	< = 3.0 unfavorable

F.1.3 Admin Fee Measurement

SPP Net Revenue Requirement Components
 FY Forecast as of September 30, 2016
 (millions)

<u>Expenses</u>	2016 Forecast	2016 Budget	Fav /(Unfav)	
Salary & Benefits	\$88.6	\$85.2	(\$3.5)	(4.1%)
Debt Service (Principal & Interest)	34.8	34.8	(0.0)	(0.0%)
Communications & Maintenance	18.5	20.9	2.5	11.9%
Outside Services & RSC	15.1	15.1	(0.1)	(0.5%)
Administrative	4.9	5.2	0.3	5.0%
Travel & Meetings	3.0	3.4	0.4	12.7%
Gross Revenue Requirement (GRR)	\$164.9	\$164.6	(\$0.4)	(0.2%)
<u>Revenue & Other Adjustments</u>				
NERC Revenues *	(\$9.4)	(\$10.4)	(\$1.0)	(9.8%)
Other Revenues	(5.4)	(4.7)	0.7	13.9%
NRR Adjustments	0.5	1.1	0.6	(52.7%)
Net Revenue Requirement (NRR)	\$150.6	\$150.5	(\$0.1)	(0.1%)
<i>* Net Impact RE Expense & NERC Funding</i>	\$4.0	\$4.2	(\$0.2)	(5.9%)

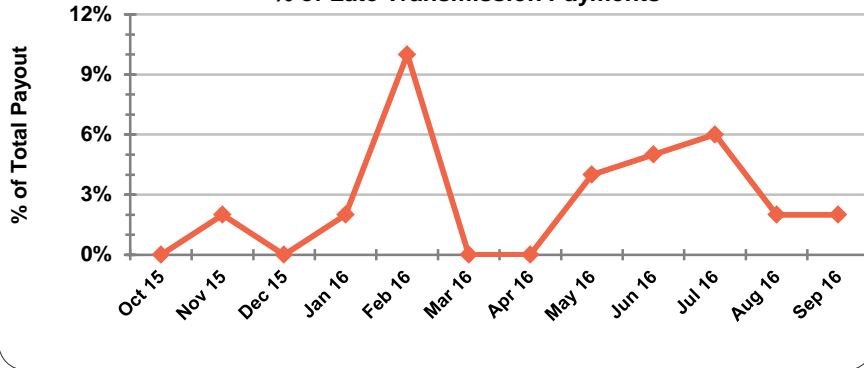
F.1.4. Admin Fee Measurement

SPP Administrative Fee Performance

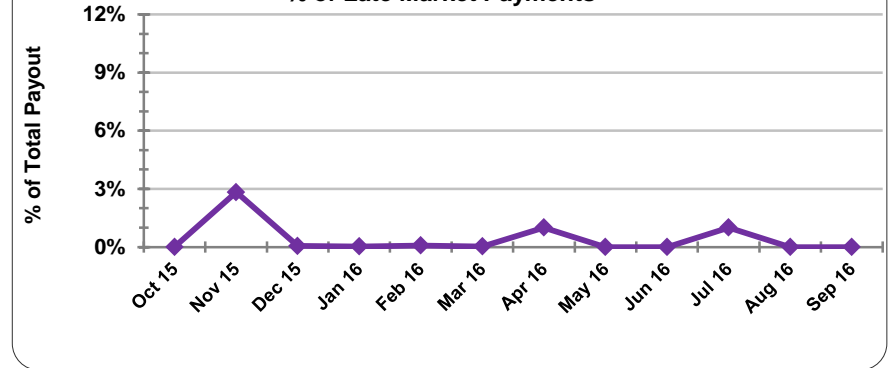
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<u>Approved Budget</u>										
Net Revenue Required (millions)	\$52.8	\$61.5	\$56.5	\$68.4	\$78.4	\$89.6	\$121.8	\$132.6	\$141.2	\$150.5
MWh Load (millions)	288.6	312.5	331.3	333.5	343.0	353.5	360.9	348.2	363.5	407.2
NRR / MWh Load	\$0.183	\$0.197	\$0.170	\$0.205	\$0.228	\$0.253	\$0.337	\$0.381	\$0.389	\$0.370
Approved Admin Fee	\$0.190	\$0.190	\$0.170	\$0.195	\$0.210	\$0.255	\$0.315	\$0.381	\$0.390	\$0.370
<u>Actual / Forecast</u>										
Net Revenue Required (millions)	\$48.0	\$58.1	\$59.8	\$63.5	\$80.8	\$84.8	\$123.3	\$137.0	\$142.6	\$150.6
MWh Load (millions)	301.1	296.1	328.2	331.6	341.4	361.7	357.5	351.0	373.6	393.5
NRR / MWh Load	\$0.159	\$0.196	\$0.182	\$0.191	\$0.237	\$0.234	\$0.345	\$0.390	\$0.382	\$0.383
Calculated Rate Over/(Under) Budget	(\$0.024)	(\$0.001)	\$0.012	(\$0.014)	\$0.008	(\$0.019)	\$0.007	\$0.009	(\$0.008)	\$0.013
Load Growth	5.12%	(1.65%)	10.82%	1.05%	2.96%	5.93%	(1.15%)	(1.83%)	6.46%	5.30%
NRR (calculated rate times load)	\$48.0	\$58.1	\$59.8	\$63.5	\$80.8	\$84.8	\$123.3	\$137.0	\$142.6	\$150.6
Admin fee collected	\$57.2	\$56.3	\$55.8	\$64.7	\$71.7	\$92.2	\$112.6	\$133.7	\$145.7	\$145.6
Difference Over/(Under)	\$9.2	(\$1.8)	(\$4.0)	\$1.2	(\$9.1)	\$7.5	(\$10.7)	(\$3.2)	\$3.1	(\$5.1)

F.2. Credit

% of Late Transmission Payments



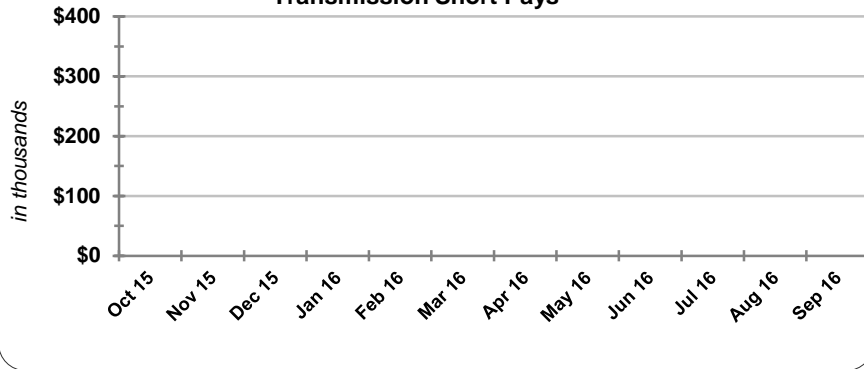
% of Late Market Payments



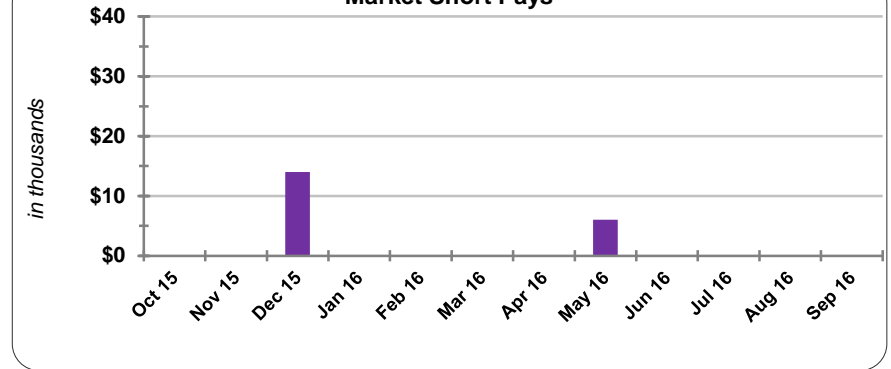
Transmission (\$000s)	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16	12 mo
Late Payments	\$0	\$996	\$47	\$932	\$3,666	\$1	\$-	\$1,921	\$2,350	\$2,537	\$874	\$998	\$14,322
Total Payments	\$43,120	\$43,984	\$60,945	\$39,754	\$37,179	\$41,435	\$42,375	\$51,579	\$44,964	\$44,785	\$43,852	\$47,756	\$541,728
% Late Payments	0%	2%	0%	2%	10%	0%	0%	4%	5%	6%	2%	2%	3%

Market (\$000s)	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16	12 mo
Late Payments	\$2	\$1,439	\$34	\$17	\$35	\$10	\$252	\$29	\$20	\$173	\$202	\$4	\$2,217
Total Payments	\$64,394	\$50,835	\$63,801	\$52,889	\$44,721	\$38,378	\$47,759	\$50,799	\$42,172	\$71,358	\$54,674	\$64,779	\$646,559
% Late Payments	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%

Transmission Short Pays



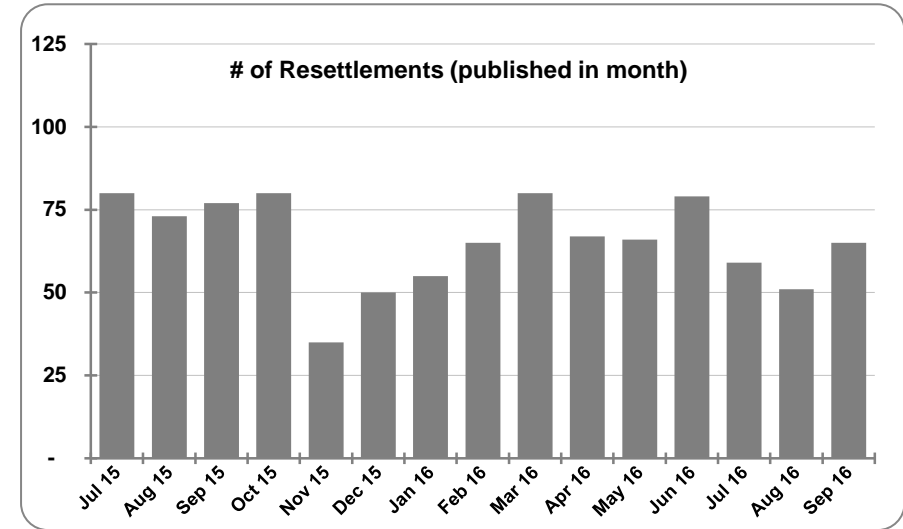
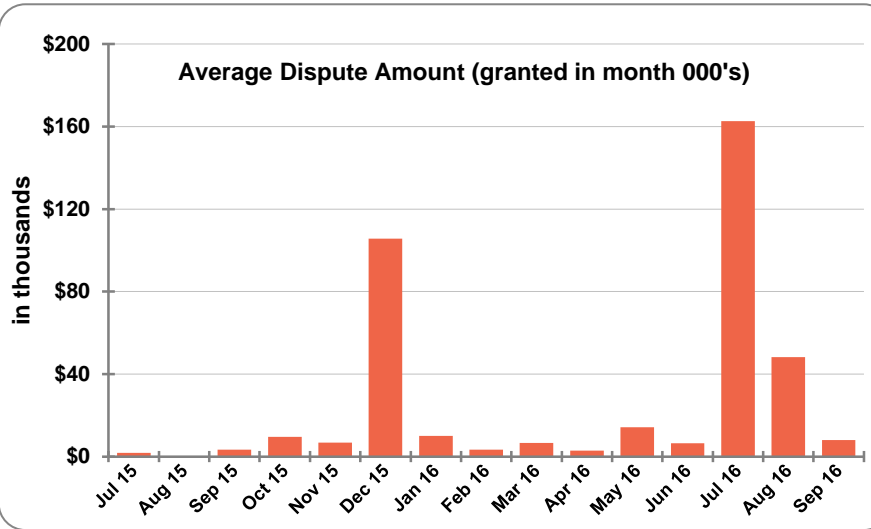
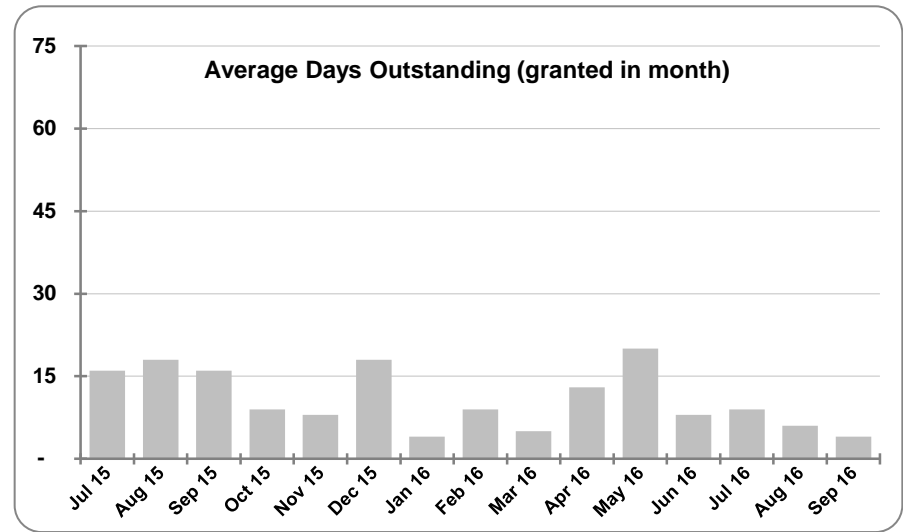
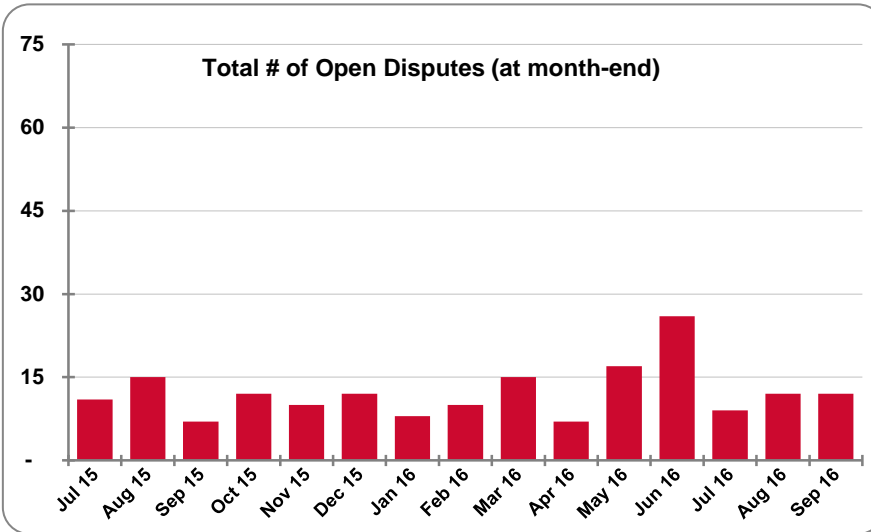
Market Short Pays



Short Pays (\$000s)	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16	12 mo
Transmission	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Market	\$0	\$0	\$14	\$0	\$0	\$0	\$0	\$6	\$0	\$0	\$0	\$0	\$20

Uncollectible (\$000s)	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16	12 mo
Transmission	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Market	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

F.3. Settlement Disputes



	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16
Total # of Open Disputes (at month-end)	11	15	7	12	10	12	8	10	15	7	17	26	9	12	12
Average Days Outstanding (granted in month)	16	18	16	9	8	18	4	9	5	13	20	8	9	6	4
Average Dispute Amount (granted in month 000's)	\$1.8	\$0.0	\$3.3	\$9.7	\$6.8	\$105.6	\$10.1	\$3.4	\$6.7	\$3.0	\$14.2	\$6.5	\$162.6	\$48.3	\$8.0
# of Resettlements (published in month)	80	73	77	80	35	50	55	65	80	67	66	79	59	51	65