SPP *Southwest Power Pool*

Southwest Power Pool

FINANCE COMMITTEE MEETING

July 16, 2018

Omaha, NE

• M I N U T E S •

Administrative Items

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

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

Others attending included:

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

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

TCR Final Reference Price Calculation

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

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

Finance Committee
July 16, 2018

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

2018 Benefit Plan Funding
Malinda See, SPP's VP of Corporate Services, and Julian Brix, SPP Board of Director member and chair of the SPP Human Resources Committee, lead a discussion of the efforts of the SPP Human Resources Committee in oversight of SPP's compensation and benefit plans. Key take-aways included, but were not limited to, the following:
- SPP conducts periodic compensation and benefit plan surveys conducted by an independent third party
- SPP's compensation and benefit plan structure targets the 50th percentile of the survey results
- SPP's retirement plan consists of defined contribution and defined benefit plans which are designed to attract and retain career employees
- The SPP Human Resources Committee has overseen plan changes which have reduced the cost by of operating the benefit program by over $500,000 since 2016.
- The SPP Human Resources Committee will receive a report from its benefit plan survey provider in August which evaluates several alternative retirement plan structures. The initial evaluation indicates any change will increase the near-term cost of the programs.

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

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

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

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

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

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

Respectfully Submitted,

Thomas P. Dunn
Secretary

Southwest Power Pool, Inc.

FINANCE COMMITTEE MEETING

July 16, 2018

Embassy Suites – Omaha, NE

• A G E N D A •

8:00 a.m. – 5:00 p.m.

1. Administrative Items (*15 minutes*) .... Bruce Scherr
2. TCR Final Reference Price Calculation ****ACTION**** (*60 minutes*) .... Mark Holler, Tenaska
3. SPP Benefit Plan Design/Affordability (*60 minutes*) .... Julian Brix, Malinda See
4. Business Process Improvement/Efficiency (*300 minutes*) .... All

      a.   AEP Approach .... Irina Bilenko

      b.   SPP Process and Results .... Michael Desselle

      c.   Westar Approach .... Jason Humphrey

      d.   Strategic Organizational Design .... Cliff Lewis, Traversa Consulting

5. Written Reports ....

      a.   May 2018 Financials
      b.   Financial, Settlements, and Credit Metrics
      c.   SPP Portfolio Report
6. Future Meetings ....

Memorandum

To: **Finance Committee Members**

From: **Tom Dunn**

CC: **Shaun Scott**

Date: **July 23, 2018**

Re: **2018 Meeting Schedule**

Detailed below is a schedule for face-to-face meetings of the Finance Committee for 2018 along with suggested agenda items to be covered at the meetings.

Meeting Date	Time	Meeting Location	Major Agenda Item
April 3, 2018	7:30	Dallas, TX	Financial Audit Review (dinner 4/2) Benefit Plan Funding Auditor Engagement
July 16, 2018	8:00	Omaha, NE	Development Session
July 30, 2018	7:30	Omaha, NE	FC, SPC, & MOPC Chair meeting
September 25, 2018	8:30	Dallas, TX (AEP Office)	Joint FC/SPC Meeting to review 2019 Operating Plan Mid-year Review
October 30-31, 2018	2:30	Little Rock, AR	2019 Budget Review (dinner 10/30)
November 20, 2018	10:30	Teleconference	2019 Budget (IF NEEDED)
December 3, 2018	2:00	Little Rock, AR	SSAE-16 Audit Report, BPI Review Corporate Insurance Review, Authority Review, Actuary Assumption Review

![SPP Southwest Power Pool logo]

Southwest Power Pool

FINANCE COMMITTEE MEETING

April 9, 2018

Kansas City, MO

• M I N U T E S •

Administrative Items

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

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

Others attending included:

Traci Bender (phone)	NPPD
Ray Bergmeier	Sunflower Electric
Phyllis Bernard	SPP Director
Dianne Branch	SPP
Nick Brown (phone)	SPP
Denise Buffington	KCPL
Cynthia Burns	BKD, LLC
Holly Carias	NextEra Energy Resources
Patrick Clarey (phone)	FERC
Graham Edwards (phone)	SPP Director
Darren Ives	KCPL
Jim Jacoby	AEP
Rob Janssen	Dogwood Energy
Carl Monroe	SPP
Chad Moore	BKD, LLC
Jerry Peace	OG&E
Dennis Reed	Consultant
Scott Smith	SPP

Minutes from the January 15, 2018 and February 27, 2018 meetings were reviewed. Kelly Harrison motioned to approve the minutes. The motion was seconded by Bruce Scherr and approved by unanimous voice vote.

2017 Financial Audit

Dianne Branch and Chad Moore presented the results of the 2017 financial report audit. Dianne Branch covered highlights on the financial statements and related footnotes. Chad Moore presented the audit opinion letter and the management letter. The audit opinion was unqualified and no exceptions were noted in the management letter. Following this presentation, SPP staff was dismissed from the meeting as the Committee went into executive session with BKD, LLC.

Following executive session, Bruce Scherr made a motion to accept the audit report as presented and recommend approval of the audit report to the SPP Board of Directors. The motion was seconded by Laura Kapustka and approved by unanimous voice vote.

The Committee next discussed continuing the engagement of BKD and Thomas & Thomas for the 2018 financial audit and benefit plan audits, respectively. Kelly Harrison made a motion to engage BKD to perform an audit of SPP's 2018 financial statements and Thomas & Thomas to perform audits of SPP's benefit plans for 2018. The motion was seconded by Mike Wise and approved by unanimous voice vote. The Committee intends to issue a request for proposal for the 2019 audits (financial, benefit plans, and controls).

2018 Benefit Plan Funding
The Committee reviewed the actuary reports prepared by Osborn, Carreiro & Associates on both the SPP Retirement Plan and the SPP Post-retirement Healthcare Plan.

SPP staff recommended $4.50 million in contributions to the SPP Retirement Plan in 2018, consistent with the suggested contribution calculation of the actuary. The SPP 2018 budget included $5.90 million in funding.

SPP staff recommended $0.00 million in contributions to the SPP Post-retirement Healthcare Plan in 2018. The SPP 2017 budget included $0.00 million in funding.

Bruce Scherr made a motion to contribute $4.50 million to the SPP Retirement Plan and $0.00 million to the SPP Post-retirement Healthcare Plan during 2018. The motion was seconded by Mike Wise and approved by unanimous voice vote.

The Committee intends to invite the chair and staff secretary of the SPP Human Resources Committee to attend the July Finance Committee meeting to discuss the structure of the pension and retirement plans and evaluate opportunities to enhance the affordability of the plans.

New Debt Issuance
SPP staff outlined a strategy for SPP's 2018 $80 million note issuance which would allow SPP to fund its capital expenditure program for the next five years, minimize the amount of idle cash on SPP's balance sheet while capital assets are being acquired and lock in spreads over treasuries for issuance of term notes over the next five years.

The issuance would consist of a committed revolving line of credit in the amount of $80 million. Annually, SPP would convert any funds outstanding under the line of credit to fixed rate term notes at a predetermined credit spread over like term treasuries. The term notes would fully amortize over the next four years. As the term notes amortized, the retired amount of principal under the term notes would be available to be re-advanced under the revolving guidance line. All notes will be unsecured. SPP will be subject to a minimum fixed charge coverage covenant of 1:1, measured at the end of each fiscal year. The covenant is consisted with that used in all of SPP's debt issuances.

Bruce Scherr motioned to approve the recommended loan structure as presented, authorize SPP to seek regulatory approval of the note issuance, and authorize the CEO and CFO of SPP to execute and deliver any and all loan commitments, agreements, statements and other documents associated with the issuance. The motion was seconded by Laura Kapustka and approved by unanimous voice vote.

Administrative Fee Recovery Changes
SPP staff presented a recommendation outlining a process, guiding principles, and a timeline for implementing a change to SPP's Schedule 1A administrative fee billing. The Committee discussed, at length, opportunities and a desire to engage a broader group of stakeholders beyond those who are members of, or participate at meetings of, the SPP Finance Committee. SPP staff and the chair of the Finance Committee were charged with reaching out to the leadership of the SPP Markets and Operations Policy Committee to engage their thoughts in how to gain broader stakeholder input on this topic and move this initiative forward.

Topics for Finance Committee Development Meeting
The Committee members discussed several topics for a more in-depth development meeting to be held in June. Two topics garnering the most interest were SPP employee benefit plans (particularly retirement plans) and SPP organizational effectiveness (encompasses process improvement efforts, cost control, transparency). This meeting was scheduled for June 12-13, 2018 but will be rescheduled to ensure availability by all Committee members.

Finance Committee Self-assessment
Larry Altenbaumer reviewed the results of the organizational group effectiveness survey specific to the SPP Finance Committee. A few comments from the survey suggested improving linkages between the Finance Committee and the MOPC. The Finance Committee is continuing to work to improve those linkages.

Review of Past Action Items
SPP staff reviewed written reports on several past action items. SPP management reported it had reduced the amount of excess liability insurance carried to $55MM (from $75MM) and used the savings in premiums to acquired $20MM in cyber liability insurance policies. One key takeaway was for SPP staff to evaluate options to broaden

errors and omission insurance coverage to address significant services SPP provides that are not required under the tariff or other covered agreements.

Future Meetings

The next meeting of the Finance Committee was scheduled for June 12-13, 2018 in Little Rock, AR. This meeting is being rescheduled to ensure full participation by the Committee members.

There being no further business, Larry Altenbaumer adjourned the meeting at 5pm.

Respectfully Submitted,

Thomas P. Dunn
Secretary

Southwest Power Pool, Inc.
CREDIT PRACTICES WORKING GROUP
Recommendation to the Finance Committee
June 16, 2018
TCR Final Reference Price Calculation

Organizational Roster

The following persons are members of the Credit Practices Working Group ("CPWG"):

Mark Holler, Tenaska	Terri Wendlandt, Westar
Malcolm Booker, OMPA	Michael Malone, Heartland
Mary Meier, OPPD	Robert Schleissinger, Xcel Energy
Matthew Simon, Basin	Cassandra Strange, OG&E

Background

TCR Final Reference Prices are used to determine the amount of financial security (cash or letter of credit) needed to acquire and hold a Transmission Congestion Right ("TCR"). Article Five A of Attachment X in the Open Access Transmission Tariff ("Credit Policy") provides the current calculation for the Final Reference Prices as the TCR Mean Price (the mean of the historical hourly Marginal Congestion Component values for a given TCR period) minus the TCR Stress Test Price (the 90th percentile of the historical distribution). Negative Final Reference Prices reflect TCRs that historically have settled as liabilities (i.e. payments) for the TCR holders.

Analysis

The CPWG is proposing a change of the TCR Final Reference Price calculation to the statistical 5th percentile of the historical settled values with a two year weighted average (75% for the most recent year and 25% for distant year). The current Final Reference Prices can reflect a price that is much lower (to the left of the distribution curve for negative values) than the statistical 5th percentile of the TCR historical value, resulting in excess collateralization required for certain TCR paths. Specifically, the current Final Reference Price approximately doubles the statistical 5th percentile on TCRs that have historically been shown to provide counter flow to congested flowgates.

The proposed change will result in a reduction in the amount of financial security required for the acquisition and holding of certain TCRs through their expiration. This reduction in financial security will lower the cost of capital for market participants and can also lead to additional liquidity within the TCR market.

The proposed TCR Final Reference Price calculation has been back-tested on the 2016-2017 TCR annual auction activities consisting of 113,846 cleared TCRs and 32,966 daily Initial settlement records (first financially binding settlement of an operating day). The TCR period consisted of all TCRs awarded in the 2016-2017 annual TCR auction covering a time period of June 1, 2016 through May 31, 2017. The Initial settlement values considered were for each operating day over the same time period.

Based on this analysis, the proposed TCR Final Reference Price calculation would have reduced excess collateralization by $124 million, from $451 million using the current reference price methodology to $327 million using the proposed statistical 5th percentile methodology. However, it would have slightly increased the under-collateralization by $22 million, from $17 million using the current reference price

methodology to $39 million using the proposed 5th percentile methodology. The CPWG has reviewed the results of this back-testing and have concluded the potential for under-collateralization is outweighed by the cost savings associated with reductions in collateral requirements.

Recommendation

The CPWG recommends the Finance Committee approve the TCR Final Reference Price calculation change from TCR Mean Price minus the TCR Stress Test Price to the proposed calculation of the statistical 5th percentile of the historical settled values with a two year weighted average.

Approved: Credit Practices Working Group   May 25, 2018

Action Requested: Approve Recommendation

TCR Final Reference Prices

RR311 on behalf of the Credit Practices Working Group

TCR Reference Prices

- Transmission Congestion Rights ("TCR") Reference Prices are used to determine the amount of Financial Security needed to acquire and hold a specific TCR
  - Per FERC Order 741, TCR positions must be covered by Financial Security in the form of cash or Letter of Credit
  - For TCRs on historically congested paths (i.e. Source/Sink path with historically negative settlement values which indicate an amount owed by the Asset Owner) Financial Security is required for the duration of the TCR period
    - This can be a period of up to 14 months between the Auction bidding window and the expiration of the TCR period
  - TCR Reference Prices are defined and discussed in Attachment X (Credit Policy), Section 5A of the SPP Tariff

Current

- Current TCR Reference Prices are calculated as:
  - The TCR Mean Price (the mean of the historical Day-Ahead Marginal Congestion Component ("MCC") values for a given TCR) <u>minus</u> the TCR Stress Test Price (the 90th percentile of the historical distribution). The historical period is the previous 2 years of MCCs with a weight of 75% for the most recent year and 25% for distant year
    - These TCR Reference Prices are multiplied by the maximum submitted MW values and the hours of the TCR product during a TCR Auction bidding window to determine the TCR auction collateral requirement
    - During the TCR Auction bidding window, positively valued TCR auction collateral requirements are set to $0 and thus cannot offset negatively valued requirements
    - After auction clearing, all positions are updated with awarded MW amounts and positively valued positions can offset negatively valued positions within the same TCR period

SPP

Proposal

- The proposal seeks to change the TCR Final Reference Price calculation to the statistical 5th percentile of the historical settled values (with a two year weighted average)

  - Reflects the "statistical" worst-case congestion value of a particular TCR path for a particular period

  - Application of the TCR Reference Price remains the same as bulleted in the previous slide

Visualization of the Methodologies

- How is TCR REFERENCE PRICE calculated?
  - The graph below is a distribution of the hourly prices for a given month or season for a negative TCR.

5th %tile as New Reference Price

Mean (Average hourly price)

Current TCR REFERENCE PRICE

The proposal sets the 5th %tile as the Reference Price instead of the current calculation.

ETCRE farther away from Mean even though the distribution of value is the same. This is statistically unlikely.

Stress Test Price based on 90%-tile of the opposite value (10th%-tile)
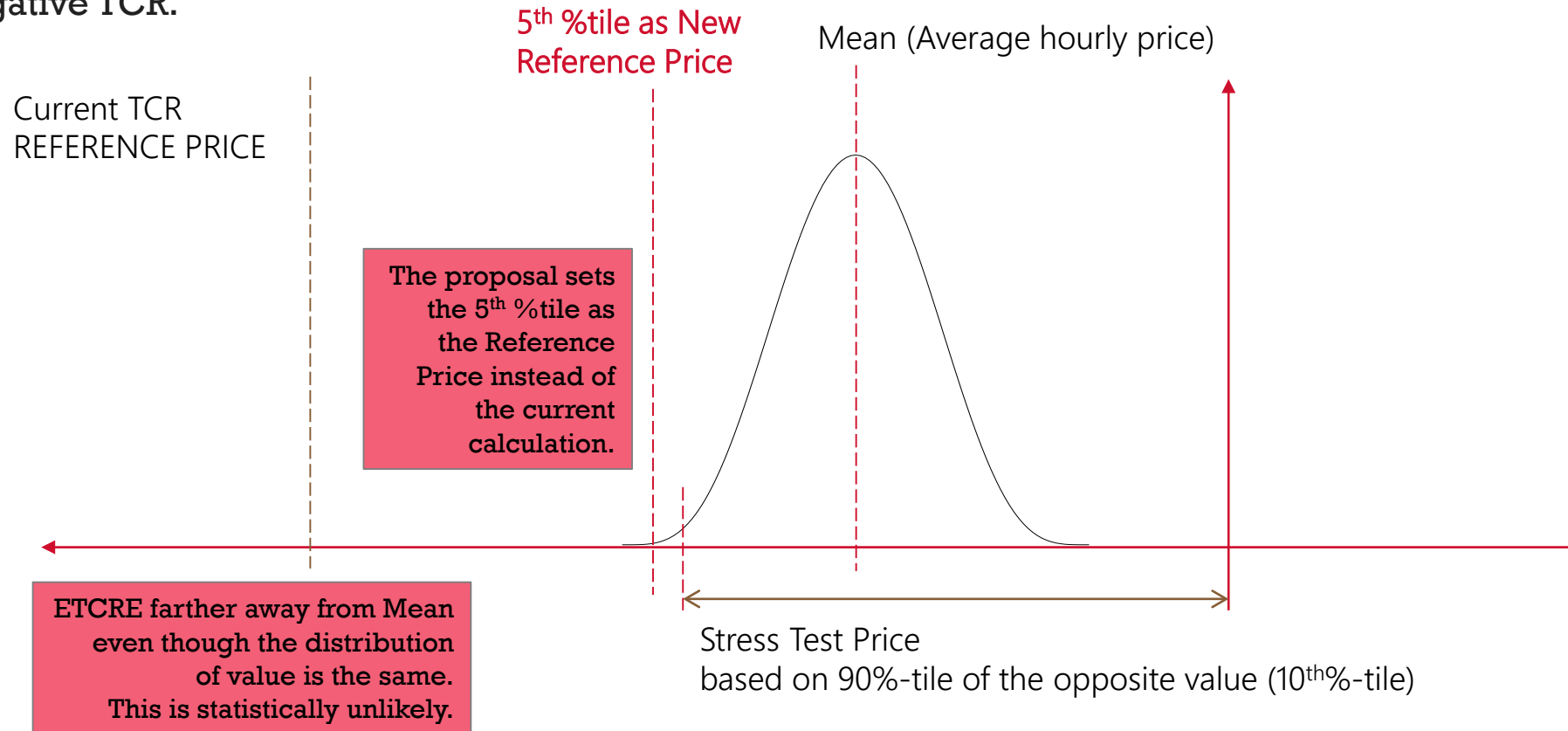
Analysis/Comparison

- Comparison performed using:
  - TCR awarded collateral requirements from 2016-2017 TCR auctions (Long-Term Congestion Rights, Annual TCR Auction, Monthly TCR Auctions) using both current TCR Reference Prices and proposed TCR Reference Prices
    - Consisting of 113,846 cleared TCRs
  - Initial settled values from the same time period
    - Initial settlements are the first financially binding settlement of an operating day
    - Consisting of 32,966 daily Initial settlement records

Details

- TCR monthly awarded collateral requirement < monthly Initial settlement values (excess collateralization)

CURRENT											
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May
Total # Credit Holders	38	53	35	50	60	48	63	64	63	55	69	78
Amount (MM)	$14	$17	$11	$44	$42	$26	$48	$37	$27	$31	$53	$101
Average (MM)	$.38	$.33	$.33	$.89	$.70	$.55	$.76	$.58	$.43	$.57	$.77	$1.3
PROPOSED											
Total # Credit Holders	39	38	23	44	61	42	60	63	60	45	68	73
Amount (MM)	$10	$10	$4	$35	$27	$14	$39	$27	$17	$18	$38	$88
Average (MM)	$.26	$.25	$.18	$.79	$.44	$.33	$.65	$.43	$.29	$.40	$.56	$1.2

SPP

7

Details 2

- TCR monthly awarded collateral requirement > monthly Initial settlement values (under-collateralization)

CURRENT											
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May
Total # Credit Holders	24	9	27	15	8	20	7	6	10	17	6	1
Amount (MM)	$2.5	$.21	$3.6	$4.2	$1.0	$2.6	$.12	$.10	$.28	$1.6	$.29	$.03
Average (MM)	$.10	$.02	$.13	$.28	$.12	$.13	$.02	$.02	$.03	$.10	$.05	$.03
PROPOSED											
Total # Credit Holders	23	24	39	21	7	26	10	7	13	27	7	6
Amount (MM)	$3.1	$2.9	$10.1	$5.7	$1.3	$6.9	$.61	$.21	$.64	$4.8	$2.0	$.43
Average (MM)	$.13	$.12	$.26	$.27	$.18	$.27	$.06	$.03	$.05	$.18	$.29	$.07

SPP

8

Results

- The proposed TCR Final Reference Price calculation would have <u>reduced excess collateralization by $124 million</u>

  - From $451 million using the current reference price methodology to $327 million using the proposed statistical 5th percentile methodology

- The proposed TCR Final Reference Price calculation would have also <u>increased the under-collateralization by $22 million</u>

  - From $17 million using the current reference price methodology to $39 million using the proposed statistical 5th percentile methodology

Action Requested

- The Credit Practices Working Group ("CPWG") has reviewed the results of this back-testing and have concluded the potential for under-collateralization is outweighed by the cost savings associated with reductions in collateral requirements
  - The CPWGs vote of approval took place on 5/25/2018

- The CPWG requests approval of the TCR Final Reference Price calculation change

Human Resources Committee

Report to SPP Finance Committee

July 16, 2018

Human Resources Committee

- "Responsible for the development of personnel policies, compensation and benefits plans that support the employees and culture of SPP".

  - Review and monitor SPP HR metrics, including benefit plan performance
  - Develop compensation philosophies, policies and plans that support SPP staff
  - Annually review and approve employee benefit plans
  - Conduct benchmark surveys and analysis on benefit plans and employee compensation
    - Recommend prudent changes

SPP

2

Human Resources Committee

- Compensation Philosophy
  - Competitively target the 50th percentile for compensation
  - Competitively target the 50th percentile for benefit plans
    - HRC established peer group for SPP employees
      - 1/3 – not-for-profit
      - 1/3 – general industry
      - 1/3 – RTO/utility
  - Compensation Plan is designed to attract employees with the following characteristics that support SPP:
    - Career employees
    - Humble, motivated and smart
    - Well rounded
    - Right skills and attitude
    - Loyal and engaged team players
    - Sense of ownership in the organization

Human Resources Committee

- Components of compensation:
  - Base Salary
  - Performance based incentive plan
  - Retirement Plan
    - Defined Contribution and Defined Benefit Plans
    - SPP total investment for both plans benchmarked
    - Maintain long term relationships with employees
  - Competitive and affordable benefit plans
  - Employee training opportunities

SPP

4

Compensation Survey History

- 2013 – HRC - Selected Mercer through competitive bid process to develop partnership with SPP for compensation and benefits and employment practices
  - Mercer utilized by RTO/ISO peers
  - Mercer utilized by many electrical utilities
  - Nationally known and respected
  - Competitive pricing

- 2013 – Staff compensation & benefits survey

- 2015 – Officer compensation survey

- 2016 – Staff compensation & benefits survey

- 2017 – Officer compensation survey

- 2017 – SPP Members Committee benefits custom survey

- 2017 – RTO/ISO benefits survey

- 2018 - Mercer analysis of SPP Retirement Plan Costs vs Alternatives

- 2019 – Staff compensation & benefits survey (scheduled)

SPP

Human Resources – Recent Cost Savings

2017 Initiatives:

- Dental Plan – changed to self-insured, annual savings: $ 66,000

- Retiree Medical Plan – changed plan structure, annual savings: $100,000 +

- Medical Plan –savings share of claims, annual savings: $ 90,000

- Unemployment rate – changed payment timing, annual savings: $ 52,000

2017 Estimated Total: **$308,000**

2018 Initiatives:

- Medical plan – negotiated fee and plan structure,
  estimated annual savings: $160,000

- Estimated savings share of claims (negotiated) $ 80,000

2018 Estimated Total: **$240,000**

- Approved the addition of a high deductible plan option, with corresponding Health Savings Account, to the SPP Employee Medical Plan

SPP

6

Benchmarks

- 2017 SPP Members Committee Survey
  - 14 participants
  - SPP ranked 6 out of 15 in overall benefits
  - 9 of the 14 SPP members responding to the survey offer Defined Benefit Retirement Plans

- 2017 SPP Employee Engagement Survey
  - Pay & Benefits – Score: 95
  - Overall Engagement – Score: 94

- 2017 SPP turnover ratio, excluding retirement: 2.86%

- 2018 SPP ytd turnover ratio, excluding retirement: 4.0%

- 2018 Average employee age: 44

- 2018 Average years of service: 7

- 2018 Mercer report on Retirement Plan Design

SPP

Comparison with RTO/ISO Peers

Historical RTO/ISO Salary, Benefit & Services Expense
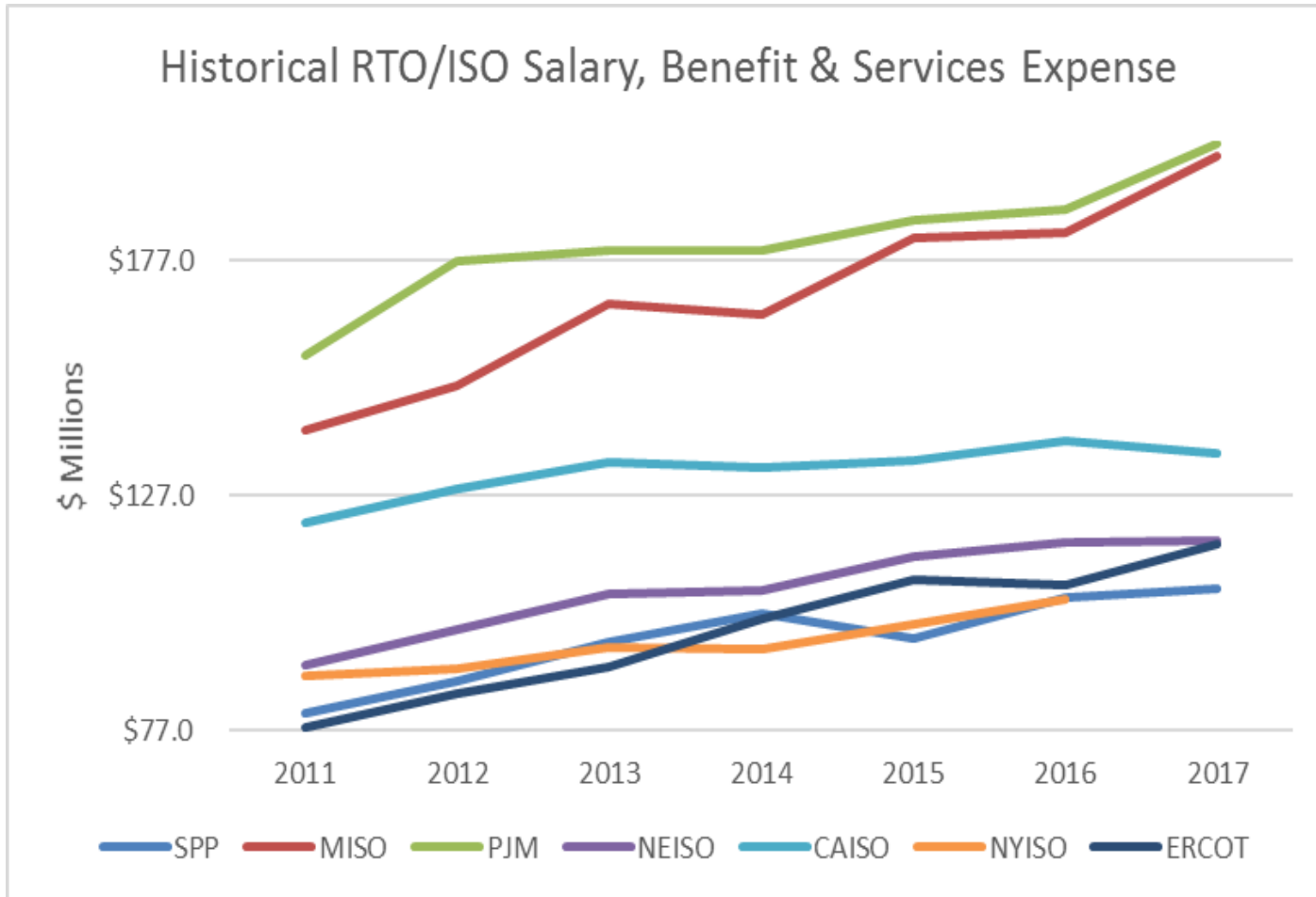
Comparison with RTO/ISO Peers

RTO/ISO	Total Number of Employees – 2018
SPP	609
MISO	932
PJM	724
NEISO	580
CAISO	593
NYISO	570
ERCOT	727

Mercer Analysis of Current SPP Retirement Plan Costs vs Alternatives

ALTERNATIVE DESIGNS
PROJECTED COSTS

(in millions) | Projected Total Retirement Contributions

	2018	2019	2020	2021	2022	2023
Current Program	$7.4	$8.1	$8.5	$9.2	$10.0	$10.6
Alternative #1	$7.4	$8.9	$9.3	$10.0	$10.7	$11.3
Alternative #2	$7.4	$10.6	$11.1	$12.0	$13.0	$13.8
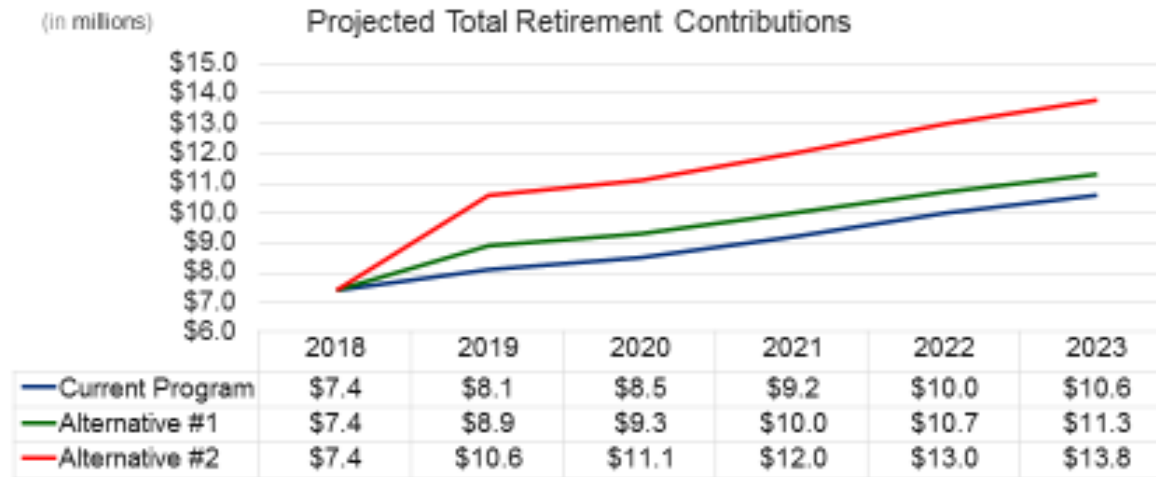
- Total Retirement Contributions reflect a pension contribution of the funding target normal cost (or the required minimum contribution, if higher) plus employer contributions to the 401k plan
- Results will vary under different economic scenarios.

© MERCER 2018   9

Alternative #1: DB plan with reduced benefit, add non-elective defined contribution
Alternative #2: Freeze DB, add non-elective defined contribution, replace DB plan with cash balance plan

Human Resources Committee

- Oversight of SPP benefit plans to find cost savings and efficiencies while maintaining plans competitive to the market

  - Review and discussion of 2018 Mercer analysis of SPP Retirement Plan Costs vs Alternatives

  - Review of SPP Benefit Plans

  - Review of HR staff cost savings initiatives

  - 2019 SPP staff compensation survey

AEP Lean/CI Journey

Presented by

Operations and Performance Transformation (OPT)

July 16, 2018

Who we are
OPT – Operations & Performance Transformation

Irina Bilenko
OPT Director
igbilenko@aep.com

Divya Mehta
OPT Director
dmehta@aep.com

OPT Mission

Our goal is to meet employees where they are on their lean journey and leverage their creativity, knowledge, and innovation to solve business problems in alignment with the overall goals of the Operating Company/Business Unit and AEP.

OPT Vision

Transform into the utility of the future through the pathway of a continuous improvement culture.

American Electric Power (AEP)

17,600 Employees
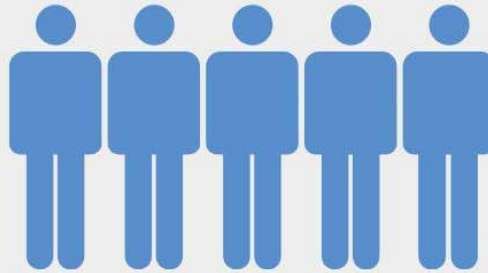
5.4 Million Regulated Customers

26,000 Megawatts of Generating Capacity

264,000 Miles of Power Lines

AEP's Lean/CI Journey
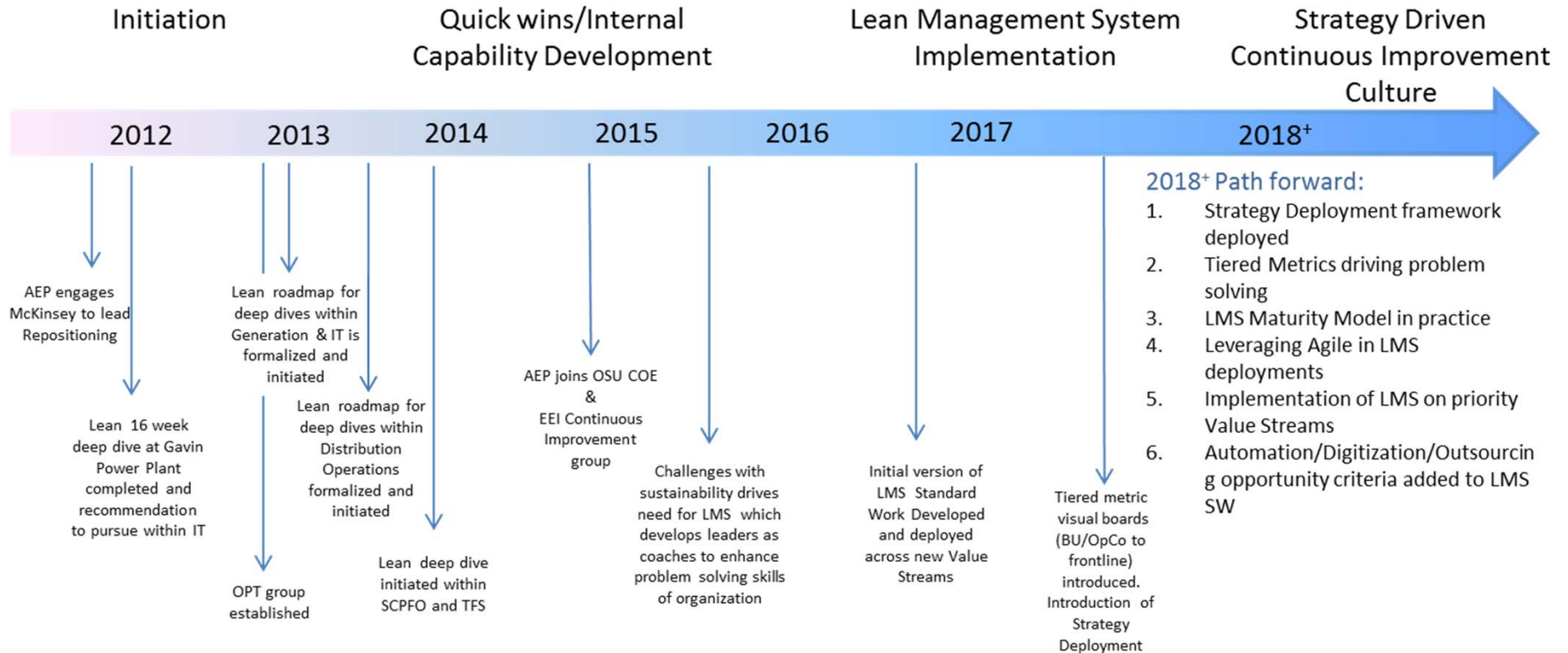
AEP Path to Lean Maturity
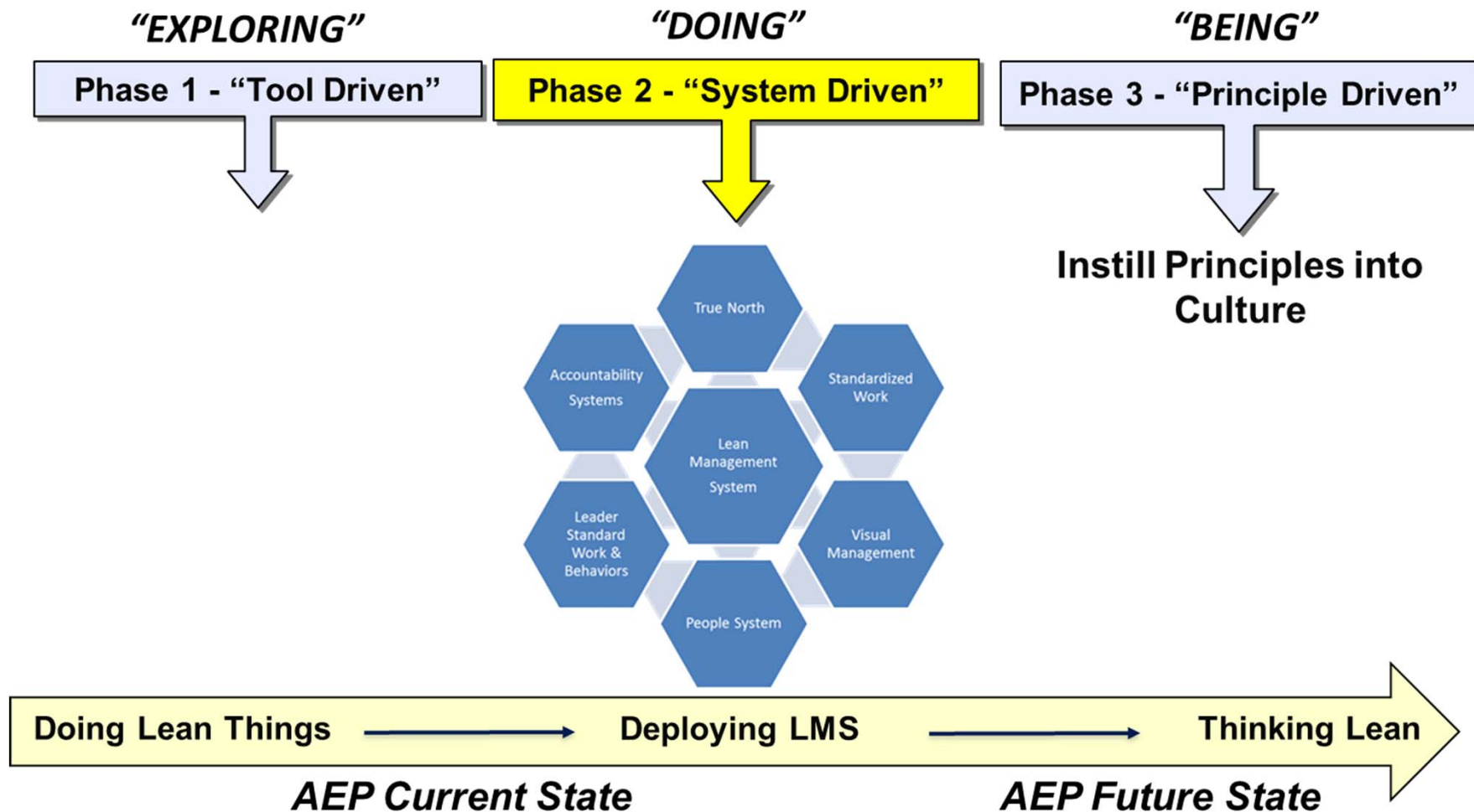
Framework & Methodology

Lean Management System

Why LMS?

1. Framework to lead and align organization to a common goal

2. Tactical means to implement AEP's cultural transformation

3. Make problems visible

4. Create accountability through all levels

5. Find a problem, fix a problem and keep it from coming back

Framework & Methodology

Lean Management System Deployment

Framework & Methodology

Strategy Deployment
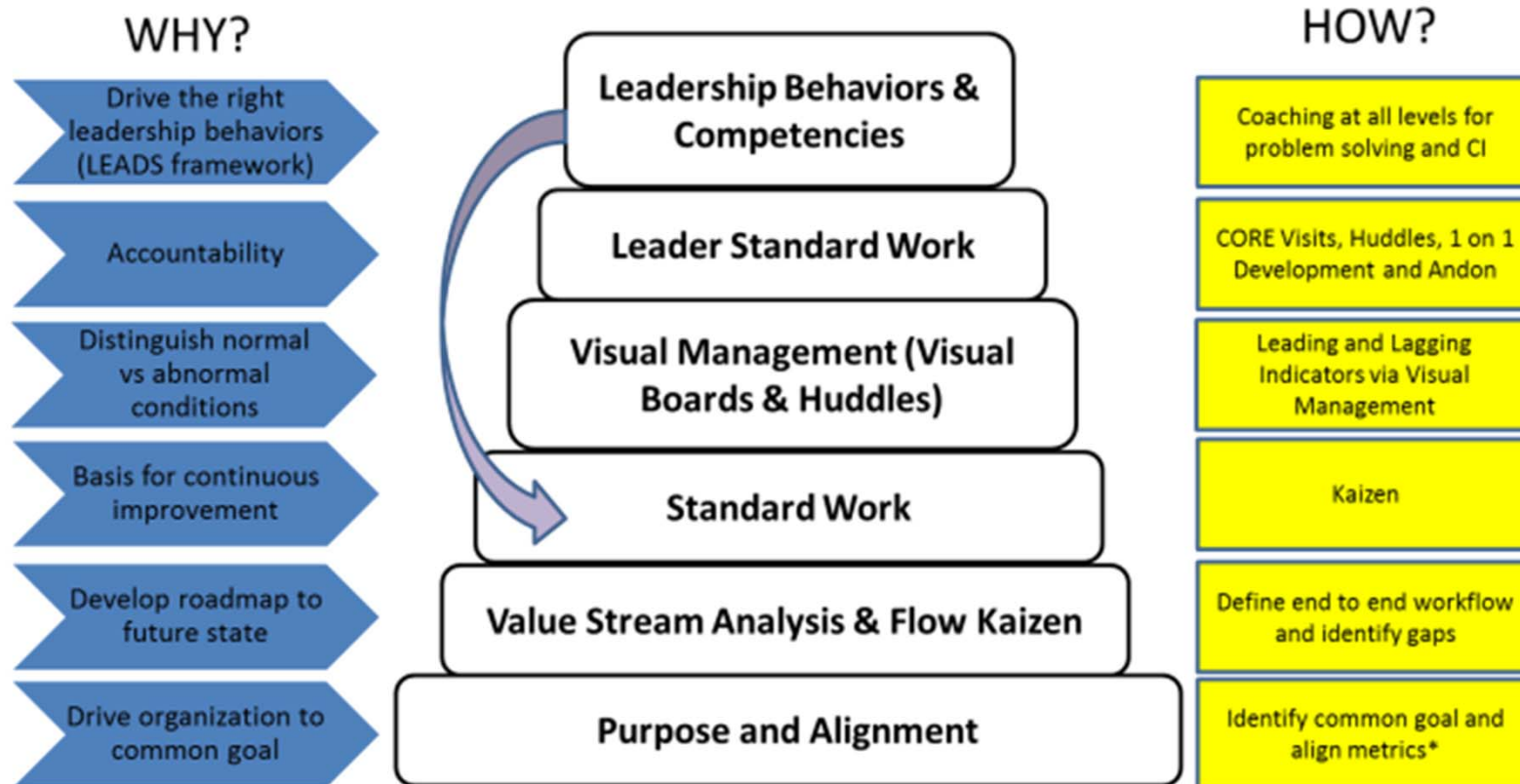
Framework & Methodology

Metric Alignment

- Measures at all are aligned to drive business strategy
- Balanced scorecard
- Utilize problem solving to drive blue chips
- Drives CI culture

Tier 3 - VP

Culture	Quality
	Cost

Tier 2 - Mng

Culture	Quality
	Cost

Tier 1 - Supv

Culture	Quality
Delivery	Cost

Work Station

| Std Wrk | 5 Whys |

Clear Connection Throughout
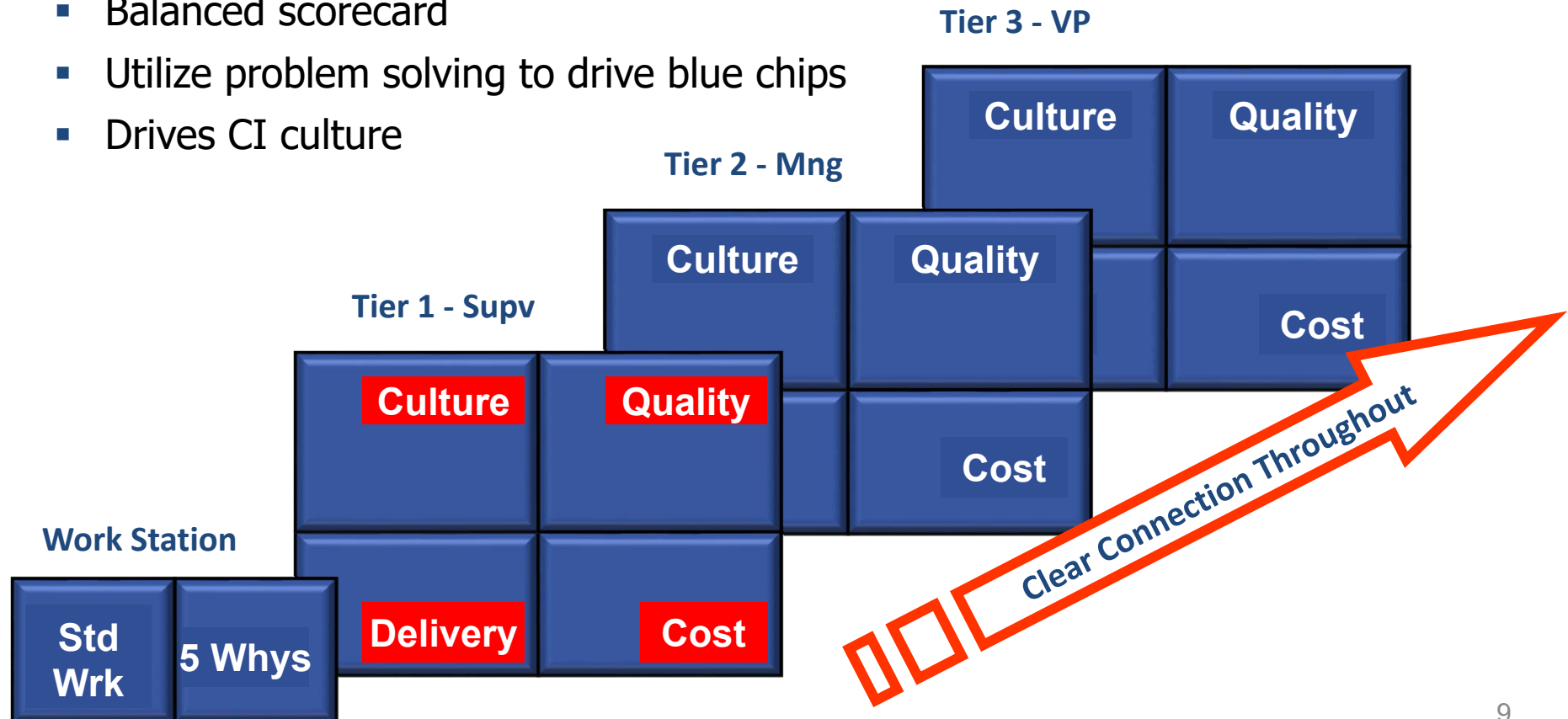
Framework & Methodology

Structured Problem Solving Approach

- The vision is <u>everyone</u> solving problems like <u>the best</u> problem solver.
- Structure provides a way to continuously improve <u>everyone's</u> problem solving skills.
- Structure provides a common way to approach, document and share results.
- Structure provides an opportunity to coach and learn from one another.
- Allows all people to see the problem through the same lens.

BUSINESS PROCESS IMPROVEMENT REPORT

Prepared for
Finance Committee
July 2018

7/2018

CONTENTS

SECTION 1: SUMMARY

When Business Process Improvement (BPI) started at SPP in 2010, we intentionally involved staff across the company to foster collaboration and improvements through a grassroots approach. As we mature, we continue to engage all staff to support a strategic direction that drives our actions toward the fulfillment of our BPI vision.

The vision is two-fold:

1. Increase **Value to our Stakeholders** by implementing process improvements that increase efficiency, improve productivity, reduce risk and cost, improve quality, and increase trust and confidence
2. Enhance **Employee Engagement** by creating opportunities for robust collaboration, critical examination of current state, experimentation, and implementation of new ideas

While quantifiable process improvements are our goal, staff are encouraged to approach processes with a creativity and curiosity to find ways to improve beyond simply financial improvements. Our philosophy and focus are on value, including consideration of the short-term and long-term value these improvements can bring to our stakeholders—indirectly, directly, financially and non-financially. You will see from the improvements captured in this report that SPP approaches the projects in a way that considered financial and non-financial outcomes.

SPP developed the Performance Excellence (PEX) program to engage our staff directly with our BPI vision. The PEX program uses a distributed model for process improvement as our framework, which will result in many improvements outside of the Performance Excellence teams. This wasn't an accident. The PEX program was designed to foster continuous improvement throughout the organization. Performance Excellence program has four goals.

1. Incorporate process improvement into SPP's cultural DNA
2. Ensure that experimentation is an accepted practice throughout the organization
3. Reinforce idea generation at all levels
4. Provide channels for identifying problems, surfacing ideas, and implementing counter-measures

This report outlines 17 process improvement projects across the organization that enhanced member value in 2017. SPP management created eight projects, and staff led Performance Excellence (PEX) teams developed six process improvements. There were three engineering efforts that were carried over to 2018. One of the notable Management Driven process enhancements is the Generation Interconnection study process improvement that resulted in a savings of $49,000 in engineering staff time and a reduction in its study process time of over 275 hours. The PEX team section includes an enhancement to SPP's reliability of our operators by creating full redundancy for our reliability services, without adding a new operations crew of six operators.

While some improvements are quantifiable in terms of time, money, resources, etc., there are a significant number of intangibles that are challenging to quantify. SPP's culture is founded on the value of relationships, and as such staff also seek process improvements that will help our member's experience when interacting with each other and SPP. The 2017 Process Goals chart shows an overview of where effort was spent in our 2017 process improvements. The top two categories for these improvements were time savings through efficiency and improving stake holder satisfaction highlighting our focus on improving our processes in an objective value based manner.

2017 Process Goals

- Time Savings — 31%
- Stakeholder Satisfaction — 25%
- Reliability — 12%
- Employee engagement — 13%
- Compliance risk — 6%
- Accuracy — 13%

When it comes down to a head-to-head comparison, what distinguishes SPP from other ISO/RTOs? What characteristics tip the scale in SPP's favor? There are many non-financial indicators that explain the difference between SPP and other ISO/RTOs (e.g., trust, confidence, employee engagement, quality, openness to innovation, customer satisfaction, etc.) For example, trust is a major non-financial indicator of future financial success (in the case of SPP, adding new members and MPs and exceeding the expectations of current members and MPs). SPP has a corporate culture in place that encourages behaviors that have the potential to increase SPP's long-term value—cooperation, collaboration, empowered decision makers, etc.

As our program evolves we will continue to share how the BPI activities evolve at SPP and highlight the ideas our incredible staff implement to fulfill our corporate mission of "helping our members work together to keep the lights on… today and in the future. "

SECTION 2: 2017 PROJECT UPDATES

SPP had many successful process enhancements in 2017. This section will share the projects that were monitored and shared with the Performance Excellence (PEX) Steering Committee throughout 2017. These process improvements include two categories, PEX Team Improvements and Management Driven Improvements. Our PEX teams include four vertical teams from across the organization, Operations, Planning, IT, and Corporate Services. The management team group of projects were led by SPP management or staff, but completed outside of the PEX teams.

PEX IT IMPROVEMENT

SPP CIP HARDWARE ASSET MANAGEMENT IMPROVEMENTS - Kathy Myhand

Metric: Improved Reliability
Results: Improved asset lifecycle management to

Overview: Develop improvements to the CIP asset management process.

After detailing the processes for CIP hardware asset management, the team developed outlines for the IT Ops Management to review. During the review, the IT management team determined that the project should take another direction. Instead of documenting all the possibilities for the Asset Management processes in a single document, the group documented the checkpoints and stages that each asset must go through in the asset lifecycle. The information included in the Asset Lifecycle Process documents is being repurposed for the new goal where internal team build documents will be updated to reflect the touchpoints by asset type and/or support team. Asset Management checkpoints and the stages of an asset through the initial asset build have been designed. As the project scope of this effort grew, this was escalated beyond the PEX team to the IT department project.

ID ASSET COMPARISON - Kathy Myhand

Metric: Time Savings
Result: The new process saves the IT team four hours compared to their old process.

Overview: This project developed a tool to assist in performing the CIP asset change required action process. The team was able to quickly develop and implement the new tool with the support of the ITQC, ITCST, and IT Sys Admin teams. The tool turned a time-consuming effort into a streamlined process which will help IT meet CIP compliance related to Baseline Comparisons. This new process reduced staff workload by roughly four hours a month.

PEX OPERATIONS IMPROVEMENTS

IMPROVING DATA AVAILABILITY - Ashley Stringer
Metric: Time Savings

Results: Members and Staff are able save time by reducing support calls for public data through more a user-friendly data portal.

Overview: SPP receives many RMS tickets for globally public data that are already available. The desired state is to enhance the public data portal and provide job aids to SPP stakeholders.

The team identified a more user-friendly public data layout. It will include a file summary page for each area (DA Mkt, RTBM, M2M, etc.) with links to those descriptions. File column descriptions, frequency, and format will also be available, all linked to the public data guide. File descriptions have been standardized and drafted by each business area and consolidated into the Public Data Guide.

OPTIMIZING WORKLOAD OF THE BALANCING AUTHORITY – Brian Strickland

Metric: Increased Reliability
Results: SPP is able to have redundant backup operators in place in the event of a disturbance

Overview: Operations implemented a change in staffing workload to better accommodate responsibilities of the Balancing Authority effective January 1, 2018.

System operations had a Reliability Unit Commit (RUC) Operator at two locations with an Real Time Balancing Market (RTBM)/ Generation Dispatch Operator(GDO) operator at one location. There was also only one Balancing Coordinator(BC) at a single location. To provide better coverage of the Balancing Coordination responsibilities during an evacuation, Ops transferred one of the RUC operators to a BC/RUC operator and moved the real-time responsibilities of the current RUC operator to the new BC/RUC operator. This included items such as the quick start tool, regulation selection, Short Term RUC studies, Contingency Reserve Deployment, etc. We transferred the current RTBM/GDO operator to a RTBM/RUC operator that will take care of resource parameter changes, look-ahead studies, forecast offsets, manual commitments, notifications, etc. This change was done with no additional headcount as we redistributed the workload to allow full coverage of both the Reliability and Balancing functions at both locations. With this change the operators will be required to become qualified on the new responsibilities they will be performing and are completed certification ahead of schedule. There were also changes made to procedures and the qualification process going forward. Implementing this ensured we are covered on our RC and BA requirements at all times, even during an evacuation. Having two BC/RUC operators on shift will also provide benefit for any future expansion.

The new process was implemented on January 1, 2018, and SPP is now achieving the benefits of Balancing function coverage in the event of an evacuation without added head count. All associated procedure changes were made, and desk qualification deltas were satisfied. The redistribution of tasks also more closely aligns with the desk functions being performed. As a secondary potential benefit these changes also prepare us to perform balancing functions in the West, if we are requested, without additional headcount by utilizing the two existing Balancing Coordinators. Absent that opportunity operations will continue to look to re-distribute additional tasks in the control room and gain enough efficiencies to ultimately reduce a shift of operators, 6 positions at a loaded FTE cost of approximately 1 million dollars.

PEX CORPORATE SERVICES IMPROVEMENTS

WORKING GROUP IMPROVEMENTS – Tara Smith

Metric: Improved Stakeholder Satisfaction, Time Savings
Result: Staff are better prepared to meet the needs of our Working Groups and Task Forces

Overview: Staff Secretaries have a multitude of resources across the organization. When first beginning to lead a group, they may not be familiar with where this information is located. Additionally, there is concern about the best practices that our members expect. This project will centralize this information for new secretaries.

The impetus of this effort came from stakeholder feedback regarding meeting materials. As the PEX team researched the current state of the working group staff secretary onboarding process, the team discovered several areas for improvement. Because facilitation is vital to our relationship-based organization, the PEX team explored how to better prepare staff secretaries for their responsibilities.

The Finance and Corporate Service PEX Team conducted brainstorming sessions and "interviewed" appropriate parties involved with their project to determine the gaps, that if closed, would provide the largest benefit to our stakeholders. The team decided to focus on the following areas:

1. Development of a formal Onboarding Process for Staff Secretaries, similar to that of new Supervisor Training (this would include improvements to the notification process when a Staff Secretary leaves or a new one joins)
2. This Onboarding Process would include:
   - Checklist/Initial Meetings with appropriate identified parties
   - Creation of a "Best Practices" document/checklist that would include recommended curriculum staff secretaries can access via the LMS
   - Development of an evaluation/survey to be given after each meeting (a few groups were chosen to "pilot" this process)

The group completed its development of the Best Practices checklist. An assembled package was shared with Carl Monroe for implementation approval. Once approved the curriculum was transferred to Donna Freeman to incorporate into the onboarding training. Staff Secretaries were assigned the training in January 2018 to complete the process improvement.

PEX ENGINEERING IMPROVEMENTS

ALTERNATING CURRENT CONTINGENCY CALCULATION CONSISTENCY - Aaron Stewart
Metric: Time Savings, Accuracy
Results: Reduction of up to 97 hours of run time and reduced research hours for violations

Overview: Reliability Planning engineers identified an opportunity to improve consistency and reduce the time required for completing the Alternating Current Contingency Calculation (ACCC).

The Engineering Planning group at SPP utilizes contingency calculations throughout their study processes. To complete the study, the engineers would schedule and run a study, but have long periods before the study completed. This resulted in delays to the study. Additionally, any updates from the members or changes to the data would require an additional run through the ACCC. This improvement resulted in improved study results, fewer errors due to consistency from having all groups running the same programs, and reduced risks from multiple code versions. The improvement resulted in significant time savings with reduction of run time from up to 105 hours to 8 (parallel vs. sequential runs) and increased efficiency due to centralized data repository for voltage violation reports. In addition, incremental modifications were made for Transmission Services and Generator Interconnection for potentially even greater time-savings.

MANAGEMENT DRIVEN IMPROVEMENTS

STAKEHOLDER DATA REQUEST SUBMISSION CALENDAR - Russell Quattlebaum

Metric: Stakeholder Satisfaction
Results: Improved transparency and awareness around stakeholder data request timeframes.

Overview: A calendar of data submission requirements was developed to assist members in tracking the deadlines for submission.

SPP staff coordinated an effort with Legal, Communications, Operations, Engineering and Compliance, to post the Stakeholder Data Request Submission calendar to the SPP website in August 2017. Notification was sent to the Working Group Staff Secretaries regarding the calendar asking that they notify their members of this new resource.

While the calendar is now in Excel spreadsheet format, future plans call for converting this data to true calendar functionality similar to the current "Calendar of Events" on the SPP website. Along with this improvement, the content of the data will be continually monitored and updated as appropriate. Russell Quattlebaum owns the updating of the calendar information.

TRANSMISSION MARKET IMPROVEMENT PROJECT - Don Shipley

Metric: Time Savings, Improved Accuracy
Result: A time savings of over 15 hours was achieved with the new process.

Overview: Settlements systems had many manual interactions and challenging computer issues that created a lengthy process with opportunities for inaccuracies. The group is upgrading its processes and systems over the next three years to improve the processes.

Various aspects of this project were completed while others continue to move forward as part of the larger upgrade project. In 2017 settlements automated approximately 90% of the transmission adjustment charge types. Settlements is very close to moving all but 3 of the settlement validations to a more robust and streamlined application. There have been multiple improvements to the TC/TO onboarding process, which allows for more timely and accurate information to be provided to the downstream systems. Finally, there was a system

enhancement implemented which reduced the time required to post the price matrix to OASIS from approximately 16 hours to 10 minutes.

Efforts are ongoing to automate the Revenue Requirements Rate (RRR) process to reduce the manual interventions required to calculate transmission rates, and to enter those rates into the appropriate systems. This effort includes an impact assessment which was presented at the September CPRG. The goal is to implement the new RRR process at the same time the new settlement system goes live in May of 2019. In addition, there are discussions with various working groups to improve the load definitions in the tariff which will increase consistency across the transmission footprint.

COMPLIANCE TASK ANALYSIS PROJECT - Kathy Myhand, Rebecca Sanders, Leslie Sink, Jennifer Wigley, Jim Gunnell

Metric: Compliance Risk
Results: Improved traceability between SPP processes and compliance requirements.

Overview: SPP is subject to numerous requirements and controls, and a common tool for managing those processes and tracking audit logs will reduce the burden on staff as well as improve understanding of compliance controls at SPP.

Through meetings with Archer RSA and The Anfield Group, an entity-wide template for determining controls in the individual areas (Ops, Engineering, Compliance, IT) was developed. IT continues to develop a formal controls inventory based on CIP processes and procedures, including mapping National Institute of Standard and Technology (NIST) controls to SPP CIP controls. The control inventory progress to date has been provided to the Compliance department for GRC tool testing. This project transitioned from the PEX team to the Project Review and Prioritization Committee for management of the implementation.

IMPROVEMENTS TO SPP.ORG CONTENT MANAGEMENT PROCEDURES - Derek Wingfield

Metric: Stakeholder Satisfaction
Result: Common expectations for members and staff for posting meeting materials

Overview: SPP stakeholders expressed concerns about posting meeting materials outside of business hours.

SPP implemented stricter controls around the timing of postings to provide our stakeholders with clearer expectations regarding availability of postings. SPP limited postings to normal business hours of 8-5 central time. Postings that are not ready to be published by close of business (unless of course they are business-critical in nature) will instead be posted by 9am the following morning. This plan was communicated staff secretaries first and announced more widely to our external stakeholders. This process will improve customer satisfaction of our members.

Additionally, the Communications Department's plan is underway to bring SPP.org in-house and assign dedicated resources to its maintenance and ongoing enhancement. The formal scope of the migration project is limited to the site's transition from external ownership to ours (excluding development work, in other words), but we are looking for every opportunity

to develop and implement enhancements along the way so as not to postpone any longer than necessary some much-needed updates to SPP.org's functionality. Communications is working with IT to establish a release schedule by which we'll implement regular enhancements once the site is in our care.

IMPROVEMENTS TO THE INTERNAL PROJECT BUDGET PROCESS - Sam Ellis

Metric: Employee Engagement
Results: Staff can complete the business cases as needed with less confusion. Similarly, directors have a common understanding of what the case contains due to less variation between authors.

Overview: SPP's directors evaluate and review business cases for projects through the Project Review and Prioritization Committee. One part of the review includes the development of a budget for projects. Working through the Corporate Budget Improvement Task Force, improvements to the template were developed.

The task force developed a simpler, more straight-forward business case template. The group conducted an informational meeting with all business owners. The group worked closely with the Directors and the Project Review and Prioritization Committee to gain buy in for the new process and timeline. Although the process was improved for 2017, the task force is exploring additional improvements for the next budget cycle. The new template reduces the time it takes for employees to submit a business plan and improves the quality of the submission with more specific guidelines. The process continues to be reviewed and evaluated for improvements in 2018.

IMPROVE EXPENSE TRACKING PROCESS FOR RRS - Jim Gunnell

Metric: Stakeholder Satisfaction
Results: Improved transparency of RR costs for SPP members.

Overview: Improvements were developed to address Revision Request costs, which can be difficult to discern from the current financial reports.

Teams in Regulatory, IT, and Market Development met to discuss how to better capture this information. The teams developed a process to capture and report the information quarterly for Tom Dunn. The process was implemented in the fourth quarter 2017, and these reports are now provided by Tom for the Finance Committee meetings.

DEVELOP AND IMPLEMENT A CROWD COLLABORATION PLATFORM FOR IDEA SHARING AND PROBLEM SOLVING - Jim Gunnell

Metric: Employee Engagement
Results: SPP has an easily accessible forum for staff to share ideas for improvements and respond to the ideas of others.

Overview: SPP has an incredibly talented staff of experts across the organization. Many ideas may only be exposed to a small portion of the staff. To improve exposure and potential solutions an electronic forum allows broader visibility of the idea.

The original plan was to leverage the new Circuit for this endeavor. The Circuit project is significantly delayed so alternatives were explored. The *Connect* module from the SPP Learning Center was selected as the platform from which to pilot this idea. The page is titled "The SPP Crowd". This Connect community serves as a crowd collaboration platform for sharing innovative ideas and collaboratively solving problems that impact SPP, its employees, and its stakeholders. *Crowd collaboration* looks to address an unresolved problem or unmet need, and involves employees collaborating rather than competing to provide a solution. The pilot challenge is: *Reducing Complicatedness*, which is went live in October.

GENERATION INTERCONNECTION IMPROVEMENT – Steve Purdy

Metric: Time Savings
Results: SPP reduced the study cycle time by 275 hours, producing results 20% faster.

Overview: The SPP studies for Generation Interconnection (GI) included a study for standalone evaluation, this study resulted in pass through costs for those in the study process and significantly increased the amount of time for the GI studies.

Steve Purdy and Sunny Raheem, SPP staff, worked to evaluate the steps in our study cycle timeline, and found significant work was being done for the stand-alone evaluation during the GI process. Their evaluation revealed there was limited value to the customer for the time spent on this step of the study. During the fall of 2017, the evaluation was shared with the GI Improvement Taskforce and the taskforce recommended the MOPC adopt the improvements in October. With the MOPC approval SPP sought and received a waiver from the Federal Energy Regulatory Commission in February 2018 to improve its study process.   SPP is in the process of revising its Tariff language to incorporate this improvement in 2018.

SECTION 3: 2018 ACTIVITY

The PEX Steering Committee met in April to review the 2017 projects discussed in this report and potential paths for 2018. The Steering Committee evaluated the process of how ideas are generated and developed by the PEX teams, and noted that there could be complementary opportunities for projects directed by the steering committee in the future.

From these discussions, we will be tracking three main categories for the 2018. First is the organic Staff Driven process used by the PEX teams today, where the vertical organization team evaluates, develops, and implements new processes. Second is a new Directed process where the PEX Steering Committee will document issues facing the organization that the PEX teams will evaluate for potential improvements and solutions. Third is through our Highlighted Corporate Projects, which documents process improvements that occur at SPP outside the rigor of the PEX process. These continuous improvements are occurring across the organization as value-enhancing experiments to improve and optimize our services. Some improvements are not fully documented in this report due to the nature of quick development outside of the PEX program, however as notable improvements in this category are made, they will be captured in this section of the report.

SPP began its BPI initiative with a goal of empowering staff to find and make improvements. As a result, there are projects that this BPI report may not adequately capture. To highlight some of the efforts outside of these areas, Appendix A was created to showcase the improvements underway in the IT department.

2018 STAFF DRIVEN PROJECTS

Throughout 2017, SPP had four teams working on process improvement. These included an Engineering Team, an Operations Team, a Corporate Services Team and an IT Team. These teams were composed of staff nominated by their directors to help identify the issues they noticed with processes in their work environment. The teams formed our grassroots or bottom up approach to process improvement. SPP has fostered this approach for several years, to identify pain points in our processes by those active in the processes. There were numerous ideas considered by the teams, and the most feasible solutions are the results in Section Two of this report. This method for process improvement is effective at for improving our day to day operations and customer service quickly and nimbly.

Staff Driven Process
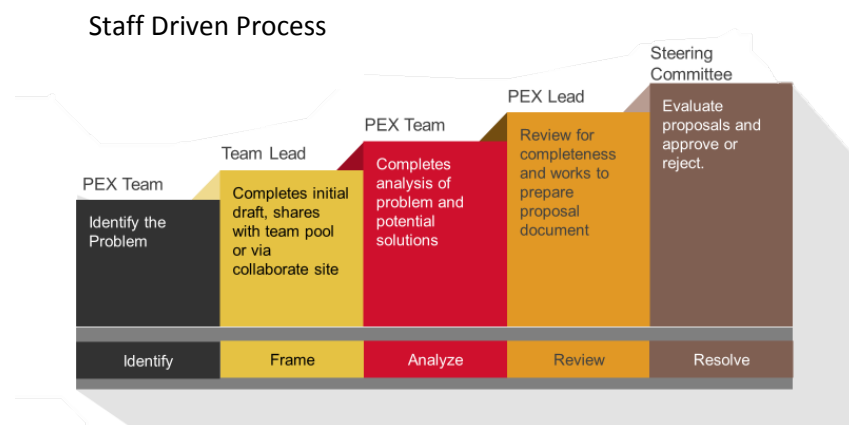
The groups are actively developing ideas for our 2018 projects and soliciting input from their coworkers and managers about processes that could be improved. Here are the projects currently on the 2018 Staff Driven plans.

PEX IT IMPROVEMENTS

IT PROCESS AUTOMATION INITIATIVE – JIM GUNNELL

Status: Underway
Metric: Compliance Risk, Time Savings, Accuracy

Overview: IT Apps, IT Technology and Services, IT Cyber Security processes are currently being evaluated for automation. The team identified over 30 ideas that will result in process improvements from a reduction in human errors, time savings, cost savings, reduction in security and compliance risks.

During Spring 2018, IT leadership gathered automation ideas from teams across IT. The list was vetted with stakeholders using an Automation Prioritization Questionnaire and the list was narrowed into a Top 12 List. Participants from across IT are meeting on July 20th to identify the best process candidates for automation through evaluation with a holistic view of risk, resource commitment, expertise, time savings, cost savings, etc. This management group will take outputs from the July 20th meeting to guide the structure and timeline for an Automation Roadmap. As the group facilitates the effort to draft the roadmap it will explore potential benefits of organizing a process a new automation project team. The draft roadmap and findings will be presented to the IT directors for input and strategic direction by the end of August 2018. An automation plan targeted at the "low-hanging fruit" will be implemented during the Fall of 2018

PEX OPERATIONS IMPROVEMENTS

PSUEDO TIE REGISTRATION ENHANCEMENTS – Julie Gerush

Status: Underway
Metric: Time Savings, Stakeholder Satisfaction

Overview: SPP is required to only operate pseudo ties in that are active in the Electric Industry Registry. In addition to the registration in the registry, our members must also coordinate with other BAs, RCs, SPP Modeling, SPP legal, and other internal departments. When looking at the process in its current form, there are ample points in the process where members might be required to restart the process, delaying their ability to complete a registration.

AUTOMATION OF INTERCHANGE SUPPORT – Julie Gerush and Brian Strickland

Status: Underway
Metric: Time Savings

Overview: There is an effort underway to evaluate the potential savings for automation of many manual processes handled by the Tariff and Interchange station at SPP. By reducing the workload for this team, staff will be able to devote resources to more reliability enhancing processes.

CONSOLIDATE MASTER OPS CONTACT LIST – Hamilton Bitely

Status: Under review
Metric: Time Savings

Overview: A methodology to consolidate all Real-Time Ops Contact Lists into a master list that feeds all or most of the other systems that need this information

This effort could to be leveraged with the Reliability Communications Tool that allows SPP and our members a way to systematically send messages, load shed instructions, and operating instructions. By having an acknowledge feature we remove the need to always issue Operating Instructions verbally. This is cleaner and reduces our compliance risk associated with operating instructions. The load shed functionality will make the process of shedding load more efficient and should provide a quicker response. Having the tool will boost our customer satisfaction as this is something we are pushed to implement from SPP working groups and member surveys. The benefits of this tool will be gained efficiency, improved reliability, and greater customer satisfaction.

PEX ENGINEERING IMPROVEMENTS

CENTRALIZED REPOSITORY FOR SOLUTIONS - Jason Terhune

Status: Under Review
Metric: Time Savings, Stakeholder Satisfaction

Overview: Currently the engineers do not have a quick way to search existing solutions from previous studies, creating a time intensive process to search for previous solutions from other studies.

Jason refined the idea and presented it to the Engineering Leadership team in late 2017. After reviewing, the team found the benefits would be helpful, and presented their findings to the Engineering Management team. Upon consideration, the management team placed this on hold due to other priorities within the department. The team is currently reconsidering if there is a way to better document the benefits and potentially reduce the scope of the project.

STANDARD PROJECT NAMING CONVENTION - Michael Odom

Status: Under Review
Metric: Time Savings

Overview: Engineering planning receives multiple files from members for its models. The members use various naming conventions that do not adequately reflect the projects they are submitting, and SPP staff must open and analyze each file to determine its purpose.

Staff developed a planning contingency naming convention, which could be implemented by replacing names via batch files throughout our modeling software. Jason Terhune surveyed his Transmission Provider contacts for standard approaches on a naming convention to benchmark. Jason and Michael Odom presented to the Engineering BPI management contact (Tony Green) on 9/20/2017, and were asked to come back with additional business case details to help determine priority based on resource constraints within the department. As the case was developed the team found interfaces with multiple existing tools, highlighting the complexity of such an improvement. When the initial project was proposed with the broad applicability to numerous tools with in the department, it was determined sufficient staff were not available to successfully complete the broad implementation. The PEX team still sees value in this project, and is looking to see if there is a scaled down approach that might be easier to complete.

TRANSMISSION AND GENERATION IMPLEMENTATION TRACKING (TAGIT) BACKLOG CLEANUP – Jennifer Swierczek

Status: Underway
Metric: Time Savings

Overview: There is a backlog of defects/enhancements to the Tracking (TAGIT) system.

A TAGIT Enhancement requirements document has been developed and the team has met with IT to review the functionality outlined in the requirements document, set forth a phased plan to implement the changes, and are working to determine the schedule for when these changes can be incorporated.   A larger effort for a TAGIT re-vamp is being evaluated for 2019.

2018 DIRECTED PEX PROJECTS

This year we are working with managers and directors on the PEX Steering Committee to identify bigger picture issues that may require a broader group of stakeholders to fully consider the issues. The new process works to address any pains or problems with processes across the horizontal of the organization. Some projects may be simply directed to be completed, while others may be looked at as more of an evaluation process where, the steering committee reviews the proposal and determines the projects potential for SPP.

Directed Process
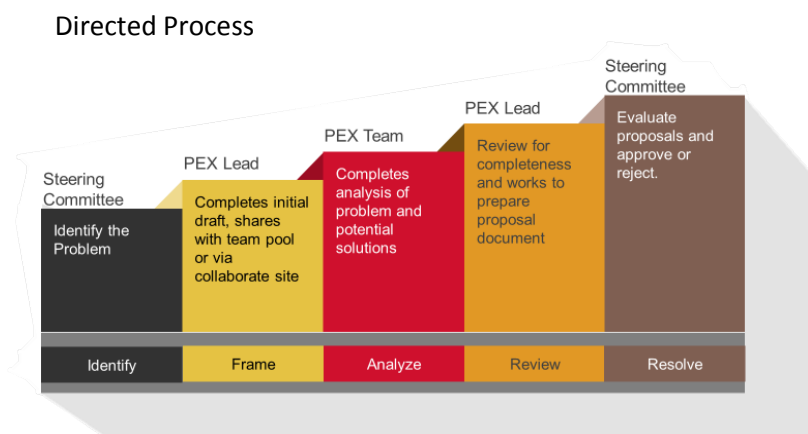
MEGAWATT MILE DATA COORDINATION PROCESS – Don Shipley

Status: Underway

Metric: Time Savings, Reduced Settlement Processing Time, Improved Coordination Between Involved Parties

Overview: SPP Settlements is currently upgrading their processing system. During recent discussions between Operations, Planning, Market Operations, and Settlements, there was interest in looking for improvement opportunities that could be implemented during the upgrade of the systems.

HIGHLIGHTED CORPORATE IMPROVEMENTS

ENGINEERING DATA SUBMISSION TOOL – Eddie Watson

Status: Underway
Metric: Time Savings, Stakeholder Satisfaction, Improved Accuracy
Results: SPP's members have an improved way to send and receive model data with SPP.

Overview: SPP members previously submitted very large model workbooks to staff. Staff would track the process, review the workbooks, and respond to the submitter to resolve errors via multiple phone calls, emails, and meetings.

Members are now able to submit model data via the new tool that enables greater collaboration and reduced involvement in rework. Members are now able to communicate regarding submissions without attaching large files. Members are also able to better collaborate and share their data with other members. The tool automates the flow of the process, and lifts the burden from staff to monitor the progress of the data submission. One of the great features of the tool is its elimination of the need to send large data files via email.

The tool was developed over 2017, and tested by a limited group last December. Feedback from the test group was used to further enhance the product for wider adoption that happens in 2018. A larger group was solicited for testing in May. Staff continue towards their implementation goal for the MDWG submission process to incorporate the tool for the 2019 model build and the 2020 ITP process. Enhancements to this tool will continue, and it is expected that additional groups will be able to extract value from the new processes. The Supply Adequacy Working Group has already identified potential benefits from using this tool to evaluate Resource Adequacy later this year.

SECTION 4: CONCLUSION

SPP process improvement efforts are spread across our company from our staff's day to day work, and through our organizational structure with the PEX program. Our BPI leaders, both past and present, focus on enhancing our member's value in SPP and reinforcing our corporate culture drivers of Continuous Improvement, Efficiency, and Collaboration. We work to support the organization with tools and ideas that foster the ability of our staff to achieve successful improvements for our members. As the BPI program at SPP evolves we continue seeking opportunities to learn new ways to ensure the program is successfully achieving its goals and has a beneficial impact on our members.

The PEX program continues to drive our process improvement efforts in 2018 by helping staff find ways to optimize processes, reduce costs, and improve the value of the services our company provides. The PEX program's focus is on facilitating improvement opportunities discovered by our staff, and we welcome improvement ideas that members may have regarding their interactions with SPP.

This report was prepared by

Joshua Phillips
BPI Coordinator
jphillips@spp.org

and with contribution from
Jim Gunnell
jgunnell@spp.org

APPENDIX A – SAMPLE OF IT IMPROVEMENTS

There are many process improvements and enhancements that our staff work to implement daily. As part of our effort to highlight some of the improvements we make that may not be captured in our other reporting activities, Jim Gunnell, IT Director of Performance and Process Optimization, provided a list of items he captured that are being addressed in the IT department.

IT System Administration – Server Build Process - Stan Chapman, Barry Bull and Jim Gunnell are restructuring the server build process. The new process will allow us to build a server in a matter of hours instead of days. The new process is scheduled to be implemented October 1, 2018.

IT Technology and Services - IT Dashboard - Once the new server build process is in place, we can develop SLAs for the server builds. We are also developing an IT metrics dashboard which will include server build stats so stakeholders know where their assets are in the build process. Additional stats will include incidents, changes, tasks, work orders, patches, baselines, firewall changes, and password changes.

IT Cyber Security - CyberArk - This initiative was put on hold until after the audit, but streamlining password changes in CyberArk remains a high priority on the process optimization list.

IT Quality Control – Ports & Service Whitelist - Implemented a job performance aid, the Ports/Services Whitelist, to serve as a job aid in which baseline owners are now informed of ports/services enabled on their assets that are part of the initial build (OS, etc.), which is essential for ongoing baseline management of ports/services.

IT Apps-Requirements and Test – Automated Text Execution Plans - Implemented function in Silk Central to automatically create test execution plans for failed test cases that are tied to defects that have been fixed since the last test run. This involved our IT test tool admin and IT test lead for the Settlements Systems Replacement Project, saving time by automating a recurring manual activity, which is extensible to other projects.

IT System Administration - Replaced manual screenshots for most CIP evidence gathering with scripts the team created.

IT Apps TSC/CSS-FIRST - Engineering has a cluster of servers called Enfuzion that have 60 different Virtual machines that contain a number of the "same" applications on the different servers. When it comes to putting software updates or patching the applications on these servers, individuals have to go into each server to make the updates manually. We are in the process of automating the software updates for the applications on these servers. This will allow us to save days in man hours of support time when a patch or update is needed for the different applications. This will also minimize the possibility for human error while updating the different servers.

IT Apps Settlements - Adopted a hybrid Agile-Waterfall process for development. We have daily scrum meetings and utilize Jira as our software tool for planning, tracking and releasing software. The majority of the Apps Settlements team are developers and using this hybrid approach in

combination with Jira has been extremely beneficial in organizing and tracking development efforts.

IT Data Services – FERC Order 760 - FERC Order 760 requires all RTOs and ISOs to provide daily submission of market-related data (MDB, TCR, CMM, and Settlements) as determined by FERC. The Order requires that FERC receive the specified data within seven days of it landing in SPP's data warehouse. To mitigate the risk of error due to data changes, SPP extracts and transmits data four days after it is loaded to allow time for corrective measures if issues are discovered prior to the 7-day deadline.

The legacy process utilized the ETL application, Informatica PowerCenter, along with at a set of Linux scripts to run the daily extract and transmittal. This process, while automated, required a tremendous amount of resources when modifications were required. Modifications that are requested by FERC include but are not limited to, data type changes, database schema updates, new database tables, and/or new columns to existing tables. Changes to the process are batched and managed through a release schedule coordinated between SPP and FERC.

At the time we began developing the enhanced solution, 134 files were being delivered daily to FERC, and work was ongoing for a new release that included 17 new files and a handful of changes to existing data process flows. The release was first built in the legacy process, and took approximately two months to complete. After the enhanced solution was put in place, the changes necessary for the same release took around three weeks to finalize. This is a rough estimate, since during that timeframe, we were still in the process of enhancing the new solution. The next major release is scheduled for August/September and we expect the development and test time to be approximately two weeks, or less.

This enhancement project and the resulting solution has far less ETL dependencies, faster runtimes, is easier to maintain, speeds up file delivery and ad-hoc file requests, and makes creating test files much more efficient. The new solution shifted the "heavy lifting" needed to add or update files away from ETL-driven objects that were numerous and burdensome to maintain to dynamic SQL statements that are significantly easier to keep up. The legacy Informatica PowerCenter process had approximately 4,900 dependencies, while the new solution utilizes only 19 dependencies, a handful of new scripts, and three new processing database tables. While the legacy process worked, it had grown too much overhead to support and maintain. The initial release of this process had just a couple files, but given that this total has been steadily increasing since the origination of Order 760, the process was ripe for an overhaul.

Throughout the design, build, and test phases, we leveraged the skillsets and borrowed existing code from many team members on the Data Services team. This redesign was successful primarily because we were able to work and collaborate as a team during all phases of the project.

IT Apps Reliability – Implemented a standardized and automated code build and packaging solution, via RedHat Package Manager, for the GE Energy Management System (EMS). This greatly simplified EMS release management and enabled the detection of EMS software package versions for automated recognition by baseline management tools. The deployment of EMS releases was further simplified by automating deployment via CA Release Automation (Nolio). Releases can now be deployed to all environments from a single UI with a deployment history that is easily viewable

for reporting and verification. These standardized and repeatable processes reduce the potential for human error in what was previously a manual and complex effort.

IT Apps Reliability – Developed a new application, called SCADA Monitor, to assist in the validation of quality member data being fed into EMS SCADA from ICCP. This real-time CIP application provides a means of proactively identifying any suspect member data that could cause ICCP & EMS stability problems if not quickly identified and resolved with the member. The application is monitored by the FIRSTeam and acts as an early detection system by identifying poor quality ICCP data that has been inappropriately marked with a good quality flag by the member. Prior to implementation of this application, inaccurate data submission was difficult to detect prior to experiencing system stability issues with these critical reliability applications.

The IT Apps Market - Implemented an automatic system health check called MOS Verification. It is a quick way to verify that our system comes back up and that all of the services are running. We have so many servers and there are so many points of failure with all of the different services that are running, it reduces the manual checking of services during installs, patching or basic troubleshooting.

IT Sourcing and Strategy – Redesigned the IT Contract Review program to allow IT Sourcing to review and "stamp" low-risk, transactional IT agreements that require SPP signature.

Our "contracts" fall into two categories: Master Documents and Transactional documents. In IT we basically buy one of three things: Hardware, Software, Services (professional or maintenance). For each of these, there is essentially a governing agreement (which requires signature), and then transactional forms (which are subject to a legally-approved master agreement). These transactional forms may/may not require signature, depending on vendor requirements. By redesigning the process and allowing IT Sourcing to "stamp" low-risk, transactional IT agreements, we have realized a reduction in turnaround time for the signed/executed agreements by roughly three (3) weeks per agreement. And a reduction in man-hours of roughly 15 hours per IT-stamped agreement:

Total of roughly $40k during 2017

Ongoing benefit in 2018 and beyond

ITSM Office Support - Automated tickets to the service desk. In the past tickets were sent to an email box then had to be reentered into Remedy. The process has been updated so that all emails automatically enter a ticket into Remedy, saving time and effort (approximately 1 minute per ticket). In the past five months, 3,231 tickets have gone through the new process, saving approximately 10 hours per month.

SPP Business Process Improvement/Efficiency Evolution

Finance Committee: July 16, 2018

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018

SAS 70 and Controls Evolution

ICT/ITO Contract Svc → **IS Integration** → **Z2**

● **SPP RE Formed**

● **Maumelle Center**

● **EIS Market**

Process Documentation → **Process Improvement Dept "Lean" Evolution** → **PEX Team "Lean Evolution"**

ICT Weekly Procurement Process → **Priority Projects Hwy/Bwy**

TPITF

Nebraska Entities

Order 1000 A, B Competitive Transmission Process

HITT

Culture of Compliance Audits/Investigations

IM/BA Consolidation → **ECC**

Aggregate Study Improvement GI Queue Balanced Portfolio

GI ITF

● **RE Transition**
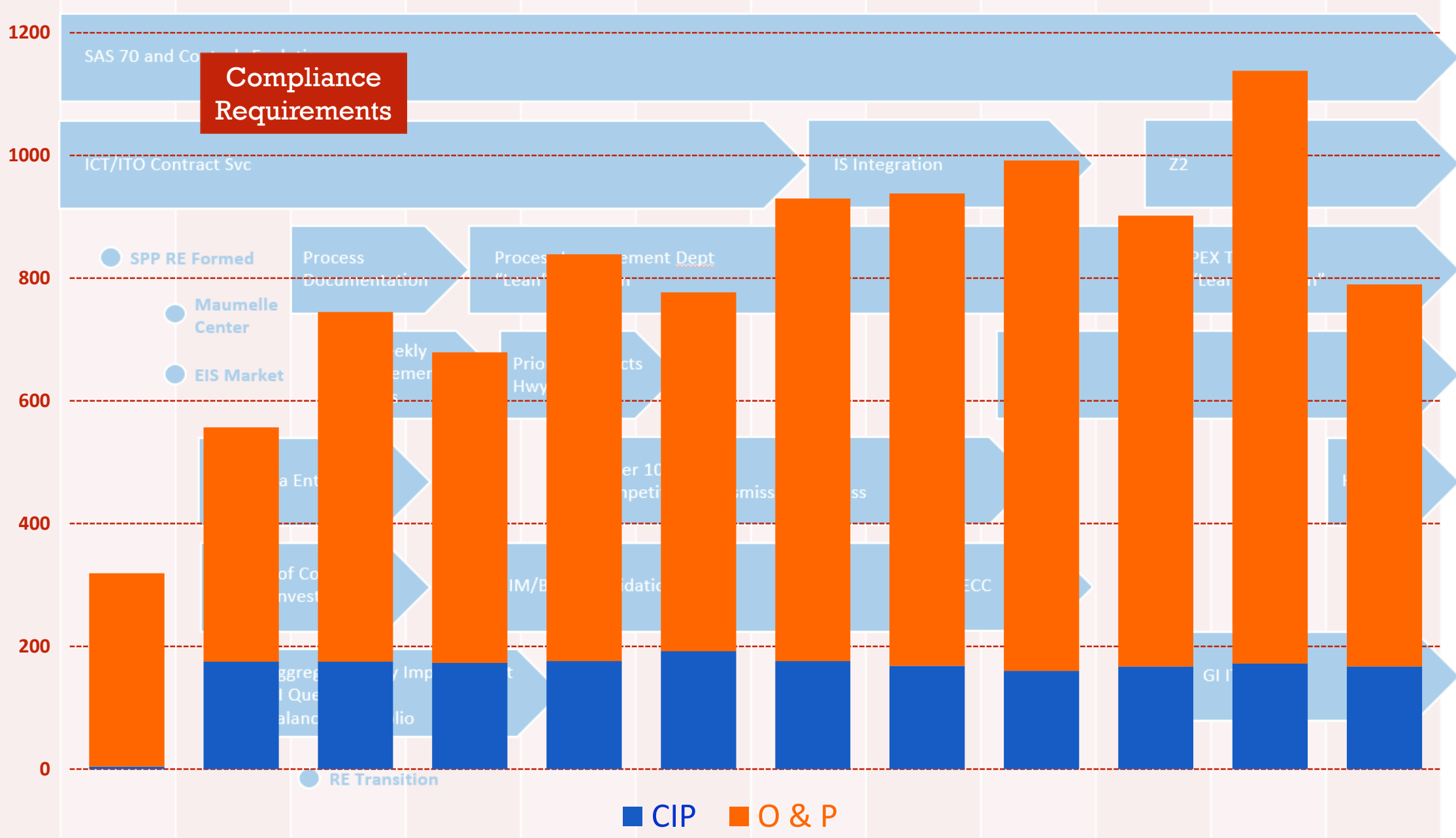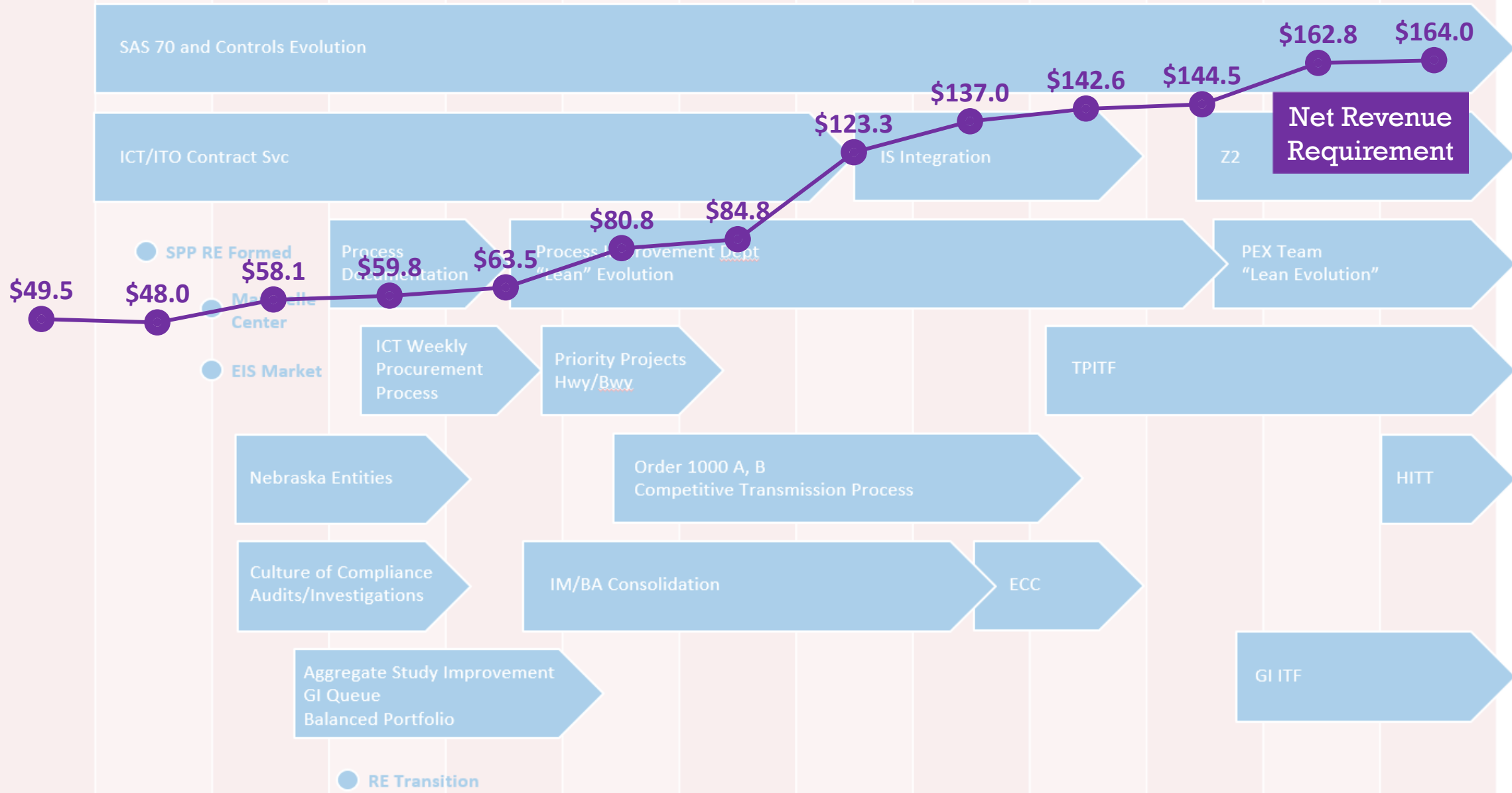
4
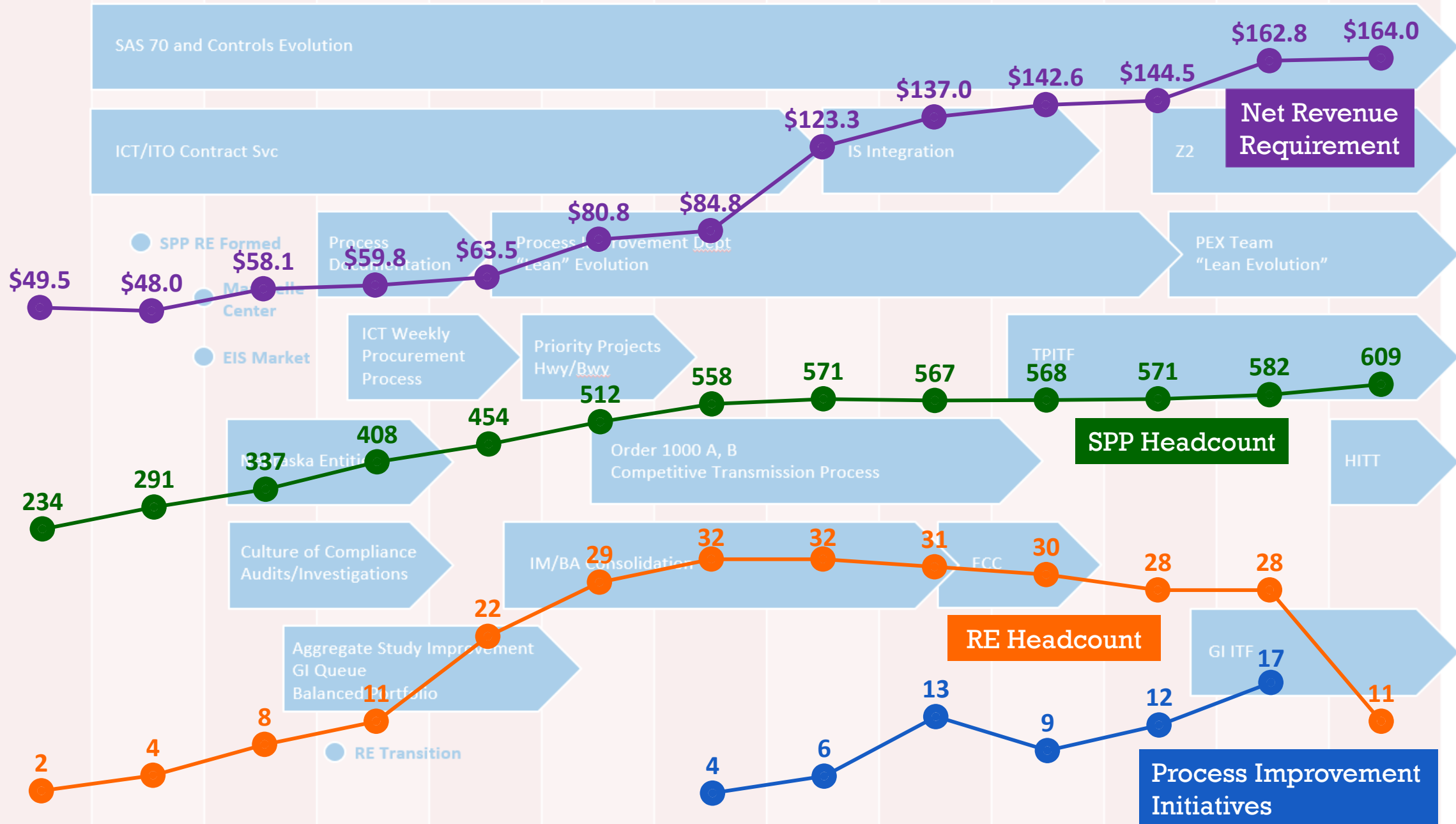
Performance Excellence Program

- 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

Performance Excellence Steering Committee

Performance Excellence Teams

Grassroots Movements

SPP

8

2017 Performance Excellence Highlights

- 17 Projects in 2017

- 56% Focused on Time Savings and Stakeholder Satisfaction

- Time savings
  - 279 Staff labor hours
  - 112 Processing time hours

- Reliability
  - Full redundancy of our Reliability and Balancing services with no increase in headcount

2017 Targets

Pie chart segments:
- Compliance risk 6%
- Accuracy 13%
- Time Savings 31%
- Stakeholder Satisfaction 25%
- Reliability 12%
- Employee engagement 13%

SPP

9
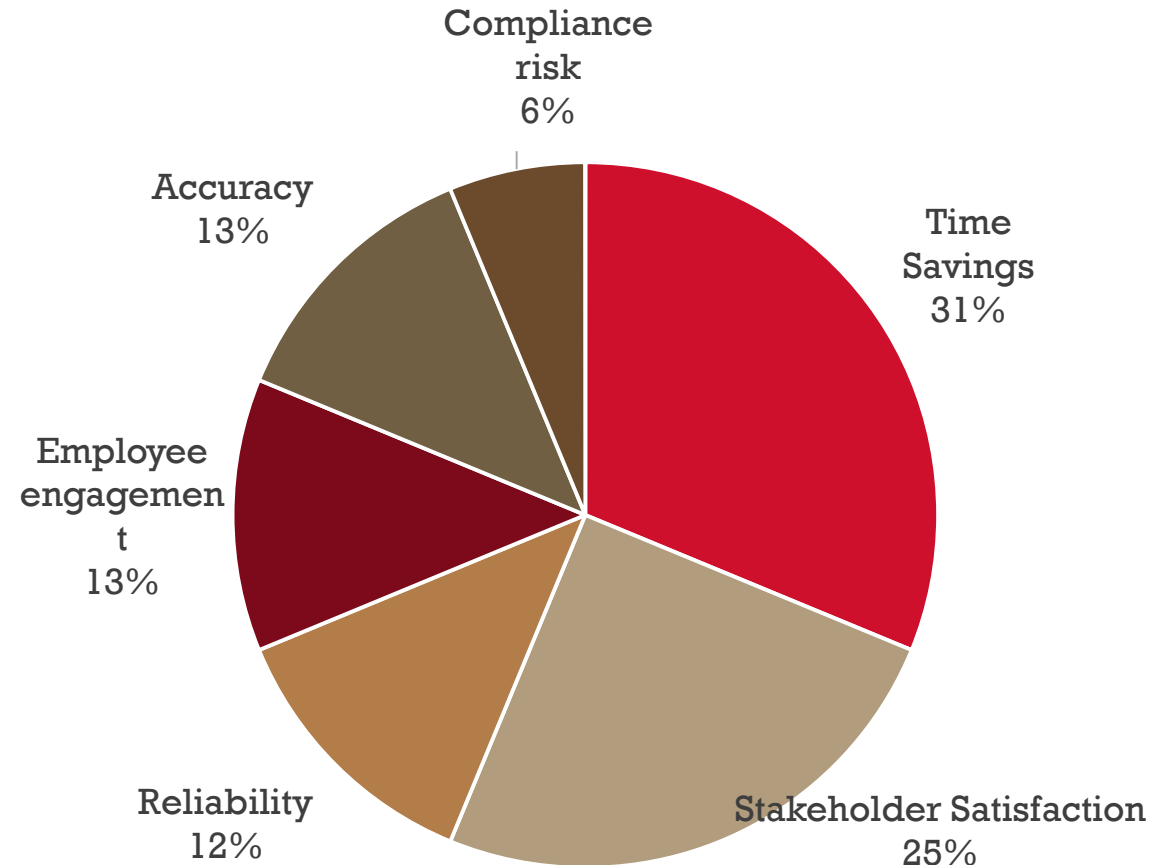
Performance Excellence 2018

- 9 Projects in 2018

- Largest target is Time Savings

- Time savings
  - Reduction in rework for pseudo-ties
  - Automation of IT processes
  - Streamlining model submission

- Stakeholder satisfaction
  - Improved flows for submitting models
  - Reduced turnarounds for requests

Targets

Compliance Risk 7%

Increased Accuracy 14%

Time Savings 57%

Stakeholder Satisfaction 22%

SPP

10
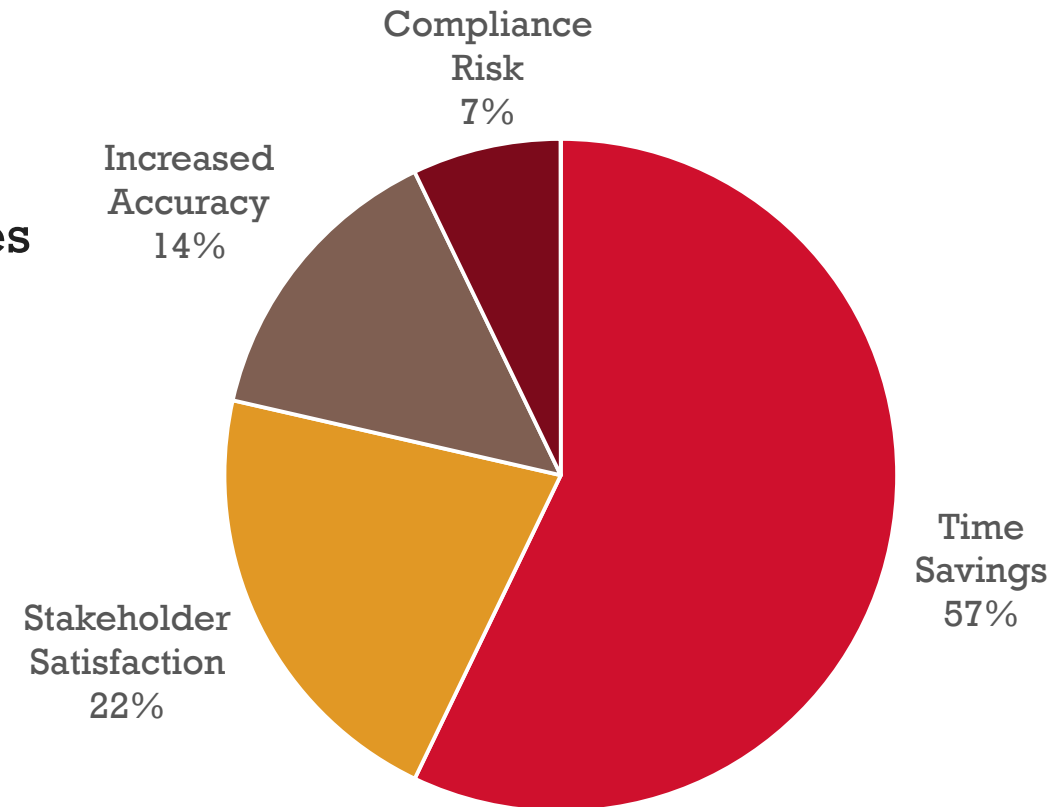
SPP Finance Committee: Continuous Improvement at Westar

7-16-2018

Why did Westar Pursue CI?

*"Even if you are on the right track, you'll
get run over if you just sit there."*
Will Rogers

- Reduces regulatory risk and creates a more competitive organization.
- Laid groundwork for continuous improvement culture
  - Supports strategic focus areas
- Prepared organization for capital and IT roadmap
- Reduced O&M Costs
- Developed Employees
  - Rotational assignments
  - CI skills carried back to departments

Governance Structure

Performance Excellence (PEx)

SPP Finance Committee
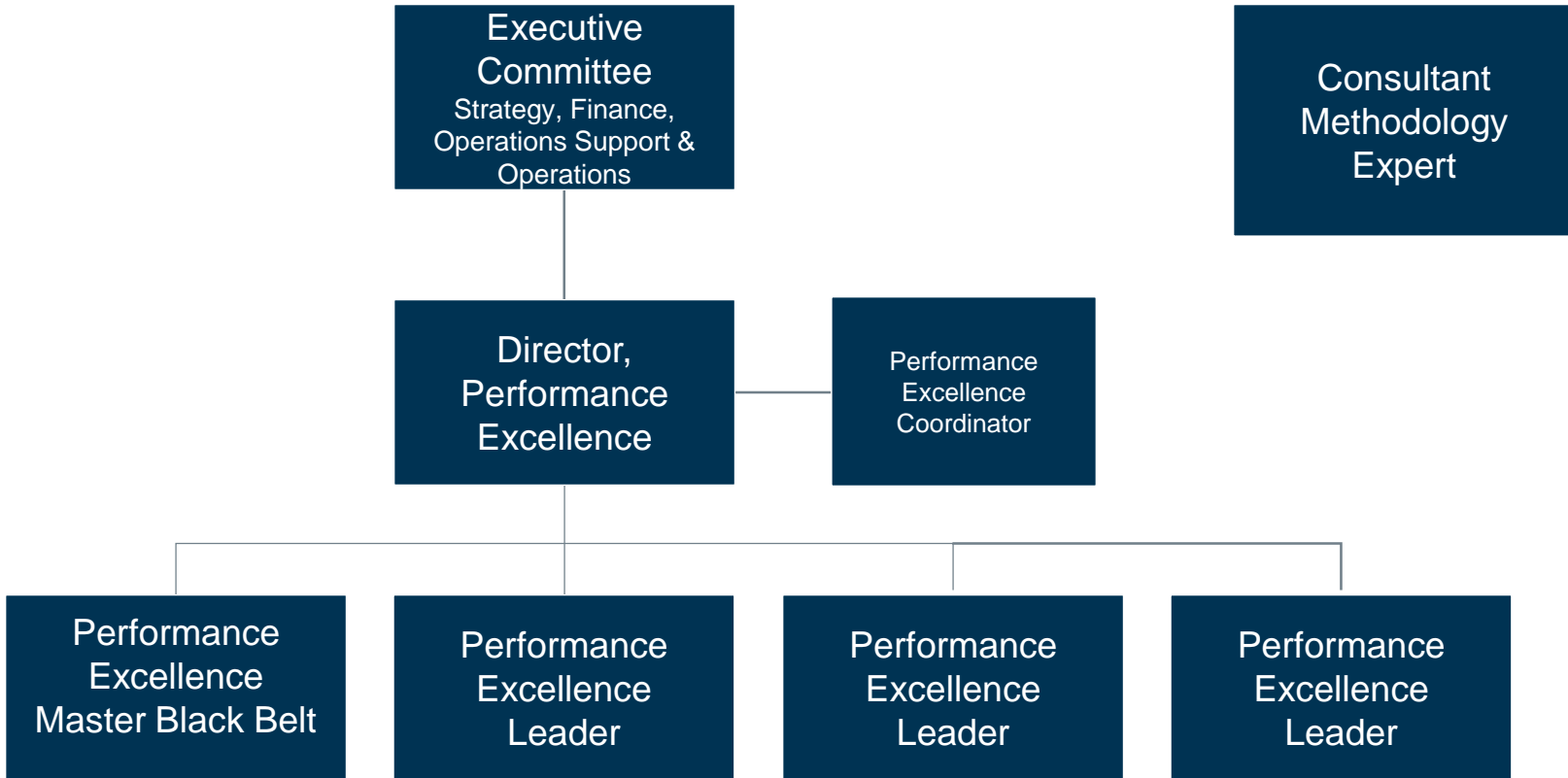
Performance Excellence Methods of Approach

VSA **5-10 Days**	• The primary opportunity identification method, value Stream Assessments (VSA) are a tool that creates a ranked list of prioritized PEx projects.
SCORE **8 Week Process** **1 Week Kaizen**	• Focused approach to process improvement; involves a cross functional team and tries to do quick-hit improvements for the good. Time is typically the primary metric.
DMAIC **4-6 Months**	• The process improvement methodology used to improve an existing product, service, or process. Relies on heavy use of data from the process and typically focuses on quality.
Other Tools and Approaches	• Hoshin Planning for Strategic objectives and implementation • Innovation Tool Kit (new product or new feature delivery) • DMADV – Define, Measure, Analyze, Design and Validate • DFSS – Design for Six Sigma

evergy™

Partial Annual Project List

Value Stream Assessments
- Supply Chain
- Meter to Bill
- Fleet
- EAM – Enterprise Asset Management

SCORE Events
- Fleet Workshop Organization
- Fleet Resource Utilization
- Leadership and Technical Training
- Meter Truck Roll
- LED Streetlight Paperwork Reduction
- Virtual Storeroom
- Service Work Procure-to-Pay

DMAIC Projects
- IT Front End Pipeline Management
- Expedited Material Charges
- Fleet Vendor Management
- Supply Chain Material Returns

evergy™

Program Deployment SWOT

Strengths

- Ready and willing to take on more
- Developed ground level trust
- Good training penetration
- Gaining skills in the tools

Weaknesses

- Rigorous discipline around hard dollar financial results
- Requested projects focus mainly on "pain-reduction"
- Might not be saying "no" at the right time

Opportunities

- Changing technology needs could present targeted project opportunities
- New project identification methodologies; benchmarking results, goals shortfalls, etc.
- Continuing to develop internal consultancy "Ghostbusters" role

Threats

- Cross functional teams do not carry common views on "right"
- Reduction in pain may not drive cost savings immediately
- Efficiency gains only turn to hard savings with budget or staffing reduction

evergy

Program Deployment Lessons Learned

More Of

- Stakeholder/Voice of the Customer (VOC) interviews – define value
- Align organizational goals with continuous improvement – visibly track leading indicators
- Perform organizational awareness and practitioner training
- Leverage internal resources as Center of Excellence (COE) model
- Create and utilize formal financial validations

Less Of

- Focus more on Lean than Six Sigma early in a deployment
- Perform fewer pain reduction projects with no clear financial result
- Analyze projects and deployments for look back metrics – redesign up front
- Utilize project teams with all subject matter experts – smart "wild cards" are invaluable

Do-Overs

- Focus on replication early – Work on projects that the results widely utilized
- Worry less about pristine use of tools and more on results and financials
- Use benchmarking far and wide; Results should drive charters/projects
- Create growth opportunities immediately for the best and brightest

evergy

Project/Request Prioritization

IT Mission

To achieve the maximum value from our IT investment by:

- Selecting the highest value work
- Executing that work effectively and efficiently
- Extracting the value from our investment

Building the Right Things → Building Things Right

evergy™
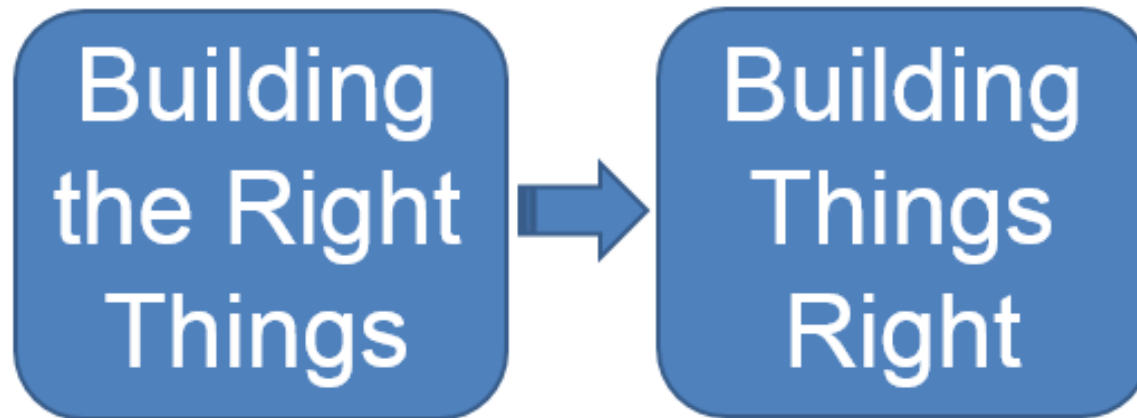
SAFe Framework
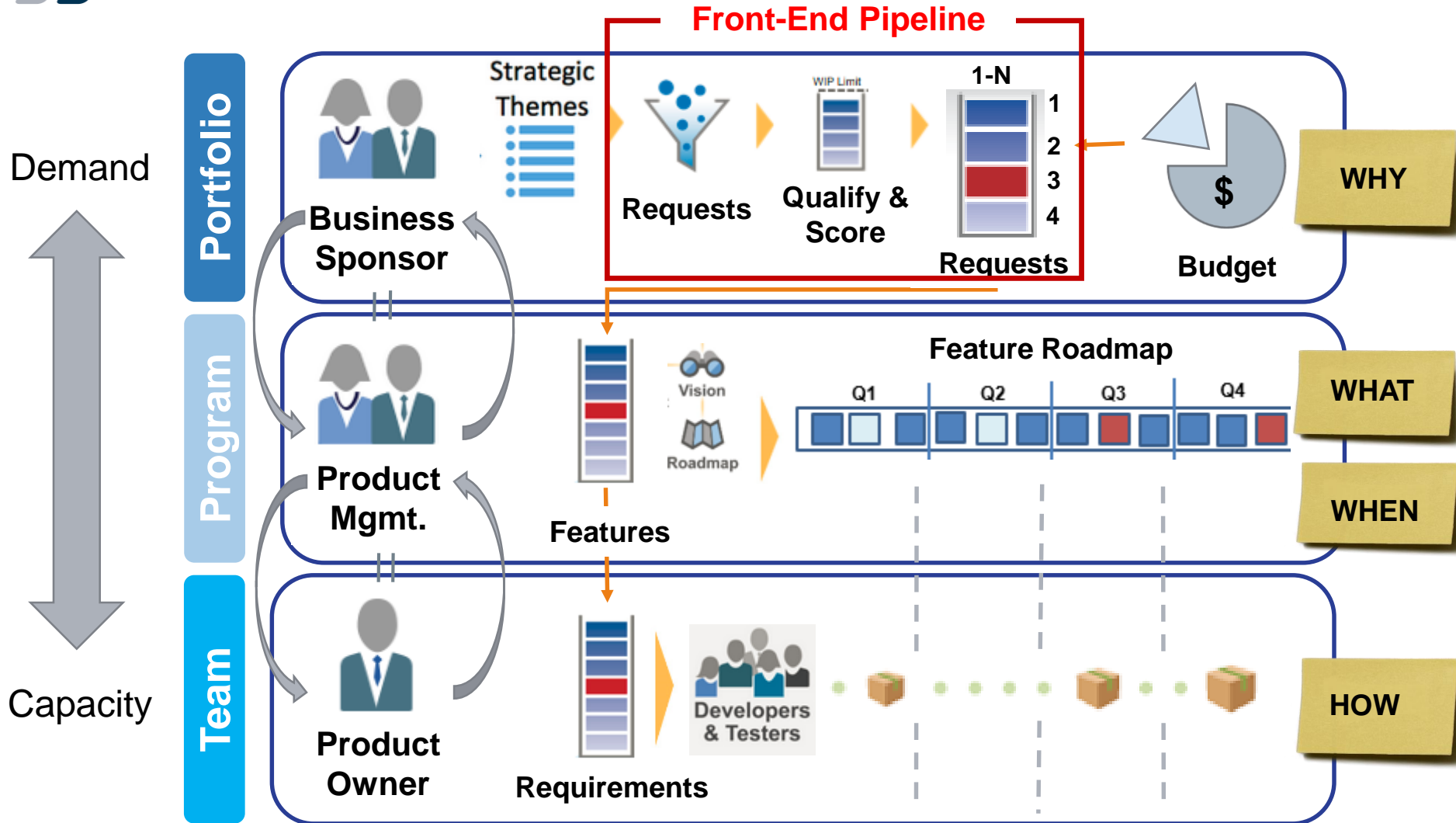
Baseline Performance
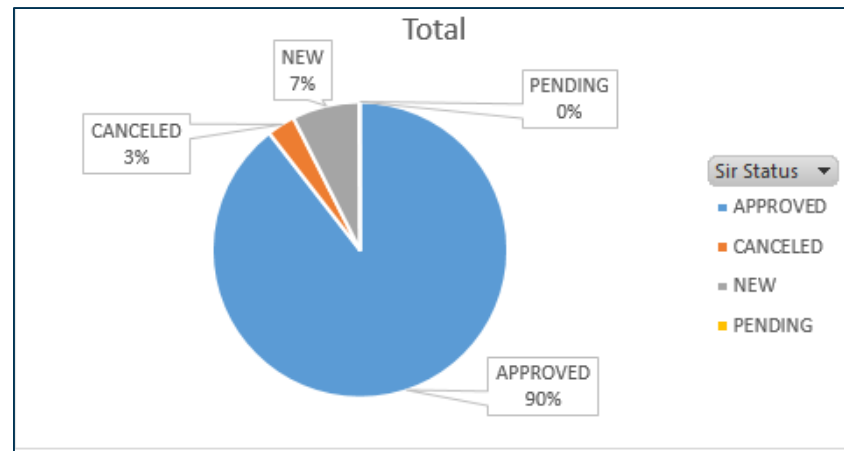
Only **3%** of total submitted requests are canceled before IT begins work. The requests arrive in the backlog with no tie to business drivers and often with no eyes other than the submitter.

Analyze - Root Cause & Solutions

Problem	Cause	Solution
No prioritization of requests come from the business. IT treats all requirements equally.	No vetting of the requests in the department. No opportunity to tell IT formally what provides value	Create a template that answers: Who, what, how and potential outcomes.
Business value not well understood and not formally evaluated	No formal scoring system. No requirements around value identification	All a high/medium/low impact analysis to different business drivers. Create a standard scoring system to reduce variability.
Effectively all requests go to IT. Only 3% of requests are canceled.	No formal process to say no.	Require departments to participate in 'saying no' early in the process for ideas without business value
Communication is poor between the business units and IT	The departments speak different languages and do not have a regular tool to review.	Utilize created document to drive conversation and follow up. Have document be the feed-in to new IT work management tool.

Selecting the Highest Value Work

Portfolio Idea Generation
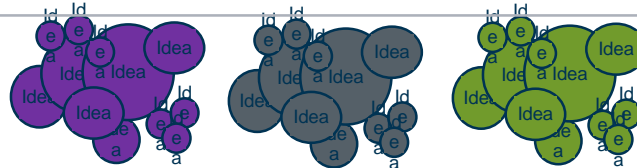
Encourage and capture new ideas

Front End Pipeline
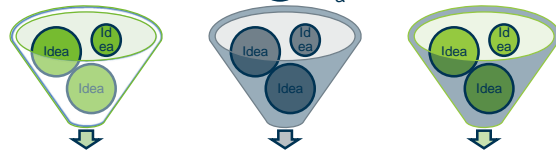
BU review - Focus on business value and alignment to BU objectives

Qualifying $
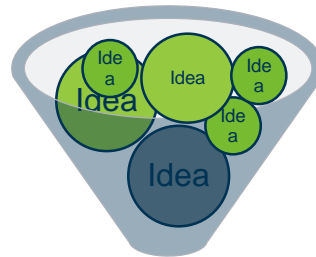
Initial Estimate, Complexity & Build vs Buy

Analyze $$
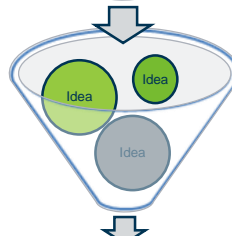
Business value to cost?
Alignment to Westar Strategy?
Invest in analyzing the idea?
Is there capacity (Business & Technical)?

Portfolio Backlog

1
2
3
4
5
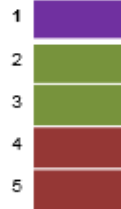
Prioritized Enterprise Portfolio List
Aligned with Westar's strategy
Ready for Program Level

Step 1: Enhancement Description

STEP 1		Enhancement Description
STOP: IF YOUR SOFTWARE IS BROKEN AND NOT WORKING AS IT TYPICALLY DOES PLEASE GO TO ESERVICE ON EPOWER AND SUBMIT A TICKET OR CALL X6311		
For	What department is this request for?	Power Marketing
Who	Who will be affected by this request? (Customers, positions, work flow owners, etc.)	Power Marketing'sEMA customers
What	What problem do you want to solve? Please provide as much detail as possible including supporting data, documentation or screenshots.	The current process for calculating the daily SPP Market activity our our EMA customers is very manual and cumbersome. Automating this process will increase the accuracy and timeliness of our daily reporting and satisfy the requirements of our external EMA customers.
How	How will this enhancement benefit those people identified in the Who? (IE: It will save a craft person 20 minutes on their job everyday, it will update an outdated system that is no longer supported, it will provide XYZ in business value)	This enhancement will save the Market Resource Trading desk 20 min each day.
Why	Why is this important? (in a nutshell - your 30 second elevator pitch.	This enhancement will provide increased accuracy and reliability to our reporting process. It will allow staff to spend their time analysing/reviewing results instead of compiling data. It will reduce error of manual copy and paste steps and autometed identification of errors in the input data.
Worst Case	What happens if this request is not completed? What is the worst case outcome if the enhancement is not completed? Are there unintended consequences? (Regulatory requirement not met, safety requirement not met, cost goals are missed, contractual obligations not met, business as usual)	business as usual
Best Case	How will you know this enhancement was successful? What is the best case scenario?	MRT desk will able to quickly and efficiently distribute the reports to our EMA customer and then spend more time on higher value work.
Alignment	How does this effort align to corporate strategy or the business unit objectives? (What Key Performance Indicators are you trying to improve, how does it relate to the 5 strategic focus areas, how will this help you meet your annual goals?)	This is aligned with increasing our EMA Customer satisfaction, and the higher value work this enhancement allows may lead to increased Power Marketing margins.
Timeline	Is there a required due date for the request? What is driving the timeline? (Regulatory, Contractual, etc.)	none
Measures of Success	How can the benefit of this enhancement be measured? (for example, time reduced in a process, reduction in customer care calls, increase in revenue, etc.)	Time creating reports will be reduced, EMA customer satisfaction may be improved.

Step 2: Value Scoring

	Scope			
STEP 2	**5 Strategic Focus Areas Enhancement Evaluation**			
#	**Question**	**Answer**	**Score (High/Medium/Low)**	**Comments**
Customers and community satisfaction: Creating a better and more consistently positive experience for our customers.				
1	Will this enhancement provide a positive customer impact (such as reliability enhancements, customer experience, billing/rates, positive public image, etc.?)	Yes	Low	*Increase the customer experience for EMA customers*
Operational Effectiveness: Strive for excellent reliability, safety and productivity while prudently managing costs and striving for "Zero Unsafe Behavior."				
2	Does this enhancement make your work product more accurate?	Yes	Medium	*Will reduce copy/paste steps and provide a process to check for errors in the input data.*
3	Does this enhancement make your job more efficient or require less time? Does this enhancement eliminate repetitive work? Does it eliminate or reduce work?	Yes	Low	
4	Does this enhancement impact worker or customer safety?	No	N/A	
5	Is this enhancement required due to a system, software upgrade or new version?	No	N/A	
Navigating Regulatory Changes: Balancing the need for regulatory compliance while offering a great value for our customers.				
6	Is this enhancement needed for security/regulatory and/or compliance reasons (NERC, FERC, KCC, RTO, SOX, OSHA, etc.)	No	N/A	
7	Is this enhancement needed for a rate case filing?	No	N/A	
Financial Performance: Achieve competitive shareholder return (dividends and share price) compared to peers, while aggressively managing downside risk.				
8	Will this enhancement help the company increase revenue?	Yes	Low	
9	Will this enhancement help the company decrease costs?	Yes	Low	
Sustainable Talent and Engaging Culture: Be a great place to work for the talent that we need with a focus on developing leaders.				
10	Does this enhancement allow you to focus on higher value work?	Yes	Medium	
11	Does this enhancement help you achieve success on your goals? (Individual, Team, Business Unit, Enterprise)	Yes	Medium	*Time creating reports will be reduced, EMA customer satisfaction may be improved.*
			14	

evergy™

Pilot & Evaluate Solutions
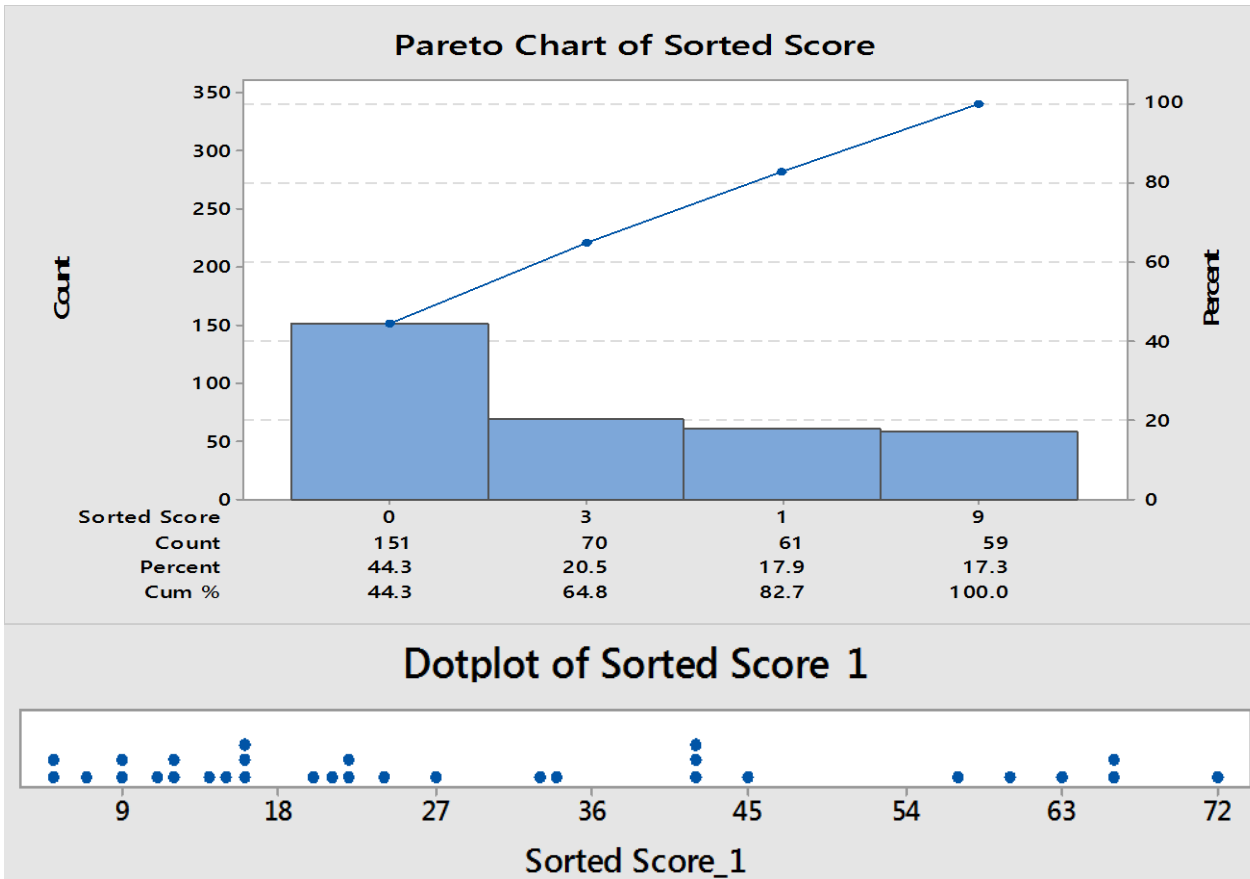
There was significant fear that scores would be falsely inflated towards higher values. The Pareto chart shows that Low, Medium and High results were equally utilized.

Pilot & Evaluate Solutions

One-way ANOVA: Sorted Score versus Sorted Questions

Method

Null hypothesis	All means are equal
Alternative hypothesis	At least one mean is different
Significance level	α = 0.05

Equal variances were assumed for the analysis.

Factor Information

| Factor | Levels | Values |
| Sorted Questions | 11 | Q1B, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11 |

Analysis of Variance

Source	DF	Adj SS	Adj MS	F-Value	P-Value
Sorted Questions	10	822.7	82.274		
Error	330	2761.0	8.367		
Total	340	3583.8			

Model Summary

| S | R-sq | R-sq(adj) | R-sq(pred) |
| 2.89254 | 22.96% | 20.62% | 17.74% |

Means

Sorted Questions	N	Mean	StDev	95% CI
Q1B	31	3.323	3.350	(2.301, 4.345)
Q2	31	4.548	2.758	(3.526, 5.570)
Q3				
Q4				
Q5				
Q6				
Q7	31	0.0323	0.1796	(-0.9897, 1.0542)
Q8	31	0.710	1.101	(-0.312, 1.732)
Q9	31	2.387	2.789	(1.365, 3.409)
Q10	31	3.677	3.609	(2.655, 4.699)
Q11	31	3.742	3.066	(2.720, 4.764)

Pooled StDev = 2.89254

Mood Median Test: Sorted Score versus Sorted Questions

Mood median test for Sorted Score
Chi-Square = 97.41   DF = 10   P = 0.000

Sorted Questions	N≤	N>	Median		
Q1B	12	19	3		
Q2	9	22	3		
Q3	13	18	3.00	8.00	(-------*---------------------)
Q4	28	3	0.00	0.00	*
Q5	24	7	0.00	1.00	*
Q6	28	3	0.00	0.00	*
Q7	31	0	0.00	0.00	*
Q8	26	5	0.00	1.00	*---)
Q9	19	12	1.00	2.00	*-------)
Q10	14	17	3.00	8.00	(-------*
Q11	8	23	3.00	2.00	*

```
              +---------+---------+---------+------
             0.0       2.5       5.0       7.5
```
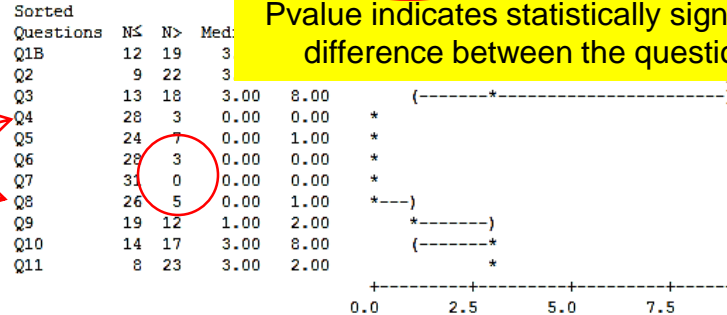
Pvalue indicates statistically significant difference between the questions

DF = # observations minus the number of necessary relations. 11 questions 10 DF proves this model has independent questions.

R^2 adj demonstrates a low ability to predict the outcome of the questions.

The mood median test and ANOVA showed that Q4-Q8 are lower and Q6, Q7 and Q8 were almost entirely centered below the median.

Q6 result makes sense since it is difficult for software to directly impact safety.

The team decided to reword Q7 to include "rate filing" instead of rate case.

The low score of Q8 is an expected response due to the rate regulated nature of the business.

Future State Map
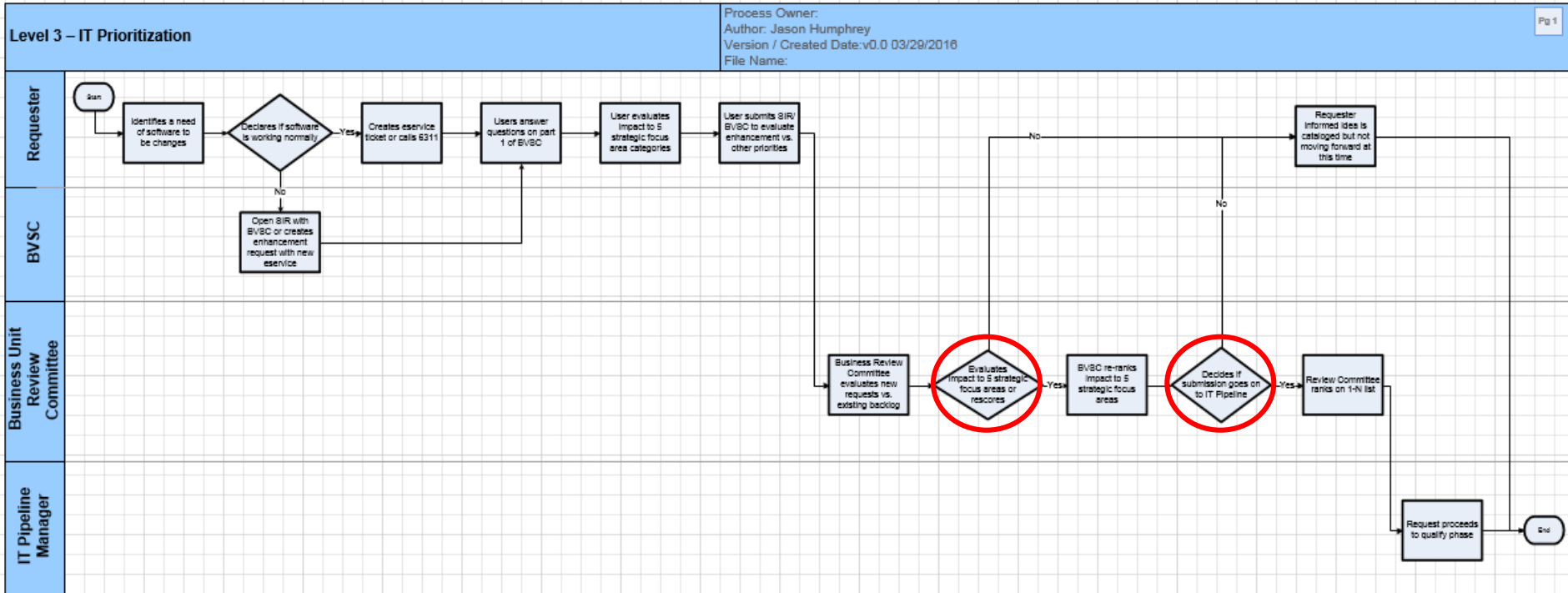
A simple process with clear decision points driving the right outcomes for IT Prioritization.

Benchmarking and Month End Close

Benchmarking Uses at Westar

- Shared Services
  - CFO Organization
    - Treasurer
    - Finance
    - Investor Relations
    - Risk Management
  - Technology Services
    - Business Systems
    - Infrastructure
    - Security
      - Cyber
      - Physical
  - Safety
  - Legal

- Shared Services Cont.
  - Human Resources
    - Business Partners
    - Compensation
    - HR Operations
    - Labor Relations
    - Talent Management
    - Payroll
    - Health and Wellness
  - Operations Support
    - Fleet
    - Facilities Management
  - Supply Chain
    - Materials Distribution
    - Strategic Sourcing

Benchmarking Uses at Westar

- Shared Services Cont.
  - Environmental Affairs
    - Air
    - Water
  - Regulatory Affairs
    - Compliance
    - Rates
  - Corporate Communications
    - Internal
    - External
    - Governmental Affairs
  - Audit

- Operations
  - Customer Service
    - Meter to Bill
    - Field Service
    - Credit and Collections
    - Customer Satisfaction
  - Generation
    - Reliability
    - Availability
    - EGC Scorecard
  - Power Delivery
    - Substation
    - Distribution
    - Transmission
    - Tree Trimming

Month End Close: Objectives

OBJECTIVES:

Primary Goal: Meet our peer benchmarks and reduce the length of time for month end closing from seven days to five days.

Secondary Goal: To create a more streamlined/documented month end process through the reduction/elimination of redundancies and non-value added activities.

GUIDING PRINCIPLES:

1. Identify and eliminate waste
2. Understand the problems with the process before deciding the solution
3. No large capital expenditures
4. No new IT solutions/software
5. No interference with the bargaining agreement terms or working conditions
6. Stay in scope of project

Month End Close: Identifying the Problems

The current state

- Convoluted Process
- Timing of CSS Close
- PO Receipt Accruals
- Journal Entries (Timeliness, Monitoring for Completion, Review Policy, Corrections)
- Timely Receipt Wolf Creek, LaCygne, and Stateline Information
- Timing of Payroll Posting

Month End Close: Brainstorming New Ideas

Top items to focus on first
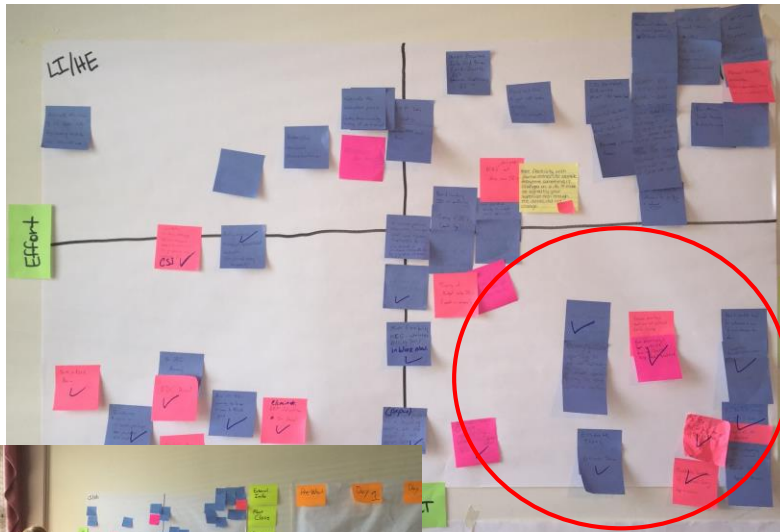
Impact/Effort Grid

- Suggested Improvements
  - Review and update the journal entry approval process
  - Develop a process for estimating revenue and tax
  - Identify critical path journal entries for 5 day close

- Identified Non-Value Add Activities
  - Multiple levels of journal entry review
  - Reduce non-critical meetings during close
  - Reduce the unnecessary referencing required for journal entries
  - Manual monthly accruals
  - Some groups not doing their own journal entries

The Future State

A new closing process reduced from seven to five days

Month End Close: Recommendations

- Identify critical path journal entries for 5 day close
- Update journal entry review policy to include new thresholds
- Allow transmission and distribution operations support to create journal entries in PeopleSoft
- Use effective tax rate to estimate tax
- Improve HFM load time
- Estimation
    - Revenue – (Execute future SCORE event)
    - Tax
    - Wolf Creek, LaCygne, and Stateline
    - Wholesale Billing

evergy™

Appendix

Contact information

Jason Humphrey

Director, Integration Success

jason.humphrey@Westarenergy.com

O (785) 575-8058 **C** (785)215-9997

Five Principles of Lean

1. Define Value
   - From customer perspective

2. Value Stream Map
   - Map material / information flow transformation

3. Continuous Flow
   - Eliminate process stops and obstacles

4. Establish Pull
   - Produce only what is needed when it is needed

5. Strive for Perfection
   - Continuously improve the process

SPP Finance Committee

>> evergy.

How Can Lean Benefit The Business

Before

After

Cycle Time

Wait Time (non value add)

Work Time (value add)

Same work completed in less time

− Cost

− Defects

− Lead time

− Inventory

+ Productivity

+ Customer satisfaction

+ Capacity

+ Quality

+ On time delivery

evergy
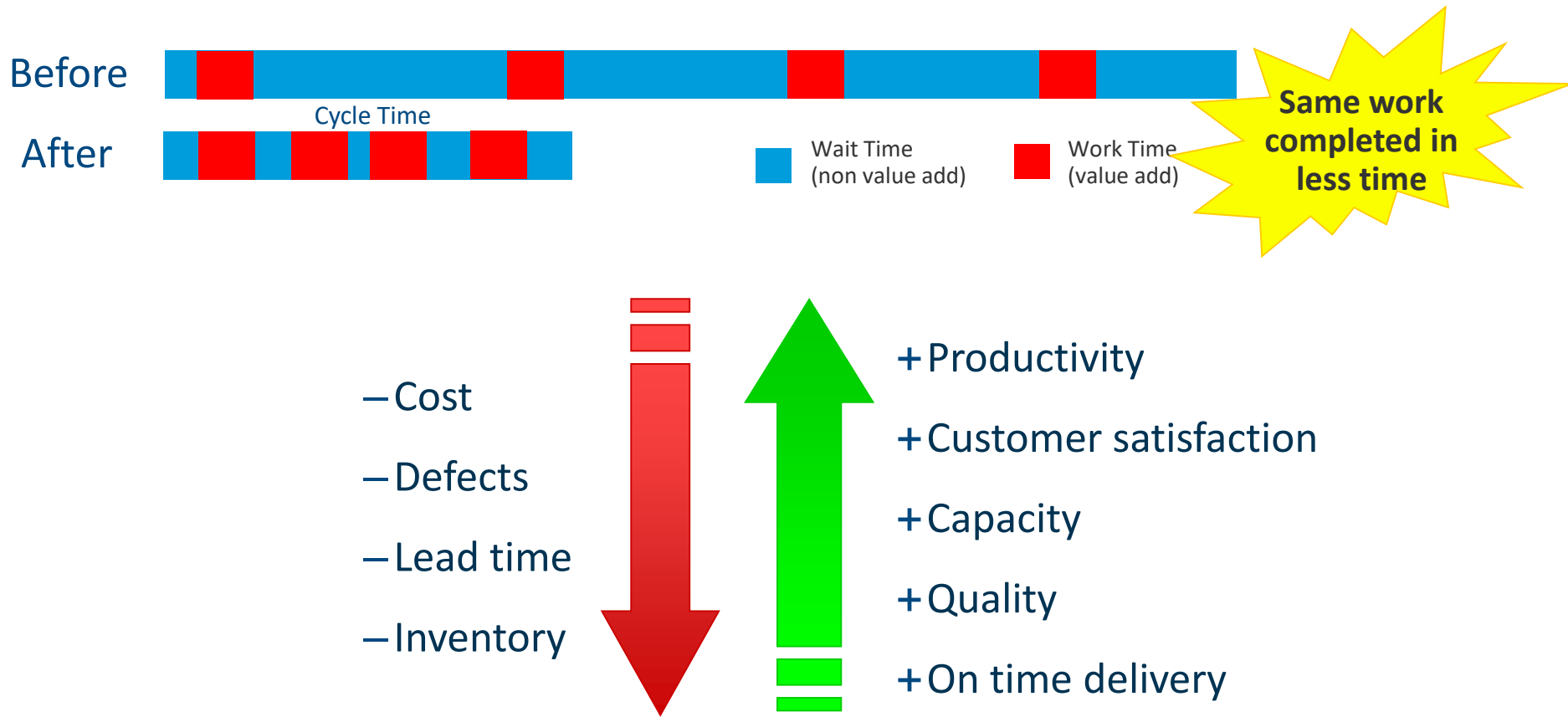
What is Six Sigma?

- **Measurement of Quality**
  - A measure of the number of "defects"
  - 3.4 defects per million opportunities

- **Process for Continuous Improvement**
  - A methodology for measuring and reducing process variation

- **Enabler for Culture Change**
  - A Common language for everyone
  - A business strategy for achieving, sustaining, and maximizing business success
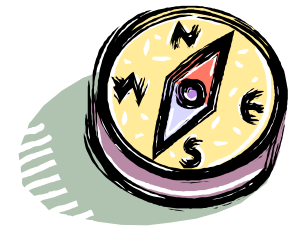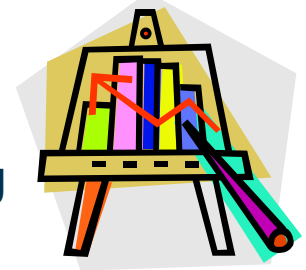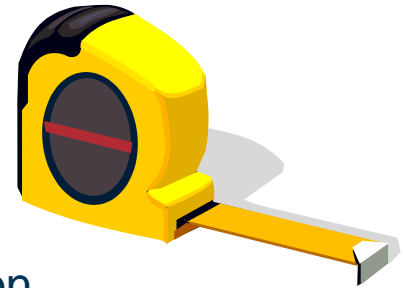
Through a Powerful DMAIC Process

DMAIC Phases

- Define
- Measure
- Analyze
- Improve
- Control

Pour in all possible input variables
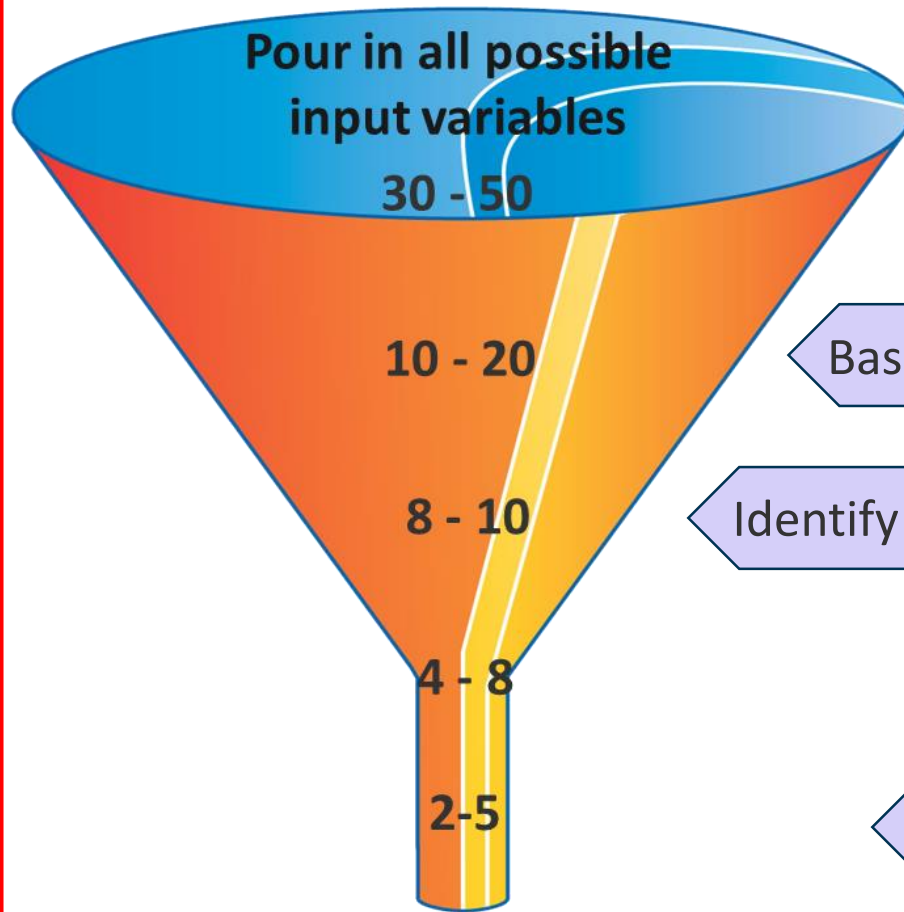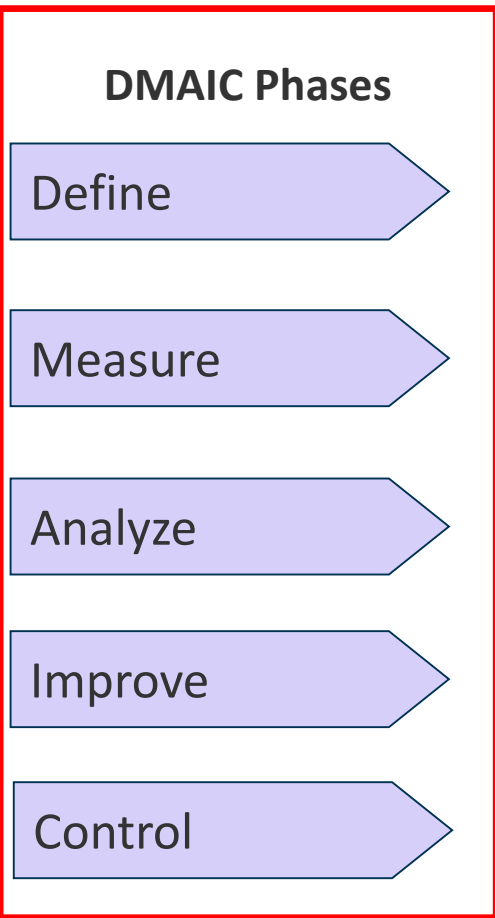
30 - 50 → Define the Project

10 - 20 → Baseline the As-Is Process

8 - 10 → Identify Significant Process x's

4 - 8 → Validate Solution

2 - 5 → Sustain Improvement

evergy™

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

Summary				
	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Revenues	$196,532	$194,212	$2,320	1.2%
Expenses	186,023	190,752	4,728	2.5%
Net Income/(Loss)	$10,509	$3,460	$7,048	(203.7%)

Revenue				
	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Tariff Administration Service	$164,757	$164,001	$756	0.5%
FERC Fees & Assessments	20,657	20,769	(112)	(0.5%)
NERC ERO Regional Entity Revenue	4,526	4,724	(198)	(4.2%)
Miscellaneous Income	5,477	3,963	1,514	38.2%
Contract Services Revenue	533	156	377	242.2%
Annual Non-Load Dues	582	600	(18)	(3.0%)
Total Revenue	$196,532	$194,212	$2,320	1.2%

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

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

The favorable variance is primarily related to increased revenues associated with engineering staff dedicated to studies. This increase is due to a greater volume of tariff studies being completed year-to-date, along with an overall increase in GI activities.

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

The budget assumed the OVEC contract would be terminated after the first quarter. Contract Services Revenue forecast assumes SPP will continue to provide services under the existing contract for the full year as per the recent agreement between SPP and OVEC.

Expense				
	2018 FY Forecast	2018 FY Budget	Fav/(Unfav) Variance	
Salary & Benefits	$95,403	$96,056	$652	0.7%
Assessments & Fees	20,269	20,269	0	0.0%
Communications	4,340	4,474	134	3.0%
Maintenance	17,622	18,366	743	4.0%
Outside Services (Including RSC)	13,120	14,588	1,468	10.1%
Administrative	4,866	5,210	345	6.6%
Travel & Meetings	2,986	3,097	110	3.6%
Depreciation	19,101	19,390	289	1.5%
Other Expenses	8,316	9,302	986	10.6%
Total Expense	$186,023	$190,752	$4,728	2.5%

Most expenses are within 5% favorable as compared to the budget.

Salary & benefits are expected to trail budget primarily due a reduction in the pension cost forecast, which was adjusted to reflect the most recent actuarial valuations for both the retirement and retiree healthcare plans. Retention payout for the RE staff as well as a lower than expected vacancy rate (average 2% as compared to 3% in the budget) partially offsets the decrease in pension costs.

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

The overall favorable variance in outside services is driven by the following items: 1) favorable contract negotiations and various delays/reassessments in IT, 2) decline in various assignments as the RE prepares to conclude its operations in June, 3) decrease in legal services required for FERC matters, and 4) various other immaterial variances across numerous departments. These favorable variances are partially offset by increased costs associated with the 2019 Integrated Transmission Planning (ITP) study that was originally budgeted to begin in 2019.

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

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

	Actual Jan-18	Actual Feb-18	Actual Mar-18	Actual Apr-18	Actual May-18	Forecast Jun-18	Forecast Jul-18	Forecast Aug-18	Forecast Sep-18	Forecast Oct-18	Forecast Nov-18	Forecast Dec-18	FY 2018 Forecast	FY 2018 Budget	Variance Fav/(Unfav)	FY 2017 Actual	Variance Fav/(Unfav)
Income																	
Tariff Administrative Service	$14,269	$12,483	$13,773	$13,570	$14,127	$13,533	$13,984	$13,984	$13,533	$13,984	$13,533	$13,984	$164,757	$164,001	$756	$162,847	$1,910
Fees & Assessments	2,565	2,795	2,456	2,301	2,176	2,362	1,709	2,203	1,933	1,755	1,606	1,901	25,765	26,093	(328)	27,496	(1,731)
Contract Services Revenue	44	44	44	44	44	44	44	44	44	44	44	44	533	156	377	533	-
Miscellaneous Income	492	417	395	420	584	362	450	537	689	382	390	357	5,477	3,963	1,514	5,745	(267)
Total Income	17,372	15,740	16,669	16,336	16,931	16,302	16,188	16,769	16,200	16,166	15,574	16,287	196,532	194,212	2,320	196,621	(89)
Expense																	
Salary & Benefits	8,251	7,958	8,438	7,884	8,050	7,941	7,823	7,803	7,780	7,762	7,701	8,013	95,403	96,056	652	94,650	(754)
Employee Travel	127	171	151	198	196	182	163	167	173	173	186	158	2,045	2,168	123	2,023	(21)
Administrative	195	420	276	568	265	483	417	313	275	997	312	345	4,866	5,210	345	4,656	(210)
Assessments & Fees	1,689	1,689	1,689	1,689	1,689	1,689	1,689	1,689	1,689	1,689	1,689	1,689	20,269	20,269	0	21,663	1,394
Meetings	72	66	67	159	80	42	91	74	39	130	75	47	942	929	(13)	1,040	98
Communications	258	287	293	308	353	378	410	410	410	410	410	410	4,340	4,474	134	3,504	(836)
Maintenance	1,115	1,387	1,328	1,507	1,566	1,392	1,459	1,492	1,489	1,526	1,530	1,831	17,622	18,366	743	16,099	(1,524)
Services	826	1,224	792	877	998	905	1,192	1,115	1,337	1,349	1,089	1,174	12,878	14,257	1,379	12,417	(461)
Regional State Committee	8	25	13	11	21	23	23	23	23	23	23	23	242	331	89	202	(39)
Depreciation	1,831	1,691	1,354	1,551	1,460	1,569	1,593	1,610	1,618	1,613	1,628	1,583	19,101	19,390	289	27,716	8,616
Total Expense	14,372	14,918	14,404	14,751	14,677	14,604	14,861	14,696	14,834	15,673	14,644	15,273	177,707	181,450	3,742	183,971	6,263
Other Income/(Expense)																	
Investment Income	5	5	46	6	7	-	-	-	-	-	-	-	69	-	69	165	(96)
Interest Expense	(811)	(802)	(812)	(804)	(786)	(787)	(772)	(802)	(769)	(753)	(752)	(751)	(9,401)	(9,424)	23	(10,227)	825
Capitalized Interest	-	-	19	-	-	26	-	-	35	-	-	43	122	122	0	63	59
Change in Valuation of Swap	-	-	547	-	-	-	-	-	-	-	-	-	547	-	547	789	(243)
Other Income/Expense	165	(60)	10	35	71	-	-	-	-	-	-	-	221	-	221	(1,414)	1,635
Unrealized Gain on Investment	512	(355)	(261)	13	218	-	-	-	-	-	-	-	127	-	127	1,499	(1,372)
Chg in Employee Benefit Plan Funded Status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,434	(6,434)
Net Other Income (Expense)	(129)	(1,212)	(452)	(749)	(491)	(761)	(772)	(802)	(734)	(753)	(752)	(709)	(8,316)	(9,302)	986	(2,691)	(5,625)
Net Income (Loss)	$2,871	($391)	$1,814	$835	$1,763	$937	$555	$1,271	$631	($260)	$178	$305	$10,509	$3,460	$7,048	$9,959	$549
2018 Headcount																	
Approved Budgeted Positions	619	619	620	620	621	621	609	609	609	609	609	609	609	609		610	
Actual/Forecast Headcount (Incl. Vacancy)	601	603	601	598	594	598	598	598	598	598	598	598	598			595	
Actual/Forecast Positions (Excl. Vacancy)	620	619	614	612	613	618	611	611	608	608	608	608	608			615	
Headcount Vacancy Run rate	3%	3%	2%	2%	3%	3%	2%	2%	2%	2%	2%	2%	2%	3%			
NERC ERO Regional Entity Revenue	803	888	781	679	616	595	76	68	-	-	-	20	4,526	4,724	($198)	10,920	($6,394)
FERC Fees Assessment	1,204	1,907	1,663	1,610	1,560	1,767	1,633	2,135	1,933	1,755	1,606	1,881	20,657	20,769	(112)	16,006	4,651
Annual Non-Load Dues	558	-	12	12	-	-	-	-	-	-	-	-	582	600	(18)	570	12
Fees & Assessments Revenue	$2,565	$2,795	$2,456	$2,301	$2,176	$2,362	$1,709	$2,203	$1,933	$1,755	$1,606	$1,901	$25,765	$26,093	(328)	$27,496	(1,731)
NRR Over / (Under) Recovery	$4,526	$998	($2,402)	$2,430	$2,560	($2,886)	$2,204	$1,909	($3,312)	$1,288	$1,358	($3,624)	$8,337			$3,288	

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

	Current Month Compared to Forecast			YTD Actual Compared to YTD Budget			FY Forecast Compared to FY Budget		
	May-2018 Actual	May-2018 Forecast	Variance Fav/(Unfav)	May-2018 Actual	May-2018 Budget	Variance Fav/(Unfav)	FY 2018 Forecast	FY 2018 Budget	Variance Fav/(Unfav)
Income									
Tariff Administrative Service	$14,127	$13,984	$143	$68,222	$68,334	($111)	$164,757	$164,001	$756
Fees & Assessments	2,176	2,053	123	12,294	13,190	(896)	25,765	26,093	(328)
Contract Services Revenue	44	44	-	222	138	84	533	156	377
Miscellaneous Income	584	312	272	2,309	1,651	658	5,477	3,963	1,514
Total Income	16,931	16,394	537	83,047	83,313	(266)	196,532	194,212	2,320
Expense									
Salary & Benefits	8,050	8,071	22	40,581	41,197	615	95,403	96,056	652
Employee Travel	196	184	(13)	843	1,002	159	2,045	2,168	123
Administrative	265	285	20	1,724	1,999	275	4,866	5,210	345
Assessments & Fees	1,689	1,689		8,445	8,445	$0	20,269	20,269	
Meetings	80	109	29	443	471	28	942	929	(13)
Communications	353	323	(30)	1,500	1,864	364	4,340	4,474	134
Maintenance	1,566	1,590	24	6,904	7,843	939	17,622	18,366	743
Services	998	1,283	286	4,717	6,216	1,499	12,878	14,257	1,379
Regional State Committee	21	28	7	78	138	60	242	331	89
Depreciation	1,460	1,510	50	7,887	8,176	289	19,101	19,390	289
Total Expense	14,677	15,072	395	73,122	77,351	4,229	177,707	181,450	3,742
Other Income/(Expense)									
Investment Income	7	-	7	69	-	69	69	-	69
Interest Expense	(786)	(789)	3	(4,016)	(3,927)	(89)	(9,401)	(9,424)	23
Capitalized Interest	-	-	-	19	19		122	122	
Change in Valuation of Swap	-	-	-	547	-	547	547	-	547
Other Income/Expense	71	-	71	221	-	221	221	-	221
Unrealized Gain on Investment	218	-	218	127	-	127	127	-	127
Net Other Income (Expense)	(491)	(789)	298	(3,033)	(3,908)	875	(8,316)	(9,302)	986
Net Income (Loss)	$1,763	$533	$1,230	$6,892	$2,054	$4,838	$10,509	$3,460	$7,048
Headcount	594	595	(1)	594	621	(27)	608	609	(1)

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

	5/31/2018	12/31/2017	Net Change
ASSETS			
Current Assets			
Cash & Equivalents	$231,805	$100,496	$131,310
Restricted Cash Deposits	348,625	340,612	8,013
Accounts Receivable (net)	41,017	74,391	(33,374)
Other Current Assets	19,146	8,539	10,608
Total Current Assets	**$640,594**	**$524,038**	**$116,556**
Total Fixed Assets	77,389	79,774	(2,386)
Total Other Assets	2,716	5,499	(2,783)
Investments	16,524	24,456	(7,932)
Total Assets	**$737,223**	**$633,767**	**$103,456**
LIABILITIES & EQUITY			
Liabilities			
Current Liabilities			
Accounts Payable (net)	$47,474	$75,844	(28,370)
Customer Deposits	397,329	340,612	56,717
Current Maturities of LT Debt	23,412	23,359	53
Other Current Liabilities	174,784	98,801	75,982
Deferred Revenue	3,084	3,928	(844)
Total Current Liabilities	**646,082**	**542,544**	**103,538**
Long Term Liabilities			
Long-Term Debt	208,288	213,677	(5,389)
Capital Lease Obligation	993	1,966	(973)
Other Long Term Liabilities	31,689	32,301	(612)
Total Long Term Liabilities	**240,970**	**247,944**	**(6,974)**
Net Income	6,892	9,959	(3,067)
Members' Equity	(156,721)	(166,680)	9,959
Total Members' Equity	**(149,829)**	**(156,721)**	**6,892**
TOTAL LIABILITIES & EQUITY	**$737,223**	**$633,767**	**$103,456**

Southwest Power Pool
Headcount Analysis
May 31, 2018

	Current Month Actual vs. Budget			Year End Forecast vs. Budget		
	Actual May-18	Budget May-18	Over/(Under) Budget	2018 Forecast	2018 Budget	Over/(Under) Budget
Administration	48	49	(1)	49	49	0
Process Integrity	50	54	(4)	58	54	4
Operations	160	162	(2)	162	162	0
Information Technology	163	164	(1)	167	164	3
Engineering	74	80	(6)	84	80	4
Regulatory Policy & General Counsel	26	27	(1)	27	27	0
Corporate Services	28	30	(2)	30	30	0
Market Monitoring	16	16	0	16	16	0
Market Design	5	6	(1)	6	6	0
Interregional Relations	1	3	(2)	1	3	(2)
Communications & Gov't Affairs	6	7	(1)	8	7	1
SPP Regional Entity	17	23	(6)	0	11	(11)
Total Positions	**594**	**621**	**(27)**	**608**	**609**	**(1)**
Vacancy Estimate				(10)	(18)	8
Headcount Including Vacancy Est.				**598**	**591**	**7**

Headcount changes		Update on RE Staffing	
2018 Beginning Positions (RTO and RE) *	621	RE Beginning budgeted positions	23
RE resignations / retirements	(9)	Transfers to RTO open position (Nov 2017)	(1)
RE staff filling open RTO positions	(7)	Resignations (as of Apr 2018)	(5)
Operations positions eliminated	(2)	Resignations (Jun 2018)	(1)
Out-of-budget positions added (Eng) *	4	Transfers to RTO open positions (Jul 2018)	(6)
Out-of-budget position added (IT)	1	Retirements (Aug 2018)	(3)
Total RTO Forecast	**608**	**Total positions to transfer to RTO**	**7**

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

Notes on RE staffing: The 2018 budget assumed the RE would be dissolved by July 2018, and SPP would retain 11 of the 23 staff members (i.e. 12 staff would voluntarily leave). This assumption was for budgeting purposes only and did not negate the possibility of retaining all 23 staff members if necessary, as SPP has committed to the continued employment for all remaining RE staff.

As of May 2018, five RE staff resigned and one filled an open position within the RTO, resulting in total RE staff of 17. The forecast also includes one additional resignation in June and three retirements after August. Six remaining RE staff have accepted offers to fill existing open positions within the RTO by the dissolution date of the RE. The total number of RE staff to be absorbed by the RTO is expected to be 7, which is 4 less than the budget assumption of 11. Of the 7 positions transferring to the RTO, 6 new positions were added to augment compliance and interregional affairs functions and one was placed in Human Resources.

Southwest Power Pool, Inc. - Finance Committee Project Dashboard

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

Project Name -------------------- Linkage to Strategic Plan	Project Description	SPP Owning Officer	Approved Budget ------------------ Est. Cost at Completion	Remaining Milestones	Comments
			ACTIVE PROJECTS		
Identity and Access Management Phase 2 --------------- 1	Automation of identity and access system to ensure CIP Compliance	Sugg	$0.5M ------------------ $0.5M	Build - 7/2/18 Test - 8/21/18	Spend to date: $0.2M.
Online VSAT -------------------- 1	The On-Line Voltage Security Assessment Tool (VSAT) software provides SPP comprehensive analyses for predicting and preventing voltage insecurity problems.	Rew	$1.4M ------------------ $1.0M	Build/Test - 6/30/18 Close – 7/31/18	On schedule and on budget Phased approach for Real Time mode first, followed by Study and Look Ahead modes.
Online TSAT -------------------- 1	Transient Stability Analysis Tool (TSAT) will be used to ensure power transfers do not cause a voltage collapse event or blackout.	Rew	$1.4M ------------------ $.8M	Build – 12/3/18 Test - 3/1/19 Training – 3/1/19 Implementation – 3/15/19 Close – 4/12/19	Under budget from software and hardware savings from original estimates.
TTSE DTS Upgrade Project - Phase 3 ---------------------- 1	Enhancement to the current DTS to incorporate virtualization tools mimicking those available in the control center.	Rew	$0.1M ------------------ $0.1M	Build - 9/29/18 Test - 11/30/18	Internal project to develop visualization tools for the training simulator that mimic the production environment. The $90K covers software license costs.
Settlements Replacement -------------------- 1	Replacement of the current Market and Transmission Settlement Systems with a custom designed single high performance scalable system solution.	Dunn	$5.3M ------------------ $5.3M	Build – 10/31/18 Test – 3/29/19 Implementation – 5/1/19	On schedule and on budget. Accelerated the development effort to ensure the Settlements system is staged correctly for the MWTG Implementation.
ITSM Tool Upgrade -------------------- 1	**Phase 1** - Remedy Upgrade (Incident, Problem, Change, Asset, etc.) Current Remedy Version is at end of life for Vendor support. **Phase 2** - Implement Upgrade of BPPM -Performance Manager (monitoring software)	Sugg	$1M ------------------ $0.9M	**Phase 1** Build - 08/02/18 Training - 10/08/18 Implementation - 11/15/18 **Phase 2** Build - 11/01/2018 Test - 12/01/2018 Implementation - 01/25/2019	Phase 2 has a dependency for phase 1 to be in production before Phase 2 can complete the cutover.

Southwest Power Pool, Inc. - Finance Committee Project Dashboard

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

Project Name ----------------- Linkage to Strategic Plan	Project Description	SPP Owning Officer	Approved Budget ----------------- Est. Cost at Completion	Remaining Milestones	Comments
Reliability Communication Tool ---------------------- 1	Project would create an application to facilitate the systematic issuance, receipt, and auditable documentation of operating instructions.	Rew	$0.0M ------------------- $0.0M	Build - 8/3/2018 Testing - 12/19/18 Implementation - 2/27/19	Decision was made to use internal staff for the development therefore no capital expenditures. Development under way and members are being engaged to identify testers.
Replicated Data Server --------------------- 1	The replicated data server gives SPP transmission operators and transmission owners a near real time view of SPP's real time models, substation one line drawings, CADA measurements, Powerflow solution results, and real time contingency analysis warnings and violations.	Rew	$0.15M ------------------- $0.15M	Requirements - 8/1/18 Build – 9/10/18 Test – 12/3/18 Training – 12/3/18 Implementation – 12/18/18 Close – 1/15/19	Requirements under review. Design for user access is underway.

Southwest Power Pool, Inc. - Finance Committee Project Dashboard

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

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

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

F.1.1. Admin Fee Measurement

Financial Metrics

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

	FY Forecast vs. Budget Variance as of:		
	Jan-18	Feb-18	Mar-18
Gross Revenue Requirement (GRR)	$0.7 ■	$0.8 ■	$1.8 ■
Net Revenue Requirement (NRR)	$3.0 ■	$2.8 ■	$4.9 ■
Admin Fee Revenue Collected	$0.9 ■	$0.7 ■	$0.6 ■
Over/(Under) Recovery	$3.9 ■	$3.5 ■	$5.5 ■
Billing Determinants (MWh)	2.1 ■	1.7 ■	1.3 ■

F.1.2. Admin Fee Measurement

SPP Administrative Fee, Net Revenue Requirement & Load Metric
FY Forecast as of March 31, 2018
(millions)

	2018 Fcst	2018 Budget	Fav /(Unfav)	
Gross Revenue Requirement (GRR)	$166.1	$167.9	$1.8	■
Net Revenue Requirement (NRR)	$159.1	$164.0	$4.9	■
Admin Fee Revenue Collected	$164.6	$164.0	$0.6	■
Over/(Under) Recovery	$5.5	($0.0)	$5.5	■
Billing Determinants (MWh)	383.4	382.1	1.3	■

Legend

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

NRR

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

Billing Determinants (MWh)

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

F.1.4. Admin Fee Measurement

Financial Metrics

| SPP Administrative Fee Performance												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Approved Budget												
Net Revenue Required (millions)	$52.8	$61.5	$56.5	$68.4	$78.4	$89.6	$121.8	$132.6	$141.2	$150.5	$160.5	$164.0
MWh Load (millions)	288.6	312.5	331.3	333.5	343.0	353.5	360.9	348.2	363.5	407.2	383.0	382.1
NRR / Billing Determinants (MWh millions)	$0.183	$0.197	$0.170	$0.205	$0.228	$0.253	$0.337	$0.381	$0.389	$0.370	$0.419	$0.429
Approved Admin Fee	$0.190	$0.190	$0.170	$0.195	$0.210	$0.255	$0.315	$0.381	$0.390	$0.370	$0.419	$0.429
Actual/Forecast												
Net Revenue Required (millions)	$48.0	$58.1	$59.8	$63.5	$80.8	$84.8	$123.3	$137.0	$142.6	$144.5	$162.8	$159.1
MWh Load (millions)	301.1	296.1	328.2	331.6	341.4	361.7	357.5	351.0	373.6	394.5	388.7	383.4
NRR / Billing Determinants (MWh millions)	$0.159	$0.196	$0.182	$0.191	$0.237	$0.234	$0.345	$0.390	$0.382	$0.366	$0.419	$0.415
Calcuated Rate Over/(Under) Budget	($0.024)	($0.001)	$0.012	($0.014)	$0.008	($0.019)	$0.007	$0.009	($0.008)	($0.003)	($0.000)	($0.014)
Billing Determinants Growth	5.12%	(1.65%)	10.82%	1.05%	2.96%	5.93%	(1.15%)	(1.83%)	6.46%	5.59%	(1.49%)	(2.81%)
NRR (calculated rate times billing determinants)	$48.0	$58.1	$59.8	$63.5	$80.8	$84.8	$123.3	$137.0	$142.6	$144.5	$162.8	$159.1
Admin fee collected *	$57.2	$56.3	$55.8	$64.7	$71.7	$92.2	$112.6	$133.7	$145.7	$146.0	$164.6	$164.6
Difference Over/(Under)	$9.2	($1.8)	($4.0)	$1.2	($9.1)	$7.5	($10.7)	($3.2)	$3.1	$1.4	$1.7	$5.5

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

F.2. Credit

% of Late Transmission Payments

% of Late Market Payments
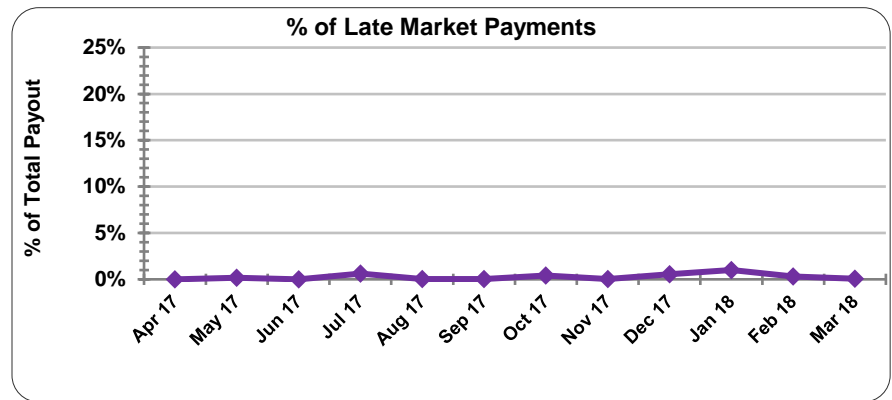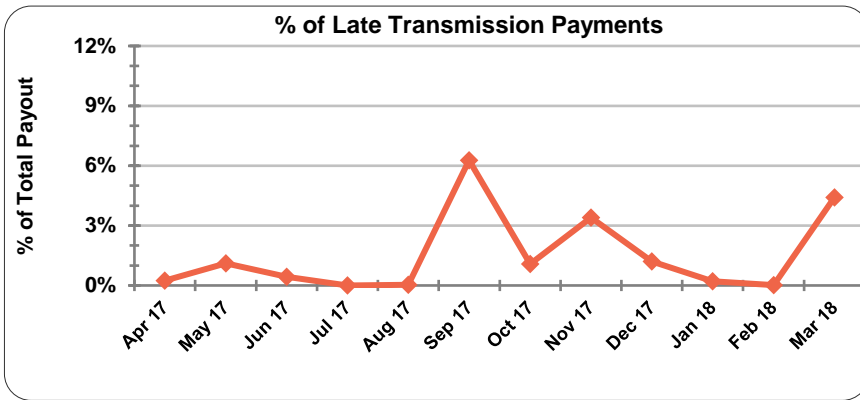
| Transmission ($000s)	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	12 mo
Late Payments	$112	$534	$201	$0	$16	$3,130	$534	$1,745	$552	$98	$8	$2,199	$9,130
Total Payments	$45,594	$48,335	$46,394	$45,936	$47,373	$49,910	$49,987	$51,403	$46,057	$46,572	$47,918	$49,788	$575,267
% Late Payments	0%	1%	0%	0%	0%	6%	1%	3%	1%	0%	0%	4%	2%

Market ($000s)	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	12 mo
Late Payments	$3	$125	$0	$580	$19	$29	$340	$13	$463	$960	$231	$58	$2,821
Total Payments	$103,871	$80,999	$60,532	$93,311	$72,038	$59,473	$84,790	$68,822	$82,220	$95,379	$72,756	$70,780	$944,971
% Late Payments	0%	0%	0%	1%	0%	0%	0%	0%	1%	1%	0%	0%	0%

Transmission Short Pays
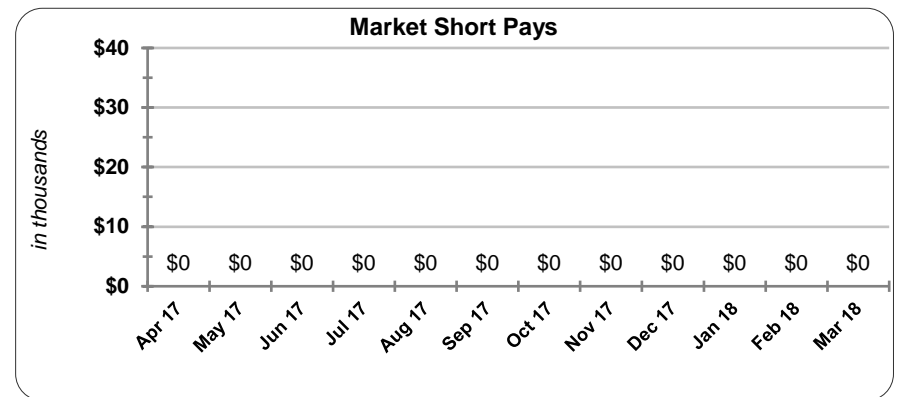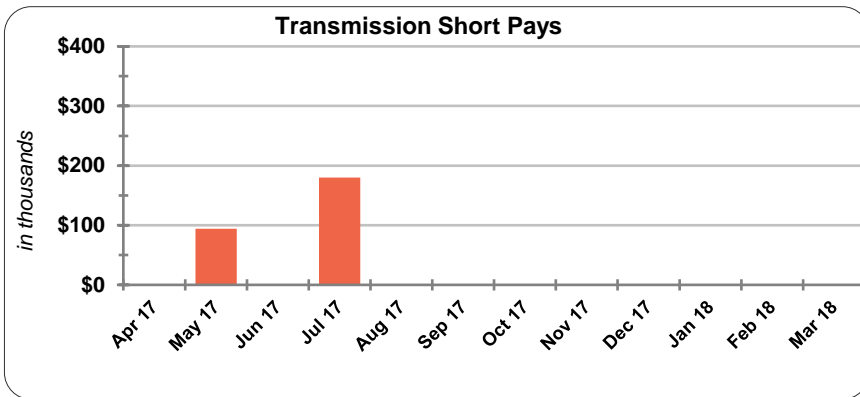
Market Short Pays

Short Pays ($000s)	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	12 mo
Transmission	$0	$94	$0	$180	$0	$0	$0	$0	$0	$0	$0	$0	$274
Market	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

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

F.3. Settlement Disputes

Financial Metrics
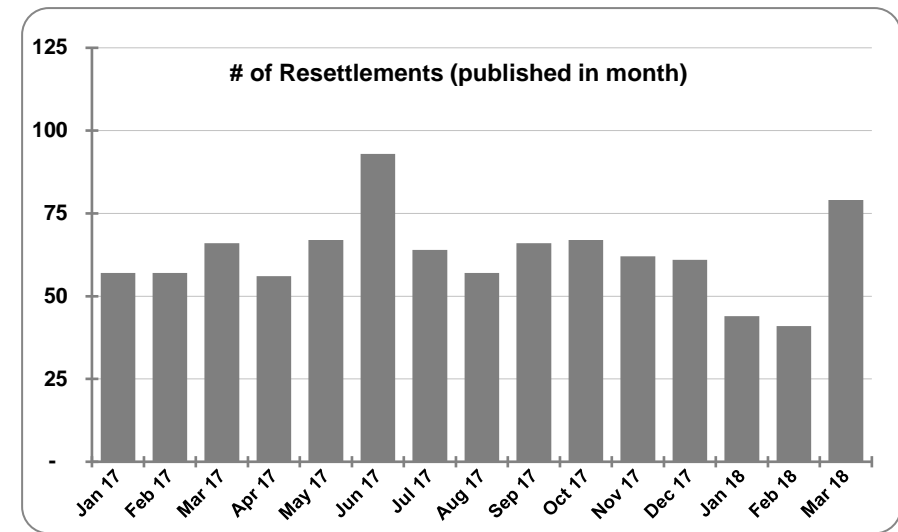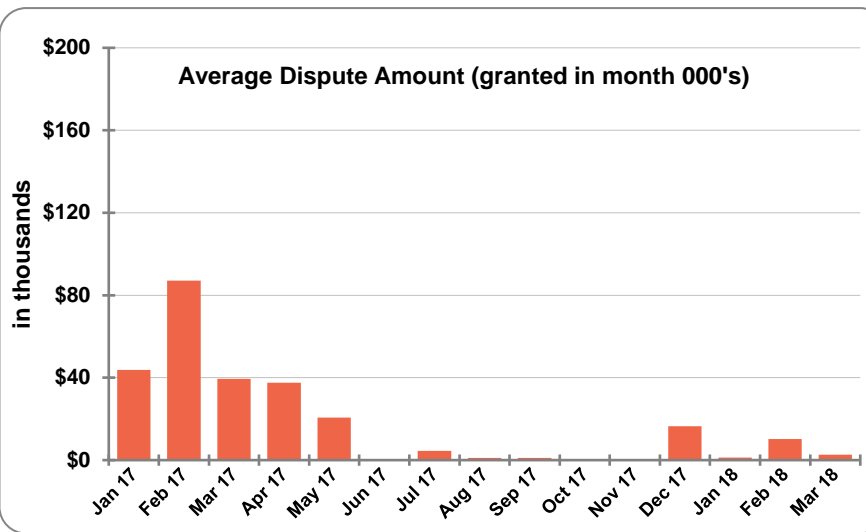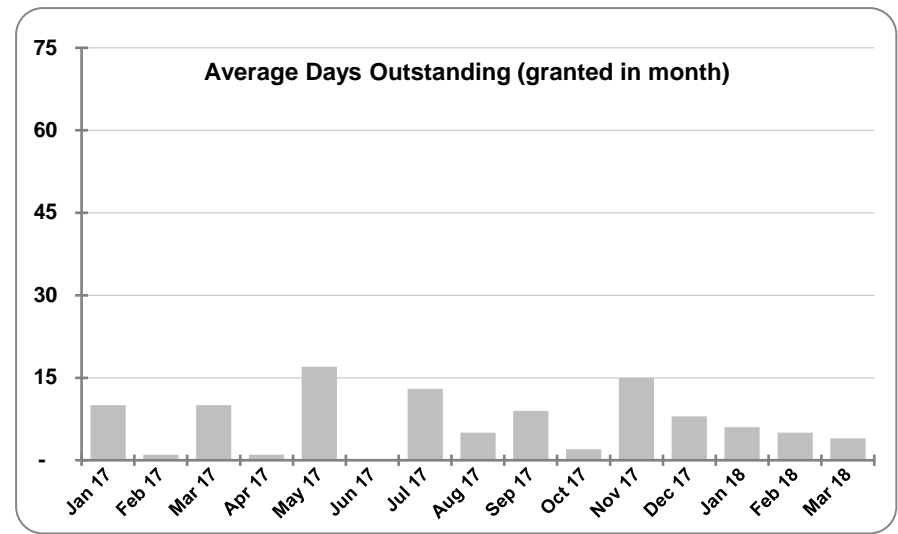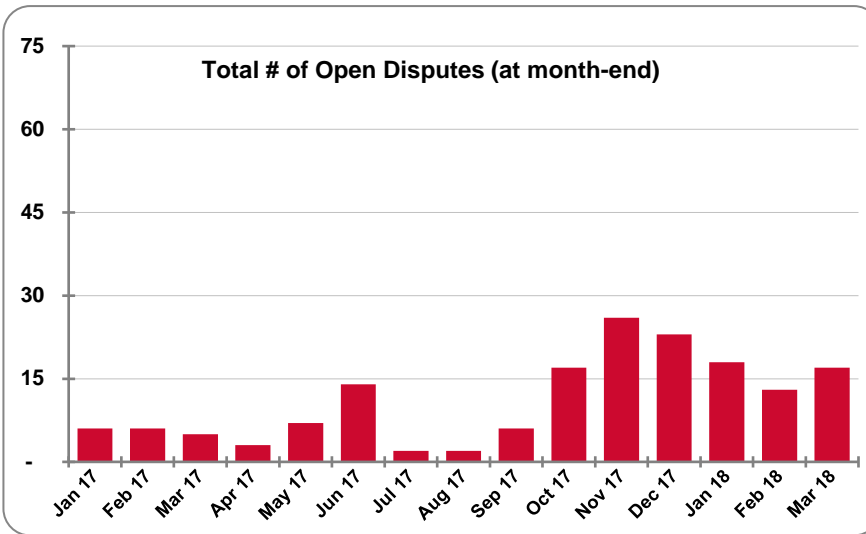
	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18
Total # of Open Disputes (at month-end)	6	6	5	3	7	14	2	2	6	17	26	23	18	13	17
Average Days Outstanding (granted in month)	10	1	10	1	17	-	13	5	9	2	15	8	6	5	4
Average Dispute Amount (granted in month 000's)	$43.8	$87.0	$39.4	$37.5	$20.6	$0.0	$4.5	$1.1	$1.0	$0.0	$0.0	$16.4	$1.2	$10.2	$2.7
# of Resettlements (published in month)	57	57	66	56	67	93	64	57	66	67	62	61	44	41	79

SPP Member-Facing Member-Impacting Portfolio Report Summary

REVISION REQUESTS	CURRENT QUARTER	PREVIOUS QUARTER	CHANGE
In Flight/Current Release	3	0	3
Pending	11	18	-7
Estimated Cost of Pending Items	$1,407,394	$1,916,622	-$509,228

ENHANCEMENT REQUESTS			
In Flight/Current Release	4	16	-12
Pending	97	89	8
Estimated Cost of Pending Items	$2,790,000	$2,830,000	-$40,000

PROJECTS			
In Flight/Current Release	8	8	0
Pending	3	7	-4
Estimated Cost of Pending Items	$60,000	$404,004	-$344,004

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
RR0088	Release of Unscheduled Firm Timing Modification	BPWG	Current Release
RR0203	Adding Second Step to Monthly ARR Allocation	MWG	Current Release
RR0210	Contingency Reserve Deployment Tests	MWG	$100K
RR0229	Order No. 831 Compliance (Offer Caps)	MWG	Current Release
RR0231	Mitigation of Locally Committed Resources	MWG	$235,480
RR0234	Redirect Billing	RTWG	TBD
RR0245	Mitigated Start-Up and No-Load Offer Maintenance Cost	MWG	$100,200
RR0252	OOME Enhancement	MWG	$168,176
RR0253	DVER Regulation Enhancement	MWG	$146,800
RR0259	Settlement Statements Timelines	MWG	
RR0266	JOU Combined Single Resource Modeling post Settlement	MWG	$389,290

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Enhancement Request: OASIS is fundamental to SPP services and its customers. This clean-up effort would improve the engagement SPP customers, members, market participants, and stakeholders have with the SPP OASIS site. Information on SPP's operational services would be more transparent and I suspect a lot of time would be saved for everyone engaging with the site. Customers would be able to find current information instead of sorting through the various folders, many of which are outdated, on the SPP OASIS.	Unplanned C	Medium	$10k - 25k	
This is in response to RMS ticket #37749. We would like to see a method to programmatically download the CSS Output Reports.Currently we have to download big files and have to run into connection issueswhen the screen is idle for quite some time between getting the report anddownloading the report.	Unplanned C	Medium	$10k - 25k	TEA
PCWG requested to change the color around Construction Status fields in Tagit-SCERT from white to yellow. This would bring formatting consistency since other areas that require TO input are also yellow.	Current Release	Low	Up to $10k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
PCWG requested addition of Upgrade Status and Definitions added to the Tagit-SCERT tool. These definitions would be static and only require change when the tool is changed. Current definitions are as follows: COMPLETE - Complete and in-service CLOSED OUT - In-service and all required project close-out documentation supplied by TO ON SCHEDULE < 4 - On Schedule within 4-year horizon ON SCHEDULE > 4 - On Schedule beyond 4-year horizon NTC-C PROJECT ESTIMATE WINDOW - Within the NTC-C Project Estimate (CPE) window DELAY – MITIGATION - Behind schedule, interim mitigation provided or project may change but time permits the implementation of project; asterisk (*) indicates interim mitigation plan provided by SPP SUSPENDED - NTC/GIA suspended RE-EVALUATION - NTC/NTC-C active; pending re-evaluation NTC - COMMITMENT WINDOW　　　　- NTC/NTC-C issued, still within the 90 day written commitment to construct window and no commitment received RFP RESPONSE WINDOW - RFP Issued	Unplanned A	Low	Up to $10k	
PCWG requested that the "Internal Escalation Rate (For Multi-Year Upgrades)" field is removed from the SCERT GUI since that field is no longer used.	Unplanned A	Low	Up to $10k	
Registered Entities request the ability to upload/download data to the new RAW workbook database via API.	Unplanned C	High	$50k - 100k	Tenaska

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
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
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	
Mitigated Start-Up and No-Load Offer Maintenance Cost	Release +1	Medium	$10k - 25k	
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. Specifically, the intent of the enhancement is to create the following: 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
Remove the ENERGY section under Markets / Scarcity Demand Curve. Energy has been put back under the VRL section 4.1.4 in the protocols and is no longer a Demand Curve.	Release +1	Low	Up to $10k	
Post DA & RT public Load data by zone	Release +2	Medium	Up to $10k	Westar (WRGS)
API to download data published to the Public FTP site	Unplanned A	High	$10k - 25k	Monterey SW (MOSW_X)
Transmission POD & SINK Locations Mapping Report	Unplanned A	Low	Up to $10k	Tenaska Power Services

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Add Functionality to send notifications to mobile devices based on individual user preferences	Unplanned A	High	$10k - 25k	OG&E
Annual Public Data Files Zip and Archival - This enhancement will include evaluation of current amount of storage space available for public data and creating a plan to efficiently use available storage ongoing by creating .zip files for previous years' data and any clean up, deletion of files as necessary.	Unplanned A	Low	Up to $10k	SPP
Post a dead buss file for each DA Market operating day - The Energy Authority (TEA) requests SPP post a public data file of all dead buses in the DA market for each operating day with the note that at this time, participants who are spreading two nodes are at risk of being long or short unintentionally if a source or sink is dead. The public data file would give participants a better chance of avoiding this risk.	Unplanned A	Low	Up to $10k	The Energy Authority (TEA)
Publish realized and scheduled circuit breaker outages Saracen Energy Midwest believes circuit breaker outages are having a major effect on SPP market operations and the market needs this information to make informed decisions about what is happening in its marketplace. Other RTOs publish this information both currently and prospectively, such as ISO-NE, NYISO, PJM, MISO.	Unplanned A	Low	$25k - 50k	Saracen Energy Midwest
Add Weather Overlay to Price Contour Map. OG&E believes that a combined Price contour/weather map will provide additional value to MPs as they monitor prices, binding constraints, weather, and wind impacts. This will allow MPs to monitor weather systems and prices across the footprint. MPs are doing it currently but with separate tools. Allowing MPs to monitor fronts and wind traveling into the footprint and then see how congestion grows west to east or south to north is added values to allow MPs to communicate with plant personal the important of being on dispatch instruction.	Unplanned A	Low	$10k - 25k	OGE

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Request has been made to increase the number of intervals that are reported as Actuals in the Public Operational_Data/STRF folder files from 23 hours and 11 intervals (287) to 24 hours/full day of intervals (288).	Unplanned A	Low	Up to $10k	KCPS
Modify "Hourly Load" public data files to post daily vs. once per month; planned enhancement will post daily files and create a monthly zipped file.	Unplanned A	Low	Up to $10k	Basin Electric Power Cooperative
Summary: Enhance Markets UI to allow right click feature to view or edit Requires MP Code Changes: No.	Release +2	Medium	$10k - 25k	Southwestern Public Service Company (SPS)
Summary: Add indicator to Emergency Limit notifications, API operations and UI displays to specify whether the minimum or maximum limit will be exercised. Requires MP Code Changes: Yes. Participants using the EnergyService API and/or EnergyNotifyService XML Notification service will be required to make code changes.	Release +2	High	$25k - 50k	Southwestern Public Service Company (SPS)
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

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Summary: Allow users to submit, delete and query Virtual Bids/Offers within the same API operation. Today, participants must submit, delete and query Virtual Bids separately from Virtual Offers. Requires MP Code Changes: No. This change would result in new, optional API operations which would not require MPs to make code changes.	Unplanned C	High	$25k - 50k	XO Energy SW, LP (XOSW)
Summary: Create a Markets UI display and API operations to show the total output (Energy+Reg Up/Down+Spin/Supp) of a generation plant. Requires MP Code Changes: No. The new API operations would be added as optional which would not require participant code changes.	Unplanned C	High	$10k - 25k	Arkansas Electric Cooperative Corporation (AECC)
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. Requires MP Code Changes: No. The new API operations would be optional operations which would not require participant system modifications.	Unplanned C	High	$10k - 25k	SPP
Summary: Add a Markets UI page and API operation to show total Real-Time LMP per hour. Requires MP Code Changes: No. There would be new, optional API operations added. Participants would not be required to make code changes.	Unplanned C	High	$10k - 25k	Arkansas Electric Cooperative Corporation (AECC)

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
New business process regarding reason code #1 for contingency reserve & #3 missing or bad resource SCADA under the XmptDev5minFlg.	Unplanned C	High	$25k - 50k	SPSM
Request to add Total MWs to all pages in the UI containing 24 hours of MW data. This includes both submitted and result data pages.	Unplanned C	Medium	$10k - 25k	
Currently, the OperatingDay parameter to GetTransactionSummarySetByDay filters on the day the transaction was submitted, not the market day of the transaction. The market day of the transaction would be a much more useful parameter.	Unplanned C	Low	$10k - 25k	
Currently the markets notifications configuration is set to support TLS1.0. A request has been made to upgrade the servers to support TLS 1.2. When updating the configuration to support TLS 1.2 backwards compatibility is expected to continue to support TLS 1.0.	Unplanned C	Low	Up to $10k	EXGN Chirag Thaker
Ability to download a node MW size similar to what CAISO publishes on thier PNode Listing report on their OASIS	Unplanned A	Low	Up to $10k	Anthony.Nairns - denverenergygroup.com
Predictive LMP forecast in a 55 minute forward look	Unplanned A	Low	Up to $10k	Shawn McBroom - OGE
Allow members to be able to export Certs and Roles from PROD and import into MTE.	Unplanned C	Medium	$25k - 50k	AECC
Move the location of the Add Role Button for the User Management screens from where it currently sits to below the Application/Role dropdowns.	Unplanned C	Low	Up to $10k	SPP
Need to validate the certificate serial inputs from the user on save to help avoid leading or trailing spaces.	Unplanned C	Low	Up to $10k	SPP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
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.	Unplanned C	Low	Up to $10k	WRGS
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
Keep the lower environments of CROW more in line with PROD as far as equipment that is available to submit outages for	Unplanned C	Low	Up to $10k	KCPL
The BSS API needs to be enhanced to support up to two major versions of the Web service at a given point in time. Versioning eliminates confusion on which WSDLs/XSDs are supported by incrementing version numbers for each release that is not backwards compatible. - Minor versions represent backwards compatibility with existing deployments of the same major version - Major versions represent significant updates that break compatibility with the existing Web service deployment	Release +1	Low	$10k - 25k	
When any data is submitted to SPP, we will provide a unique transaction ID in the response to the submission. This transaction ID will uniquely identify a data submission transaction to be used for informational and tracking purposes.	Release +1	Low	$10k - 25k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
MP submitted multiple enhancement requests to the BSS application and those requests have been broken out into separate/individual enhancement request. The request covered in this ticket is the following: - Ability to Confirm/Approve Multiple Days and/or Months at a time	Release +1	Medium	$50k - 100k	TEA, ETEC
Market Participant has requested an enhancement to add a drop-down list for all "location" and buyer + seller" fields in the SPP Portal. Currently, If "Location" or acronym of "Buyer" or "Seller" is not known or misspelled, then "error" will populate when trying to enter a new contract or filter by particular location or company abbreviation. This goes for any tab in the SPP portal.	Release +1	Low	Up to $10k	TEA
Market Participant has requested an enhancement to filter by a date range on the Home, Profile Approval and Reporting Tabs in the BSS UI. Currently, you are only able to filter by a single operating day. MP would like to have the option to filter by single and/or multiple days, as well as filter up to a monthly date range.	Release +1	Low	Up to $10k	TEA

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Market Participant has requested an enhancement to move the "Submit Profile Data" button on the Home tab to another location on the screen. Currently, it is placed between the "Deny Contract" and "End Contract" buttons. This has caused a few unexpected accidentals. When you accidentally hit the "Deny Contracts" button an error is thrown; however, when the "End Contract" button is accidentally hit, there is no precautionary warning to populate, where the end result will create the contract highlighted to "end" as of the current date. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	Up to $10k	TEA
Market Participant has requested an enhancement to filter by Asset Owner/Company on the Home, Profile Approval and Reporting tabs without being required to indicate buyer or seller information. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	Up to $10k	TEA

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Market Participant has requested an enhancement to the BSS UI to display the end date of a contract to be displayed instead of the following date being displayed as "end date". Impact to MP: This change would eliminate any room for confusion and save time for the end user. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	Up to $10k	TEA
Market Participant has requested an enhancement to the BSS UI Reporting Tab to display the option of hour ending interval instead of the current AM/PM that is currently displayed on this screen. The tabs in the BSS UI need to be consistent as the Profile Approval Screen and the extraction of data out of the Reporting tab show the hour ending as an interval. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	Up to $10k	TEA
Market Participant requested additional enhancement to 03-1992 to also add the ability to search BSS by date range for multiple Asset Owners. Priority - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Medium	$10k - 25k	AEP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Market Participant requested additional functionality to current request 03-1789 to also allow multi-day submissions for a group of Asset Owners instead of just one. Priority - Other - Additional Information has been requested from the submitter in order to Score and provide cost analysis and complexity for this change. Request for closure as we have not been provided the information requested.	Other	Unknown		AEP
Request to add a confirmation 'pop-up' box when the user selects the 'end contract' button in the BSS Application. The confirmation box should also allow the analyst to select a termination date other than the next business day which is currently the default behavior. Priority - O - This ticket is currently being considered for implementation with the Replacement Project.	Other	Medium	$25k - 50k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Member requested enhancement to provide the schedule 11 charges with the associated upgrade. Complexity and Cost Estimate can't be provided at this time. This request is dependent on the automation of another project outside of Settlements. Once that project is implemented in Q32018 this ticket can be evaluated for complexity and cost and re-evaluated for a Settlements release. 4/20/2018 Changed Priority Grouping - O - Other (MORE INFORMATION NEEDED) SPP has determined that more information is needed from the submitters of this ticket before moving forward. SPP has reached out to the submitters and are awaiting responses to our questions before any additional analysis can be completed.	Other	Unknown		NPPD, ITCM
The Meter Data API needs to be enhanced to support up to two major versions of the Web service at a given point in time. Versioning eliminates confusion on which WSDLs/XSDs are supported by incrementing version numbers for each release that is not backwards compatible. - Minor versions represent backwards compatibility with existing deployments of the same major version - Major versions represent significant updates that break compatibility with the existing Web service deployment	Release +1	Low	$10k - 25k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Member requested enhancement to update the meter application and reports (including calibration report) in real-time as meter data is submitted while the meter windows are open. Currently, the submitter must wait until the files are picked up before they can see them and this may take up to 30 minutes depending on when the file is submitted and when the meter files were last loaded.	Release +1	Medium	$25k - 50k	
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.	Release +1	Low	Up to $10k	MECB
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.	Release +1	Low	Up to $10k	WFEC
Enhance the current Meter Agent Report Card to work similar to the MP Meter Report to improve performance and usability for the MPs. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	$10k - 25k	SPP

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Enhancement to provide a new MA Interchange Report with additional details. The report will have the hourly information at a high level with the option to drill down into a 5 minute level. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Medium	$10k - 25k	SPP
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. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	Up to $10k	SPS
MP request to display summarized data at the hourly interval in the Meter Agent Report Card. Currently, only a detailed display is available. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Medium	$10k - 25k	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. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	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. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Medium	$10k - 25k	Westar Energy
The Notifications API needs to be enhanced to support up to two major versions of the Web service at a given point in time. Versioning eliminates confusion on which WSDLs/XSDs are supported by incrementing version numbers for each release that is not backwards compatible. - Minor versions represent backwards compatibility with existing deployments of the same major version - Major versions represent significant updates that break compatibility with the existing Web service deployment	Release +1	Low	$10k - 25k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
As a part of the replacement project, notifications will be created for transmission reports (similar to the existing market notifications for invoice and statements).	Release +1	Medium	$25k - 50k	
For the Replacement Project, new notifications will be created to notify members when the calendar is updated.	Release +1	Medium	$10k - 25k	
RR259 - This Revision Request provides changes to the market settlement posting and dispute timelines to be implemented with the new settlement system. In the Notifications API, the valid values for settlement types will be modified as a result. The new scheduled (regular) settlement types will be S7, S53, and S120. Resettlements will be R<ddd>, where <ddd> represents the number of days after the operating day in which the resettlement is posted. This change will take effect with the first settlement date posted with the new system. The modified NotificationsAPI will support both the old and new settlement types.	Release +1	Low	$10k - 25k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
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. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	Up to $10k	Tenaska
Market Participant has requested an update to the Settlement Calendar to include a reason for resettlements. It was also suggested that a business aid be created to include a master list of resettlements and a reason for the resettlement.	Release +1	Unknown	$10k - 25k	
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."	Release +1	High	$50k - 100k	WFEC
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

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
Member requested enhancement to the existing ARRTCR public report to add a funding percentage to the daily tab. It was originally requested that an hourly tab also be provided in this report, however, the data currently is calculated at the daily level so hourly details are not available. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Medium	$10k - 25k	AECC
RR259 - This Revision Request provides changes to the market settlement posting and dispute timelines to be implemented with the new settlement system. In the MWP(Make-Whole-Payment) public file, the valid values for settlement types will be modified as a result. The new scheduled (regular) settlement types will be S7, S53, and S120. Resettlements will be R<ddd>, where <ddd> represents the number of days after the operating day in which the resettlement is posted. This change will take effect with the first settlement date posted with the new system. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	$10k - 25k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
RR259 - This Revision Request provides changes to the market settlement posting and dispute timelines to be implemented with the new settlement system. In the OCL (Over-Collected Losses)public file, the valid values for settlement types will be modified as a result. The new scheduled (regular) settlement types will be S7, S53, and S120. Resettlements will be R<ddd>, where <ddd> represents the number of days after the operating day in which the resettlement is posted. This change will take effect with the first settlement date posted with the new system. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	$10k - 25k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
RR259 - This Revision Request provides changes to the market settlement posting and dispute timelines to be implemented with the new settlement system. In the TCRARR public file, the valid values for settlement types will be modified as a result. The new scheduled (regular) settlement types will be S7, S53, and S120. Resettlements will be R<ddd>, where <ddd> represents the number of days after the operating day in which the resettlement is posted. This change will take effect with the first settlement date posted with the new system. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	$10k - 25k	

Open Enhancements - All

Enhancement Description	Priority Grouping	Level of Complexity	Cost Estimate	Requesting Party
RR259 - This Revision Request provides changes to the market settlement posting and dispute timelines to be implemented with the new settlement system. In the OpReserve public file, the valid values for settlement types will be modified as a result. The new scheduled (regular) settlement types will be S7, S53, and S120. Resettlements will be R<ddd>, where <ddd> represents the number of days after the operating day in which the resettlement is posted. This change will take effect with the first settlement date posted with the new system. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	Low	$10k - 25k	
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. Release - Other - This ticket is currently being considered for implementation with the Replacement Project.	Other	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 on the PDF invoice so they don't have to manually add up all the lines to come up with one.	Release +1	Medium	$10k - 25k	KCPL
The Settlements Reports API needs to be enhanced to support up to two major versions of the Web service at a given point in	Release +1	Low	$10k - 25k	

Projects

Project Name	Project Description	Cost Estimate	Targeted Implementation Date
SPP.org Migration of Support and Maintenance	Plan to move all components of SPP.org from current hosting vendor to Microsoft Cloud technology to improve reliability and enhance Member experience.	In flight	06/29/18
Revenue Requirements & Rates (RRR) Automation	Improve productivity and quality by reducing risk from manual tasks involved in processing Transmission Owner data (TO data) into the RRR file for Regulatory and the data entry from the RRR file for Settlements	In flight	09/28/18
CROW Upgrade	The CROW application is scheduled to have its first major upgrade since 2011. There are several new features that will be available from both SPP's and the member's perspective.	$60,000	12/31/18
TCR Release 3.1	This release will address several enhancements and defects.	In flight	08/31/18
TSS 1.8	This release will address several enhancements and defects.	In flight	TBD
Engineering Data Submission Tool (EDST) Release 1.0	During testing for the Engineering Hub project, some enhancements were identified for the Engineering Data Submittal Tool (EDST). This project will complete a number of those enhancements prior to MDWG and Resource Adequacy 2019 submittal periods (August and October, respectively).	Active	10/12/18
Settlement Systems Replacement	This project will replace the current market and transmission settlement systems with a custom designed single high performance scalable system solution.	In flight	5/1/19
Order 831 Offer Cap Compliance	FERC has issued Order 831 that allows offers above $1,000/MWh when the fuel costs necessitate those offers. The current market software does not allow an offer to be submitted above $1,000/MWh. This project will enable submission by Market Participants above the offer cap.	In flight	5/1/19
Reliability Communication 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.	Active	1/1/19

Projects

Project Name	Project Description	Cost Estimate	Targeted Implementation Date
Storage and Distributed Generation	FERC has issued a NOPR for rule changes regarding the modeling of Storage Devices and the use of Distributed Generation. The NOPR shows additional data that would need to be accepted and used in the Commitment and Dispatch logic. The timing of a final rule is unknown at this time.	TBD	9/1/18
Replicated Data Server	Increase the capabilities of and the support level commitment for the Replicated Data Server in support of SPP Transmission Operator's compliance with the new TOP-001 standard.	TBD	12/31/18

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. • 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: • 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 (Ranked by Primary WG)	Defines the criticality, according to a scale. • 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	Assessment by SPP Staff of the priority group: • 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 bing 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	Defines the criticality, according to the scale. • 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: • 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